Major soil-landscape resources of the cascape intervention woredas, Ethiopia

Soil information in support to scaling up of evidence-based best practices in agricultural production (with dataset)

CASCAPE TECHNICAL REPORT

OT_CP_2016_1

Capacity building for scaling up of evidence-based best practices in agricultural production in Ethiopia

Major soil-landscape resources of the cascape intervention woredas, Ethiopia

Soil information in support to scaling up of evidence-based best practices in agricultural production (with dataset)

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Wageningen, 2016

This report was written to record and share results with the stakeholders of the CASCAPE project. To secure the quality of the report it was reviewed by the coordination unit and the project management team.

	Coordination	Project management
Name		
Date		
Signature		

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Executive summary

The objective of this study is to produce a dataset of the major soil–landscape resources of the CASCAPE intervention woredas. The CASCAPE project operates in thirty woredas, located in six regions, therewith contributing to the Agricultural Growth Program of the Ethiopian Government in general and to the 'Soil fertility roadmap' in particular. To achieve the objective of the study, a collaborative project was established among CASCAPE project partners with scientists from ISRIC - World Soil Information[1] (ICSU World Data Centre for Soils), the CASCAPE[2] project's National Coordination Unit in partnership with universities from six regions in Ethiopia (Addis Ababa, Bahir Dar, Haramaya, Hawassa, Jimma, Mekelle) and ALTERRA[3] (Wageningen UR).

Geospatially explicit information on the major soil resources in the landscapes of Ethiopia is lacking or fragmented for much of the country and yet this information, locally observed and validated and nationally harmonised and consistent, is key for understanding the country's soils and their qualities as coherent support, complementary to soil fertility mapping as first reported for Ethiopia by Murphy (1959), to scaling up of evidence-based best practices in the agricultural growth program of the country.

The study started with a survey to identify and characterise the major soil types of the agricultural lands of a number of four kebeles selected for each of the 30 woreda. Soil profiles were georeferenced and described in the field and samples were taken, from depth intervals till beyond root zone depth of a selection of profiles, and analysed in the laboratory. The generated soil profile data were compiled in a database and the profiles were classified to soil reference groups, including qualifiers, according to the framework of the World Reference Base (WRB).

Using the soil profile data combined with spatial covariate data, the relationships between soil types and landscapes at kebele-level were statistically quantified with Random Forests modelling to produce a soil–landscape map at woreda-level. The map depicts the reference soil group, with a prefix-qualifier, predicted as most probable at given locations aggregated to polygons according to geomorphology and landscape facets.

The map was validated at woreda-level using additional soil profile data, also classified according to WRB, which were augered beyond the kebele-level. Combining áll soil profile data, the soil-landscape relationships were modelled at woreda-level to produce a final version of the map including a final round of validation. Map purity of the final raster product at a resolution of 250 m is approximately 50% and is estimated at 40% when generalised to a polygon version of the final map. The map purity is 60 and 50%, respectively, with the classification aggregated to the reference soil group.

The dataset, including soil profile data and soil-landscape resource maps, is available at: www.isric.org/projects/CASCAPE-ethiopia-woredas-soil-landscape-resources

Keywords: soil data, soil profile, soil map, soil landscape, WRB, random forests, Ethiopia, Africa

[1] http://www.isric.org/

[2] http://www.CASCAPE.info/

[3] http://www.wageningenur.nl/en/alterra/

Introduction

As part of the Growth and Transformation Plan (GTP), the Ethiopian Government aimed at doubling crop production during the Five Year Planning period (2011-2015). The Government of Ethiopia identified low soil fertility as one of the key challenges to meet the GTP objectives.

To address many of the soil related problems, the Ministry of Agriculture (MoA) and the Agricultural Transformation Agency (ATA) have established the project "*Ethiopian Soils Information System (EthioSIS*)" under the overall Soil Fertility Road Map of MoA. Among others, EthioSIS is set out to (i) to establish national and regional soils resource and other land resources databases; (ii) conduct surveys and soil fertility mapping to reformulate fertilizer recommendations; and (iii) develop tools for development of integrated soil fertility management technologies.

CASCAPE has entered into a collaboration agreement with the Government of Ethiopia to assist EthioSIS in various activities: (i) soil sampling and fertility mapping of 30 CASCAPE intervention woredas (through composite topsoil samples); (ii) establishment of a modern and well-functioning national soil resource database; (iii) training and capacity building in the area of soil fertility mapping (geo-statistics and soil data interpretation) and fertilizer recommendations (QUEFTS validation, fertilizer trials, etc.); and (iv) a soil characterisation study conducting detailed soil profile studies and classification of agricultural soils in all 30 CASCAPE intervention woredas.

This report summarizes findings of the fourth activity, results of which are intended to also contribute to the second activity.

Objective

The purpose of this study is to characterise and map the major soil resources within the landscapes of the CASCAPE intervention woredas and to make the data available to the project.

Data and methods used are described in Chapter 2, results in Chapter 3, and conclusions are given in in Chapter 4. The data and information produced are provided in the annexes.

Data and methods

The project was conducted through two studies, namely a soil characterisation study at kebele level and a soil mapping study at woreda level. The soil characterisation study included an exploratory survey to identify the major soil types within the landscapes and a detailed characterisation of representative soil pits to assess the soil properties and classify the major soil types. The soil profile point data collected during the soil characterisation study from selected kebeles served as input to the soil mapping study producing maps of soil types in the landscape of entire woredas.

Soil characterisation study at kebele level

The soil characterisation study consisted of two major components, namely the identification of major soil types and their characterisation.

Identification of major soil types

Exploratory base maps were prepared to support an exploratory soil survey to assess soil variability and to identify the major soil types in the landscape. These maps served to provide prior information about which soil types to anticipate and to verify where these may occur in the landscape.

A common base map for the six regions was provided by the map compiled at 1: 1 million scale of the geomorphology and soils of Ethiopia (FAO, 1984), shown in Figure 1. The map depicts geomorphology (geology and landforms) with a legend describing the associated, spatially implicit, terrain components (facets as depicted by landscape transects and as described by slope classes). Associated to the terrain components are soil components classified according to the legend of the Soil Map of the World (FAO, 1974). The broad scale map thus represents soil associations and would need disaggregation to make the soil types spatially explicit.

Figure 1. Geomorphology and soils of Ethiopia at scale 1: 1 M (FAO, 1984)

Derived from the above study is the Ethiopian part of the Soil and Terrain database for north-eastern Africa (FAO, 1998) also at a scale of 1: 1 million. This database includes a shapefile depicting the same map as described above though with a different legend and an attribute data table. The legend and the data are harmonised according to procedures and conventions as described by FAO (1997). Annex 2 illustrates this base map together with the delineations of the CASCAPE intervention woredas projected upon Google Earth. The database provides information, for each map legend entry, about landforms, geology, land cover and alike, together with the terrain components and associated soil components and their relative proportions. Soil components are classified according the revised legend (FAO, 1990). The database version shared with the consultants also includes the classification of the dominant soil type according to WRB (FAO, 2006b) as copied from the Soil Atlas of Africa (Jones et al., 2013).

Additionally, region specific information was collected in so far as available to possibly improveme the exploratory base maps. Main sources considered here included information from the Ethiopian Mapping Authority (topographic maps at 1: 50,000 scale), Ministry of Water Resources (river basin studies), Ministry of Agriculture, the Agricultural Transformation Agency (ATA), EthioGIS (Water and Land Resources Centre), Atlas of Ethiopia (IFPRI), the six universities involved, CASCAPE offices (PRA results) and the ISRIC library.

The exploratory survey was conducted through the agricultural lands of the selected kebeles using the base maps (both delineations and content) as hypothesis to verify. Besides exploratory observations made at road cuts and through surficial features like stoniness, colour and vegetation, eight auger point observations were made per kebele (also near trial sites) resulting in a total of some 960 observations. Auger points were georeferenced using Geographic Positioning System (GPS) and described to a depth of 120 cm unless restricted by hard rock or impenetrable layer, using the field form template as prepared by ISRIC (see annex 2b) according to the guidelines for soil profile description (FAO, 2006). Auger points were tentatively classified according to WRB reference soil groups (FAO, 2006b) representing major soil types

Characterisation and classification of major soil types

Following the identification of major soil types, representative soil profiles (soil pits) were characterised in greater detail. Soil characteristics were described using the standard template prepared by ISRIC (see annex 2a) for some 6 profiles per woreda (minimally 4, maximally 8) or some 180 soil profiles in total. The locations of the profiles were not evenly distributed over the four kebeles per woreda, but over the major soil types identified per woreda.

The master horizons with subordinate characteristics were designated to a depth of at least 180 cm (bedrock permitting) and described. From each horizon, over the whole soil depth, a sample of at least 1 kg was taken (more samples were taken from thick horizons with sampled depth intervals not extending 30 cm), properly and traceably labelled, administrated, and subsequently air dried at the universities. The samples, including several (hidden) duplicate samples, were submitted to the Soil and Plant Laboratory of the Water Works and Design Supervision Enterprise in Addis Ababa for selected laboratory analyses: particle size distribution (sand, silt, clay content) by hydrometer method (Bouyoucos, 1951) with the fractions defined according to USDA (c<0.002<si<0.05<sa<2 mm), bulk density of the fine earth from core samples, pH H2O in 1:2.5 soil: water solution and pH KCl in 1:2.5 soil: KCl (1M) solution, electric conductivity in 1:2.5 soil: water solution, cation exchange capacity in a 1M NH4OAc solution buffered at pH H2O of 7 (Black, 1965), exchangeable bases (Ca and Mg by atomic absorption spectrometry; K and Na by flame photometry), organic carbon content (Walkley and Black, 1934), total nitrogen by the method of Kjeldahl (1883), available phosphorus content by the method of Olsen (1954), available or extractable sulphur by an unspecified method and extractable micro nutrients (Fe, Mn, Zn, Cu) by the DTPA method (Lindsay and Norvell, 1978).

The soil analytical data, as sampled from the entire soil depth, were used to check the preliminary field classifications. Each soil profile was classified according to WRB (FAO, 2006b), specifying the prefix and suffix qualifiers.

Reporting of the soil characterisation study

Each of the six universities reported the methods and results of the soil characterisation studies per woreda following a detailed outline as provided by ALTERRA.

The soil profile observations (site characteristics and soil morphological, chemical and physical characteristics) were described in the reports and the data were compiled in tables in principle according to the standard template tailored from the Africa Soil Profiles database (Leenaars et al., 2014).

The soil profile data collected and compiled during the soil characterisation study at kebele level served as input to the soil mapping study at woreda level.

Soil mapping study at woreda level

Maps of the spatial extent and distribution of the major soil types, and their properties, reflect the very basic information to generate and communicate crop and site specific soil water and fertility management recommendations and thus to scale up best practices. To this effect, it was decided to prepare woreda level soil – landscape maps in a uniform way for each of the 30 CASCAPE intervention woredas.

The soil mapping study extrapolates the georeferenced soil profile point observations made at kebele level to soil-landscape maps at woreda level. Additional soil profile point observations were made beyond the kebele level to validate this base map at woreda level. A final version of the map at woreda level was produced using áll soil profile observations collected throughout the woredas. Depicted on the map is the most probable Reference Soil Group including one prefix-qualifier, as classified according to WRB (FAO, 2006), generalised from prediction grids to polygons according to geomorphology and landscape facets.

Map production

Base map and final map

A woreda level base map was produced on the basis of the georeferenced soil profile point observations reported from the kebele-level soil characterisation study. Subsequently, a final map at woreda level was produced, also using the additional georeferenced soil profile point observations.

The soil observations, compiled under a common standard together with a selection of 281 profiles added from the Africa Soil Profiles database (Leenaars et al., 2014), gives the reference soil group (RSG) and qualifiers according to WRB (FAO, 2006b) together with geo-coordinates and profile IDs. The soil classifications were related to the landscape by projecting the soil point data upon stacks of spatial covariate data representing the spatial variability of soil forming factors *climate, organisms, relief, parent material* and *time* (CLORPT), including SRTM DEM, MODIS imagery and thematic maps (see annex 7). In addition, the original Geomorphology and Soils map (FAO, 1984) was used as a covariate and was disaggregated for this purpose into spatially explicit landscape facets (terrain components defined according to slope classes) and associated spatially explicit soil types (classified according the legend of the soil map of the world (FAO, 1974)) in line with as originally reported. Soil-landscape relations were quantified statistically with Random Forests modelling. Subsequently, the Random Forests were used to predict the distribution of soil types (Reference Soil Groups (RSG) with a prefix qualifier) over the landscapes of the 30 woredas. Separately, the distribution of qualifiers was predicted.

The outcome, at this stage, are raster maps at a resolution of 250m giving the probabilities of occurrence (in %) of each of the observed prefix-RSG combinations. Moreover, the outcome includes raster maps of the probabilities of occurrence of each of the qualifiers. Qualifiers are predicted from the diagnostic horizons, properties or materials as well as from the prefixes and suffixes reported from the soil profile observations.

In the next mapping step, the gridded maps were generalised to polygon maps matching landscape features. Slope classes were assessed from the SRTM DEM, representing the different landscape facets (with associated soil types) as described by FAO (1984) from landscape transects representing the variability within the geomorphologic units. Unique combinations of the slope classes with the predicted dominant soil type (most probable Reference Soil Group including prefix) form the basis of aggregation of the prediction grids (rasters) to 'spatially homogeneous' polygons. This aggregation implies a certain level of generalization whereby isolated pixels of divergent soil-slope combinations are eliminated from the map. The resulting soil-slope polygons are subsequently related to geomorphology as mapped by FAO (1984). The imprecise delineations of this geomorphology map have been adjusted to match the delineations of the soil-slope map by applying a majority-minority rule to the intersected soil-slope polygons. The resulting map represents unique combinations of geomorphology, slope class and the dominant Reference Soil Group including prefix qualifier.

The statistics were combined with expert soil knowledge using conventional soil maps and insights into a hybrid approach for soil-landscape mapping.

Details about random forests modelling used for digital soil mapping

Tree models, including random forests, become increasingly popular for mapping soil classes (Brungard et al., 2015; Heung et al., 2016). Tree models are part of the large family of machine learning approaches. Machine learning employs computer science and statistics to uncover patterns and relationships in (large) datasets. A tree model partitions the training dataset, for example a soil sampling dataset, in subsets (Strobl et al., 2009) by means of recursive binary splitting (Figure 2). The subsets are becoming increasingly homogenous when moving down the three, i.e. the variation in the daughter nodes is smaller than the variation in the parent node. The covariates are used as partitioning variables, and each split is chosen in such a way that it maximizes the reduction of a certain accuracy measure, such as the sum of squares in case of a continuous target property or the Shannon entropy, Gini index or misclassification error in case of a categorical target property (Hastie et al., 2008). At the terminal nodes of the tree (the leafs) a simple model is fitted to the observations that are contained in the nodes. The model can be a constant, for instance the mean of the values in case of continuous data or the majority in case of categorical data.

One of the most popular tree models currently in digital soil mapping are random forest (RF) models. A random forest consists of an ensemble (a forest) of trees (Breiman, 2001; Strobl et al., 2009). Random forests combine bootstrap aggregation (bagging) and random covariate selection for partitioning, to grow a forest of trees. This means that for each tree in the forest a bootstrap sample is drawn from the calibration dataset randomly – a bootstrap sample is a subset of the full dataset drawn with replacement. Typically, the bootstrap sample contains two-thirds of the dataset. A random-forest tree is grown to the bootstrap sample. This is done as follows (Hastie et al., 2008):

1. Select m covariates at random from the full set of p covariates. m is often taken as the square root of p or $p/3$.
2. Select the best covariate/split-point among the m. This is the covariate/split-point that results in the largest reduction in error.
3. Split the node into two daughter nodes.

These steps are repeated recursively until a minimum node size is reached. The minimum node size is the minimum number of observations that must be included in a terminal node. These observations are used for the terminal node prediction (see above). Bootstrapping and growing trees is repeated many times, a random forests typically contains 500 to 1,000 trees. Each tree is used to make a prediction at the data points or at new points (for instance the nodes of a prediction grid). The predictions of the individual trees are then aggregated in a single prediction: the random-forests predictor. For continuous data, this is the average of the predictions of the individual trees. For categorical data, the prediction is based on the majority vote of the individual tree predictions (Breiman, 2001; Hastie et al., 2008).

Figure 2. Example of a Random Forests tree model.

Random forests are not easy to interpret. There is no such thing as an average tree that can be visualized for interpretation for example to assess the relevance of the covariates. Despite this drawback, there are measures, the so-called 'variance importance measures' that can be used to assess the relevance of each covariate over all trees in the forest. The most advanced variance importance measure is the 'permutation accuracy importance'. Strobl et al. (2009) provide the following rationale for this measure. By randomly permutating the values of a covariate its originial association with the target variable is broken. Hence, if a permuted covariate, together with the remaining unpermuted covariates, is used to predict the target variable, then this will result in a decrease of prediction accuracy. Covariates that have the strongest association with the target variable will show the largest decrease in prediction accuracy. Thus, a reasonable measure for variable importance is the prediction accuracy before and after permuting a variable, averaged over all trees.

Map validation

Random Forests modelling includes a cross-validation procedure to assess the accuracy of the model. It sets aside a randomly selected subset (called 'bootstrapping') of soil profiles of approximately one third of the entire dataset. This subset is referred to as the 'out-of-bag' (OOB) set that are used to validate the prediction based on the model calibrated from 'in-bag' profiles. This step of calibration and validation is typcially repeated hundreds of times, here 500, with different subsets each time. The OOB profiles are used to assess the prediction accuracy of the model. This is done as follows. Once a Random-Forest tree is calibrated, it is used to predict the soil type for all OOB profiles. This is done for each tree in the forest. Because bootstrapping is done randomly, each profile will be part of the OOB set approximately one-third times the number of trees in the forest. This means that in case of this study, each profile has around 180-190 OOB predictions. The final OOB (validation) prediction is the most frequently predicted soil type. This prediction is then compared with the observed soil type. From this comparison an overall accuracy measure is computed, which is in case of soil type modelling referred to as the 'map purity' (Brus et al., 2011). Here, the map purity is defined as the percentage of soil profiles for which the predicted soil type equals the observed soil type. The results of the OOB validation can be presented in detail by purity matrices.

The map purity was assessed (step 1) for the raster base map at two levels of classification: the RSG level and the prefix-RSG combi level. With the current modelling procedure the polygon map cannot be cross-validated with independent data (such as the OOB validation for the raster maps). This means that we cannot get an objective estimate of the accuracy of the maps. Nevertheless, we checked the correspondence of the soil types according to the polygon maps with the soil types observed at the profile description locations. It should be noted, however, that this map correspondence gives a too optimistic estimate of the map purity since the same data were used for calibration and validation.

The purity of the polygon maps will likely not exceed (or is likely a fraction of) that of the raster maps from which these were derived and an estimate of the purity of the polgygon maps is given based on the fraction of the polygon map correspondence relative to the raster map correspondence.

The first Random Forests model was calibrated with kebele data only. The validation statistics are, therefore, only relevant for the base map at kebele level, but irrelevant for the parts of the base map beyond the kebele level where profile data were lacking. Additional field work was carried out to collect soil profile data beyond the kebeles to serve as an independent dataset to validate the base map at woreda-level (step 2). The data were collected by augering along transects with at least 30 auger points per woreda. The augered observations were georeferenced and classified in the field, according to WRB but also according to the local nomenclature. Few soil properties were described following the template given in annex 2b. Note that this field work is in few regions done by other consultants than those of the first phase which implies an increased chance of making different interpretations and classifications of the soils observed. An additional shortcoming is that soils cannot well be classified from (disturbed) auger observations as an adequate soil classification requires soil pit observation and soil analytical data. The auger observations thus permit to verify and confirm easily observable soil characteristics similar or comparable to soil characteristics of yet observed and classified soil profiles.

The map purity at woreda level was assessed by i) comparing the base map, both raster and polygon, with the additional soil profile data (step 2), and ii) combining the results of the cross-validation at the kebele level (of step 1) with the results of the validation with the additional data set at the woreda-level (of step 2) to get an estimate of the overall purity of the base map at woreda-level (step 3).

The final map at woreda-level (step 4) is produced by calibrating a new Random Forests model using both the data collected at kebele-level and the additional data. Again a soil-landscape polygon map was derived from the Random Forests raster predictions. The accuracy of the raster map was evaluated by the map purity based OOB cross-validation, as explained before, and the polygon map based on the correspondence of the mapped soil types with the observed soil types.

Results

Soil characterisation study

The major reference soil groups identified from the field work are, in order of importance considering number of observation points, Vertisols, Luvisols, Nitisols, Leptosols and Cambisols. These reference soil groups represent 82% of the soil profiles observed. Annex 11a gives a brief description of these major soil types, copied from Driessen et al. (2001), including main characteristics and implications for management. Other reference soil groups observed are Regosols, Fluvisols, Alisols, Planosols and Andosols, together representing 15% of the observations. The remaining 3% of the observations are classified as Arenosols, Phaeozems, Gleysols, Acrisols and Calcisols. These soil groups are also described briefly in annex 11a.

Annex 11b provides soil analytical data summarised per reference soil group considering only the first depth interval sampled from the soil profiles; note that these summary data are preliminary and not ready for being used yet.

Some of the soil profiles are also classified according to the local nomenclatures. Local nomenclatures are commonly based on landscape features and topsoil characteristics (Mulders et al., 2001) while reference soil groups are classified rather on subsoil characteristics. The main correlations between the various local soil names and the reference soil groups are shown in annex 12.

Soil data are collected for a total of 2330 profile (point) locations which corresponds with an average density of 1 profile per 11.5 km² for a total area of some 26,830 km². Added to the database is a selection of 282 profiles from the Africa Soil Profiles database, to a large extent from outside the woredas, which makes a total of 2612 soil profiles compiled.

Annex 3 gives the profile data collected from the exploratory soil survey at kebele level, including 780 soil auger observations and 221 detailed soil pit observations. The soil analytical data of the profile layers are given in annex 3b. Annex 4 gives the 1329 additional auger observations made at woreda level with relevant site data and with the soil morphologic data given per layer in annex 4b. These data, both analytical and descriptive and not limited to topsoil characteristics, permit to assess the soil fertility status of the soil as well as other important soil qualities, or constraints, such as drainage status, available soil water capacity or rootability (Leenaars et al., 2014b).

The soil profile data are georeferenced and compiled under a common standard following a tailored template prepared from the Africa Soil Profiles database (AfSP) arranging all data entries as observations and measurements by specifying the feature, property, method and value, with unit of expression, together with the lineage. Descriptive soil property data are standardised according to the data conventions of the guidelines for soil description (FAO, 2006) and numeric soil property data according to the AfSP data conventions.

The various universities used the provided template to various degrees of consistency. Consequently, the collected data could not be compiled efficiently and still needed much processing, for achieving an adequate compilation which is queryable and useable, which was done by ALTERRA/ISRIC for a selection of the most required and significant soil properties only (see annex 3). The augered data, from the additional field work, have been compiled and shared by the universities strictly following the provided template. This resulted in the fact that the data were efficiently compiled and that a wider range of property data is presented here (Annex 4).

The dataset specifies the laboratory of analysis and the laboratory methods applied as well as the units of expression applicable to the property values by a dictionary table which gives a description of the soil characteristics compiled.

The lineage of the soil profile data is specified in the dataset by reference to the unique report ID as included in the ISRIC library holding; metadata are accessible through the ISRIC library portal together (with a downloadable version of the report itself (Table 1). No lineage is defined for the additional auger data.

Table 1. Lineage of the soil profile data.

Author	Report
Kibebew Kibret, Haramaya university	library.wur.nl/WebQuery/isric/34088
Mekonnen Getahun, Bahir Dar university	library.wur.nl/WebQuery/isric/34089
Engdawork Assefa, Addis Ababa university	library.wur.nl/WebQuery/isric/34090
Amanuel Zenebe et al., Mekele university	library.wur.nl/WebQuery/isric/34091
Alemayehu Kiflu, Hawassa university	library.wur.nl/WebQuery/isric/34103
Alemayehu Regassa, Jimma university	library.wur.nl/WebQuery/isric/34104
Leenaars JGB, AJM van Oostrum and M Ruiperez Gonzalez, ISRIC	library.wur.nl/WebQuery/isric/34023

Following further validation, the soil profile data will be added to a next version of the Africa Soil Profiles database (AfSP; Leenaars et al., 2014) and subsequently imported into the World Soil Information Service (WoSIS; Ribeiro et al., 2015).

Soil mapping study

Map production

The reference soil groups observed from augers and pits are distributed throughout the landscapes as a function of the soil formation that has been taking place at the various locations which is modelled relative to spatial covariate data that mimick the soil forming factors such as parent material, climate, toposequential position, land cover and time, plus management as the sixth soil forming factor. Figure 3 illustrates the typical distribution of reference soil groups, as identified by their broad location, within the context of a landscape with more or less uniform climate and geology; it reflects differences in soil formation due to differences in toposequential position.

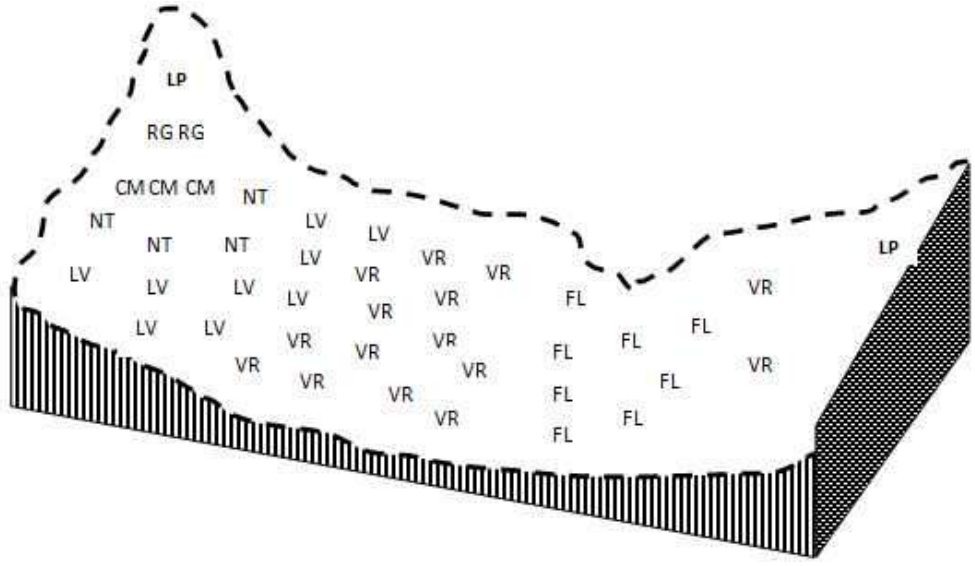

Figure 3. Example of a typical soil-landscape in Haramaya region (from Kibebew, 2014).

The base map and final map were made available to the project, both as a raster version and a generalised polygon version. For each woreda, a print of the base polygon map was provided to the universities together with a complete legend in support of the additional field work. Annex 5 gives the full legend, with geomorphology codes explained in annex 5a and the soil-landscape legend given in annex 5b. The soil-landscape legend also provides information about the three most probable reference soil groups, with prefix qualifier, and the three most probable, independent, qualifiers including prefixes, suffixes and diagnostics. Annex 6 gives a visualisation of the final polygon map for each woreda and a summary overview of the frequencies of occurrence of reference soil groups mapped for each woreda.

Figure 4 indicates the relevance of each of the covariates, listed in annex 7, offered to the prediction model for producing the final map. The relevance is assessed from and expressed as the 'permutation accuracy importance' of each covariate.

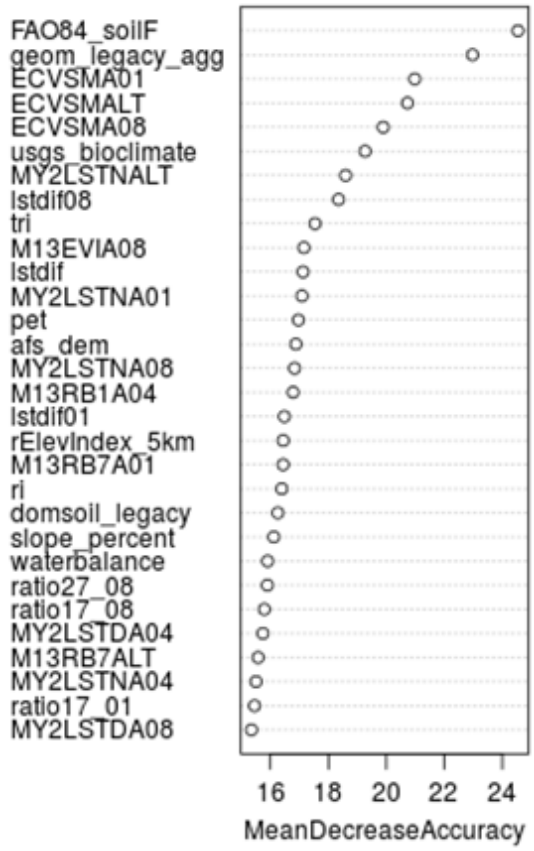

Figure 4. 'Permutation accuracy importance' of covariates in predicting the final soil map.

(See appendix 7 for abbreviations on Y-axis)

Figure 4 indicates a mean decrease of accuracy, of the final map, of 23% if the geomorphology map at 1: 1 M scale would be removed as covariate from the prediction modelling and a decrease of near 25% if the same (geomorphology) map disaggregated to soil facets (FAO84_soilF) would be removed. The map and report of the Geomorphology and Soils of Ethiopia (FAO, 1984) thus prove to be of highest relevance for predicting soil distribution, exceeding the relevance of stacks of satellite data, which coincides with the experience from many other digital soil mapping efforts that conventional legacy soil maps prove to best represent spatial variability of soil types and soil properties (Hengl et al., 2014). Annex 8 gives 'permutation accuracy importance' diagrams both for producing the final map and the base map.

Map validation

The map purity indices are reported from the Random Forests procedure and are summarised in Table 2 for the raster version of the maps. The purity of the raster base map at kebele-level (step 1) is 0.46 at the prefix-RSG level. This improves to 0.58 at the RSG level. This indicates that the prediction model captures the RSG fairly well but has difficulties in predicting the correct combination of prefix-RSG. The purity drops to 0.29/0.44 when validating with independent woreda-level data observed beyond the kebele-level (step 2). Considering all data (step 3), the purity of the base map is 0.38/0.51 at the prefix-RSG / RSG level. The final raster map (step 4) has a purity of 0.49/0.58 which exceeds that of the base map at woreda-level of step 3 but is near similar to that of the base map at kebele-level of step 1. This indicates that adding additional data to an already large dataset does not necessarily increase the overall information content in the data and neither results in better prediction accuracy at the kebele-level but does improve the information content and prediction accuracy at the woreda-level. These purities are inline with purities that are typically reported for soil class maps developed with statistical methods (Kempen et al., 2009, Kempen et al., 2012, Holmes et al., 2015, Heung et al., 2016).

The map correspondence indices are summarised in Table 2 for the polygon version of the maps. The polygon map correspondences are a fraction of the raster map correspondences and that fraction is 80-87% for the prefix-RSG combinations and 84-92% for the RSGs. Applying that fraction to the purity assessed for the raster maps gives an estimate of the purity of the final polygon maps of 0.39/0.49.

Table 2. Summary of map accuracy measures as assessed at four steps of map production.

Step	**RASTER map purity**			**POLYGON map correspondence**		
	n	Prefix-RSG	RSG	*n*	Prefix-RSG	RSG
4. Final map, all data	*2594*	0.49	0.58	*2291*	0.74	0.79
3. Base map, all data	*2594*	0.38	0.51	*2288*	0.47	0.59
2. Base map, additional data	*1328*	0.29	0.44	*1318*	0.29	0.44
1. Base map, kebele data	*1265*	0.46	0.58	*969*	0.71	0.79

(n = number of observations included, prefix = prefix qualifier, RSG = Reference Soil Group)

The map correspondence of the final polygon map is 0.74/0.79. The RSG depicted by the map corresponds with the RSG observed at similar location for 1808 out of 2291 profiles. The other 483 profiles are listed in Annex 9. The spatial distribution of the profiles of both categories is also visualised in annex 9.

Full purity matrices are given in annex 10, for steps 1, 2 and 4, comparing the RSG as observed from the 'out-of-bag' profiles with the RSG as predicted on the map.

Major soil types summarised

The final map of soil-landscape resources, generalised to polygons, is summarised per woreda in annex 6a and is summarised for all 30 CASCAPE intervention woredas together in Table 3 by giving the frequencies of occurrence (%) of the major reference soil groups. The frequencies (%) as counted from profile point observations are also given together with the frequencies as counted from predictions at similar point locations.

The relative importance varies, depending on the entry point for assessing the relative frequencies. Where the order of importance, considering number of observations, was in a former paragraph reported as Vertisols, Luvisols, Nitisols, Leptosols and Cambisols, representing 82% of the soil profiles observed,

the order considering the area mapped is Nitisols, Vertisols and Leptosols, representing 83% of the area mapped, followed by Luvisols and Planosols.

These figures suggest that Luvisols are underrepresented on the maps, possibly due to the fact that these brownish soils may take an intermediate landscape position between the relatively poorly drained blackish vertisols and relatively well drained reddish nitisols, resulting in the latter two soils being more strongly expressed, relative to the landscape position, and overrepresented at the cost of the Luvisols. The relative representation of leptosols largely exceeds the relative number of observations which is well explainable by the fact that leptosols occupy the highest and steepest least accessible landscape positions. Cambisols and also Regosols and Fluvisols were observed frequently (15.5%) but are strongly underrepresented on the map with only 2%. This may well be due to the fact that these soils are young and developed in relatively young parent materials and this soil-landscape relationship is apparently inadequately modelled due to spatial covariates which do not adequately reflect such young landscape areas. The Fluvisols are likely merged with the Vertisols, in the lower landscape positions, and the regosols with the leptosols. The Cambisols can be expected within close distance with most other reference groups.

Table 3. Frequencies of occurrence (%) of reference soil groups in the intervention woredas

RSG	Area mapped	Observations counted	Predictions counted
Nitisols	30.4	17.5	21.6
Vertisols	26.5	21.7	25.9
Leptosols	26.2	13.5	13.9
Luvisols	10.5	21.4	20.3
Planosols	1.8	2.3	2.0
Alisols	1.5	3.0	3.2
Regosols	1.1	4.0	2.3
Cambisols	0.9	8.1	4.9
Andosols	0.5	2.0	1.8
Arenosols	0.4	1.3	1.5
Fluvisols	0	3.2	1.3
Phaeozems	0	1.1	0.6
Acrisols	0	0.3	0.4
Calcisols	0	0.2	0.1
Gleysols	0	0.4	0.2
Lakes	0.1	0.0	0.0
	100%	100%	100%

Conclusions

The distribution of soils in the woreda landscapes has been inventoried using geomorphology as a directive and augering as a rapid approach to verify variability within the landscape. This variability was captured by the identification of the major soil resources which were characterised in detail and classified according to the World Reference Base. Next, a map was produced of the soil-landscape resources at woreda level using the soil profile observations collected at kebele level. This base map proved reasonably accurate, with a map purity of 58%, but the predictive capacity of the soil-landscape model proved less adequate to predict soil variability beyond the kebele level, as shown by the a map purity of 44% when comparing the map with additionally augered soil observations. Using áll soil profile observations collected at the woreda level, a final map was produced which represents larger soil variability though with a map purity of again 58%. Generalised to polygons, this map purity is 49%.

The map purity is reasonable and justifies a comparable approach to extrapolate soil-landscape data and findings to other woredas. However, as indicated, map purity strongly depends on the quantity, quality and reliability of the in-field profile classifications, which should be enhanced.

Reference soil groups, and qualifiers, may be assessed from a detailed field observation complemented with the necessary soil analytical data. Alternatively, it is difficult to classify a soil correctly from an auger observation which is meant to determine or confirm in-field variability of soil characteristics possibly similar or comparable to characteristics yet observed in detail from yet classified soils.

Some auger observations were also classified according to the local (farmers) nomenclature. When done in consultation with a local land user, this may prove to be a more reliable entry to in-field soil classification whereby within-class variability can be assessed from augering till greater depth. Local soil names, plus possibly within-class variability identified from deep augering, may serve as the basis for detailed ‘scientific’ soil characterisation and classification according to WRB and for mapping the variability of soil-landscape resources. The advantage of such approach is the enhanced reliability of the in-field classification of soil observations and thus of the derived soil maps as well as the enhanced communicability and relevance for farmers and extension workers, without jeopardising the relevance and communication with the scientific community.

Outlook

By collecting and processing additional soil profile data, using a consistent approach as described in this report, reliable soil-landscape resource maps can be produced efficiently for additional woredas in Ethiopia. The results of this study, and of other well documented studies, may be used as input for the Ethiopian Soil Information Service (EthioSIS) resp. World Soil Information Service (WoSIS); once digitised and quality-assessed such data may serve soil mapping efforts in support to scaling up of best agricultural practices in Ethiopia and beyond. For this, the soil property data, of morphological, physical and chemical nature, need further interpretation relative to land use requirements and measured crop response to agricultural practices managing soil water and soil nutrients.

Acknowledgements

Funding for the CASCAPE project was provided by the Directorate-General for International Cooperation (DGIS) of the Netherlands Ministry of Foreign Affairs through the Netherlands Embassy in Ethiopia.

Acknowledgements are due to Arie van Kekem who initiated this study on soil-landscape resources within the CASCAPE project and contracted ISRIC – World Soil Information (JL) for expert advice.

Special thanks are due to consultants from the participating Ethiopian universities for carrying out most of the field work and reporting; Kibebew Kibret of Haramaya university, Mekonnen Getahun of Bahir Dar university, Engdawork Assefa of Addis Ababa university, Amanuel Zenebe et al. of Mekele university, Alemayehu Kiflu of Hawassa university and Alemayehu Regassa of Jimma university. Koos Dijkshoorn, formerly of ISRIC, provided guidance as a consultant during the field work in two regions.

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Annex 1 CASCAPE intervention woredas and kebeles

S/N	Region / University	Zone	Woreda	Kebele
1	Tigray / Mekelle (MKU)	Southern Tigray	Alaje	Ayba
2				Atsela
3			Endamehoni	Mekan
4				Simret
5			Ofla	Hashenge
6				Menkere
7				Hayalo
8			Raya-Alamata	Tumuga
9				Gerjale
10			Raya-Azebo	Tsigea
11				Genete
12	Amhara / Bahir Dar (BDU)	West Gojam	Bure	Zalma
13				Wadra
14				Woynima Ambaye
15				Arbici
16			Debub Achefer	Abchikili
17				Ker Guraji
18				Ahuri Keltafa
19				Lallibela
20			Jabi Tehnan	Jigga
21				Jimmat
22				Mana
23				Zaba
24			Mecha	Amarit
25				Abomesk
26				Tagel Wodefit
27				Agomamit
28				Kolela
29		South Gonder	Dera	Korata
30				Jigna
31				Shime
32				Gelawdwos
33	Oromia / Addis Ababa (AAU)	Arsi	Munessa	Gunguma
34				Chaffa
35				Gerenbota Lole
36				Munessa
37		East Shewa	Gimbichu	Adadi Gole
38				Habro seftu
39				Koka
40				Arada Gora
41		North Shewa	Girar Jarso	Torban Ashe
42				Girar Geber
43				Koticho Sefane
44				Wartu
45		West Shewa	Bako Tibe	Guto meti
46				Dembi dima
47				Amarti gibe
48				Bachara odda gibe
49		Southwest Shewa	Becho	Kobo
50				Soyoma
51				Awash Bune

S/N	Region / University	Zone	Woreda	Kebele
52				Wasarbi Abati
53	Oromia (East) / Haramaya (HMU)	East Hararge	Gurawa	Lafto Elatatessa
54				Rasa Janata
55				Lencha
56				Ula Janata
57			Haramaya	Kuro Jalala
58				Finkile
59				Damoto
60				Ifa Oromia
61			Kombolcha	Egu
62				Bilisuma
63				Kakali
64				Warra Mehamed
65			Meta	Hawi Bilisuma
66				Dursitu Bilisuma
67				Bakalcha Oromia
68				Chalanko Lola
69		West Hararge	Habro	Haro Charchar
70				Bareda
71				Ifa JIru
72				Garbi Gobe
73	SNNPR / Hawassa (HWU)	Gedeo	Bulle	Ilalcha
74				Sika
75				Basura
76				Daro
77		Gurage	Enamore na Ener	Agata
78				Kunber
79				Gomesh
80				Karabed
81			Cheha (the 5th newly selected woreda)	To be selected
82				To be selected
83				To be selected
84				To be selected
85		Sidama	Melga	Kocho
86				Sintaro
87				Fitokatumena
88				Guguma
89		Silte	Misrak Azernet	Adazer Abicho
90				Adazer Shebel
91				Yerim
92				Emejar
93	Oromia (West) / Jimma (JMU)	Illu Ababor	Bedelle	Banshure
94				Haro gefere
95				Mirge mute
96				Yebala
97			Dhidhessa	Yembero
98				Goro
99				Sobo
100				Challo
101		Jimma	Limu Seka	Mirkuz
102				Dora
103				Saka
104				Gejib
105			Gera	Ganji chala
106				Sadii

S/N	Region / University	Zone	Woreda	Kebele
107				Wanja kersa
108				Challo
109			Omonada	Doyo yaya
110				Nada Chala
111				Nada Bidaru
112				Toli Beyam

* Note that other spellings are also being used.

Annex 2a Field template for soil profile pit description

Soil Profile Description

Profile ID	**Date** ... / ... / ...	**Surveyor**	**Status (t1)** 1 2 3 4 5
Location (admin.)	**GPS E** ... ° ... ' ... "	**GPS N** ... ° ... ' ... "	**Elevation (m.)** .....
(Base) map unit ID	**Topography (t7)** <0.5 0.5-2 2-5 5-10 10-15 15-30 30-45 45-60 >60		
Major landform (t4) L (P L D F V) - S (E H M P) - T (E H M V)	**Position in landform, descr.**		
Position on slope (f2) CR UP MS LS TS BO	**Slope form (t6)** S C V T X / S V C	**Slope (%)** ...	
Land Use (t8) A M H F P S Y O U	**Crop (t9)** Ce Oi Fo Ro Fr Fi Ve Pu Lu Ot	**Human infl. (t10)**	
Geology descr.	**Parent material (t12)** I M S U		
Outcrops/stoniness (t15)	Cover (%) ... ,N V F C M A D	Size (cm.) ... ,F M C S B L	
Erosion (t16, 17, 18)	Category N W A WA M NK	Area % ... ,0 1 2 3 4 5	Degree S M V E
Sealing (t20)	Thickness (mm) ... ,N F M T V	Consistence S H V E	
Cracks (t21)	Width (cm) ... ,F M W V E	Depth (cm) ... ,S M D V	Distance (m) ... ,C D M W V
Surface drainage V R W S E	**Soil drainage** E S W M I P V	**Flooding freq.** (./yr)	**duration (wks)** ....
Depth to groundwater (cm) ..... /N	**Depth to bedrock (cm)** ..... /N	**Rootable depth (cm)** ....., V S M D X	
Local soil name		**Field WRB**	
Notes, observations, diagram			

Profile ID					
Horizon (p67 t85)	1	2	3	4	5
Depth interval (cm)	0 -				
Hor. Boundary Distinct. (t24)	A C G D	A C G D	A C G D	A C G D	A C G D
Topography (t24)	S W I B	S W I B	S W I B	S W I B	S W I B
Texture class (f4, t25)					
Coarse fragments					
Abundance % (t26)	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D
Size mm (t27)	F M C S B L	F M C S B L	F M C S B L	F M C S B L	F M C S B L
Weathering state (t29)	F W S	F W S	F W S	F W S	F W S
Colour munsell code moist					
Colour munsell code dry					
Mottles Abundance (t32)	N V F C M A	N V F C M A	N V F C M A	N V F C M A	N V F C M A
Size (t33)	V F M C	V F M C	V F M C	V F M C	V F M C
Prominence (t34)	F D P	F D P	F D P	F D P	F D P
Colour munsell code					

FAO, 2006. Guidelines for soil description, 4th ed.

Soil Profile Description

Carbonates (t38) by HCl		N SL MO ST EX	N SL MO ST EX	N SL MO ST EX	N SL MO ST EX	N SL MO ST EX
Field pH						
Horizon (p67 t85)		1	2	3	4	5
Structure	Grade (t47)	WE MO ST	WE MO ST	WE MO ST	WE MO ST	WE MO ST
	Size (t50)	VF F M C VC	VF F M C VC	VF F M C VC	VF F M C VC	VF F M C VC
(str breaking into str 2)	Type (t49)	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU
Structure 2	Grade (t47)	WE MO ST	WE MO ST	WE MO ST	WE MO ST	WE MO ST
	Size (t50)	VF F M C VC	VF F M C VC	VF F M C VC	VF F M C VC	VF F M C VC
	Type (t49)	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU	RS SG MA PM PR AB SAB PR WE CO GR WC PL CL CR LU
Consistency	Dry (t53)	LO SO SHA HA VHA EHA	LO SO SHA HA VHA EHA	LO SO SHA HA VHA EHA	LO SO SHA HA VHA EHA	LO SO SHA HA VHA EHA
	Moist (t54)	LO VFR FR FI VFI EFI	LO VFR FR FI VFI EFI	LO VFR FR FI VFI EFI	LO VFR FR FI VFI EFI	LO VFR FR FI VFI EFI
	Wet (t55, 56)	NS SS S VS NP SP P VP	NS SS S VS NP SP P VP	NS SS S VS NP SP P VP	NS SS S VS NP SP P VP	NS SS S VS NP SP P VP
Moisture status (t57)		VD D SM M W VW	VD D SM M W VW	VD D SM M W VW	VD D SM M W VW	VD D SM M W VW
Porosity	Volume % (t60)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	Abundance (t63)	N V F C M	N V F C M	N V F C M	N V F C M	N V F C M
Coatings	Abundance % (t64)	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D
	Contrast (t65)	F D P	F D P	F D P	F D P	F D P
	Nature (t66)	C S MN SF PF	C S MN SF PF	C S MN SF PF	C S MN SF PF	C S MN SF PF
Cementation /compaction	Nature (t71)					
	Degree (t72)	N Y W M C I	N Y W M C I	N Y W M C I	N Y W M C I	N Y W M C I
Mineral concentrations	Abundance % (t73)	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D
	Size mm (t75)	V F M C	V F M C	V F M C	V F M C	V F M C
	Hardness (t76)	H S B	H S B	H S B	H S B	H S B
	Nature (t77)					
Roots	Size mm (t79)	VF F M C	VF F M C	VF F M C	VF F M C	VF F M C
	Abundance % (t80)	N V F C M	N V F C M	N V F C M	N V F C M	N V F C M
Biological activity	Abundance % (t81)	N V F C M	N V F C M	N V F C M	N V F C M	N V F C M
	Kind (t82)	A B C E P T I	A B C E P T I	A B C E P T I	A B C E P T I	A B C E P T I
Sample interval (cm)						
Sample ID						
Diagnostic horizon						
Diagnostic property						
Diagnostic material						

SOIL PIT

FAO, 2006. Guidelines for soil description, 4th ed.

Annex 2b Field template for soil profile auger description

Soil auger description (short)

Auger ID	Date ... / ... / ...	Surveyor	Status (t1) 4 5
Location (admin.)	GPS* X (DD) ...,.....	GPS* Y (DD) ...,.....	Elevation (m.) .....
Base map-unit ID	Position on slope (f2) CR UP MS LS TS BO		Slope (%) ...
Topography (t7) 0-0.5 0.5-2 2-5 5-10 10-15 15-30 30-45 45-60 >60 (%)		Parent material (t12) Lo Ma Sa Ul	
Augered depth (cm)	Depth to bedrock (cm) ..... / N	Rootable depth (cm) ..... , V S M D X	
Local soil name	WRB reg	WRB qualifier	
Soil drainage V P I M W S E	Comment		

* GPS: WGS1984, decimal degrees, 6 decimals

Horizon (p67 t85)	1	2	3	4	5
Depth interval (cm)	0 -				
Texture class (f4, t25)					
Coarse fragments Abun. (t26)	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D	N V F C M A D
Colour munsell code moist					
Gley mottles Abundance (t32)	N V F C M A	N V F C M A	N V F C M A	N V F C M A	N V F C M A
Field pH					
Consistency Moist (t54)	LO VF FR FI VF	LO VF FR FI VF	LO VF FR FI VF	LO VF FR FI VF	LO VF FR FI VF
Wet (t55)	NS SS S VS	NS SS S VS	NS SS S VS	NS SS S VS	NS SS S VS
Porosity (v%) (t60)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Cement/compact Degree (t72)	N Y W M C I	N Y W M C I	N Y W M C I	N Y W M C I	N Y W M C I
Roots Presence	Y N	Y N	Y N	Y N	Y N
Diagnostic horizon					
Diagnostic property					
Diagnostic material					
Notes					
Sample ID					

FAO, 2006. Guidelines for soil description, 4th ed.

Annex 3a Soil profile pits & augers at kebele level, site data

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
ABAP001	34089	Mekonnen G.	BDU	Burie	37.14687	10.74394	-	Luvic Nitisols (Rhodic)	P
ABAP002	34089	Mekonnen G.	BDU	Burie	37.15567	10.73617	-	Luvic Nitisols (Rhodic)	P
ABWAP001	34089	Mekonnen G.	BDU	Burie	37.10998	10.72045	-	Mollic Nitisols (Rhodic, Humic)	P
ABWAP002	34089	Mekonnen G.	BDU	Burie	37.11122	10.73852	-	Mollic Nitisols (Rhodic, Humic)	P
ABWGP001	34089	Mekonnen G.	BDU	Burie	37.06190	10.65179	-	Luvic Nitisols (Rhodic)	P
ABWGP002	34089	Mekonnen G.	BDU	Burie	37.06100	10.63700	-	Gleyic Vertisols (Pellic, Eutric)	P
ABZAP001	34089	Mekonnen G.	BDU	Burie	37.01794	10.51896	-	Luvic Nitisols (Rhodic)	P
ABZAP002	34089	Mekonnen G.	BDU	Burie	37.03063	10.54927	-	Gleyic Vertisols (Chromic, Eutric)	P
ADGP001	34089	Mekonnen G.	BDU	Dera	37.80196	11.63484	-	Haplic Luvisols (Rhodic)	P
ADGP002	34089	Mekonnen G.	BDU	Dera	37.79200	11.63100	-	Haplic Luvisols (Manganiferric)	P
ADJP001	34089	Mekonnen G.	BDU	Dera	37.60718	11.84805	-	Gleyic Vertisols (Pellic, Eutric)	P
ADJP002	34089	Mekonnen G.	BDU	Dera	37.63325	11.83161	-	Haplic Vertisols (Eutric, Chromic)	P
ADQP001	34089	Mekonnen G.	BDU	Dera	37.45009	11.73484	-	Nitic Luvisols (Rhodic)	P
ADQP002	34089	Mekonnen G.	BDU	Dera	37.49300	11.75700	-	Haplic Luvisols (Manganiferric)	P
ADSP001	34089	Mekonnen G.	BDU	Dera	37.70091	11.64193	-	Nitic Luvisols (Manganiferric)	P
ADSP002	34089	Mekonnen G.	BDU	Dera	37.74543	11.63933	-	Haplic Luvisols (Rhodic)	P
AJJIP001	34089	Mekonnen G.	BDU	Jabi Tehnan	37.32483	10.65928	-	Luvic Nitisols (Rhodic)	P
AJJIP002	34089	Mekonnen G.	BDU	Jabi Tehnan	37.35054	10.64568	-	Haplic Vertisols (Chromic, Eutric)	P
AJJP001	34089	Mekonnen G.	BDU	Jabi Tehnan	37.35893	10.68601	-	Luvic Nitisols (Rhodic)	P
AJJP002	34089	Mekonnen G.	BDU	Jabi Tehnan	37.37190	10.66651	-	Gleyic Vertisols (Pellic, Eutric)	P
AJMP001	34089	Mekonnen G.	BDU	Jabi Tehnan	37.17361	10.72854	-	Mollic Nitisols (Rhodic, Humic)	P
AJMP002	34089	Mekonnen G.	BDU	Jabi Tehnan	37.17790	10.73985	-	Haplic Nitisols	P
AJZTP001	34089	Mekonnen G.	BDU	Jabi Tehnan	37.14428	10.70993	-	Luvic Nitisols (Rhodic)	P
AJZTP002	34089	Mekonnen G.	BDU	Jabi Tehnan	37.14379	10.69439	-	Haplic Vertisols (Chromic, Eutric)	P
AMAMP001	34089	Mekonnen G.	BDU	Mecha	37.06008	11.40739	-	Luvic Nitisols (Rhodic)	P
AMAMP002	34089	Mekonnen G.	BDU	Mecha	37.06207	11.38484	-	Haplic Nitisols	P
AMAP001	34089	Mekonnen G.	BDU	Mecha	37.09966	11.47332	-	Nitic Luvisols (Rhodic)	P
AMAP002	34089	Mekonnen G.	BDU	Mecha	37.10160	11.53744	-	Luvic Nitisols (Rhodic)	P
AMIP001	34089	Mekonnen G.	BDU	Mecha	37.13106	11.43201	-	Mollic Nitisols (Rhodic, Humic)	P
AMIP002	-	Mekonnen G.	BDU	Mecha	0.00000	0.00000	-	-	P
AMKP001	34089	Mekonnen G.	BDU	Mecha	37.12481	11.45925	-	Haplic Luvisols (Manganiferric)	P
AMKP002	34089	Mekonnen G.	BDU	Mecha	37.17492	11.51378	-	Haplic Luvisols (Manganiferric)	P
AMTWP001	34089	Mekonnen G.	BDU	Mecha	37.08308	11.42974	-	Haplic Luvisols (Rhodic)	P
AMTWP002	34089	Mekonnen G.	BDU	Mecha	37.05058	11.43753	-	Luvic Nitisols (Rhodic)	P

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
ASAAKP001	34089	Mekonnen G.	BDU	South Achefer	36.94537	11.41630	-	Mollic Nitisols (Rhodic, Humic)	P
ASAAKP002	34089	Mekonnen G.	BDU	South Achefer	36.94382	11.42921	-	Gleyic Vertisols (Eutric, Chromic)	P
ASAAP001	34089	Mekonnen G.	BDU	South Achefer	36.95240	11.36370	-	Luvic Nitisols (Rhodic)	P
ASAAP002	34089	Mekonnen G.	BDU	South Achefer	36.93117	11.33927	-	Haplic Nitisols (Rhodic)	P
ASAKGP001	34089	Mekonnen G.	BDU	South Achefer	37.00237	11.40788	-	Haplic Luvisols (Rhodic)	P
ASAKGP002	34089	Mekonnen G.	BDU	South Achefer	36.98774	11.37875	-	Luvic Nitisols (Rhodic)	P
ASALP001	34089	Mekonnen G.	BDU	South Achefer	36.94855	11.52083	-	Nitic Luvisols (Rhodic)	P
ASALP002	34089	Mekonnen G.	BDU	South Achefer	36.92293	11.55202	-	Nitic Luvisols (Manganiferric)	P
BDU_A001	34089	Mekonnen G.	BDU	Dera	37.50376	11.73460	-	Gleyic Vertisols	A
BDU_A002	34089	Mekonnen G.	BDU	Dera	37.44155	11.72954	-	Gleyic Vertisols	A
BDU_A003	34089	Mekonnen G.	BDU	Dera	37.49006	11.76461	-	Luvisols	A
BDU_A004	34089	Mekonnen G.	BDU	Dera	37.45052	11.72983	-	Lithic Leptosols	A
BDU_A005	34089	Mekonnen G.	BDU	Dera	37.44961	11.73710	-	Leptosols	A
BDU_A006	34089	Mekonnen G.	BDU	Dera	37.50609	11.73692	-	Nitisols	A
BDU_A007	34089	Mekonnen G.	BDU	Dera	37.48567	11.75864	-	Nitisols	A
BDU_A008	34089	Mekonnen G.	BDU	Dera	37.46032	11.75935	-	Luvisols	A
BDU_A009	34089	Mekonnen G.	BDU	Dera	37.62758	11.86005	-	Chromic Vertisols	A
BDU_A010	34089	Mekonnen G.	BDU	Dera	37.59585	11.86765	-	Pellic Vertisols	A
BDU_A011	34089	Mekonnen G.	BDU	Dera	37.62045	11.84583	-	Gleyic Vertisols	A
BDU_A012	34089	Mekonnen G.	BDU	Dera	37.63492	11.81472	-	Chromic Vertisols	A
BDU_A013	34089	Mekonnen G.	BDU	Dera	37.60479	11.87351	-	Chromic Vertisols	A
BDU_A014	34089	Mekonnen G.	BDU	Dera	37.74734	11.64014	-	Leptosols	A
BDU_A015	34089	Mekonnen G.	BDU	Dera	37.72694	11.63670	-	Lithic Leptosols	A
BDU_A016	34089	Mekonnen G.	BDU	Dera	37.77119	11.63533	-	Lithic Leptosols	A
BDU_A017	34089	Mekonnen G.	BDU	Dera	37.73458	11.64493	-	Lithic Leptosols	A
BDU_A018	34089	Mekonnen G.	BDU	Dera	37.73829	11.62030	-	Luvisols	A
BDU_A019	34089	Mekonnen G.	BDU	Dera	37.70559	11.64474	-	Luvisols	A
BDU_A020	34089	Mekonnen G.	BDU	Dera	37.79332	11.63210	-	Leptosols	A
BDU_A021	34089	Mekonnen G.	BDU	Dera	37.82755	11.62400	-	Lithic Leptosols	A
BDU_A022	34089	Mekonnen G.	BDU	Dera	37.85371	11.63717	-	Luvisols	A
BDU_A023	34089	Mekonnen G.	BDU	Dera	37.85337	11.63591	-	Lithic Leptosols	A
BDU_A024	34089	Mekonnen G.	BDU	Dera	37.84130	11.63411	-	Luvisols	A
BDU_A025	34089	Mekonnen G.	BDU	Dera	37.81415	11.63272	-	Luvisols	A
BDU_A026	34089	Mekonnen G.	BDU	Dera	37.80998	11.64380	-	Lithic Leptosols	A
BDU_A027	34089	Mekonnen G.	BDU	Mecha	37.12472	11.43001	-	Nitisols	A
BDU_A028	34089	Mekonnen G.	BDU	Mecha	37.12286	11.42699	-	Vertisols	A
BDU_A029	34089	Mekonnen G.	BDU	Mecha	37.11838	11.43167	-	Vertisols	A

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
BDU_A030	34089	Mekonnen G.	BDU	Mecha	37.10959	11.43041	-	Nitisols	A
BDU_A031	34089	Mekonnen G.	BDU	Mecha	37.11519	11.44543	-	Nitisols	A
BDU_A032	34089	Mekonnen G.	BDU	Mecha	37.11034	11.41530	-	Gleyic Vertisols	A
BDU_A033	34089	Mekonnen G.	BDU	Mecha	37.05978	11.40862	-	Luvic Nitisols	A
BDU_A034	34089	Mekonnen G.	BDU	Mecha	37.04356	11.40564	-	Luvic Nitisols	A
BDU_A035	34089	Mekonnen G.	BDU	Mecha	37.08015	11.39875	-	Vertisols	A
BDU_A036	34089	Mekonnen G.	BDU	Mecha	37.04120	11.38933	-	Luvisols	A
BDU_A037	34089	Mekonnen G.	BDU	Mecha	37.04200	11.38681	-	Lithic Leptosols	A
BDU_A038	34089	Mekonnen G.	BDU	Mecha	37.08236	11.38379	-	Nitisols	A
BDU_A039	34089	Mekonnen G.	BDU	Mecha	37.04680	11.43248	-	Nitisols	A
BDU_A040	34089	Mekonnen G.	BDU	Mecha	37.09531	11.41665	-	Nitisols	A
BDU_A041	34089	Mekonnen G.	BDU	Mecha	37.09383	11.42073	-	Lithic Leptosols	A
BDU_A042	34089	Mekonnen G.	BDU	Mecha	37.03103	11.44844	-	Luvisols	A
BDU_A043	34089	Mekonnen G.	BDU	Mecha	37.06900	11.43570	-	Nitisols	A
BDU_A044	34089	Mekonnen G.	BDU	Mecha	37.11512	11.52058	-	Nitisols	A
BDU_A045	34089	Mekonnen G.	BDU	Mecha	37.11480	11.55603	-	Nitisols	A
BDU_A046	34089	Mekonnen G.	BDU	Mecha	37.12828	11.57812	-	Luvisols	A
BDU_A047	34089	Mekonnen G.	BDU	Mecha	37.12089	11.51373	-	Vertisols	A
BDU_A048	34089	Mekonnen G.	BDU	Mecha	37.16588	11.52030	-	Luvisols	A
BDU_A049	34089	Mekonnen G.	BDU	Mecha	37.14320	11.50486	-	Nitisols	A
BDU_A050	34089	Mekonnen G.	BDU	Mecha	37.14226	11.53253	-	Nitisols	A
BDU_A051	34089	Mekonnen G.	BDU	Mecha	37.14957	11.56231	-	Nitisols	A
BDU_A052	34089	Mekonnen G.	BDU	Mecha	37.16363	11.48434	-	Nitisols	A
BDU_A053	34089	Mekonnen G.	BDU	South Achefer	37.00417	11.39502	-	Luvisols	A
BDU_A054	34089	Mekonnen G.	BDU	South Achefer	36.98079	11.39185	-	Luvisols	A
BDU_A055	34089	Mekonnen G.	BDU	South Achefer	37.00429	11.38981	-	Leptosols	A
BDU_A056	34089	Mekonnen G.	BDU	South Achefer	37.01444	11.36776	-	Gleyic Vertisols	A
BDU_A057	34089	Mekonnen G.	BDU	South Achefer	36.93038	11.34936	-	Nitisols	A
BDU_A058	34089	Mekonnen G.	BDU	South Achefer	36.91828	11.35499	-	Nitisols	A
BDU_A059	34089	Mekonnen G.	BDU	South Achefer	36.94526	11.33002	-	Nitisols	A
BDU_A060	34089	Mekonnen G.	BDU	South Achefer	36.93733	11.36530	-	Gleyic Vertisols	A
BDU_A061	34089	Mekonnen G.	BDU	South Achefer	36.93215	11.40672	-	Luvisols	A
BDU_A062	34089	Mekonnen G.	BDU	South Achefer	36.93829	11.42038	-	Luvisols	A
BDU_A063	34089	Mekonnen G.	BDU	South Achefer	36.93677	11.43023	-	Luvisols	A
BDU_A064	34089	Mekonnen G.	BDU	South Achefer	36.93125	11.42716	-	Luvisols	A
BDU_A065	34089	Mekonnen G.	BDU	South Achefer	36.93104	11.55346	-	Lithic Leptosols	A
BDU_A066	34089	Mekonnen G.	BDU	South Achefer	36.93857	11.55504	-	Luvisols	A

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
BDU_A067	34089	Mekonnen G.	BDU	South Achefer	36.93442	11.54513	-	Luvisols	A
BDU_A068	34089	Mekonnen G.	BDU	South Achefer	36.93901	11.53834	-	Leptosols	A
BDU_A069	34089	Mekonnen G.	BDU	South Achefer	36.94163	11.53095	-	Luvisols	A
BDU_A070	34089	Mekonnen G.	BDU	Burie	37.11364	10.72625	-	Nitisols	A
BDU_A071	34089	Mekonnen G.	BDU	Burie	37.11467	10.73222	-	Nitisols	A
BDU_A072	34089	Mekonnen G.	BDU	Burie	37.11959	10.73721	-	Nitisols	A
BDU_A073	34089	Mekonnen G.	BDU	Burie	37.11610	10.73880	-	Lithic Leptosols	A
BDU_A074	34089	Mekonnen G.	BDU	Burie	37.10269	10.73242	-	Leptosols	A
BDU_A075	34089	Mekonnen G.	BDU	Burie	37.04516	10.63315	-	Gleyic Vertisols	A
BDU_A076	34089	Mekonnen G.	BDU	Burie	37.05532	10.63660	-	Nitisols	A
BDU_A077	34089	Mekonnen G.	BDU	Burie	37.06179	10.65680	-	Gleyic Vertisols	A
BDU_A078	34089	Mekonnen G.	BDU	Burie	37.05592	10.65759	-	Luvisols	A
BDU_A079	34089	Mekonnen G.	BDU	Burie	37.05129	10.66204	-	Leptosols	A
BDU_A080	34089	Mekonnen G.	BDU	Burie	37.04764	10.65492	-	Lithic Leptosols	A
BDU_A081	34089	Mekonnen G.	BDU	Burie	37.16432	10.72930	-	Leptosols	A
BDU_A082	34089	Mekonnen G.	BDU	Burie	37.14877	10.73505	-	Leptosols	A
BDU_A083	34089	Mekonnen G.	BDU	Burie	37.15703	10.74387	-	Lithic Leptosols	A
BDU_A084	34089	Mekonnen G.	BDU	Burie	37.15222	10.75073	-	Haplic Nitisols	A
BDU_A085	34089	Mekonnen G.	BDU	Burie	37.14320	10.74744	-	Luvic Nitisols	A
BDU_A086	34089	Mekonnen G.	BDU	Burie	37.13814	10.75043	-	Leptosols	A
BDU_A087	34089	Mekonnen G.	BDU	Burie	37.02635	10.52349	-	Leptosols	A
BDU_A088	34089	Mekonnen G.	BDU	Burie	37.03452	10.53991	-	Luvic Nitisols	A
BDU_A089	34089	Mekonnen G.	BDU	Burie	37.02044	10.54150	-	Luvic Nitisols	A
BDU_A090	34089	Mekonnen G.	BDU	Burie	37.02076	10.55281	-	Haplic Nitisols	A
BDU_A091	34089	Mekonnen G.	BDU	Burie	37.02652	10.57231	-	Luvic Nitisols	A
BDU_A092	34089	Mekonnen G.	BDU	Burie	37.03156	10.57442	-	Vertisols	A
BDU_A093	34089	Mekonnen G.	BDU	Burie	37.02642	10.57549	-	Haplic Nitisols	A
BDU_A094	34089	Mekonnen G.	BDU	Burie	37.03664	10.58028	-	Leptosols	A
BDU_A095	34089	Mekonnen G.	BDU	Jabi Tehinan	37.17604	10.73142	-	Haplic Nitisols	A
BDU_A096	34089	Mekonnen G.	BDU	Jabi Tehinan	37.18251	10.73180	-	Leptosols	A
BDU_A097	34089	Mekonnen G.	BDU	Jabi Tehinan	37.17039	10.72654	-	Haplic Nitisols	A
BDU_A098	34089	Mekonnen G.	BDU	Jabi Tehinan	37.18358	10.72506	-	Haplic Nitisols	A
BDU_A099	34089	Mekonnen G.	BDU	Jabi Tehinan	37.17053	10.71545	-	Haplic Nitisols	A
BDU_A100	34089	Mekonnen G.	BDU	Jabi Tehinan	37.18101	10.71555	-	Mollic Nitisols	A
BDU_A101	34089	Mekonnen G.	BDU	Jabi Tehinan	37.18170	10.71051	-	Vertisols	A
BDU_A102	34089	Mekonnen G.	BDU	Jabi Tehinan	37.18754	10.70704	-	Mollic Nitisols	A
BDU_A103	34089	Mekonnen G.	BDU	Jabi Tehinan	37.15017	10.69822	-	Luvic Nitisols	A

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
BDU_A104	34089	Mekonnen G.	BDU	Jabi Tehinan	37.15719	10.69834	-	Leptosols	A
BDU_A105	34089	Mekonnen G.	BDU	Jabi Tehinan	37.15602	10.70388	-	Gleyic Vertisols	A
BDU_A106	34089	Mekonnen G.	BDU	Jabi Tehinan	37.14984	10.70774	-	Mollic Nitisols	A
BDU_A107	34089	Mekonnen G.	BDU	Jabi Tehinan	37.13531	10.69302	-	Mollic Nitisols	A
BDU_A108	34089	Mekonnen G.	BDU	Jabi Tehinan	37.13415	10.70309	-	Mollic Nitisols	A
BDU_A109	34089	Mekonnen G.	BDU	Jabi Tehinan	37.35911	10.67494	-	Vertisols	A
BDU_A110	34089	Mekonnen G.	BDU	Jabi Tehinan	37.36283	10.67054	-	Leptosols	A
BDU_A111	34089	Mekonnen G.	BDU	Jabi Tehinan	37.37734	10.65626	-	Luvic Nitisols	A
BDU_A112	34089	Mekonnen G.	BDU	Jabi Tehinan	37.38390	10.65936	-	Luvic Nitisols	A
BDU_A113	34089	Mekonnen G.	BDU	Jabi Tehinan	37.36411	10.69556	-	Luvic Nitisols	A
BDU_A114	34089	Mekonnen G.	BDU	Jabi Tehinan	37.36379	10.70087	-	Leptosols	A
BDU_A115	34089	Mekonnen G.	BDU	Jabi Tehinan	37.32473	10.65937	-	Gleyic Vertisols	A
BDU_A116	34089	Mekonnen G.	BDU	Jabi Tehinan	37.33343	10.66039	-	Leptosols	A
BDU_A117	34089	Mekonnen G.	BDU	Jabi Tehinan	37.32324	10.65491	-	Nitisols	A
BDU_A118	34089	Mekonnen G.	BDU	Jabi Tehinan	37.33121	10.64391	-	Leptosols	A
BDU_A119	34089	Mekonnen G.	BDU	Jabi Tehinan	37.33000	10.63208	-	Nitisols	A
BDU_A120	34089	Mekonnen G.	BDU	Jabi Tehinan	37.33234	10.63423	-	Nitisols	A
BDU_A121	34089	Mekonnen G.	BDU	Jabi Tehinan	37.34261	10.63930	-	Nitisols	P
Bu-Ba-P1	34103	Alemayehu K.	HWU	-	38.38167	6.31833	-	Haplic Luvisols (Chromic)	P
Bu-Ba-P2	34103	Alemayehu K.	HWU	-	38.36722	6.31889	-	Cutanic Luvisols (Chromic)	P
Bu-De-P1	34103	Alemayehu K.	HWU	-	38.35917	6.32028	-	Haplic Luvisols (Clayic)	P
Bu-De-P2	34103	Alemayehu K.	HWU	-	38.35389	6.30722	-	Haplic Luvisols (Chromic)	P
Bu-De-P3	34103	Alemayehu K.	HWU	-	38.36250	6.30222	-	Haplic Cambisols (Eutric)	P
Bu-Ila-P1	34103	Alemayehu K.	HWU	-	38.42028	6.27028	-	Haplic Luvisols (Chromic)	P
Bu-Illa-P2	34103	Alemayehu K.	HWU	-	38.38167	6.31833	-	Cutanic Luvisols (Chromic)	P
Bu-Si-P1	34103	Alemayehu K.	HWU	-	38.40917	6.27750	-	Cutanic Luvisols (Chromic)	P
Ch-Ew-P1	34103	Alemayehu K.	HWU	-	37.81250	8.22861	-	Gleyic Vertisols (Eutric)	P
Ch-Mo-P1	34103	Alemayehu K.	HWU	-	38.01389	8.04972	-	Cutanic Luvisols (Chromic)	P
Ch-Mo-P2	34103	Alemayehu K.	HWU	-	38.01500	8.06111	-	Cutanic Luvisols (Chromic)	P
Ch-Wo-P1	34103	Alemayehu K.	HWU	-	37.77583	8.16028	-	Haplic Luvisols (Chromic)	P
Ch-Wo-P2	34103	Alemayehu K.	HWU	-	37.79667	8.16722	-	Gleyic Vertisols (Eutric)	P
Ch-Ye-P1	34103	Alemayehu K.	HWU	-	37.92806	8.14472	-	Haplic Luvisols (Chromic)	P
Ch-Ye-P2	34103	Alemayehu K.	HWU	-	37.93167	8.13528	-	Haplic Luvisols (Chromic)	P
En-Ag-P1	34103	Alemayehu K.	HWU	-	37.89222	7.93778	-	Cutanic Luvisols (Chromic)	P
En-Go-P1	34103	Alemayehu K.	HWU	-	37.77111	8.06083	-	Haplic Luvisols (Chromic)	P
En-Go-P2	34103	Alemayehu K.	HWU	-	37.77694	8.05389	-	Gleyic Vertisols (Mesotropic)	P
En-Ke-P1	34103	Alemayehu K.	HWU	-	37.76361	8.04889	-	Gleyic Vertisols (Mesotropic)	P

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En-Ku-P1	34103	Alemayehu K.	HWU	-	37.88139	7.96528	-	Cutanic Luvisols (Chromic)	P
En-Ku-P2	34103	Alemayehu K.	HWU	-	37.87694	7.96028	-	Cutanic Luvisols (Chromic)	P
GRW/LH/A1	34088	Kibebew K.	HMU	-	41.77806	9.21419	-	Gleyic Luvisols	A
GRW/LH/A2	34088	Kibebew K.	HMU	-	41.77144	9.21072	-	Cambisols	A
GRW/LH/A3	34088	Kibebew K.	HMU	-	41.77369	9.20106	-	Leptosols	A
GRW/LH/A4	34088	Kibebew K.	HMU	-	41.78183	9.19697	-	Luvic Nitisols	A
GRW/LH/A5	34088	Kibebew K.	HMU	-	41.77897	9.18172	-	Luvic Nitisols (Rhodic)	A
GRW/LH/A6	34088	Kibebew K.	HMU	-	41.77711	9.17044	-	Vertic Calcisols	A
GRW/LH/A7	34088	Kibebew K.	HMU	-	41.78581	9.16644	-	Vertisols	A
GRW/LH/A8	34088	Kibebew K.	HMU	-	41.78042	9.15022	-	Vertisols	A
GRW/LT/A1	34088	Kibebew K.	HMU	-	41.78056	9.02836	-	Luvic Nitisols (Rhodic)	A
GRW/LT/A2	34088	Kibebew K.	HMU	-	41.77739	9.03228	-	Leptosols	A
GRW/LT/A3	34088	Kibebew K.	HMU	-	41.77722	9.03486	-	Vertic Luvisols	A
GRW/LT/A4	34088	Kibebew K.	HMU	-	41.77389	9.02997	-	Luvic Nitisols	A
GRW/LT/A5	34088	Kibebew K.	HMU	-	41.76931	9.02900	-	Cambisols (Rhodic)	A
GRW/LT/A6	34088	Kibebew K.	HMU	-	41.76900	9.05153	-	Vertic Cambisols	A
GRW/LT/A7	34088	Kibebew K.	HMU	-	41.76536	9.05706	-	Luvic Nitisols	A
GRW/LT/A8	34088	Kibebew K.	HMU	-	41.76056	9.05742	-	Vertic Cambisols	A
GRW/RJ/A1	34088	Kibebew K.	HMU	-	41.81114	9.19772	-	Vertic Luvisols	A
GRW/RJ/A2	34088	Kibebew K.	HMU	-	41.81064	9.19142	-	Vertic Luvisols	A
GRW/RJ/A3	34088	Kibebew K.	HMU	-	41.80964	9.18789	-	Calcic Vertisols	A
GRW/RJ/A4	34088	Kibebew K.	HMU	-	41.80000	9.18906	-	Vertic Cambisols	A
GRW/RJ/A5	34088	Kibebew K.	HMU	-	41.79692	9.16817	-	Gleyic Vertisols	A
GRW/RJ/A6	34088	Kibebew K.	HMU	-	41.79789	9.18122	-	Vertisols (Rhodic)	A
GRW/RJ/A7	34088	Kibebew K.	HMU	-	41.79211	9.18567	-	Luvic Nitisols	A
GRW/RJ/A8	34088	Kibebew K.	HMU	-	41.79472	9.19789	-	Vertisols	A
GRW/UJ/A1	34088	Kibebew K.	HMU	-	41.82286	9.14428	-	Vertic Luvisols	A
GRW/UJ/A2	34088	Kibebew K.	HMU	-	41.81789	9.14694	-	Vertic Luvisols	A
GRW/UJ/A3	34088	Kibebew K.	HMU	-	41.81414	9.15592	-	Vertisols	A
GRW/UJ/A4	34088	Kibebew K.	HMU	-	41.81986	9.15942	-	Regosols	A
GRW/UJ/A5	34088	Kibebew K.	HMU	-	41.81992	9.16519	-	Regosols	A
GRW/UJ/A6	34088	Kibebew K.	HMU	-	41.81608	9.16689	-	Luvisols (Rhodic)	A
GRW/UJ/A7	34088	Kibebew K.	HMU	-	41.79261	9.16667	-	Vertic Cambisols	A
GRW/UJ/A8	34088	Kibebew K.	HMU	-	41.80256	9.16572	-	Vertisols	A
Haw_A001	34103	Alemayehu K.	HWU	Bule	38.38194	6.31694	Tiloke	Luvisols	A
Haw_A002	34103	Alemayehu K.	HWU	Bule	38.38028	6.31917	Tiloke	Luvisols	A
Haw_A003	34103	Alemayehu K.	HWU	Bule	38.37944	6.31889	Tiloke	Luvisols	A

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Haw_A004	34103	Alemayehu K.	HWU	Bule	38.37583	6.31806	Tiloke	Luvisols	A
Haw_A005	34103	Alemayehu K.	HWU	Bule	38.36917	6.31806	Tiloke	Luvisols	A
Haw_A006	34103	Alemayehu K.	HWU	Bule	38.36556	6.31917	Tiloke	Luvisols	A
Haw_A007	34103	Alemayehu K.	HWU	Bule	38.37056	6.31611	Tiloke	Luvisols	A
Haw_A008	34103	Alemayehu K.	HWU	Bule	38.37056	6.31361	Tiloke	Luvisols	A
Haw_A009	34103	Alemayehu K.	HWU	Bule	38.35917	6.32028	Tiloke	Luvisols	A
Haw_A010	34103	Alemayehu K.	HWU	Bule	38.36056	6.32167	Tiloke	Luvisols	A
Haw_A011	34103	Alemayehu K.	HWU	Bule	38.36167	6.31167	Tiloke	Luvisols	A
Haw_A012	34103	Alemayehu K.	HWU	Bule	38.35500	6.30611	Tiloke	Luvisols	A
Haw_A013	34103	Alemayehu K.	HWU	Bule	38.35389	6.30722	Tiloke	Luvisols	A
Haw_A014	34103	Alemayehu K.	HWU	Bule	38.35750	6.30611	Demoke	Cambisols	A
Haw_A015	34103	Alemayehu K.	HWU	Bule	38.36111	6.30444	Demoke	Cambisols	A
Haw_A016	34103	Alemayehu K.	HWU	Bule	38.36250	6.30222	Demoke	Cambisols	A
Haw_A017	34103	Alemayehu K.	HWU	Bule	38.42000	6.25528	Tiloke	Luvisols	A
Haw_A018	34103	Alemayehu K.	HWU	Bule	38.42167	6.25806	Tiloke	Luvisols	A
Haw_A019	34103	Alemayehu K.	HWU	Bule	38.42194	6.26083	Tiloke	Luvisols	A
Haw_A020	34103	Alemayehu K.	HWU	Bule	38.42194	6.26472	Tiloke	Luvisols	A
Haw_A021	34103	Alemayehu K.	HWU	Bule	38.42028	6.27028	Tiloke	Luvisols	A
Haw_A022	34103	Alemayehu K.	HWU	Bule	38.42083	6.26639	Tiloke	Luvisols	A
Haw_A023	34103	Alemayehu K.	HWU	Bule	38.42139	6.27306	Tiloke	Luvisols	A
Haw_A024	34103	Alemayehu K.	HWU	Bule	38.41917	6.27167	Tiloke	Luvisols	A
Haw_A025	34103	Alemayehu K.	HWU	Bule	38.40917	6.28278	Tiloke	Luvisols	A
Haw_A026	34103	Alemayehu K.	HWU	Bule	38.40889	6.28611	Tiloke	Luvisols	A
Haw_A027	34103	Alemayehu K.	HWU	Bule	38.40222	6.28167	Tiloke	Luvisols	A
Haw_A028	34103	Alemayehu K.	HWU	Bule	38.40889	6.28056	Tiloke	Luvisols	A
Haw_A029	34103	Alemayehu K.	HWU	Bule	38.39639	6.28306	Tiloke	Luvisols	A
Haw_A030	34103	Alemayehu K.	HWU	Bule	38.41139	6.27861	Tiloke	Luvisols	A
Haw_A031	34103	Alemayehu K.	HWU	Bule	38.40778	6.28000	Tiloke	Luvisols	A
Haw_A032	34103	Alemayehu K.	HWU	Bule	38.40917	6.27639	Tiloke	Luvisols	A
Haw_A033	34103	Alemayehu K.	HWU	Cheha	37.81139	8.22611	Tikur	Vertisols	A
Haw_A034	34103	Alemayehu K.	HWU	Cheha	37.81333	8.23167	Tikur	Vertisols	A
Haw_A035	34103	Alemayehu K.	HWU	Cheha	37.81583	8.22306	Tikur	Vertisols	A
Haw_A036	34103	Alemayehu K.	HWU	Cheha	37.82222	8.22139	Tikur	Vertisols	A
Haw_A037	34103	Alemayehu K.	HWU	Cheha	37.83083	8.22889	Tikur	Vertisols	A
Haw_A038	34103	Alemayehu K.	HWU	Cheha	37.82806	8.22972	Tikur	Vertisols	A
Haw_A039	34103	Alemayehu K.	HWU	Cheha	37.82611	8.23278	Tikur	Vertisols	A
Haw_A040	34103	Alemayehu K.	HWU	Cheha	37.82500	8.23139	Tikur	Vertisols	A

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Haw_A041	34103	Alemayehu K.	HWU	Cheha	38.01583	8.06222	Besha	Luvisols	A
Haw_A042	34103	Alemayehu K.	HWU	Cheha	38.01778	8.05917	Besha	Luvisols	A
Haw_A043	34103	Alemayehu K.	HWU	Cheha	38.01667	8.05333	Besha	Luvisols	A
Haw_A044	34103	Alemayehu K.	HWU	Cheha	38.01833	8.05167	Besha	Luvisols	A
Haw_A045	34103	Alemayehu K.	HWU	Cheha	38.01306	8.06000	Besha	Luvisols	A
Haw_A046	34103	Alemayehu K.	HWU	Cheha	38.01639	8.04917	Besha	Luvisols	A
Haw_A047	34103	Alemayehu K.	HWU	Cheha	38.01778	8.04917	Besha	Luvisols	A
Haw_A048	34103	Alemayehu K.	HWU	Cheha	38.01361	8.05000	Besha	Luvisols	A
Haw_A049	34103	Alemayehu K.	HWU	Cheha	37.77694	8.16111	Besha	Nitisols	A
Haw_A050	34103	Alemayehu K.	HWU	Cheha	37.77417	8.15917	Besha	Nitisols	A
Haw_A051	34103	Alemayehu K.	HWU	Cheha	37.80028	8.17000	Tikur	Vertisols	A
Haw_A052	34103	Alemayehu K.	HWU	Cheha	37.80056	8.16333	Tikur	Vertisols	A
Haw_A053	34103	Alemayehu K.	HWU	Cheha	37.79139	8.16861	Tikur	Vertisols	A
Haw_A054	34103	Alemayehu K.	HWU	Cheha	37.78389	8.16750	Tikur	Vertisols	A
Haw_A055	34103	Alemayehu K.	HWU	Cheha	37.78056	8.16333	Tikur	Vertisols	A
Haw_A056	34103	Alemayehu K.	HWU	Cheha	37.79583	8.16778	Tikur	Vertisols	A
Haw_A057	34103	Alemayehu K.	HWU	Cheha	37.92694	8.14722	Besha	Luvisols	A
Haw_A058	34103	Alemayehu K.	HWU	Cheha	37.93000	8.14694	Besha	Luvisols	A
Haw_A059	34103	Alemayehu K.	HWU	Cheha	37.92917	8.14194	Besha	Luvisols	A
Haw_A060	34103	Alemayehu K.	HWU	Cheha	37.92139	8.14194	Besha	Luvisols	A
Haw_A061	34103	Alemayehu K.	HWU	Cheha	37.92389	8.13778	Besha	Luvisols	A
Haw_A062	34103	Alemayehu K.	HWU	Cheha	37.92833	8.13528	Besha	Luvisols	A
Haw_A063	34103	Alemayehu K.	HWU	Cheha	37.93111	8.13861	Besha	Luvisols	A
Haw_A064	34103	Alemayehu K.	HWU	Cheha	37.93028	8.13167	Besha	Luvisols	A
Haw_A065	34103	Alemayehu K.	HWU	Enemor Ener	37.88528	7.95500	Gembena	Luvisols	A
Haw_A066	34103	Alemayehu K.	HWU	Enemor Ener	37.88667	7.95639	Gembena	Luvisols	A
Haw_A067	34103	Alemayehu K.	HWU	Enemor Ener	37.88722	7.95417	Gembena	Luvisols	A
Haw_A068	34103	Alemayehu K.	HWU	Enemor Ener	37.88500	7.95167	Gembena	Luvisols	A
Haw_A069	34103	Alemayehu K.	HWU	Enemor Ener	37.88972	7.93917	Gembena	Luvisols	A
Haw_A070	34103	Alemayehu K.	HWU	Enemor Ener	37.89000	7.94194	Gembena	Luvisols	A
Haw_A071	34103	Alemayehu K.	HWU	Enemor Ener	37.88694	7.94722	Gembena	Luvisols	A
Haw_A072	34103	Alemayehu K.	HWU	Enemor Ener	37.89222	7.94556	Gembena	Luvisols	A
Haw_A073	34103	Alemayehu K.	HWU	Enemor Ener	37.76694	8.06167	Gembena	Luvisols	A
Haw_A074	34103	Alemayehu K.	HWU	Enemor Ener	37.77083	8.06000	Chara	Vertisols	A
Haw_A075	34103	Alemayehu K.	HWU	Enemor Ener	37.77417	8.05889	Gembena	Luvisols	A
Haw_A076	34103	Alemayehu K.	HWU	Enemor Ener	37.77694	8.05778	Chara	Vertisols	A
Haw_A077	34103	Alemayehu K.	HWU	Enemor Ener	37.77861	8.05556	Chara	Vertisols	A

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Haw_A078	34103	Alemayehu K.	HWU	Enemor Ener	37.77944	8.05778	Chara	Vertisols	A
Haw_A079	34103	Alemayehu K.	HWU	Enemor Ener	37.77333	8.06056	Chara	Vertisols	A
Haw_A080	34103	Alemayehu K.	HWU	Enemor Ener	37.72806	8.06917	Chara	Vertisols	A
Haw_A081	34103	Alemayehu K.	HWU	Enemor Ener	37.77778	8.04361	Chara	Vertisols	A
Haw_A082	34103	Alemayehu K.	HWU	Enemor Ener	37.77417	8.04000	Chara	Vertisols	A
Haw_A083	34103	Alemayehu K.	HWU	Enemor Ener	37.77167	8.04167	Chara	Vertisols	A
Haw_A084	34103	Alemayehu K.	HWU	Enemor Ener	37.77028	8.04611	Chara	Vertisols	A
Haw_A085	34103	Alemayehu K.	HWU	Enemor Ener	37.76750	8.03694	Chara	Vertisols	A
Haw_A086	34103	Alemayehu K.	HWU	Enemor Ener	37.76472	8.04083	Chara	Vertisols	A
Haw_A087	34103	Alemayehu K.	HWU	Enemor Ener	37.76861	8.04083	Chara	Vertisols	A
Haw_A088	34103	Alemayehu K.	HWU	Enemor Ener	37.74889	8.05139	Chara	Vertisols	A
Haw_A089	34103	Alemayehu K.	HWU	Enemor Ener	37.87833	7.96667	Gembena	Luvisols	A
Haw_A090	34103	Alemayehu K.	HWU	Enemor Ener	37.87889	7.96222	Gembena	Luvisols	A
Haw_A091	34103	Alemayehu K.	HWU	Enemor Ener	37.87528	7.96222	Gembena	Luvisols	A
Haw_A092	34103	Alemayehu K.	HWU	Enemor Ener	37.88028	7.96306	gembena	Luvisols	A
Haw_A093	34103	Alemayehu K.	HWU	Enemor Ener	37.88139	7.96083	Gembena	Luvisols	A
Haw_A094	34103	Alemayehu K.	HWU	Enemor Ener	37.88083	7.95944	Gembena	Luvisols	A
Haw_A095	34103	Alemayehu K.	HWU	Enemor Ener	37.88972	7.93917	Gembena	Luvisols	A
Haw_A096	34103	Alemayehu K.	HWU	Enemor Ener	37.89222	7.94556	Gembena	Luvisols	A
Haw_A097	34103	Alemayehu K.	HWU	Malga	38.62583	6.93139	Dumbo	Luvisols	A
Haw_A098	34103	Alemayehu K.	HWU	Malga	38.62361	6.93111	Dumbo	Luvisols	A
Haw_A099	34103	Alemayehu K.	HWU	Malga	38.62222	6.92944	Dumbo	Luvisols	A
Haw_A100	34103	Alemayehu K.	HWU	Malga	38.61861	6.93000	Dumbo	Luvisols	A
Haw_A101	34103	Alemayehu K.	HWU	Malga	38.61528	6.92889	Dumbo	Luvisols	A
Haw_A102	34103	Alemayehu K.	HWU	Malga	38.60889	6.92917	Dumbo	Nitisols	A
Haw_A103	34103	Alemayehu K.	HWU	Malga	38.60667	6.92667	Dumbo	Nitisols	A
Haw_A104	34103	Alemayehu K.	HWU	Malga	38.60750	6.92250	Dumbo	Nitisols	A
Haw_A105	34103	Alemayehu K.	HWU	Malga	38.71222	6.99111	Kolisho	Luvisols	A
Haw_A106	34103	Alemayehu K.	HWU	Malga	38.70833	6.99028	Kolisho	Luvisols	A
Haw_A107	34103	Alemayehu K.	HWU	Malga	38.71139	6.98889	Kolisho	Luvisols	A
Haw_A108	34103	Alemayehu K.	HWU	Malga	38.70750	6.98889	Kolisho	Luvisols	A
Haw_A109	34103	Alemayehu K.	HWU	Malga	38.70833	6.98333	Kolisho	Luvisols	A
Haw_A110	34103	Alemayehu K.	HWU	Malga	38.70472	6.98778	Kolisho	Luvisols	A
Haw_A111	34103	Alemayehu K.	HWU	Malga	38.70056	6.98972	Kolisho	Luvisols	A
Haw_A112	34103	Alemayehu K.	HWU	Malga	38.70111	6.99139	Kolisho	Luvisols	A
Haw_A113	34103	Alemayehu K.	HWU	Malga	38.55361	6.92694	Kolisho	Luvisols	A
Haw_A114	34103	Alemayehu K.	HWU	Malga	38.56111	6.92556	Kolisho	Luvisols	A

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Haw_A115	34103	Alemayehu K.	HWU	Malga	38.55083	6.93083	Kolisho	Luvisols	A
Haw_A116	34103	Alemayehu K.	HWU	Malga	38.55167	6.93111	Kolisho	Luvisols	A
Haw_A117	34103	Alemayehu K.	HWU	Malga	38.55167	6.93167	Kolisho	Luvisols	A
Haw_A118	34103	Alemayehu K.	HWU	Malga	38.55472	6.93194	Kolisho	Luvisols	A
Haw_A119	34103	Alemayehu K.	HWU	Malga	38.56250	6.92778	Kolisho	Luvisols	A
Haw_A120	34103	Alemayehu K.	HWU	Malga	38.55306	6.92556	Kolisho	Luvisols	A
Haw_A121	34103	Alemayehu K.	HWU	Malga	38.54417	6.93556	Dumbo	Cambisols	A
Haw_A122	34103	Alemayehu K.	HWU	Malga	38.54722	6.93694	Dumbo	Cambisols	A
Haw_A123	34103	Alemayehu K.	HWU	Malga	38.54611	6.93833	Kolisho	Nitisols	A
Haw_A124	34103	Alemayehu K.	HWU	Malga	38.54778	6.93833	Kolisho	Nitisols	A
Haw_A125	34103	Alemayehu K.	HWU	Malga	38.55000	6.93861	Kolisho	Nitisols	A
Haw_A126	34103	Alemayehu K.	HWU	Malga	38.55056	6.93778	Kolisho	Nitisols	A
Haw_A127	34103	Alemayehu K.	HWU	Malga	38.55167	6.93944	Kolisho	Nitisols	A
Haw_A128	34103	Alemayehu K.	HWU	Malga	38.54611	6.93583	Kolisho	Nitisols	A
Haw_A129	34103	Alemayehu K.	HWU	Mesrak Azernet	38.08861	7.89583	Busha	Luvisols	A
Haw_A130	34103	Alemayehu K.	HWU	Mesrak Azernet	38.09250	7.89583	Busha	Luvisols	A
Haw_A131	34103	Alemayehu K.	HWU	Mesrak Azernet	38.09083	7.89333	Busha	Luvisols	A
Haw_A132	34103	Alemayehu K.	HWU	Mesrak Azernet	38.08778	7.89361	Busha	Luvisols	A
Haw_A133	34103	Alemayehu K.	HWU	Mesrak Azernet	38.09222	7.90528	Busha	Luvisols	A
Haw_A134	34103	Alemayehu K.	HWU	Mesrak Azernet	38.08833	7.90500	Busha	Luvisols	A
Haw_A135	34103	Alemayehu K.	HWU	Mesrak Azernet	38.09139	7.90306	Busha	Luvisols	A
Haw_A136	34103	Alemayehu K.	HWU	Mesrak Azernet	38.08917	7.90306	Busha	Luvisols	A
Haw_A137	34103	Alemayehu K.	HWU	Mesrak Azernet	38.06056	7.87500	Busha	Luvisols	A
Haw_A138	34103	Alemayehu K.	HWU	Mesrak Azernet	38.07667	7.87972	Busha	Luvisols	A
Haw_A139	34103	Alemayehu K.	HWU	Mesrak Azernet	38.07361	7.88167	Busha	Luvisols	A
Haw_A140	34103	Alemayehu K.	HWU	Mesrak Azernet	38.07639	7.88167	Busha	Luvisols	A
Haw_A141	34103	Alemayehu K.	HWU	Mesrak Azernet	38.06306	7.88111	Busha	Luvisols	A
Haw_A142	34103	Alemayehu K.	HWU	Mesrak Azernet	38.06778	7.87750	Busha	Luvisols	A
Haw_A143	34103	Alemayehu K.	HWU	Mesrak Azernet	38.06139	7.87583	Busha	Luvisols	A
Haw_A144	34103	Alemayehu K.	HWU	Mesrak Azernet	38.07139	7.87889	Busha	Luvisols	A
Haw_A145	34103	Alemayehu K.	HWU	Mesrak Azernet	38.01528	7.74333	Busha	Luvisols	A
Haw_A146	34103	Alemayehu K.	HWU	Mesrak Azernet	38.01444	7.74972	Busha	Luvisols	A
Haw_A147	34103	Alemayehu K.	HWU	Mesrak Azernet	38.01389	7.73917	Busha	Luvisols	A
Haw_A148	34103	Alemayehu K.	HWU	Mesrak Azernet	38.01778	7.73917	Busha	Luvisols	A
Haw_A149	34103	Alemayehu K.	HWU	Mesrak Azernet	38.00889	7.73083	Busha	Luvisols	A
Haw_A150	34103	Alemayehu K.	HWU	Mesrak Azernet	38.00333	7.72472	Mune	Vertisols	A
Haw_A151	34103	Alemayehu K.	HWU	Mesrak Azernet	38.01500	7.74583	Busha	Luvisols	A

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Haw_A152	34103	Alemayehu K.	HWU	Mesrak Azernet	37.99778	7.72056	Mune	Vertisols	A
Haw_A153	34103	Alemayehu K.	HWU	Mesrak Azernet	37.96778	7.70444	Busha	Luvisols	A
Haw_A154	34103	Alemayehu K.	HWU	Mesrak Azernet	37.97667	7.70139	Busha	Luvisols	A
Haw_A155	34103	Alemayehu K.	HWU	Mesrak Azernet	37.96861	7.69750	Busha	Luvisols	A
Haw_A156	34103	Alemayehu K.	HWU	Mesrak Azernet	37.98583	7.70417	Sancha	Vertisols	A
Haw_A157	34103	Alemayehu K.	HWU	Mesrak Azernet	37.98889	7.70361	Sancha	Vertisols	A
Haw_A158	34103	Alemayehu K.	HWU	Mesrak Azernet	37.97417	7.69722	Sancha	Vertisols	A
Haw_A159	34103	Alemayehu K.	HWU	Mesrak Azernet	37.99028	7.70056	Sancha	Vertisols	A
Haw_A160	34103	Alemayehu K.	HWU	Mesrak Azernet	37.98056	7.69639	Sancha	Vertisols	A
HE/GRW/LH/P1	34088	Kibebew K.	HMU	-	41.77764	9.16950	-	Vertic Hyper-calcic Calcisols (Clayic)	P
HE/GRW/LH/P2	34088	Kibebew K.	HMU	-	41.78153	9.19714	-	Luvic Nitisols (Eutric)	P
HE/GRW/LT/P1	34088	Kibebew K.	HMU	-	41.76975	9.02928	-	Haplic Cambisols (Eutric, Clayic, Chromic)	P
HE/GRW/LT/P2	34088	Kibebew K.	HMU	-	41.76514	9.05689	-	Vertic Cambisols (Eutric, Clayic, Rhodic)	P
HE/GRW/RJ/P1	34088	Kibebew K.	HMU	-	41.79211	9.18589	-	Luvic Nitisols (Eutric)	P
HE/GRW/RJ/P2	34088	Kibebew K.	HMU	-	41.79822	9.17022	-	Mollic Gleyic Vertisols (Eutric, Pellic)	P
HE/GRW/UJ/P1	34088	Kibebew K.	HMU	-	41.81786	9.14714	-	Nitic Vertic Luvisols (Hyper-eutric, Clayic, Chromic)	P
HE/GRW/UJ/P2	34088	Kibebew K.	HMU	-	41.80325	9.16575	-	Vertic Cambisols (Eutric, Skeletic)	P
HE/HMY/DJ/P1	34088	Kibebew K.	HMU	-	42.08361	9.42917	-	Vertic Luvisols (Hyper-eutric, Clayic)	P
HE/HMY/DJ/P2	34088	Kibebew K.	HMU	-	42.07667	9.41983	-	Haplic Cambisols (Eutric, Chromic)	P
HE/HMY/DJ/P3	34088	Kibebew K.	HMU	-	42.05472	9.41733	-	Calcic Fluvisols (Calcaric, Eutric)	P
HE/HMY/DJ/P4	34088	Kibebew K.	HMU	-	42.05511	9.41536	-	Haplic Regosols (Eutric, Skeletic)	P
HE/HMY/FI/P1	34088	Kibebew K.	HMU	-	42.04017	9.45308	-	Haplic Cambisols (Eutric, Clayic, Rhodic)	P
HE/HMY/FI/P2	34104	Kibebew K.	HMU	-	42.03778	9.46194	-	Calcic Luvisols (Hyper-eutric, Clayic, Chromic)	P
HE/HMY/FI/P3	34088	Kibebew K.	HMU	-	42.02889	9.45111	-	Calcic Fluvisols (Eutric, Calcaric, Clayic)	P
HE/HMY/FI/P4	34088	Kibebew K.	HMU	-	42.03000	9.44639	-	Calcic Mollic Gleyic Vertisols (Pellic)	P
HE/HMY/IO/P1	34088	Kibebew K.	HMU	-	41.94639	9.43694	-	Calcic Mollic Vertisols (Pellic)	P
HE/HMY/KJ/P1	34088	Kibebew K.	HMU	-	42.00694	9.46333	-	Cutanic Luvisols (Skeletic, Chromic)	P
HE/KOM/BL/P1	34088	Kibebew K.	HMU	-	42.10369	9.46833	-	Haplic Luvisols (Hyper-eutric, Skeletic)	P
HE/KOM/BL/P2	34088	Kibebew K.	HMU	-	42.11722	9.45917	-	Grumic Vertisols (Eutric, Rhodic)	P
HE/KOM/BL/P3	34088	Kibebew K.	HMU	-	42.10556	9.45481	-	Grumic Vertisols (Eutric, Chromic	P
HE/KOM/EG/P1	34088	Kibebew K.	HMU	-	42.11139	9.49172	-	Haplic Cambisols (Eutric, Chromic)	P
HE/KOM/EG/P2	34088	Kibebew K.	HMU	-	42.10267	9.50908	-	Grumic Vertisols (Eutric)	P
HE/KOM/KK/P1	34088	Kibebew K.	HMU	-	42.13706	9.46442	-	Haplic Luvisols (Hyper-eutric, Skeletic, Clayic, Chromic)	P
HE/KOM/WM/P1	34088	Kibebew K.	HMU	-	42.16794	9.46578	-	Calcic Vertisols (Eutric, Chromic)	P
HE/MTA/BO/P1	34088	Kibebew K.	HMU	-	41.64556	9.41025	-	Haplic Cambisols (Eutric)	P
HE/MTA/BO/P2	34088	Kibebew K.	HMU	-	41.65925	9.41933	-	Vertic Gleyic Luvisols (Hyper-eutric, Clayic, Chromic)	P
HE/MTA/CL/P1	34088	Kibebew K.	HMU	-	41.62569	9.42322	-	Haplic Nitisols (Eutric, Rhodic)	P

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HE/MTA/CL/P2	34088	Kibebew K.	HMU	-	41.62608	9.42014	-	Calcic Gleyic Vertisols (Calcaric, Eutric)	P
HE/MTA/DB/P1	34088	Kibebew K.	HMU	-	41.58992	9.41567	-	Vertic Luvisols (Hyper-eutric, Clayic, Chromic)	P
HE/MTA/DB/P2	34088	Kibebew K.	HMU	-	41.59603	9.40850	-	Calcic Gleyic Vertisols (Pellic)	P
HE/MTA/HB/P1	34088	Kibebew K.	HMU	-	41.71578	9.43994	-	Haplic Nitisols (Eutric, Chromic)	P
HE/MTA/HB/P2	34088	Kibebew K.	HMU	-	41.74500	9.42528	-	Calcic Luvisols (Hyper-eutric, Clayic)	P
HMY/DJ/A1	34088	Kibebew K.	HMU	-	42.08750	9.42722	-	Vertic Cambisols	A
HMY/DJ/A2	34088	Kibebew K.	HMU	-	42.08167	9.42667	-	Cambisols	A
HMY/DJ/A3	34088	Kibebew K.	HMU	-	42.07556	9.42000	-	Cambisols	A
HMY/DJ/A4	34088	Kibebew K.	HMU	-	42.06917	9.41278	-	Cambisols	A
HMY/DJ/A5	34088	Kibebew K.	HMU	-	42.06889	9.42528	-	Vertisols	A
HMY/DJ/A6	34088	Kibebew K.	HMU	-	42.05639	9.42250	-	Vertisols	A
HMY/DJ/A7	34088	Kibebew K.	HMU	-	42.05194	9.41778	-	Vertisols	A
HMY/DJ/A8	34088	Kibebew K.	HMU	-	42.05389	9.41528	-	Regosols	A
HMY/FI/A1	34088	Kibebew K.	HMU	-	42.03570	9.44600	-	Luvisols	A
HMY/FI/A2	34088	Kibebew K.	HMU	-	42.03570	9.44300	-	Luvisols (Rhodic)	A
HMY/FI/A3	34088	Kibebew K.	HMU	-	42.04014	9.46044	-	Luvisols (Chromic)	A
HMY/FI/A4	34088	Kibebew K.	HMU	-	42.04033	9.45406	-	Nitisols (Rhodic)	A
HMY/FI/A5	34088	Kibebew K.	HMU	-	42.03225	9.44547	-	Vertisols	A
HMY/FI/A6	34088	Kibebew K.	HMU	-	42.02725	9.45281	-	Calcic Vertisols	A
HMY/FI/A7	34088	Kibebew K.	HMU	-	42.02750	9.45083	-	Fluvisols	A
HMY/FI/A8	34088	Kibebew K.	HMU	-	42.03083	9.46139	-	Cambisols	A
HMY/IO/A1	34088	Kibebew K.	HMU	-	41.97083	9.42000	-	Calcic Vertisols	A
HMY/IO/A2	34088	Kibebew K.	HMU	-	41.96508	9.42361	-	Calcic Vertisols	A
HMY/IO/A3	34088	Kibebew K.	HMU	-	41.98000	9.42694	-	Calcic Vertisols	A
HMY/IO/A4	34088	Kibebew K.	HMU	-	41.94900	9.44222	-	Nitisols	A
HMY/IO/A5	34088	Kibebew K.	HMU	-	41.94667	9.43694	-	Calcic Vertisols	A
HMY/IO/A6	34088	Kibebew K.	HMU	-	41.95667	9.43833	-	Nitisols	A
HMY/IO/A7	34088	Kibebew K.	HMU	-	41.97778	9.45194	-	Nitisols	A
HMY/IO/A8	34088	Kibebew K.	HMU	-	41.95361	9.43972	-	Regosols	A
HMY/KJ/A1	34088	Kibebew K.	HMU	-	41.98944	9.47806	-	Luvisols	A
HMY/KJ/A2	34088	Kibebew K.	HMU	-	41.99861	9.47694	-	Luvisols	A
HMY/KJ/A3	34088	Kibebew K.	HMU	-	41.98417	9.45944	-	Calcic Vertisols	A
HMY/KJ/A4	34088	Kibebew K.	HMU	-	41.99333	9.47000	-	Luvisols	A
HMY/KJ/A5	34088	Kibebew K.	HMU	-	42.00583	9.46917	-	Fluvisols	A
HMY/KJ/A6	34088	Kibebew K.	HMU	-	42.00639	9.46306	-	Vertic Luvisols	A
HMY/KJ/A7	34088	Kibebew K.	HMU	-	42.01167	9.45944	-	Vertisols	A
HMY/KJ/A8	34088	Kibebew K.	HMU	-	42.00583	9.44000	-	Vertisols	A

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HRO/BD/A1	34088	Kibebew K.	HMU	-	40.64981	8.87619	-	Cambisols	A
HRO/BD/A2	34088	Kibebew K.	HMU	-	40.64336	8.86672	-	Vertic Luvisols	A
HRO/BD/A3	34088	Kibebew K.	HMU	-	40.64544	8.85739	-	Vertic Luvisols	A
HRO/BD/A4	34088	Kibebew K.	HMU	-	40.65428	8.85400	-	Calcic Vertisols	A
HRO/BD/A5	34088	Kibebew K.	HMU	-	40.62972	8.85567	-	Vertic Luvisols	A
HRO/BD/A6	34088	Kibebew K.	HMU	-	40.63644	8.84600	-	Fluvisols (Clayic)	A
HRO/BD/A7	34088	Kibebew K.	HMU	-	40.64350	8.84589	-	Vertic Luvisols	A
HRO/BD/A8	34088	Kibebew K.	HMU	-	40.65092	8.86214	-	Calcic Vertisols	A
HRO/GG/A1	34088	Kibebew K.	HMU	-	40.50561	8.79219	-	Regosols	A
HRO/GG/A2	34088	Kibebew K.	HMU	-	40.50178	8.79856	-	Nitisols	A
HRO/GG/A3	34088	Kibebew K.	HMU	-	40.51403	8.79783	-	Vertisols	A
HRO/GG/A4	34088	Kibebew K.	HMU	-	40.51428	8.80597	-	Calcic Vertisols (Eutric)	A
HRO/GG/A5	34088	Kibebew K.	HMU	-	40.52864	8.79094	-	Nitisols	A
HRO/GG/A6	34088	Kibebew K.	HMU	-	40.52122	8.79275	-	Regosols	A
HRO/GG/A7	34088	Kibebew K.	HMU	-	40.52375	8.80244	-	Nitisols	A
HRO/GG/A8	34088	Kibebew K.	HMU	-	40.53756	8.80139	-	Nitisols	A
HRO/HC/A1	34088	Kibebew K.	HMU	-	40.65978	8.86642	-	Vertisols	A
HRO/HC/A2	34088	Kibebew K.	HMU	-	40.66397	8.85519	-	Vertisols	A
HRO/HC/A3	34088	Kibebew K.	HMU	-	40.67053	8.85817	-	Vertisols	A
HRO/HC/A4	34088	Kibebew K.	HMU	-	40.66956	8.84328	-	Luvisols (Rhodic)	A
HRO/HC/A5	34088	Kibebew K.	HMU	-	40.67936	8.86742	-	Vertic Luvisols	A
HRO/HC/A6	34088	Kibebew K.	HMU	-	40.67844	8.82933	-	Calcic Vertisols	A
HRO/HC/A7	34088	Kibebew K.	HMU	-	40.66400	8.87400	-	Vertisols	A
HRO/HC/A8	34088	Kibebew K.	HMU	-	40.66700	8.86356	-	Vertisols	A
HRO/IJ/A1	34088	Kibebew K.	HMU	-	40.40828	8.72161	-	Nitisols	A
HRO/IJ/A2	34088	Kibebew K.	HMU	-	40.41322	8.72300	-	Calcic Vertisols	A
HRO/IJ/A3	34088	Kibebew K.	HMU	-	40.41681	8.71394	-	Vertisols	A
HRO/IJ/A4	34088	Kibebew K.	HMU	-	40.42011	8.72308	-	Nitisols	A
HRO/IJ/A5	34088	Kibebew K.	HMU	-	40.42358	8.72803	-	Vertisols	A
HRO/IJ/A6	34088	Kibebew K.	HMU	-	40.41975	8.71658	-	Vertisols	A
HRO/IJ/A7	34088	Kibebew K.	HMU	-	40.42081	8.71406	-	Luvisols	A
HRO/IJ/A8	34088	Kibebew K.	HMU	-	40.42581	8.72033	-	Leptosols	A
HW/HRO/BD/P1	34088	Kibebew K.	HMU	-	40.62969	8.85747	-	Calcic Vertic Luvisols (Hyper-eutric, Clayic, Chromic)	P
HW/HRO/GG/P1	34088	Kibebew K.	HMU	-	40.52869	8.79089	-	Haplic Nitisols (Eutric)	P
HW/HRO/GG/P2	34088	Kibebew K.	HMU	-	40.51456	8.79956	-	Calcic Vertisols (Eutric)	P
HW/HRO/HC/P1	34088	Kibebew K.	HMU	-	40.64725	8.86539	-	Calcic Vertic Luvisols (Hyper-eutric, Clayic, Chromic)	P
HW/HRO/IJ/P1	34088	Kibebew K.	HMU	-	40.41542	8.71950	-	Calcic Vertic Luvisols (Hyper-eutric, Clayic, Chromic)	P

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ILU/B/B/A1	34104	Alemayehu R.	JMU	Bedele	36.37735	8.52471	-	Leptosols	A
ILU/B/B/A2	34104	Alemayehu R.	JMU	Bedele	36.37814	8.52422	-	Gleysols	A
ILU/B/B/A3	34104	Alemayehu R.	JMU	Bedele	36.37620	8.53784	-	Leptosols	A
ILU/B/B/A4	34104	Alemayehu R.	JMU	Bedele	36.36727	8.53467	-	Nitisols	A
ILU/B/B/A5	34104	Alemayehu R.	JMU	Bedele	36.39699	8.56523	-	Vertisols	A
ILU/B/B/A6	34104	Alemayehu R.	JMU	Bedele	36.38949	8.55634	-	Nitisols	A
ILU/B/B/A7	34104	Alemayehu R.	JMU	Bedele	36.42413	8.55289	-	Vertisols	A
ILU/B/B/A8	34104	Alemayehu R.	JMU	Bedele	36.39891	8.54187	-	Nitisols	A
ILU/B/B/P1	34104	Alemayehu R.	JMU	Bedele	36.36727	8.53467	-	Nitic Luvisols (Epi-dystric, Clayic)	P
ILU/B/B/P2	34104	Alemayehu R.	JMU	Bedele	36.38949	8.55634	-	Luvic Nitisols (Dystric, Rhodic)	P
ILU/B/HG/A1	34104	Alemayehu R.	JMU	Bedele	36.40727	8.45688	-	Cambisols	A
ILU/B/HG/A2	34104	Alemayehu R.	JMU	Bedele	36.39254	8.45327	-	Acrisols	A
ILU/B/HG/A3	34104	Alemayehu R.	JMU	Bedele	36.40709	8.46221	-	Cambisols	A
ILU/B/HG/A4	34104	Alemayehu R.	JMU	Bedele	36.40140	8.46068	-	Nitisols	A
ILU/B/HG/A5	34104	Alemayehu R.	JMU	Bedele	36.40585	8.46395	-	Cambisols	A
ILU/B/HG/A6	34104	Alemayehu R.	JMU	Bedele	36.41110	8.46952	-	Leptosols	A
ILU/B/HG/A7	34104	Alemayehu R.	JMU	Bedele	36.40119	8.45205	-	Acrisols	A
ILU/B/HG/A8	34104	Alemayehu R.	JMU	Bedele	36.40884	8.44279	-	Luvisols	A
ILU/B/HG/P1	34104	Alemayehu R.	JMU	Bedele	36.40727	8.45688	-	Haplic Acrisols (Epi-eutric, Clayic)	P
ILU/B/HG/P2	34104	Alemayehu R.	JMU	Bedele	36.39254	8.45327	-	Haplic Cambisols (Dystric, Clayic)	P
ILU/B/MM/A1	34104	Alemayehu R.	JMU	Bedele	36.33381	8.48384	-	Nitisols	A
ILU/B/MM/A2	34104	Alemayehu R.	JMU	Bedele	36.33477	8.48633	-	Acrisols	A
ILU/B/MM/A3	34104	Alemayehu R.	JMU	Bedele	36.33680	8.48341	-	Nitisols	A
ILU/B/MM/A4	34104	Alemayehu R.	JMU	Bedele	36.34116	8.48704	-	Cambisols	A
ILU/B/MM/A5	34104	Alemayehu R.	JMU	Bedele	36.34461	8.48910	-	Vertisols	A
ILU/B/MM/A6	34104	Alemayehu R.	JMU	Bedele	36.32893	8.48492	-	Leptosols	A
ILU/B/MM/A7	34104	Alemayehu R.	JMU	Bedele	36.33330	8.48855	-	Luvisols	A
ILU/B/MM/A8	34104	Alemayehu R.	JMU	Bedele	36.33217	8.49385	-	Fluvisols	A
ILU/B/MM/P1	34104	Alemayehu R.	JMU	Bedele	36.33477	8.48633	-	Cutanic Luvisols (Clayic)	P
ILU/B/Y/A1	34104	Alemayehu R.	JMU	Bedele	36.39532	8.40827	-	Cambisols	A
ILU/B/Y/A2	34104	Alemayehu R.	JMU	Bedele	36.39060	8.39632	-	Acrisols	A
ILU/B/Y/A3	34104	Alemayehu R.	JMU	Bedele	36.39300	8.40645	-	Cambisols	A
ILU/B/Y/A4	34104	Alemayehu R.	JMU	Bedele	36.40171	8.41017	-	Cambisols	A
ILU/B/Y/A5	34104	Alemayehu R.	JMU	Bedele	36.40571	8.41258	-	Acrisols	A
ILU/B/Y/A6	34104	Alemayehu R.	JMU	Bedele	36.38936	8.41358	-	Cambisols	A
ILU/B/Y/A7	34104	Alemayehu R.	JMU	Bedele	36.39672	8.41439	-	Nitisols	A
ILU/B/Y/A8	34104	Alemayehu R.	JMU	Bedele	36.40630	8.41488	-	Acrisols	P

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ILU/B/Y/P1	34104	Alemayehu R.	JMU	Bedele	36.39532	8.40827	-	Haplic Acrisols (Epi-eutric, Clayic)	P
ILU/B/Y/P2	34104	Alemayehu R.	JMU	Bedele	36.39060	8.39632	-	Haplic Cambisols (Dystric, Clayic)	A
ILU/D/G/A1	34104	Alemayehu R.	JMU	Didessa	36.49777	8.12672	-	Nitisols	A
ILU/D/G/A2	34104	Alemayehu R.	JMU	Didessa	36.50391	8.09084	-	Vertisols	A
ILU/D/G/A3	34104	Alemayehu R.	JMU	Didessa	36.51905	8.09244	-	Cambisols	A
ILU/D/G/A4	34104	Alemayehu R.	JMU	Didessa	36.52624	8.09412	-	Nitisols	A
ILU/D/G/A5	34104	Alemayehu R.	JMU	Didessa	36.53327	8.09596	-	Nitisols	A
ILU/D/G/A6	34104	Alemayehu R.	JMU	Didessa	36.51073	8.07878	-	Nitisols	A
ILU/D/G/A7	34104	Alemayehu R.	JMU	Didessa	36.50896	8.09924	-	Cambisols	A
ILU/D/G/A8	34104	Alemayehu R.	JMU	Didessa	36.51758	8.08674	-	Cambisols	A
ILU/D/G/P1	34104	Alemayehu R.	JMU	Didessa	36.49777	8.12672	-	Cutanic Luvisols (Clayic)	P
ILU/D/M/A1	34104	Alemayehu R.	JMU	Didessa	36.44060	8.13019	-	Nitisols	A
ILU/D/M/A2	34104	Alemayehu R.	JMU	Didessa	36.45421	8.14463	-	Luvisols	A
ILU/D/M/A3	34104	Alemayehu R.	JMU	Didessa	36.46004	8.13518	-	Nitisols	A
ILU/D/M/A4	34104	Alemayehu R.	JMU	Didessa	36.44647	8.13551	-	Fluvisols	A
ILU/D/M/A5	34104	Alemayehu R.	JMU	Didessa	36.44991	8.13303	-	Nitisols	A
ILU/D/M/A6	34104	Alemayehu R.	JMU	Didessa	36.45754	8.13098	-	Cambisols	A
ILU/D/M/A7	34104	Alemayehu R.	JMU	Didessa	36.44113	8.13998	-	Nitisols	A
ILU/D/M/A8	34104	Alemayehu R.	JMU	Didessa	36.43084	8.13261	-	Nitisols	A
ILU/D/M/P1	34104	Alemayehu R.	JMU	Didessa	36.46004	8.13518	-	Luvic Nitisols (Dystric, Rhodic)	P
ILU/D/S/A1	34104	Alemayehu R.	JMU	Didessa	36.46865	8.07518	-	Nitisols	A
ILU/D/S/A2	34104	Alemayehu R.	JMU	Didessa	36.47004	8.06629	-	Cambisols	A
ILU/D/S/A3	34104	Alemayehu R.	JMU	Didessa	36.45552	8.05995	-	Nitisols	A
ILU/D/S/A4	34104	Alemayehu R.	JMU	Didessa	36.48115	8.06161	-	Regosols	A
ILU/D/S/A5	34104	Alemayehu R.	JMU	Didessa	36.49303	8.05630	-	Vertisols	A
ILU/D/S/A6	34104	Alemayehu R.	JMU	Didessa	36.48536	8.06043	-	Luvisols	A
ILU/D/S/A7	34104	Alemayehu R.	JMU	Didessa	36.47618	8.06442	-	Nitisols	A
ILU/D/S/P1	34104	Alemayehu R.	JMU	Didessa	36.46865	8.07518	-	Luvic Nitisols (Dystric, Rhodic)	P
ILU/D/S/P2	34104	Alemayehu R.	JMU	Didessa	36.47004	8.06629	-	Haplic Cambisols (Dystric, Clayic)	P
ILU/D/Y/A1	34104	Alemayehu R.	JMU	Didessa	36.46893	8.16074	-	Planosols	A
ILU/D/Y/A2	34104	Alemayehu R.	JMU	Didessa	36.47226	8.15796	-	Nitisols	A
ILU/D/Y/A3	34104	Alemayehu R.	JMU	Didessa	36.45421	8.18381	-	Nitisols	A
ILU/D/Y/A4	34104	Alemayehu R.	JMU	Didessa	36.38671	8.16158	-	Fluvisols	A
ILU/D/Y/A5	34104	Alemayehu R.	JMU	Didessa	36.45350	8.16742	-	Fluvisols	A
ILU/D/Y/A6	34104	Alemayehu R.	JMU	Didessa	36.44930	8.17769	-	Nitisols	A
ILU/D/Y/A7	34104	Alemayehu R.	JMU	Didessa	36.43363	8.19181	-	Cambisols	A
ILU/D/Y/A8	34104	Alemayehu R.	JMU	Didessa	36.47994	8.14908	-	Cambisols	A

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ILU/D/Y/P1	34104	Alemayehu R.	JMU	Didessa	36.46893	8.16074	-	Plinthic Gleysols (Dystric, Clayic)	P
ILU/D/Y/P2	34104	Alemayehu R.	JMU	Didessa	36.38671	8.16158	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/G/GC/A1	34104	Alemayehu R.	JMU	Gera	36.28060	7.75043	-	Nitisols	A
JIM/G/GC/A2	34104	Alemayehu R.	JMU	Gera	36.25949	7.72459	-	Nitisols	A
JIM/G/GC/A3	34104	Alemayehu R.	JMU	Gera	36.25560	7.72209	-	Fluvisols	A
JIM/G/GC/A4	34104	Alemayehu R.	JMU	Gera	36.26393	7.72931	-	Nitisols	A
JIM/G/GC/A5	34104	Alemayehu R.	JMU	Gera	36.25255	7.72848	-	Nitisols	A
JIM/G/GC/P1	34104	Alemayehu R.	JMU	Gera	36.26393	7.72931	-	Piso-plinthic Gleysols (Dystric, Clayic)	P
JIM/G/GC/P2	34104	Alemayehu R.	JMU	Gera	36.25255	7.72848	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/G/KA/A1	34104	Alemayehu R.	JMU	Gera	36.31644	7.76738	-	Planosols	A
JIM/G/KA/A2	34104	Alemayehu R.	JMU	Gera	36.32505	7.75988	-	Gleysols	A
JIM/G/KA/A3	34104	Alemayehu R.	JMU	Gera	36.32979	7.76690	-	Leptosols	A
JIM/G/KA/A4	34104	Alemayehu R.	JMU	Gera	36.33811	7.75804	-	Nitisols	A
JIM/G/KA/A5	34104	Alemayehu R.	JMU	Gera	36.32677	7.77282	-	Fluvisols	A
JIM/G/KA/A6	34104	Alemayehu R.	JMU	Gera	36.32260	7.75277	-	Nitisols	A
JIM/G/KA/A7	34104	Alemayehu R.	JMU	Gera	36.32141	7.76640	-	Planosols	A
JIM/G/KA/A8	34104	Alemayehu R.	JMU	Gera	36.33141	7.77230	-	Nitisols	A
JIM/G/KA/P1	34104	Alemayehu R.	JMU	Gera	36.31644	7.76738	-	Luvic Gleysols (Dystric, Clayic)	P
JIM/G/SL/A1	34104	Alemayehu R.	JMU	Gera	36.41199	7.81439	-	Nitisols	A
JIM/G/SL/A2	34104	Alemayehu R.	JMU	Gera	36.41532	7.82793	-	Nitisols	A
JIM/G/SL/A3	34104	Alemayehu R.	JMU	Gera	36.40593	7.81524	-	Planosols	A
JIM/G/SL/A4	34104	Alemayehu R.	JMU	Gera	36.40921	7.77738	-	Nitisols	A
JIM/G/SL/A5	34104	Alemayehu R.	JMU	Gera	36.41171	7.82349	-	Nitisols	A
JIM/G/SL/A6	34104	Alemayehu R.	JMU	Gera	36.41152	7.77103	-	Planosols	A
JIM/G/SL/A7	34104	Alemayehu R.	JMU	Gera	36.41786	7.82592	-	Nitisols	A
JIM/G/SL/A8	34104	Alemayehu R.	JMU	Gera	36.43504	7.79845	-	Cambisols	A
JIM/G/SL/P1	34104	Alemayehu R.	JMU	Gera	36.40593	7.81524	-	Endo-gleyic Plinthic Vertic Planosols (Eutric, Clayic)	P
JIM/G/SL/P2	34104	Alemayehu R.	JMU	Gera	36.40921	7.77738	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/G/SL/P3	34104	Alemayehu R.	JMU	Gera	36.41171	7.82349	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/G/WK/A1	34104	Alemayehu R.	JMU	Gera	36.36643	7.77988	-	Nitisols	A
JIM/G/WK/A2	34104	Alemayehu R.	JMU	Gera	36.36644	7.76765	-	Luvisols	A
JIM/G/WK/A3	34104	Alemayehu R.	JMU	Gera	36.37144	7.78543	-	Luvisols	A
JIM/G/WK/A4	34104	Alemayehu R.	JMU	Gera	36.37144	7.78543	-	Nitisols	A
JIM/G/WK/A5	34104	Alemayehu R.	JMU	Gera	36.38047	7.77288	-	Cambisols	A
JIM/G/WK/A6	34104	Alemayehu R.	JMU	Gera	36.36454	7.76708	-	Fluvisols	A
JIM/G/WK/A7	34104	Alemayehu R.	JMU	Gera	36.35953	7.76871	-	Nitisols	A
JIM/G/WK/A8	34104	Alemayehu R.	JMU	Gera	36.37930	7.76895	-	Nitisols	A

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JIM/G/WK/P1	34104	Alemayehu R.	JMU	Gera	36.37144	7.78543	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/LS/DG/A1	34104	Alemayehu R.	JMU	Limu Saka	36.91865	8.09296	-	Planosols	A
JIM/LS/DG/A2	34104	Alemayehu R.	JMU	Limu Saka	36.91488	8.10635	-	Fluvisols	A
JIM/LS/DG/A3	34104	Alemayehu R.	JMU	Limu Saka	36.91644	8.13597	-	Nitisols	A
JIM/LS/DG/A4	34104	Alemayehu R.	JMU	Limu Saka	36.89781	8.10626	-	Fluvisols	A
JIM/LS/DG/A5	34104	Alemayehu R.	JMU	Limu Saka	36.90003	8.14434	-	Luvisols	A
JIM/LS/DG/A6	34104	Alemayehu R.	JMU	Limu Saka	36.92930	8.11126	-	Planosols	A
JIM/LS/DG/A7	34104	Alemayehu R.	JMU	Limu Saka	36.93334	8.11743	-	Fluvisols	A
JIM/LS/DG/A8	34104	Alemayehu R.	JMU	Limu Saka	36.89467	8.13610	-	Nitisols	A
JIM/LS/DG/P1	34104	Alemayehu R.	JMU	Limu saka	36.91865	8.09296	-	Stagnic Albic Luvisols (Rubtic, Clayic)	P
JIM/LS/G/A1	34104	Alemayehu R.	JMU	Limu Saka	36.93948	8.15463	-	Luvisols	A
JIM/LS/G/A2	34104	Alemayehu R.	JMU	Limu Saka	36.94087	8.15018	-	Nitisols	A
JIM/LS/G/A3	34104	Alemayehu R.	JMU	Limu Saka	36.92309	8.16074	-	Leptosols	A
JIM/LS/G/A4	34104	Alemayehu R.	JMU	Limu Saka	36.93503	8.15074	-	Acrisols	A
JIM/LS/G/A5	34104	Alemayehu R.	JMU	Limu Saka	36.91837	8.09296	-	Planosols	A
JIM/LS/G/A6	34104	Alemayehu R.	JMU	Limu Saka	36.91775	8.16996	-	Leptosols	A
JIM/LS/G/A7	34104	Alemayehu R.	JMU	Limu Saka	36.93534	8.13986	-	Vertisols	A
JIM/LS/G/A8	34104	Alemayehu R.	JMU	Limu Saka	36.92318	8.15155	-	Nitisols	A
JIM/LS/G/P1	34104	Alemayehu R.	JMU	Limu saka	36.93503	8.15074	-	Cutanic Luvisols (Clayic)	P
JIM/LS/M/P1	34104	Alemayehu R.	JMU	Limu saka	37.02948	8.36271	-	Luvic Gleysols (Dystric, Clayic)	P
JIM/LS/M/P2	34104	Alemayehu R.	JMU	Limu saka	37.00892	8.35465	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/LS/MZ/A1	34104	Alemayehu R.	JMU	Limu Saka	37.00725	8.35632	-	Nitisols	A
JIM/LS/MZ/A2	34104	Alemayehu R.	JMU	Limu Saka	36.97809	8.33271	-	Nitisols	A
JIM/LS/MZ/A3	34104	Alemayehu R.	JMU	Limu Saka	37.00892	8.35465	-	Nitisols	A
JIM/LS/MZ/A4	34104	Alemayehu R.	JMU	Limu Saka	37.00484	8.35411	-	Nitisols	A
JIM/LS/MZ/A5	34104	Alemayehu R.	JMU	Limu Saka	37.02948	8.36271	-	Planosols	A
JIM/LS/MZ/A6	34104	Alemayehu R.	JMU	Limu Saka	37.00068	8.37723	-	Leptosols	A
JIM/LS/MZ/A7	34104	Alemayehu R.	JMU	Limu Saka	37.02894	8.34531	-	Vertisols	A
JIM/LS/MZ/A8	34104	Alemayehu R.	JMU	Limu Saka	37.03256	8.37180	-	Planosols	A
JIM/LS/S/A1	34104	Alemayehu R.	JMU	Limu Saka	36.93031	8.20103	-	Nitisols	A
JIM/LS/S/A2	34104	Alemayehu R.	JMU	Limu Saka	36.91781	8.20047	-	Nitisols	A
JIM/LS/S/A3	34104	Alemayehu R.	JMU	Limu Saka	36.91726	8.19825	-	Nitisols	A
JIM/LS/S/A4	34104	Alemayehu R.	JMU	Limu Saka	36.93892	8.20103	-	Nitisols	A
JIM/LS/S/A5	34104	Alemayehu R.	JMU	Limu Saka	36.96979	8.18799	-	Planosols	A
JIM/LS/S/A6	34104	Alemayehu R.	JMU	Limu Saka	36.94104	8.19426	-	Nitisols	A
JIM/LS/S/A7	34104	Alemayehu R.	JMU	Limu Saka	36.94279	8.19970	-	Luvisols	A
JIM/LS/S/A8	34104	Alemayehu R.	JMU	Limu Saka	36.95525	8.18622	-	Luvisols	A

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JIM/LS/S/P1	34104	Alemayehu R.	JMU	Limu saka	36.91726	8.19825	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/LS/S/P2	34104	Alemayehu R.	JMU	Limu saka	36.94104	8.19426	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/OMN/DY/A1	34104	Alemayehu R.	JMU	Omo Nada	37.27459	7.57082	-	Nitisols	A
JIM/OMN/DY/A2	34104	Alemayehu R.	JMU	Omo Nada	37.28559	7.58903	-	Luvisols	A
JIM/OMN/DY/A3	34104	Alemayehu R.	JMU	Omo Nada	37.27337	7.61848	-	Nitisols	A
JIM/OMN/DY/A4	34104	Alemayehu R.	JMU	Omo Nada	37.26864	7.62153	-	Nitisols	A
JIM/OMN/DY/A5	34104	Alemayehu R.	JMU	Omo Nada	37.29993	7.60483	-	Leptosols	A
JIM/OMN/DY/A6	34104	Alemayehu R.	JMU	Omo Nada	37.26229	7.63836	-	Vertisols	A
JIM/OMN/DY/A7	34104	Alemayehu R.	JMU	Omo Nada	37.26109	7.64028	-	Vertisols	A
JIM/OMN/DY/A8	34104	Alemayehu R.	JMU	Omo Nada	37.27535	7.62018	-	Nitisols	A
JIM/OMN/DY/P1	34104	Alemayehu R.	JMU	Omo Nada	37.26864	7.62153	-	Cutanic Luvisols (Epi-dystric, Clayic, Rhodic)	P
JIM/OMN/DY/P2	34104	Alemayehu R.	JMU	Omo Nada	37.27337	7.61848	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/OMN/DY/P3	34104	Alemayehu R.	JMU	Omo Nada	37.28559	7.58903	-	Luvic Phaeozems (Clayic)	P
JIM/OMN/NB/A1	34104	Alemayehu R.	JMU	Omo Nada	37.18559	7.57458	-	Nitisols	A
JIM/OMN/NB/A2	34104	Alemayehu R.	JMU	Omo Nada	37.18642	7.56319	-	Nitisols	A
JIM/OMN/NB/A3	34104	Alemayehu R.	JMU	Omo Nada	37.18808	7.54708	-	Cambisols	A
JIM/OMN/NB/A4	34104	Alemayehu R.	JMU	Omo Nada	37.18809	7.56319	-	Nitisols	A
JIM/OMN/NB/A5	34104	Alemayehu R.	JMU	Omo Nada	37.18701	7.52444	-	Leptosols	A
JIM/OMN/NB/A6	34104	Alemayehu R.	JMU	Omo Nada	37.19660	7.56190	-	Nitisols	A
JIM/OMN/NB/A7	34104	Alemayehu R.	JMU	Omo Nada	37.19388	7.54998	-	Vertisols	A
JIM/OMN/NB/A8	34104	Alemayehu R.	JMU	Omo Nada	37.18213	7.54921	-	Nitisols	A
JIM/OMN/NB/P1	34104	Alemayehu R.	JMU	Omo Nada	37.18809	7.56319	-	Luvic Nitisols (Dystric, Rhodic)	P
JIM/OMN/NB/P2	34104	Alemayehu R.	JMU	Omo Nada	37.18808	7.54708	-	Haplic Cambisols (Eutric, Clayic)	P
JIM/OMN/NC/A1	34104	Alemayehu R.	JMU	Omo Nada	37.21753	7.62292	-	Planosols	A
JIM/OMN/NC/A2	34104	Alemayehu R.	JMU	Omo Nada	37.19059	7.62459	-	Nitisols	A
JIM/OMN/NC/A3	34104	Alemayehu R.	JMU	Omo Nada	37.17983	7.62679	-	Vertisols	A
JIM/OMN/NC/A4	34104	Alemayehu R.	JMU	Omo Nada	37.20461	7.61867	-	Nitisols	A
JIM/OMN/NC/A5	34104	Alemayehu R.	JMU	Omo Nada	37.18294	7.59986	-	Leptosols	A
JIM/OMN/NC/A6	34104	Alemayehu R.	JMU	Omo Nada	37.18138	7.61483	-	Nitisols	A
JIM/OMN/NC/A7	34104	Alemayehu R.	JMU	Omo Nada	37.20640	7.61256	-	Planosols	A
JIM/OMN/NC/A8	34104	Alemayehu R.	JMU	Omo Nada	37.18892	7.62126	-	Nitisols	A
JIM/OMN/NC/P1	34104	Alemayehu R.	JMU	Omo Nada	37.21753	7.62292	-	Vertic Planosols (Albic, Eutric, Clayic)	P
JIM/OMN/NC/P2	34104	Alemayehu R.	JMU	Omo Nada	37.19059	7.62459	-	Acric Nitisols (Dystric)	P
JIM/OMN/TB/A1	34104	Alemayehu R.	JMU	Omo Nada	37.11631	7.57129	-	Planosols	A
JIM/OMN/TB/A2	34104	Alemayehu R.	JMU	Omo Nada	37.14975	7.56153	-	Planosols	A
JIM/OMN/TB/A3	34104	Alemayehu R.	JMU	Omo Nada	37.11697	7.62375	-	Luvisols	A
JIM/OMN/TB/A4	34104	Alemayehu R.	JMU	Omo Nada	37.12883	7.62374	-	Fluvisols	A

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JIM/OMN/TB/A5	34104	Alemayehu R.	JMU	Omo Nada	37.11546	7.59374	-	Cambisols	A
JIM/OMN/TB/A6	34104	Alemayehu R.	JMU	Omo Nada	37.15446	7.59466	-	Nitisols	A
JIM/OMN/TB/A7	34104	Alemayehu R.	JMU	Omo Nada	37.11445	7.62835	-	Vertisols	A
JIM/OMN/TB/A8	34104	Alemayehu R.	JMU	Omo Nada	37.12367	7.62513	-	Vertisols	A
JIM/OMN/TB/P1	34104	Alemayehu R.	JMU	Omo Nada	37.14975	7.56153	-	Vertic Planosols (Albic, Eutric, Clayic)	P
KOM/BL/A1	34088	Kibebew K.	HMU	-	42.09975	9.47233	-	Vertic Luvisols	A
KOM/BL/A2	34088	Kibebew K.	HMU	-	42.10369	9.46833	-	Regosols	A
KOM/BL/A3	34088	Kibebew K.	HMU	-	42.10167	9.46417	-	Vertic Luvisols	A
KOM/BL/A4	34088	Kibebew K.	HMU	-	42.09417	9.45728	-	Luvisols	A
KOM/BL/A5	34088	Kibebew K.	HMU	-	42.10583	9.44250	-	Calcic Vertisols	A
KOM/BL/A6	34088	Kibebew K.	HMU	-	42.10831	9.45861	-	Grumic Vertisols	A
KOM/BL/A7	34088	Kibebew K.	HMU	-	42.11619	9.45297	-	Grumic Vertisols	A
KOM/BL/A8	34088	Kibebew K.	HMU	-	42.10722	9.45619	-	Grumic Vertisols (Chromic)	A
KOM/EG/A1	34088	Kibebew K.	HMU	-	42.11619	9.50083	-	Vertic Luvisols (Rhodic)	A
KOM/EG/A2	34088	Kibebew K.	HMU	-	42.11136	9.49167	-	Vertic Luvisols (Chromic)	A
KOM/EG/A3	34088	Kibebew K.	HMU	-	42.10581	9.51122	-	Gleyic Vertisols	A
KOM/EG/A4	34088	Kibebew K.	HMU	-	42.11506	9.48169	-	Calcic Gleyic Vertisols	A
KOM/EG/A5	34088	Kibebew K.	HMU	-	42.11008	9.47778	-	Haplic Regosols	A
KOM/EG/A6	34088	Kibebew K.	HMU	-	42.09342	9.48386	-	Gleyic Vertisols	A
KOM/EG/A7	34088	Kibebew K.	HMU	-	42.09547	9.49156	-	Calcic Gleyic Vertisols (Chromic)	A
KOM/EG/A8	34088	Kibebew K.	HMU	-	42.08639	9.48589	-	Calcic Vertisols (Rhodic)	A
KOM/KK/A1	34088	Kibebew K.	HMU	-	42.13928	9.49003	-	Calcic Vertic Luvisols	A
KOM/KK/A2	34088	Kibebew K.	HMU	-	42.14119	9.48539	-	Calcic Vertic Luvisols	A
KOM/KK/A3	34088	Kibebew K.	HMU	-	42.14033	9.47444	-	Vertic Luvisols (Rhodic)	A
KOM/KK/A4	34088	Kibebew K.	HMU	-	42.14500	9.47694	-	Arenosols	A
KOM/KK/A5	34088	Kibebew K.	HMU	-	42.13803	9.46667	-	Luvic Nitisols	A
KOM/KK/A6	34088	Kibebew K.	HMU	-	42.13564	9.46611	-	Luvic Nitisols	A
KOM/KK/A7	34088	Kibebew K.	HMU	-	42.13139	9.46478	-	Luvic Nitisols	A
KOM/KK/A8	34088	Kibebew K.	HMU	-	42.13019	9.49100	-	Regosols	A
KOM/WM/A1	34088	Kibebew K.	HMU	-	42.18300	9.44947	-	Leptosols	A
KOM/WM/A2	34088	Kibebew K.	HMU	-	42.18314	9.45600	-	Fluvisols	A
KOM/WM/A3	34088	Kibebew K.	HMU	-	42.19836	9.47603	-	Calcic Vertic Luvisols	A
KOM/WM/A4	34088	Kibebew K.	HMU	-	42.17928	9.46947	-	Fluvisols	A
KOM/WM/A5	34088	Kibebew K.	HMU	-	42.17092	9.46778	-	Vertisols (Rhodic)	A
KOM/WM/A6	34088	Kibebew K.	HMU	-	42.16933	9.46456	-	Calcic Vertisols	A
KOM/WM/A7	34088	Kibebew K.	HMU	-	42.16664	9.46508	-	Calcic Fluvisols	A
KOM/WM/A8	34088	Kibebew K.	HMU	-	42.17861	9.47286	-	Gleyic Vertisols	A

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Ma-Ft-P1	34103	Alemayehu K.	HWU	-	38.60583	6.92389	-	Haplic Nitisols (Eutric)	P
Ma-Ft-P2	34103	Alemayehu K.	HWU	-	38.62556	6.93000	-	Cutanic Luvisols (Chromic)	P
Ma-Gu-P1	34103	Alemayehu K.	HWU	-	38.70889	6.98917	-	Haplic Luvisols (Clayic)	P
Ma-Gu-P2	34103	Alemayehu K.	HWU	-	38.70194	6.99000	-	Haplic Luvisols (Clayic)	P
Ma-Ko-P1	34103	Alemayehu K.	HWU	-	38.55028	6.93167	-	Cutanic Luvisols (Chromic)	P
Ma-Si-P1	34103	Alemayehu K.	HWU	-	38.54500	6.93528	-	Stagnic Cambisols (Chromic)	P
Ma-Si-P2	34103	Alemayehu K.	HWU	-	38.55000	6.93972	-	Haplic Nitisols (Eutric)	P
Me-Az-Ab-P1	34103	Alemayehu K.	HWU	-	38.09194	7.89500	-	Cutanic Luvisols (Chromic)	P
Me-Az-Em-P2	34103	Alemayehu K.	HWU	-	38.01528	7.74944	-	Haplic Luvisols (Chromic)	P
Me-Az-Sb-P1	34103	Alemayehu K.	HWU	-	38.06361	7.87583	-	Haplic Luvisols (Chromic)	P
Me-Az-Sb-P2	34103	Alemayehu K.	HWU	-	38.07639	7.88139	-	Cutanic Luvisols (Clayic)	P
Me-Em-P1	34103	Alemayehu K.	HWU	-	38.00167	7.72222	-	Gleyic Vertisols (Mesotropic)	P
Me-Ye-P1	34103	Alemayehu K.	HWU	-	37.96833	7.70111	-	Cutanic Luvisols (Chromic)	P
MTA/BO/A1	34088	Kibebew K.	HMU	-	41.65503	9.38425	-	Leptosols	A
MTA/BO/A2	34088	Kibebew K.	HMU	-	41.65139	9.39122	-	Cambisols	A
MTA/BO/A3	34088	Kibebew K.	HMU	-	41.64661	9.39053	-	Calcic Gleyic Vertisols	A
MTA/BO/A4	34088	Kibebew K.	HMU	-	41.63947	9.38972	-	Luvisols	A
MTA/BO/A5	34088	Kibebew K.	HMU	-	41.63347	9.39564	-	Calcic Vertisols	A
MTA/BO/A6	34088	Kibebew K.	HMU	-	41.65853	9.42247	-	Regosols	A
MTA/BO/A7	34088	Kibebew K.	HMU	-	41.64797	9.41175	-	Cambisols (Chromic)	A
MTA/BO/A8	34088	Kibebew K.	HMU	-	41.64039	9.41447	-	Cambisols	A
MTA/CL/A1	34088	Kibebew K.	HMU	-	41.63117	9.42522	-	Regosols	A
MTA/CL/A2	34088	Kibebew K.	HMU	-	41.63139	9.42303	-	Nitisols (Rhodic)	A
MTA/CL/A3	34088	Kibebew K.	HMU	-	41.62656	9.44389	-	Calcic Vertisols	A
MTA/CL/A4	34088	Kibebew K.	HMU	-	41.61833	9.41064	-	Calcic Vertisols	A
MTA/CL/A5	34088	Kibebew K.	HMU	-	41.60533	9.36814	-	Calcic Fluvisols	A
MTA/CL/A6	34088	Kibebew K.	HMU	-	41.61597	9.41917	-	Calcic Vertisols	A
MTA/CL/A7	34088	Kibebew K.	HMU	-	41.61553	9.42256	-	Luvic Nitisols (Rhodic)	A
MTA/CL/A8	34088	Kibebew K.	HMU	-	41.62197	9.42525	-	Haplic Luvisols (Chromic)	A
MTA/DB/A1	34088	Kibebew K.	HMU	-	41.58689	9.39911	-	Calcic Vertisols (Chromic)	A
MTA/DB/A2	34088	Kibebew K.	HMU	-	41.59983	9.40286	-	Vertic Luvisols (Rhodic)	A
MTA/DB/A3	34088	Kibebew K.	HMU	-	41.60486	9.39994	-	Nitic Luvisols (Rhodic)	A
MTA/DB/A4	34088	Kibebew K.	HMU	-	41.58283	9.41272	-	Vertic Cambisols	A
MTA/DB/A5	34088	Kibebew K.	HMU	-	41.58903	9.41606	-	Cambisols (Skeletic)	A
MTA/DB/A6	34088	Kibebew K.	HMU	-	41.59367	9.41753	-	Calcic Vertisols	A
MTA/DB/A7	34088	Kibebew K.	HMU	-	41.60542	9.41617	-	Luvic Nitisols	A
MTA/DB/A8	34088	Kibebew K.	HMU	-	41.60331	9.41881	-	Calcic Vertic Luvisols (Rhodic)	A

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MTA/HB/A1	34088	Kibebew K.	HMU	-	41.71992	9.44231	-	Luvisols	A
MTA/HB/A2	34088	Kibebew K.	HMU	-	41.72144	9.43725	-	Vertic Luvisols	A
MTA/HB/A3	34088	Kibebew K.	HMU	-	41.71478	9.43103	-	Vertic Luvisols	A
MTA/HB/A4	34088	Kibebew K.	HMU	-	41.71072	9.43933	-	Vertic Luvisols	A
MTA/HB/A5	34088	Kibebew K.	HMU	-	41.70994	9.44636	-	Vertic Luvisols	A
MTA/HB/A6	34088	Kibebew K.	HMU	-	41.70969	9.44964	-	Leptosols	A
MTA/HB/A7	34088	Kibebew K.	HMU	-	41.74433	9.42497	-	Calcic Vertisols	A
MTA/HB/A8	34088	Kibebew K.	HMU	-	41.72303	9.41378	-	Vertisols	A
OR/BAK/AG/P1	34090	Engdawork A.	AAU	-	37.19197	8.97244	-	Haplic Vertisols (Hyper-eutric)	P
OR/BAK/AG/P2	34090	Engdawork A.	AAU	-	37.19464	8.97968	-	Cutanic Luvisols (Hyper-eutric)	P
OR/BAK/AG/P3	34090	Engdawork A.	AAU	-	37.20592	8.98938	-	Luvic Nitisols (Eutric)	P
OR/BAK/BE/P1	34090	Engdawork A.	AAU	-	37.07878	9.04985	-	Haplic Nitisols (Eutric)	P
OR/BAK/DD/P1	34090	Engdawork A.	AAU	-	37.08110	9.11267	-	Haplic Nitisols (Eutric)	P
OR/BAK/DD/P2	34090	Engdawork A.	AAU	-	37.07494	9.09545	-	Haplic Fluvisols (Eutric)	P
OR/BAK/GM/P1	34090	Engdawork A.	AAU	-	37.15457	9.17510	-	Lithic Leptosols	P
OR/BEC/AB/P1	34090	Engdawork A.	AAU	-	38.29807	8.73268	-	Cutanic Luvisols (Hyper-eutric)	P
OR/BEC/SO/P1	34090	Engdawork A.	AAU	-	38.23842	8.69686	-	Cutanic Luvisols (Hyper-eutric)	P
OR/BEC/WE/P1	34090	Engdawork A.	AAU	-	38.36239	8.72145	-	Haplic Vertisols (Eutric)	P
OR/BEC/WE/P2	34090	Engdawork A.	AAU	-	38.35762	8.73474	-	Cutanic Luvisols (Hyper-eutric)	P
OR/EXCL/01	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/01	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/02	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/02	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/03	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/03	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/04	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/04	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/05	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/05	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/06	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/06	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/07	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/07	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/08	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/EXCL/08	-	Engdawork A.	AAU	-	0.00000	0.00000	-	-	P
OR/GIM/AD/P1	34090	Engdawork A.	AAU	-	39.12843	9.00299	-	Luvic Phaeozems	P
OR/GIM/AD/P2	34090	Engdawork A.	AAU	-	39.13897	9.00579	-	Haplic Leptosols (Eutric)	P

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OR/GIM/AR/P1	34090	Engdawork A.	AAU	-	39.26705	9.08088	-	Haplic Vertisols (Eutric)	P
OR/GIM/HS/P1	34090	Engdawork A.	AAU	-	39.07652	8.96087	-	Haplic Leptosols (Eutric)	P
OR/GIM/HS/P3	34090	Engdawork A.	AAU	-	39.08197	8.95673	-	Luvic Phaeozems	P
OR/GIM/HS/P4	34090	Engdawork A.	AAU	-	39.09689	8.95284	-	Haplic Vertisols (Eutric)	P
OR/GIR/GG/P1	34090	Engdawork A.	AAU	-	38.70757	9.77127	-	Haplic Vertisols (Eutric)	P
OR/GIR/GG/P2	34090	Engdawork A.	AAU	-	38.70401	9.77277	-	Haplic Cambisols (Eutric)	P
OR/GIR/GG/P3	34090	Engdawork A.	AAU	-	38.69900	9.77700	-	Lithic Leptosols	P
OR/GIR/KO/P2	34090	Engdawork A.	AAU	-	38.76566	9.78398	-	Haplic Vertisols (Eutric)	P
OR/GIR/TN/P1	34090	Engdawork A.	AAU	-	38.72130	9.77292	-	Cutanic Luvisols (Hyper-eutric)	P
OR/GIR/TN/P2	34090	Engdawork A.	AAU	-	38.69963	9.72708	-	Haplic Nitisols (Eutric)	P
OR/GIR/WU/P1	34090	Engdawork A.	AAU	-	38.80094	9.73407	-	Cutanic Luvisols (Hyper-eutric)	P
OR/MUN/GE/P1	34090	Engdawork A.	AAU	-	39.00949	7.66397	-	Luvic Phaeozems	P
OR/MUN/GU/P1	34090	Engdawork A.	AAU	-	39.08350	7.50454	-	Haplic Luvisols (Hyper-eutric)	P
OR/MUN/GU/P3	34090	Engdawork A.	AAU	-	39.07821	7.49133	-	Haplic Fluvisols (Eutric)	P
OR/MUN/GU/P4	34090	Engdawork A.	AAU	-	39.07589	7.53545	-	Haplic Leptosols (Eutric)	P
TALJ-ATS-A1	34091	Amanuel Z.	MKU	-	39.52694	12.92250	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A2	34091	Amanuel Z.	MKU	-	39.53972	12.92389	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A3	34091	Amanuel Z.	MKU	-	39.53000	12.95833	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A4	34091	Amanuel Z.	MKU	-	39.55028	12.95194	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A5	34091	Amanuel Z.	MKU	-	39.54778	12.94361	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A6	34091	Amanuel Z.	MKU	-	39.54000	12.93750	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A7	34091	Amanuel Z.	MKU	-	39.55556	12.92861	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-A8	34091	Amanuel Z.	MKU	-	39.51861	12.95528	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-ATS-P1	34091	Amanuel Z.	MKU	-	39.54700	12.92860	-	Haplic Vertisols (Eutric, Pellic)	P
TALJ-AYB-A1	34091	Amanuel Z.	MKU	-	39.54167	12.90333	-	Calcic Vertisols (Eutric, Pellic)	A
TALJ-AYB-A2	34091	Amanuel Z.	MKU	-	39.54083	12.90278	-	Calcic Vertisols (Eutric, Pellic)	A
TALJ-AYB-A5	34091	Amanuel Z.	MKU	-	39.54056	12.90194	-	Calcic Vertisols (Eutric, Pellic)	A
TALJ-AYB-A6	34091	Amanuel Z.	MKU	-	39.54833	12.87667	-	Calcic Vertisols (Eutric, Pellic)	A
TALJ-AYB-A7	34091	Amanuel Z.	MKU	-	39.53278	12.88333	-	Vertic Epi-leptic Cambisols (Eutric)	A
TALJ-AYB-A8	34091	Amanuel Z.	MKU	-	39.52306	12.88806	-	Vertic Epi-leptic Cambisols (Eutric)	A
TALJ-AYB-P1	34091	Amanuel Z.	MKU	-	39.53900	12.89940	-	Calcic Vertisols (Eutric, Pellic)	P
TALJ-AYB-P2	34091	Amanuel Z.	MKU	-	39.53500	12.88940	-	Endo-gleyic Cambisols (Eutric, Thapto-Vertic)	P
TALJ-SES-A1	34091	Amanuel Z.	MKU	-	39.56778	12.91806	-	Haplic Leptosols (Eutric, Skeletic)	A
TALJ-SES-A2	34091	Amanuel Z.	MKU	-	39.58194	12.91778	-	Haplic Leptosols (Eutric, Skeletic)	A
TALJ-SES-A3	34091	Amanuel Z.	MKU	-	39.59306	12.93694	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-SES-A4	34091	Amanuel Z.	MKU	-	39.60861	12.92028	-	Leptic Regosols (Eutric)	A
TALJ-SES-A5	34091	Amanuel Z.	MKU	-	39.60889	12.91556	-	Haplic Vertisols (Eutric, Pellic)	A

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TALJ-SES-A6	34091	Amanuel Z.	MKU	-	39.60194	12.91750	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-SES-A7	34091	Amanuel Z.	MKU	-	39.58833	12.91944	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-SES-A8	34091	Amanuel Z.	MKU	-	39.56667	12.92889	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-SES-P1	34091	Amanuel Z.	MKU	-	39.57500	12.92250	-	Haplic Vertisols (Eutric, Pellic)	P
TALJ-TEK-A1	34091	Amanuel Z.	MKU	-	39.47583	12.89583	-	Haplic Regosols (Eutric)	A
TALJ-TEK-A2	34091	Amanuel Z.	MKU	-	39.46972	12.90778	-	Haplic Cambisols (Eutric)	A
TALJ-TEK-A3	34091	Amanuel Z.	MKU	-	39.47139	12.91389	-	Haplic Leptosols (Eutric, Skeletic)	A
TALJ-TEK-A4	34091	Amanuel Z.	MKU	-	39.47417	12.90833	-	Haplic Cambisols (Eutric)	A
TALJ-TEK-A5	34091	Amanuel Z.	MKU	-	39.47972	12.90972	-	Haplic Cambisols (Eutric)	A
TALJ-TEK-A6	34091	Amanuel Z.	MKU	-	39.48750	12.90333	-	Vertic Epi-leptic Cambisols (Eutric)	A
TALJ-TEK-A7	34091	Amanuel Z.	MKU	-	39.50194	12.90278	-	Vertic Epi-leptic Cambisols (Eutric)	A
TALJ-TEK-A8	34091	Amanuel Z.	MKU	-	39.48722	12.91667	-	Haplic Vertisols (Eutric, Pellic)	A
TALJ-TEK-P1	34091	Amanuel Z.	MKU	-	39.47800	12.90000	-	Haplic Cambisols (Eutric)	P
TALJ-TEK-P2	34091	Amanuel Z.	MKU	-	39.48300	12.90310	-	Vertic Epi-leptic Cambisols (Eutric)	P
TALJ-TEK-P3	34091	Amanuel Z.	MKU	-	39.48600	12.91110	-	Haplic Vertisols (Eutric, Pellic)	P
TENM-MEK-A1	34091	Amanuel Z.	MKU	-	39.52139	12.74194	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-MEK-A2	34091	Amanuel Z.	MKU	-	39.52472	12.74361	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-MEK-A3	34091	Amanuel Z.	MKU	-	39.52833	12.74639	-	Haplic Fluvisols (Eutric)	A
TENM-MEK-A4	34091	Amanuel Z.	MKU	-	39.53000	12.75000	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-MEK-A5	34091	Amanuel Z.	MKU	-	39.53361	12.75278	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-MEK-A6	34091	Amanuel Z.	MKU	-	39.53250	12.75917	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-MEK-A7	34091	Amanuel Z.	MKU	-	39.50417	12.74222	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-MEK-A8	34091	Amanuel Z.	MKU	-	39.50500	12.75167	-	Vertic Cambisols (Eutric)	A
TENM-MEK-P1	34091	Amanuel Z.	MKU	-	39.52800	12.74750	-	Haplic Vertisols (Eutric, Pellic)	P
TENM-MES-A1	34091	Amanuel Z.	MKU	-	39.55889	12.70444	-	Calcic Vertisols (Eutric, Pellic)	A
TENM-MES-A2	34091	Amanuel Z.	MKU	-	39.56139	12.69583	-	Vertic Cambisols (Eutric)	A
TENM-MES-A3	34091	Amanuel Z.	MKU	-	39.57333	12.69583	-	Calcic Vertisols (Eutric, Pellic)	A
TENM-MES-A4	34091	Amanuel Z.	MKU	-	39.56194	12.71194	-	Vertic Cambisols (Eutric)	A
TENM-MES-A5	34091	Amanuel Z.	MKU	-	39.55500	12.70417	-	Calcic Vertisols (Eutric, Pellic)	A
TENM-MES-A6	34091	Amanuel Z.	MKU	-	39.54667	12.69833	-	Vertic Cambisols (Eutric)	A
TENM-MES-A7	34091	Amanuel Z.	MKU	-	39.54639	12.69056	-	Vertic Cambisols (Eutric)	A
TENM-MES-A8	34091	Amanuel Z.	MKU	-	39.54111	12.69500	-	Haplic Leptosols (Eutric, Skeletic)	A
TENM-MES-P1	34091	Amanuel Z.	MKU	-	39.56000	12.70560	-	Calcic Vertisols (Eutric, Pellic)	P
TENM-SHI-A1	34091	Amanuel Z.	MKU	-	39.47889	12.79889	-	Haplic Leptosols (Eutric, Skeletic)	A
TENM-SHI-A2	34091	Amanuel Z.	MKU	-	39.48833	12.79722	-	Vertic Cambisols (Eutric)	A
TENM-SHI-A3	34091	Amanuel Z.	MKU	-	39.49194	12.78972	-	Vertic Cambisols (Eutric)	A
TENM-SHI-A4	34091	Amanuel Z.	MKU	-	39.49528	12.79083	-	Haplic Vertisols (Eutric, Pellic)	A

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TENM-SHI-A5	34091	Amanuel Z.	MKU	-	39.52056	12.79333	-	Vertic Cambisols (Eutric)	A
TENM-SHI-A6	34091	Amanuel Z.	MKU	-	39.52361	12.79806	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TENM-SHI-A7	34091	Amanuel Z.	MKU	-	39.48083	12.79806	-	Haplic Leptosols (Eutric, Skeletic)	A
TENM-SHI-A8	34091	Amanuel Z.	MKU	-	39.52500	12.79444	-	Vertic Cambisols (Eutric)	A
TENM-SHI-P1	34091	Amanuel Z.	MKU	-	39.50300	12.79920	-	Haplic Vertisols (Eutric, Pellic)	P
TENM-SHI-P2	34091	Amanuel Z.	MKU	-	39.50600	12.79830	-	Vertic Cambisols (Eutric)	P
TENM-SHI-P3(RC)	34091	Amanuel Z.	MKU	-	39.52500	12.79440	-	Vertic Cambisols (Eutric)	P
TENM-SIM-A1	34091	Amanuel Z.	MKU	-	39.51056	12.72472	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-SIM-A2	34091	Amanuel Z.	MKU	-	39.51222	12.72667	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-SIM-A3	34091	Amanuel Z.	MKU	-	39.51528	12.72944	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-SIM-A4	34091	Amanuel Z.	MKU	-	39.51472	12.71917	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-SIM-A5	34091	Amanuel Z.	MKU	-	39.50944	12.72111	-	Vertic Cambisols (Eutric)	A
TENM-SIM-A6	34091	Amanuel Z.	MKU	-	39.50583	12.72694	-	Haplic Vertisols (Eutric, Pellic)	A
TENM-SIM-A7	34091	Amanuel Z.	MKU	-	39.49722	12.73389	-	Vertic Cambisols (Eutric)	A
TENM-SIM-A8	34091	Amanuel Z.	MKU	-	39.49944	12.73806	-	Vertic Cambisols (Eutric)	A
TENM-SIM-P1	34091	Amanuel Z.	MKU	-	39.51100	12.72580	-	Haplic Vertisols (Calcaric, Pellic)	P
TOFL-AGO-A1	34091	Amanuel Z.	MKU	-	39.50889	12.52306	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-AGO-A2	34091	Amanuel Z.	MKU	-	39.50111	12.52083	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-AGO-A3	34091	Amanuel Z.	MKU	-	39.49778	12.52556	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-AGO-A4	34091	Amanuel Z.	MKU	-	39.49750	12.53778	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-AGO-A5	34091	Amanuel Z.	MKU	-	39.49417	12.55500	-	Gleyic Calcic Fluvisols (Eutric)	A
TOFL-AGO-A6	34091	Amanuel Z.	MKU	-	39.48861	12.56056	-	Gleyic Calcic Fluvisols (Eutric)	A
TOFL-AGO-A7	34091	Amanuel Z.	MKU	-	39.51250	12.53417	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-AGO-P1	34091	Amanuel Z.	MKU	-	39.50300	12.53360	-	Haplic Vertisols (Eutric)	P
TOFL-HAS-A1	34091	Amanuel Z.	MKU	-	39.50111	12.62528	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HAS-A2	34091	Amanuel Z.	MKU	-	39.49667	12.62278	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HAS-A3	34091	Amanuel Z.	MKU	-	39.49111	12.60833	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HAS-A4	34091	Amanuel Z.	MKU	-	39.51222	12.60333	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HAS-A5	34091	Amanuel Z.	MKU	-	39.51417	12.59917	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HAS-P1	34091	Amanuel Z.	MKU	-	39.51400	12.60690	-	Haplic Vertisols (Eutric, Pellic)	P
TOFL-HUG-A1	34091	Amanuel Z.	MKU	-	39.53056	12.63583	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HUG-A2	34091	Amanuel Z.	MKU	-	39.52417	12.63500	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HUG-A3	34091	Amanuel Z.	MKU	-	39.51639	12.63972	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HUG-A4	34091	Amanuel Z.	MKU	-	39.51000	12.63528	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HUG-A5	34091	Amanuel Z.	MKU	-	39.53194	12.64417	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-HUG-A6	34091	Amanuel Z.	MKU	-	39.53000	12.65472	-	Leptic Cambisols (Eutric)	A
TOFL-HUG-A7	34091	Amanuel Z.	MKU	-	39.53639	12.65417	-	Leptic Cambisols (Eutric)	A

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TOFL-HUG-P1	34091	Amanuel Z.	MKU	-	39.53500	12.65640	-	Leptic Cambisols (Eutric)	P
TOFL-MEN-A1	34091	Amanuel Z.	MKU	-	39.53333	12.58556	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-MEN-A1	34091	Amanuel Z.	MKU	-	39.53333	12.58556	-	Haplic Vertisols (Eutric, Pellic)	A
TOFL-MEN-A3	34091	Amanuel Z.	MKU	-	39.53278	12.57139	-	Haplic Cambisols (Eutric)	A
TOFL-MEN-A4	34091	Amanuel Z.	MKU	-	39.52944	12.57333	-	Haplic Cambisols (Eutric)	A
TOFL-MEN-A5	34091	Amanuel Z.	MKU	-	39.52472	12.58333	-	Gleyic Calcic Fluvisols (Eutric)	A
TOFL-MEN-A6	34091	Amanuel Z.	MKU	-	39.52528	12.58417	-	Gleyic Calcic Fluvisols (Eutric)	A
TOFL-MEN-P1	34091	Amanuel Z.	MKU	-	39.52500	12.58750	-	Gleyic Calcic Fluvisols (Eutric)	P
TOFL-MEN-P2	34091	Amanuel Z.	MKU	-	39.52200	12.56670	-	Haplic Cambisols (Eutric)	P
TRAL-GER-A1	34091	Amanuel Z.	MKU	-	39.63472	12.46861	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-GER-A2	34091	Amanuel Z.	MKU	-	39.62556	12.47333	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-GER-A3	34091	Amanuel Z.	MKU	-	39.61083	12.44667	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-GER-A4	34091	Amanuel Z.	MKU	-	39.61667	12.44583	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-GER-A5	34091	Amanuel Z.	MKU	-	39.62694	12.44861	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-GER-A6	34091	Amanuel Z.	MKU	-	39.60222	12.44778	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TRAL-GER-A7	34091	Amanuel Z.	MKU	-	39.59306	12.46833	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TRAL-GER-A8	34091	Amanuel Z.	MKU	-	39.58694	12.47167	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TRAL-GER-P1	34091	Amanuel Z.	MKU	-	39.63800	12.47360	-	Haplic Fluvisols (Eutric)	P
TRAL-SBK-A1	34091	Amanuel Z.	MKU	-	39.55917	12.39667	-	Calcic Vertisols (Eutric, Pellic)	A
TRAL-SBK-A2	34091	Amanuel Z.	MKU	-	39.56528	12.38944	-	Calcic Vertisols (Eutric, Pellic)	A
TRAL-SBK-A3	34091	Amanuel Z.	MKU	-	39.57333	12.39722	-	Calcic Vertisols (Eutric, Pellic)	A
TRAL-SBK-A4	34091	Amanuel Z.	MKU	-	39.64528	12.40194	-	Gleyic Calcic Fluvisols (Eutric)	A
TRAL-SBK-A5	34091	Amanuel Z.	MKU	-	39.59000	12.38667	-	Gleyic Calcic Fluvisols (Eutric)	A
TRAL-SBK-A6	34091	Amanuel Z.	MKU	-	39.58806	12.38139	-	Gleyic Calcic Fluvisols (Eutric)	A
TRAL-SBK-A7	34091	Amanuel Z.	MKU	-	39.54611	12.38417	-	Haplic Cambisols (Eutric)	A
TRAL-SBK-A8	34091	Amanuel Z.	MKU	-	39.55000	12.39806	-	Haplic Leptosols (Eutric, Skeletic)	A
TRAL-SBK-P1	34091	Amanuel Z.	MKU	-	39.66200	12.38690	-	Gleyic Calcic Fluvisols (Eutric)	P
TRAL-TAO-A1	34091	Amanuel Z.	MKU	-	39.64778	12.50028	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-TAO-A2	34091	Amanuel Z.	MKU	-	39.66472	12.51417	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-TAO-A3	34091	Amanuel Z.	MKU	-	39.66778	12.52222	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-TAO-A4	34091	Amanuel Z.	MKU	-	39.63750	12.47361	-	Haplic Vertisols (Eutric, Pellic)	A
TRAL-TAO-P1	34091	Amanuel Z.	MKU	-	39.64900	12.52560	-	Vertic Cambisols (Calcaric)	P
TRAL-TIM-A1	34091	Amanuel Z.	MKU	-	39.58167	12.28167	-	Calcic Vertisols (Eutric)	A
TRAL-TIM-A2	34091	Amanuel Z.	MKU	-	39.58833	12.28361	-	Calcic Vertisols (Eutric)	A
TRAL-TIM-A3	34091	Amanuel Z.	MKU	-	39.57472	12.27611	-	Calcic Vertisols (Eutric)	A
TRAL-TIM-A4	34091	Amanuel Z.	MKU	-	39.57278	12.26833	-	Calcic Vertisols (Eutric)	A
TRAL-TIM-A5	34091	Amanuel Z.	MKU	-	39.59278	12.30583	-	Calcic Vertisols (Eutric)	A

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TRAL-TIM-A6	34091	Amanuel Z.	MKU	-	39.59222	12.31306	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TRAL-TIM-A7	34091	Amanuel Z.	MKU	-	39.58694	12.31250	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TRAL-TIM-A8	34091	Amanuel Z.	MKU	-	39.57972	12.30111	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	A
TRAL-TIM-P1	34091	Amanuel Z.	MKU	-	39.58900	12.30780	-	Haplic Cambisols (Calcaric, Thapto-Vertic)	P
TRAL-TIM-P2	34091	Amanuel Z.	MKU	-	39.57400	12.27750	-	Calcic Vertisols (Eutric)	P
TRAZ-EBO-A1	34091	Amanuel Z.	MKU	-	39.66528	12.86639	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A2	34091	Amanuel Z.	MKU	-	39.66917	12.87111	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A3	34091	Amanuel Z.	MKU	-	39.67889	12.87861	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A4	34091	Amanuel Z.	MKU	-	39.68556	12.85944	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A5	34091	Amanuel Z.	MKU	-	39.67861	12.85722	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A6	34091	Amanuel Z.	MKU	-	39.69250	12.85583	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A7	34091	Amanuel Z.	MKU	-	39.68222	12.86861	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-A8	34091	Amanuel Z.	MKU	-	39.68806	12.85083	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-EBO-P1	34091	Amanuel Z.	MKU	-	39.68300	12.86280	-	Calcic Vertisols (Eutric, Pellic)	P
TRAZ-GEN-A1	34091	Amanuel Z.	MKU	-	39.64889	12.75778	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A2	34091	Amanuel Z.	MKU	-	39.64417	12.75639	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A3	34091	Amanuel Z.	MKU	-	39.63667	12.75750	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A4	34091	Amanuel Z.	MKU	-	39.64472	12.76722	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A5	34091	Amanuel Z.	MKU	-	39.62972	12.76139	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A6	34091	Amanuel Z.	MKU	-	39.62583	12.77361	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A7	34091	Amanuel Z.	MKU	-	39.61361	12.75639	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-GEN-A8	34091	Amanuel Z.	MKU	-	39.68111	12.73750	-	Haplic Vertisols (Calcaric)	A
TRAZ-GEN-P1	34091	Amanuel Z.	MKU	-	39.65900	12.75610	-	Haplic Vertisols (Calcaric)	P
TRAZ-GEN-P2	34091	Amanuel Z.	MKU	-	39.62700	12.76360	-	Calcic Vertisols (Eutric, Pellic)	P
TRAZ-KAS-A1	34091	Amanuel Z.	MKU	-	39.66806	12.67778	-	Haplic Vertisols (Calcaric)	A
TRAZ-KAS-A2	34091	Amanuel Z.	MKU	-	39.67139	12.70194	-	Haplic Vertisols (Calcaric)	A
TRAZ-KAS-A3	34091	Amanuel Z.	MKU	-	39.66611	12.69833	-	Haplic Vertisols (Calcaric)	A
TRAZ-KAS-A4	34091	Amanuel Z.	MKU	-	39.64972	12.68639	-	Haplic Vertisols (Calcaric)	A
TRAZ-KAS-A5	34091	Amanuel Z.	MKU	-	39.63556	12.69611	-	Vertic Cambisols (Calcaric)	A
TRAZ-KAS-A6	34091	Amanuel Z.	MKU	-	39.65889	12.68667	-	Haplic Vertisols (Calcaric)	A
TRAZ-KAS-A7	34091	Amanuel Z.	MKU	-	39.63000	12.69917	-	Vertic Cambisols (Calcaric)	A
TRAZ-KAS-A8	34091	Amanuel Z.	MKU	-	39.62667	12.69417	-	Vertic Cambisols (Calcaric)	A
TRAZ-KAS-P1	34091	Amanuel Z.	MKU	-	39.66600	12.69810	-	Haplic Vertisols (Calcaric)	P
TRAZ-TSE-A1	34091	Amanuel Z.	MKU	-	39.60472	12.80222	-	Leptic Regosols (Eutric)	A
TRAZ-TSE-A2	34091	Amanuel Z.	MKU	-	39.61639	12.80306	-	Leptic Regosols (Eutric)	A
TRAZ-TSE-A3	34091	Amanuel Z.	MKU	-	39.65472	12.79722	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-TSE-A4	34091	Amanuel Z.	MKU	-	39.63667	12.80611	-	Calcic Vertisols (Eutric, Pellic)	A

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TRAZ-TSE-A5	34091	Amanuel Z.	MKU	-	39.66667	12.79528	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-TSE-A6	34091	Amanuel Z.	MKU	-	39.67278	12.78556	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-TSE-A7	34091	Amanuel Z.	MKU	-	39.63944	12.82222	-	Calcic Vertisols (Eutric, Pellic)	A
TRAZ-TSE-P1	34091	Amanuel Z.	MKU	-	39.62800	12.81530	-	Calcic Vertisols (Eutric, Pellic)	P
TRAZ-TSE-P2	34091	Amanuel Z.	MKU	-	39.60800	12.80310	-	Leptic Regosols (Eutric)	A
VirtualProfile_01	Virtual	-	-	-	39.62250	12.89839	-	Leptosols	A
VirtualProfile_02	Virtual	-	-	-	39.58578	12.83962	-	Leptosols	A
VirtualProfile_03	Virtual	-	-	-	39.45946	12.94332	-	Leptosols	A
VirtualProfile_04	Virtual	-	-	-	39.45633	12.72331	-	Leptosols	A
VirtualProfile_05	Virtual	-	-	-	39.48452	12.65561	-	Leptosols	A
VirtualProfile_06	Virtual	-	-	-	39.37466	12.53065	-	Leptosols	A
VirtualProfile_07	Virtual	-	-	-	39.41838	12.53145	-	Leptosols	A
VirtualProfile_08	Virtual	-	-	-	39.51987	12.44284	-	Leptosols	A
VirtualProfile_09	Virtual	-	-	-	39.35727	12.41356	-	Leptosols	A
VirtualProfile_10	Virtual	-	-	-	39.57696	12.54104	-	Leptosols	A
VirtualProfile_11	Virtual	-	-	-	39.45426	12.83167	-	Leptosols	A
VirtualProfile_12	Virtual	-	-	-	39.61105	12.70319	-	Leptosols	A
VirtualProfile_13	Virtual	-	-	-	37.73249	11.39681	-	Leptosols	A
VirtualProfile_14	Virtual	-	-	-	37.34139	10.84588	-	Leptosols	A
VirtualProfile_15	Virtual	-	-	-	36.96989	8.43148	-	Leptosols	A
VirtualProfile_16	Virtual	-	-	-	37.07706	8.76118	-	Leptosols	A
VirtualProfile_17	Virtual	-	-	-	36.82923	8.40103	-	Leptosols	A
VirtualProfile_18	Virtual	-	-	-	37.26049	7.41107	-	Leptosols	A
VirtualProfile_19	Virtual	-	-	-	37.39530	7.46911	-	Leptosols	A
VirtualProfile_20	Virtual	-	-	-	37.29987	7.47852	-	Leptosols	A
VirtualProfile_21	Virtual	-	-	-	37.98411	7.80052	-	Leptosols	A
VirtualProfile_22	Virtual	-	-	-	38.98788	7.39548	-	Leptosols	A
VirtualProfile_23	Virtual	-	-	-	38.89203	7.44800	-	Leptosols	A
VirtualProfile_24	Virtual	-	-	-	38.37001	6.24759	-	Leptosols	A
VirtualProfile_25	Virtual	-	-	-	38.33621	6.24640	-	Leptosols	A
VirtualProfile_26	Virtual	-	-	-	39.28423	9.08753	-	Leptosols	A
VirtualProfile_27	Virtual	-	-	-	39.29058	9.12430	-	Leptosols	A
VirtualProfile_28	Virtual	-	-	-	40.50457	8.64381	-	Leptosols	A
VirtualProfile_29	Virtual	-	-	-	40.55887	8.72416	-	Leptosols	A
VirtualProfile_30	Virtual	-	-	-	41.75639	9.25392	-	Leptosols	A
VirtualProfile_31	Virtual	-	-	-	41.87124	9.05312	-	Leptosols	A
VirtualProfile_32	Virtual	-	-	-	41.73915	9.24193	-	Leptosols	A

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VirtualProfile_33	Virtual	-	-	-	41.61484	9.27226	-	Leptosols	A
VirtualProfile_34	Virtual	-	-	-	38.17915	13.26254	-	Leptosols	A
VirtualProfile_35	Virtual	-	-	-	39.32533	13.06796	-	Leptosols	A
VirtualProfile_36	Virtual	-	-	-	39.30482	13.06416	-	Leptosols	A
VirtualProfile_37	Virtual	-	-	-	39.43101	12.64385	-	Leptosols	P
27179_J1	34023	-	-	-	43.06750	9.20592	-	Calcic Vertisols	P
27179_J2	34023	-	-	-	43.06786	9.20831	-	Calcic Vertisols	P
27179_J3	34023	-	-	-	43.05722	9.22294	-	Calcic Vertisols	P
27179_J4	34023	-	-	-	43.05528	9.22408	-	Calcic Vertisols	P
27180_DB1	34023	-	-	-	37.80292	6.89300	-	Cutanic Luvisols	P
27180_DB2	34023	-	-	-	37.80506	6.88931	-	Cutanic Luvisols (Abruptic, Endo-clayic)	P
27180_DB3	34023	-	-	-	37.81106	6.88119	-	Haplic Cambisols (Epi-eutric)	P
27180_DB4	34023	-	-	-	37.81178	6.87942	-	Haplic Cambisols (Epi-eutric, Clayic)	P
28969_AD1	34023	-	-	-	37.48322	11.28228	-	Vertisols (Eutric)	P
28969_AD10	34023	-	-	-	37.48669	11.27814	-	Vertisols (Eutric)	P
28969_AD11	34023	-	-	-	37.49011	11.27692	-	Vertisols (Eutric)	P
28969_AD12	34023	-	-	-	37.49033	11.27850	-	Vertisols (Eutric)	P
28969_AD13	34023	-	-	-	37.49136	11.28128	-	Fluvisols (Eutric)	P
28969_AD14	34023	-	-	-	37.49117	11.28275	-	Fluvisols (Eutric)	P
28969_AD15	34023	-	-	-	37.49242	11.27528	-	Haplic Phaeozems	P
28969_AD16	34023	-	-	-	37.48903	11.28003	-	Vertisols (Eutric)	P
28969_AD17	34023	-	-	-	37.48406	11.28075	-	Vertisols (Eutric)	P
28969_AD18	34023	-	-	-	37.49156	11.27725	-	Vertisols (Eutric)	P
28969_AD19	34023	-	-	-	37.48797	11.27719	-	Vertisols (Eutric)	P
28969_AD2	34023	-	-	-	37.48044	11.28708	-	Vertic Luvisols	P
28969_AD20	34023	-	-	-	37.48892	11.27892	-	Mollic Phaeozems	P
28969_AD3	34023	-	-	-	37.48439	11.28431	-	Vertisols (Eutric)	P
28969_AD4	34023	-	-	-	37.48625	11.28169	-	Vertic Luvisols	P
28969_AD5	34023	-	-	-	37.48086	11.28456	-	Haplic Nitisols	P
28969_AD6	34023	-	-	-	37.48758	11.28342	-	Vertisols (Eutric)	P
28969_AD7	34023	-	-	-	37.48694	11.28089	-	Vertic Luvisols	P
28969_AD8	34023	-	-	-	37.47181	11.28142	-	Vertisols (Eutric)	P
28969_AD9	34023	-	-	-	37.48464	11.27922	-	Vertic Luvisols	P
28969_DT1	34023	-	-	-	37.99425	11.86378	-	Luvisols (Dystric)	P
28969_DT10	34023	-	-	-	37.99650	11.86236	-	Cambisols (Dystric)	P
28969_DT11	34023	-	-	-	37.99647	11.86517	-	Vertisols (Eutric)	P
28969_DT12	34023	-	-	-	37.99600	11.86653	-	Haplic Vertisols	P

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28969_DT2	34023	-	-	-	37.99447	11.86447	-	Luvisols (Dystric)	P
28969_DT3	34023	-	-	-	37.99542	11.86431	-	Luvisols (Dystric)	P
28969_DT4	34023	-	-	-	37.99575	11.86742	-	Haplic Phaeozems	P
28969_DT5	34023	-	-	-	37.99761	11.86819	-	Fluvisols (Eutric)	P
28969_DT6	34023	-	-	-	37.99900	11.86564	-	Vertisols (Eutric)	P
28969_DT7	34023	-	-	-	37.99992	11.86736	-	Fluvisols (Eutric)	P
28969_DT8	34023	-	-	-	37.99992	11.86839	-	Haplic Nitisols	P
28969_DT9	34023	-	-	-	37.99900	11.86378	-	Haplic Luvisols	P
28969_FS1	34023	-	-	-	37.27250	10.67808	-	Nitisols (Rhodic)	P
28978_B1	34023	-	-	-	39.31558	8.39450	-	Mollic Andosols	P
28978_B2	34023	-	-	-	39.31472	8.39281	-	Mollic Andosols	P
28978_B3	34023	-	-	-	39.31361	8.39331	-	Mollic Andosols	P
28978_B4	34023	-	-	-	39.31519	8.39167	-	Regosols (Eutric)	P
28978_B5	34023	-	-	-	39.31772	8.39092	-	Vertisols (Eutric)	P
28978_B6	34023	-	-	-	39.32058	8.39022	-	Vertisols (Eutric)	P
28978_M1	34023	-	-	-	39.32039	8.42397	-	Mollic Andosols	P
28978_M10	34023	-	-	-	39.32725	8.41072	-	Mollic Andosols	P
28978_M11	34023	-	-	-	39.32894	8.41103	-	Mollic Andosols	P
28978_M12	34023	-	-	-	39.32889	8.40697	-	Vitric Andosols	P
28978_M13	34023	-	-	-	39.33033	8.40456	-	Vitric Andosols	P
28978_M14	34023	-	-	-	39.32419	8.40703	-	Fluvisols (Eutric)	P
28978_M15	34023	-	-	-	39.32272	8.40775	-	Vertisols (Eutric)	P
28978_M16	34023	-	-	-	39.33267	8.40314	-	Regosols (Eutric)	P
28978_M2	34023	-	-	-	39.31786	8.42014	-	Mollic Andosols	P
28978_M3	34023	-	-	-	39.32339	8.41878	-	Mollic Andosols	P
28978_M4	34023	-	-	-	39.32472	8.42047	-	Vitric Andosols	P
28978_M5	34023	-	-	-	39.32189	8.41436	-	Mollic Andosols	P
28978_M6	34023	-	-	-	39.32189	8.41244	-	Mollic Andosols	P
28978_M7	34023	-	-	-	39.32225	8.40956	-	Mollic Andosols	P
28978_M8	34023	-	-	-	39.32483	8.41197	-	Mollic Andosols	P
28978_M9	34023	-	-	-	39.32639	8.40803	-	Mollic Andosols	P
28978_W1	34023	-	-	-	39.44403	8.66742	-	Vertisols (Eutric)	P
28979_CMh2	34023	-	-	-	37.61306	8.95667	-	Haplic Cambisols	P
28979_CMv2	34023	-	-	-	37.61972	8.95917	-	Vertic Cambisols	P
28979_FLe2	34023	-	-	-	37.61972	8.94694	-	Fluvisols (Eutric)	P
28979_LPq1	34023	-	-	-	37.63250	8.95222	-	Lithic Leptosols	P
28979_LVv3	34023	-	-	-	37.61806	8.96333	-	Vertic Luvisols	P

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28979_PHI1	34023	-	-	-	37.62333	8.93333	-	Luvic Phaeozems	P
28979_VRe1	34023	-	-	-	37.62528	8.97083	-	Vertisols (Eutric)	P
28980_Hp1	34023	-	-	-	39.45306	7.06317	-	Vertic Cambisols	P
28980_Hp2	34023	-	-	-	39.43439	7.08636	-	Vertisols (Eutric)	P
28980_Hp3	34023	-	-	-	39.46772	7.06058	-	Vertisols (Eutric)	P
28980_Hp4	34023	-	-	-	39.42039	7.10072	-	Vertisols (Eutric)	P
28980_Hp5	34023	-	-	-	39.42828	7.12022	-	Vertisols (Eutric)	P
28981_AAN1	34023	-	-	-	37.86392	7.32797	-	Luvic Phaeozems	P
28981_ABB1	34023	-	-	-	37.83503	7.57072	-	Luvisols (Profondic)	P
28981_ABB2	34023	-	-	-	37.83586	7.57050	-	Luvisols (Profondic)	P
28981_AFR1	34023	-	-	-	38.01044	7.99244	-	Luvisols (Dystric)	P
28981_AFR2	34023	-	-	-	38.00992	7.87658	-	Luvisols (Dystric)	P
28981_AJA1	34023	-	-	-	37.78328	7.50964	-	Luvisols (Profondic)	P
28981_AKK1	34023	-	-	-	37.80700	6.87833	-	Nitisols (Rhodic)	P
28982_AK1	34023	-	-	-	38.82022	8.89431	-	Vertisols (Eutric)	P
28982_AT1	34023	-	-	-	38.95147	8.30789	-	Haplic Andosols	P
28982_CHD1	34023	-	-	-	39.10111	8.95406	-	Vertisols (Eutric)	P
28982_DN1	34023	-	-	-	38.93236	8.76644	-	Mollic Andosols	P
28982_DZ1	34023	-	-	-	39.00025	8.76675	-	Vitric Andosols	P
28982_DZ2	34023	-	-	-	39.00100	8.76758	-	Vertisols (Eutric)	P
28982_DZ3	34023	-	-	-	39.00378	8.76853	-	Vertisols (Eutric)	P
28982_DZ4	34023	-	-	-	39.00744	8.77092	-	Vertisols (Eutric)	P
28982_DZ5	34023	-	-	-	38.66653	8.77006	-	Vitric Andosols	P
28982_DZ6	34023	-	-	-	39.01097	8.76775	-	Vertisols (Eutric)	P
28982_DZ7	34023	-	-	-	39.06639	8.77092	-	Haplic Andosols	P
28982_DZ8	34023	-	-	-	39.00061	8.77244	-	Vitric Andosols	P
28982_DZ9	34023	-	-	-	39.00792	8.76414	-	Vertisols (Eutric)	P
28982_KK1	34023	-	-	-	39.02786	8.43456	-	Andosols	P
28982_MN1	34023	-	-	-	39.41814	8.91886	-	Vertisols (Eutric)	P
28983_A01	34023	-	-	-	37.68439	7.05847	-	Haplic Alisols	P
28983_A02	34023	-	-	-	37.68325	7.05786	-	Haplic Alisols	P
28983_A03	34023	-	-	-	37.68278	7.05911	-	Haplic Alisols	P
28983_A04	34023	-	-	-	37.68417	7.06256	-	Haplic Alisols	P
28983_A05	34023	-	-	-	37.68608	7.06614	-	Haplic Alisols	P
28983_A06	34023	-	-	-	37.68761	7.07061	-	Haplic Alisols	P
28983_A07	34023	-	-	-	37.68778	7.05114	-	Haplic Alisols	P
28983_A08	34023	-	-	-	37.68864	7.06458	-	Haplic Alisols	P

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28983_A09	34023	-	-	-	37.69278	7.06694	-	Haplic Alisols	P
28983_A10	34023	-	-	-	37.68911	7.06853	-	Haplic Alisols	P
28984_R1	34023	-	-	-	37.71848	12.01935	-	Fluvisols	P
28984_R107	34023	-	-	-	37.61084	11.98605	-	Fluvisols	P
28984_R11	34023	-	-	-	37.67093	12.03574	-	Vertisols	P
28984_R110	34023	-	-	-	37.62814	12.00478	-	Fluvisols	P
28984_R111	34023	-	-	-	37.61873	12.00916	-	Fluvisols	P
28984_R121	34023	-	-	-	37.58510	11.98865	-	Fluvisols	P
28984_R124	34023	-	-	-	37.57124	11.98582	-	Fluvisols	P
28984_R128	34023	-	-	-	37.75741	12.01071	-	Fluvisols	P
28984_R13	34023	-	-	-	37.69284	12.01968	-	Vertisols	P
28984_R29	34023	-	-	-	37.69026	11.97704	-	Vertisols	P
28984_R36	34023	-	-	-	37.65498	12.03349	-	Vertisols	P
28984_R4	34023	-	-	-	37.69093	12.03619	-	Vertisols	P
28984_R42	34023	-	-	-	37.67099	11.96888	-	Fluvisols	P
28984_R7	34023	-	-	-	37.71129	12.00605	-	Fluvisols	P
28984_R8	34023	-	-	-	37.72532	12.00546	-	Fluvisols	P
28984_R96	34023	-	-	-	37.63850	11.99593	-	Fluvisols	P
28985_AG1	34023	-	-	-	36.59778	7.84719	-	Mollic Nitisols	P
28985_AG2	34023	-	-	-	36.59539	7.84650	-	Mollic Nitisols	P
28985_AG3	34023	-	-	-	36.59511	7.84636	-	Mollic Nitisols	P
28985_AG4	34023	-	-	-	36.59542	7.84650	-	Mollic Fluvisols	P
28985_AG5	34023	-	-	-	36.59589	7.84603	-	Mollic Nitisols	P
28985_AG6	34023	-	-	-	36.59588	7.84601	-	Umbric Fluvisols	P
28985_AG7	34023	-	-	-	36.59590	7.84604	-	Mollic Nitisols	P
28985_M1	34023	-	-	-	35.60017	8.32322	-	Umbric Nitisols	P
28985_M2	34023	-	-	-	35.59906	8.32406	-	Umbric Nitisols	P
28985_M3	34023	-	-	-	35.59644	8.31939	-	Umbric Fluvisols	P
28985_M4	34023	-	-	-	35.59700	8.31953	-	Mollic Nitisols	P
28985_M5	34023	-	-	-	35.60175	8.32297	-	Mollic Nitisols	P
28985_M6	34023	-	-	-	35.60144	8.32300	-	Leptosols (Eutric)	P
28985_M7	34023	-	-	-	35.59856	8.32075	-	Mollic Nitisols	P
28986_P1	34023	-	-	-	36.42194	11.31564	-	Haplic Alisols	P
28986_P2	34023	-	-	-	36.41458	11.31769	-	Vertic Luvisols	P
28986_P3	34023	-	-	-	36.41056	11.30561	-	Haplic Alisols	P
28986_P4	34023	-	-	-	36.40969	11.31789	-	Vertic Luvisols	P
28986_P5	34023	-	-	-	36.41000	11.32108	-	Vertisols (Eutric)	P

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28986_P6	34023	-	-	-	36.41458	11.31333	-	Haplic Alisols	P
28986_P7	34023	-	-	-	36.41319	11.31653	-	Haplic Alisols	P
28987_SA1	34023	-	-	-	39.01981	12.72483	-	Cambisols (Eutric)	P
28987_SA2	34023	-	-	-	39.01969	12.72431	-	Cambisols (Eutric)	P
28987_SA3	34023	-	-	-	39.01908	12.72425	-	Fluvisols (Eutric)	P
28987_SA4	34023	-	-	-	39.01914	12.72492	-	Cambisols (Eutric)	P
28987_SA5	34023	-	-	-	39.01858	12.72494	-	Regosols (Eutric)	P
28987_SA6	34023	-	-	-	39.01892	12.72536	-	Cambisols (Eutric)	P
28987_SA7	34023	-	-	-	39.01706	12.72603	-	Cambisols (Eutric)	P
28987_SM1	34023	-	-	-	39.02269	12.62628	-	Regosols (Eutric)	P
28987_SM2	34023	-	-	-	39.02208	12.62619	-	Regosols (Dystric)	P
28987_SM3	34023	-	-	-	39.02264	12.62653	-	Cambisols (Eutric)	P
28987_SW1	34023	-	-	-	39.05508	12.53364	-	Vertic Cambisols	P
28987_SW2	34023	-	-	-	39.05533	12.53358	-	Vertisols (Eutric)	P
29069_MA01	34023	-	-	-	39.74161	13.88089	-	Luvisols	P
29069_MK01	34023	-	-	-	39.50750	13.52067	-	Vertisols (Eutric)	P
29069_MK02	34023	-	-	-	39.50603	13.52125	-	Vertisols (Eutric)	P
29069_MK03	34023	-	-	-	39.50481	13.51886	-	Calcic Vertisols	P
29069_MK04	34023	-	-	-	39.50431	13.51933	-	Fluvisols (Calcaric)	P
29069_MK05	34023	-	-	-	39.50311	13.52000	-	Fluvisols	P
29069_MK06	34023	-	-	-	39.50347	13.52161	-	Calcic Vertisols	P
29069_MK07	34023	-	-	-	39.50789	13.51958	-	Cambisols	P
29069_MK08	34023	-	-	-	39.50372	13.51811	-	Fluvisols	P
29069_MKW1	34023	-	-	-	39.54931	13.45669	-	Vertisols	P
29069_MW01	34023	-	-	-	39.59431	13.76114	-	Vertisols	P
29070_1	34023	-	-	-	39.94150	10.11589	-	Fluvisols	P
29070_2	34023	-	-	-	39.94781	10.11172	-	Fluvisols	P
29070_3	34023	-	-	-	39.94772	10.11472	-	Vertisols	P
29070_4	34023	-	-	-	39.95231	10.12003	-	Vertic Cambisols	P
29071_S01	34023	-	-	-	40.22131	7.11658	-	Luvic Phaeozems	P
29071_S02	34023	-	-	-	40.22558	7.11419	-	Luvic Phaeozems	P
29071_S03	34023	-	-	-	40.22389	7.11200	-	Haplic Phaeozems	P
29071_S04	34023	-	-	-	40.22461	7.10942	-	Luvic Phaeozems	P
29071_S05	34023	-	-	-	40.22194	7.10606	-	Haplic Phaeozems	P
29071_S06	34023	-	-	-	40.21778	7.10869	-	Haplic Phaeozems	P
29071_S07	34023	-	-	-	40.21989	7.11308	-	Cambisols	P
29071_S08	34023	-	-	-	40.22264	7.11658	-	Cambisols	P

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29071_S09	34023	-	-	-	40.21489	7.11386	-	Haplic Phaeozems	P
29071_S10	34023	-	-	-	40.21256	7.11067	-	Haplic Phaeozems	P
29071_S11	34023	-	-	-	40.21753	7.11503	-	Cambisols	P
29071_S12	34023	-	-	-	40.22161	7.12211	-	Vertic Cambisols	P
29071_S13	34023	-	-	-	40.22150	7.10200	-	Luvic Phaeozems	P
29071_S14	34023	-	-	-	40.22703	7.11264	-	Vertic Cambisols	P
29071_S15	34023	-	-	-	40.22753	7.11494	-	Vertisols (Eutric)	P
29072_K01	34023	-	-	-	39.15778	8.01528	-	Vertic Luvisols	P
29072_K02	34023	-	-	-	39.15361	8.02361	-	Vertic Luvisols	P
29072_K03	34023	-	-	-	39.13722	8.02028	-	Vertic Luvisols	P
29072_K04	34023	-	-	-	39.14222	8.01833	-	Vertic Luvisols	P
29072_K05	34023	-	-	-	39.13111	8.01500	-	Vertic Luvisols	P
29072_K06	34023	-	-	-	39.13278	8.01278	-	Vertisols (Eutric)	P
29072_K07	34023	-	-	-	39.15389	8.03222	-	Vertic Luvisols	P
29072_K08	34023	-	-	-	39.15083	8.01806	-	Vertisols (Eutric)	P
29072_K09	34023	-	-	-	39.14833	8.02222	-	Vertic Luvisols	P
29072_K10	34023	-	-	-	39.15722	8.01778	-	Vertic Cambisols	P
29072_K11	34023	-	-	-	39.16194	8.01528	-	Vertic Cambisols	P
29072_K12	34023	-	-	-	39.13083	8.03083	-	Vertic Luvisols	P
29072_K13	34023	-	-	-	39.15722	8.02333	-	Vertic Cambisols	P
29072_K14	34023	-	-	-	39.14278	8.02167	-	Vertic Luvisols	P
29072_K15	34023	-	-	-	39.15111	8.01472	-	Vertic Luvisols	P
29074_175D	34023	-	-	-	39.69167	10.81111	-	Regosols (Eutric)	P
29074_210D	34023	-	-	-	39.71528	10.66111	-	Mollic Andosols	P
29074_ANR14	34023	-	-	-	40.01342	9.91564	-	Vertisols (Eutric)	P
29074_ANR4	34023	-	-	-	39.96283	11.49183	-	Calcic Vertisols	P
29074_ANR8	34023	-	-	-	40.08181	10.71097	-	Vertisols (Eutric)	P
29074_AX38	34023	-	-	-	38.91699	14.20833	-	Cambisols	P
29074_B107	34023	-	-	-	39.90556	10.64167	-	Mollic Gleysols	P
29074_B20A	34023	-	-	-	39.80556	10.76944	-	Luvic Phaeozems	P
29074_DK8	34023	-	-	-	38.18417	13.25250	-	Umbric Andosols	P
29074_G004	34023	-	-	-	37.36195	12.85473	-	Vertisols	P
29074_G005	34023	-	-	-	37.38917	12.79279	-	Leptosols	P
29074_G018	34023	-	-	-	36.68528	12.61771	-	Vertisols	P
29074_MK14	34023	-	-	-	39.02680	13.54249	-	Cambisols	P
29074_PBR1	34023	-	-	-	39.52956	9.14956	-	Cambisols (Eutric)	P
29074_PBR2	34023	-	-	-	39.56786	9.08592	-	Leptosols (Eutric)	P

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
29074_PBR3	34023	-	-	-	39.71233	9.26203	-	Cambisols (Calcaric)	P
29074_PHK1	34023	-	-	-	39.41147	9.19706	-	Vertic Cambisols	P
29074_PHK2	34023	-	-	-	39.49556	9.26500	-	Haplic Alisols	P
29074_PHK3	34023	-	-	-	39.45606	9.29361	-	Vertisols (Eutric)	P
29074_R101	34023	-	-	-	39.53805	11.87618	-	Fluvisols (Eutric)	P
29074_R102	34023	-	-	-	39.57831	11.80917	-	Vertisols (Eutric)	P
29074_R103	34023	-	-	-	39.48254	12.15664	-	Haplic Luvisols	P
29074_R104	34023	-	-	-	39.74635	12.16871	-	Vertic Fluvisols	P
29074_REC001	34023	-	-	-	39.42583	11.34194	-	Leptosols (Eutric)	P
29074_REC010	34023	-	-	-	39.42500	11.34167	-	Regosols (Eutric)	P
29074_REC011	34023	-	-	-	38.92167	11.59056	-	Regosols (Eutric)	P
29074_REC017	34023	-	-	-	36.88194	11.04583	-	Haplic Luvisols	P
29074_REC018	34023	-	-	-	35.73944	11.33667	-	Luvisols (Chromic)	P
29074_REC019	34023	-	-	-	39.64028	9.65472	-	Haplic Luvisols	P
29074_REC020	34023	-	-	-	37.30472	10.28028	-	Haplic Alisols	P
29074_REC029	34023	-	-	-	35.86417	10.83139	-	Haplic Nitisols	P
29074_REC030	34023	-	-	-	37.01361	11.61056	-	Haplic Nitisols	P
29074_REC035	34023	-	-	-	39.55167	9.68417	-	Vertisols (Eutric)	P
29074_REC036	34023	-	-	-	39.28528	11.31444	-	Vertisols (Eutric)	P
29074_YF015	34023	-	-	-	38.85129	12.73145	-	Cambisols	P
29074_YF05	34023	-	-	-	38.83138	12.43981	-	Leptosols	P
29074_YF07	34023	-	-	-	38.85768	12.17196	-	Nitisols	P
29074_YF10	34023	-	-	-	38.96048	12.14206	-	Vertisols	P
29074_YF19	34023	-	-	-	38.12761	12.11022	-	Cambisols	P
29074_YF25	34023	-	-	-	38.19996	12.52509	-	Vertisols	P
29074_YF26	34023	-	-	-	38.08741	12.40500	-	Leptosols	P
29074_YF37	34023	-	-	-	37.91919	12.39458	-	Vertisols	P
29977_A14	34023	-	-	-	39.82498	9.00386	-	Cambisols (Eutric)	P
29977_A22	34023	-	-	-	39.80106	8.98844	-	Umbric Andosols	P
29977_A25	34023	-	-	-	39.83339	8.90677	-	Vitric Andosols	P
29977_A26	34023	-	-	-	39.84314	8.90201	-	Umbric Andosols	P
29977_A27	34023	-	-	-	39.85117	8.90621	-	Cambisols (Dystric)	P
29977_A33	34023	-	-	-	39.81531	8.99157	-	Umbric Andosols	P
29977_A36	34023	-	-	-	39.82769	8.92933	-	Lithic Leptosols	P
29977_A39	34023	-	-	-	39.83659	8.95187	-	Umbric Andosols	P
29977_A42	34023	-	-	-	39.81574	8.96953	-	Lithic Leptosols	P
29977_A43	34023	-	-	-	39.81186	8.96113	-	Vitric Andosols	P

ProfileID	SourceID	Observer	University	Woreda	X_LonDD	Y_LatDD	LocalClass	WRB2006	O
29977_A53	34023	-	-	-	39.80572	8.97703	-	Vitric Andosols	P
29977_A62	34023	-	-	-	39.83893	8.97434	-	Lithic Leptosols	P
29977_A65	34023	-	-	-	39.80791	8.99509	-	Cambisols	P
29977_A66	34023	-	-	-	39.81739	8.90716	-	Cambisols	P
29977_A68	34023	-	-	-	39.82490	8.97260	-	Lithic Leptosols	P
29977_A69	34023	-	-	-	39.81776	8.97959	-	Lithic Leptosols	P
29977_A70	34023	-	-	-	39.81696	8.95918	-	Lithic Leptosols	P
29977_A74	34023	-	-	-	39.82326	8.92700	-	Lithic Leptosols	P
29977_B18	34023	-	-	-	39.82973	8.83973	-	Umbric Andosols	P
29977_B20	34023	-	-	-	39.84404	8.88824	-	Cambisols (Calcaric)	P
29977_B21	34023	-	-	-	39.84167	8.88372	-	Leptosols	P
29977_B22	34023	-	-	-	39.83669	8.87376	-	Leptosols	P
29977_B23	34023	-	-	-	39.79680	8.81830	-	Vitric Andosols	P
29977_B4	34023	-	-	-	39.81578	8.88281	-	Umbric Andosols	P
29977_B8	34023	-	-	-	39.84108	8.89654	-	Umbric Andosols	P
29977_D14	34023	-	-	-	39.71647	8.97469	-	Cambisols (Calcaric)	P
29977_D15	34023	-	-	-	39.71412	8.97976	-	Cambisols (Calcaric)	P
29977_D18	34023	-	-	-	39.73524	8.98605	-	Fluvisols (Dystric)	P
29977_D26	34023	-	-	-	39.73693	9.01046	-	Fluvisols (Eutric)	P
29977_D8	34023	-	-	-	39.70070	8.95635	-	Vertisols (Eutric)	P
29977_E2	34023	-	-	-	39.70336	8.96666	-	Fluvisols (Eutric)	P
29977_E4	34023	-	-	-	39.71049	8.98428	-	Fluvisols (Eutric)	A
9999_P-148	34023	-	-	-	38.98333	8.92222	-	Vertisols (Eutric)	P
9999_P-284	34023	-	-	-	38.83278	8.83222	-	Vertisols (Eutric)	P
9999_P-44	34023	-	-	-	38.93333	8.75139	-	Phaeozems (Calcaric)	P
9999_P-47	34023	-	-	-	38.94583	9.19167	-	Regosols (Eutric)	P
9999_P-Holetta	34023	-	-	-	38.03000	9.05000	-	Haplic Nitisols	P
9999_P-Sokoru	34023	-	-	-	38.95833	9.15000	-	Haplic Phaeozems	P

Annex 3b Soil profile pits at kebele level, laboratory layer data

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
ABAP001		1	Ap	0	22	3	20	77	1.23	5.2	4.1	0.1	13.6	13.6	0.1	0.1	47	58	32.0	1.8	17.8	3.5	40	71	1.2	2.6	11
ABAP001		2	AB	22	74	1	10	89	1.18	5.0	3.9	0.1	9.0	10.8	0.1	0.1	37	54	11.0	1.2	9.2						
ABAP001		3	Bt1	74	157	1	12	87	1.14	4.9	4.2	0.1	9.9	9.9	0.1	0.1	37	54	10.0	0.5	20.0						
ABAP001		4	Bt2	157	200	3	11	86	1.12	5.1	4.4	0.0							7.0	0.8	8.8						
ABAP002		1	Ap	0	26	7	33	60	1.20	5.2	4.0	0.0	16.3	16.3	0.1	0.3	53	62	30.0	2.0	15.0	7.9	38	65	1.3	1.6	8.8
ABAP002		2	AB	26	77	5	26	69	1.11	4.8	3.6	0.0	10.8	11.8	0.1	0.1	48	48	12.0	0.8	15.0						
ABAP002		3	Bt1	77	130	6	20	74	1.14	4.8	3.6	0.0	11.8	6.3	0.1	0.1	48	38	9.0	0.9	10.0						
ABAP002		4	Bt2	130	200	4	11	85	1.12	4.7	3.4	0.0							7.0	0.8	8.8						
ABWAP001		1	Ap	0	11	23	19	58	1.20	5.1	4.3	0.0	15.4	5.1	1.7	0.2	43	52	19.0	2.1	9.0	7.3	43	77	1.2	2.9	5.1
ABWAP001		2	AB	11	26	29	22	50	1.19	5.4	4.5	0.0	15.4	6.0	0.8	0.1	43	51	18.5	1.8	10.3						
ABWAP001		3	B	26	80	12	25	63	1.12	5.6	4.7	0.0	22.5	6.9	1.1	0.1	46	67	18.2	1.7	10.7						
ABWAP001		4	Bt1	80	100	11	26	63	1.14	5.6	4.8	0.0	16.4	6.1	1.2	0.1	38	63	14.7	1.4	10.5						
ABWAP001		5	Bt2	100	132	7	31	62	1.17	5.8	5.2	0.0	10.5	4.4	0.9	0.1	29	54	12.6	1.2	10.5						
ABWAP001		6	Bt3	132	190	13	26	61	1.11	5.7	4.6	0.1	9.5	3.5	0.8	0.1	30	46	11.1	1.1	10.1						
ABWAP002		1	Ap	0	12	25	12	63	1.29	5.4	4.8	0.0	15.3	5.9	1.1	0.1	39	57	15.6	1.9	8.2	10.8	27	85	1.1	1.5	19.3
ABWAP002		2	AB	12	36	8	30	62	1.16	5.4	4.2	0.0	18.8	6.9	1.0	0.1	35	76	13.7	1.5	9.1						
ABWAP002		3	Bt1	36	76	14	25	61	1.15	5.5	4.6	0.0	17.3	6.0	1.1	0.1	38	64	12.3	1.4	8.8						
ABWAP002		4	Bt2	76	120	21	26	53	1.12	5.6	4.5	0.0	11.3	3.5	0.6	0.0	35	44	12.0	1.2	10.0						
ABWGP001		1	Ap	0	12	20	27	54	1.21	5.1	4.5	0.1	18.7	5.9	1.0	0.4	38	68	24.9	2.2	11.3	4.6	42	81	1.4	2.6	4.3
ABWGP001		2	AB	12	40	13	27	61	1.17	5.0	4.4	0.0	15.3	5.9	1.1	0.3	40	57	17.5	1.8	9.7						
ABWGP001		3	Bt1	40	60	17	23	61	1.19	4.9	4.3	0.0	13.7	4.3	1.0	0.1	36	53	15.3	1.6	9.6						
ABWGP001		4	Bt2	60	90	12	29	59	1.15	5.2	4.5	0.0	18.7	6.8	1.0	0.1	33	81	14.4	1.6	9.0						
ABWGP001		5	BC	90	110	10	31	59	1.14	5.3	4.4	0.0	19.5	6.8	1.2	0.1	35	79	11.9	1.5	7.9						
ABWGP001		6	C	110	180	10	29	62	1.15	5.3	4.6	0.0	10.2	4.2	1.1	0.1	34	46	11.5	1.3	8.8						
ABWGP002		1	Ap	0	30	16	25	60	1.24	5.4	4.4	0.1	35.2	12.3	0.9	0.1	52	93	27.7	3.2	8.7	3.3	64	65	0.8	4.5	8.9
ABWGP002		2	A	30	50	22	18	61	1.14	4.9	3.9	0.1	32.9	10.7	0.9	0.1	54	82	22.7	2.9	7.8						
ABWGP002		3	AC	50	100	20	16	64	1.19	5.5	4.4	0.1	34.1	11.7	0.8	0.1	58	80	22.3	2.4	9.3						
ABWGP002		4	C	100	180	14	25	61	1.31	6.3	5.2	0.1	33.3	10.2	0.4	0.1	57	77	14.7	1.7	8.6						

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
ABZAP001		1	Ap	0	18	3	15	82	1.14	5.2	3.9	0.1	11.6	5.2	0.1	0.2	41	42	29.0	1.8	16.1	2.4	40	76	1.3	2.6	3.5
ABZAP001		2	AB	18	86	1	13	86	1.07	5.0	3.9	0.1	9.0	5.3	0.1	0.1	43	34	12.0	0.9	13.3						
ABZAP001		3	Bt1	86	162	2	13	85	1.02	5.1	4.6	0.1	12.5	4.5	0.1	0.2	36	48	7.0	0.3	23.3						
ABZAP001		4	Bt2	162	200				1.16	5.1	4.4	0.0		7.0	0.1	0.1	26	28	8.0	0.6	13.3						
ABZAP001		5	Bt3	200	220				1.17	5.1	4.3	0.0		7.2		0.1			5.7	0.6	9.5						
ABZAP002		1	Ap	0	21	5	25	70	1.25	5.8	5.0	0.1	28.7	10.6	0.1	0.3	44	90	35.0	2.3	15.2	2.4	58	53	0.8	3.6	11
ABZAP002		2	AB	21	50	2	10	89	1.27	6.0	5.1	0.1	25.1	28.7	0.1	0.2	56	97	14.0	1.2	11.7						
ABZAP002		3	Bt1	50	122	1	15	84	1.19	6.7	5.8	0.1	35.8	19.7	0.1	0.2	58	96	8.0	0.6	13.3						
ABZAP002		4	Bt2	122	160	3	22	55	1.31	7.8	6.2	0.0	22.6	20.8	0.1	0.2	52	84	7.0	0.5	14.0						
ABZAP002		5	Bt3	160	200																						
ADGP001		1	Ap	0	15	21	24	55	1.21	5.1	4.2	0.0	23.5	7.9	1.0	0.1	49	66	17.0	2.3	7.4	1.1	19	42	0.7	1.3	5.1
ADGP001		2	AB	15	65	14	28	58	1.43	5.1	4.2	0.0	22.9	7.9	1.3	0.1	50	64	15.2	1.8	8.4						
ADGP001		3	Bt1	65	120	2	37	60	1.16	4.9	4.3	0.0	25.1	9.0	1.6	0.1	41	88	9.0	1.3	6.9						
ADGP002		1	Ap	0	12	26	24	50	1.18	5.0	4.1	0.0	17.5	5.8	1.7	0.1	50	50	19.9	2.1	9.5	1.4	25	27	0.7	1.3	7.5
ADGP002		2	AB	12	50	14	28	58	1.18	4.8	4.0	0.0	15.7	5.8	1.5	0.1	44	53	19.2	2.0	9.6						
ADGP002		3	Bt1	50	95	6	35	59	1.18	4.8	4.1	0.0	15.0	5.8	1.6	0.2	52	44	19.2	2.0	9.6						
ADGP002		4	Bt2	95	135	11	28	61	1.21	5.0	4.2	0.0	16.8	5.9	1.5	0.2	54	45	15.3	2.0	7.7						
ADJP001		1	Ap	0	10	22	21	57	1.26	5.2	4.4	0.1	21.1	7.0	0.8	0.2	51	57	17.0	2.3	7.4	12.8	90	75	1.5	4.1	15.5
ADJP001		2	ABg	10	25	6	37	58	1.27	5.4	4.3	0.1	27.3	8.8	0.8	0.1	57	64	9.6	1.2	8.0						
ADJP001		3	Bg1	25	80	9	30	61	1.34	5.7	4.7	0.1	26.6	8.9	0.5	0.0	59	61	8.7	1.1	7.9						
ADJP001		4	Bg2	80	120	8	34	57	1.34	6.8	5.9	0.1	29.4	9.0	0.8	0.1	43	91	7.5	0.9	8.3						
ADJP001		5	BCg	120	150	18	27	55	1.31	7.8	7.0	0.1	31.6	9.0	1.3	0.1	55	77	5.6	0.8	7.0						
ADJP001		6	Cg	150	200	15	32	54		7.4	6.5	0.1	38.2	13.3	0.7	0.1	60	87	4.6	0.6	7.7						
ADJP002		1	Ap	0	13	11	40	49	1.25	5.6	4.4	41.7	20.5	10.9	0.4	0.9	43	76	26.2	2.2	11.9	2.4					14
ADJP002		2	B1	13	33	9	40	51	1.20	5.6	4.5	51.1	21.8	11.5	0.3	0.4	43	79	13.9	1.9	7.3						
ADJP002		3	B2	33	67	21	32	47	1.30	6.3	4.6	28.2	24.5	12.2	0.5	0.3	49	77	9.3	1.0	9.3						
ADJP002		4	BCg1	67	130	13	31	59	1.36	6.4	4.9	32.3	25.2	11.6	0.3	0.2	46	81	11.8	1.2	9.8						
ADJP002		5	BCg2	130	200	9	32	59		6.0	4.8	25.0	19.2	10.6	0.3	0.3	39	78	7.7	0.7	11.0						
ADQP001		1	Ap	0	13	17	28	55	1.24	5.0	4.2	0.1	24.6	9.3	1.0	0.3	48	73	15.6	2.1	7.4	4.1	19	76	0.9	1.7	7.8
ADQP001		2	AB	13	31	20	22	58	1.16	5.0	4.3	0.0	18.8	6.9	0.9	0.2	42	64	15.2	1.9	8.0						
ADQP001		3	B1t	31	60	9	28	63	1.19	5.1	4.2	0.0	25.9	8.6	1.4	0.3	49	74	10.5	1.4	7.5						

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
ADQP001		4	B2t	60	91	7	31	62	1.21	5.1	4.1	0.0	22.0	7.9	0.9	0.1	44	71	6.5	0.9	7.2						
ADQP001		5	B3t	91	121	4	33	63	1.21	5.0	4.1	0.0	19.4	7.0	1.3	0.1	38	73	6.6	0.8	8.3						
ADQP001		6	C	121	195	2	36	62	1.25	4.8	4.0	0.0	19.4	6.2	1.1	0.2	36	74	6.0	0.8	7.5						
ADQP002		1	Ap	0	19	9	24	68	1.20	5.1	4.0	0.3	27.1	12.2	0.1	3.1	45	94	39.0	3.5	11.1	4.9					
ADQP002		2	B1	19	44	3	12	85	1.20	5.4	4.2	0.1	21.9	11.9	0.3	1.1	44	80	19.0	1.7	11.2						
ADQP002		3	B2	44	79	3	12	85	1.20	5.3	4.2	0.1	18.2	9.1	0.3	0.3	36	78	11.0	1.2	9.2						
ADQP002		4	C	79	200	5	9	76	1.11	5.2	4.1	0.1	18.2	11.9	0.3	0.5	36	86	9.0	1.0	9.0						
ADSP001		1	Ap	0	14	23	28	50	1.26	4.9	4.0	0.0	15.1	5.0	1.2	0.3	47	47	13.7	1.8	7.6	4.7	32	61	1.2	1.9	16
ADSP001		2	AB	14	36	23	19	58	1.13	4.9	4.1	0.0	17.0	5.1	1.5	0.2	46	52	13.8	1.6	8.6						
ADSP001		3	Bt1	36	70	4	33	63	1.14	5.2	4.3	0.0	25.5	8.2	1.4	0.2	50	71	10.3	1.4	7.4						
ADSP001		4	Bt2	70	99	1	36	63	1.18	5.1	4.2	0.0	18.3	6.7	1.6	0.2	53	50	9.1	1.3	7.0						
ADSP001		5	Bt3	99	120	1	39	60	1.19	5.2	4.5	0.0	17.6	5.9	1.7	0.2	47	55	7.0	0.9	7.8						
ADSP001		6	C	120	185	2	40	58	1.22	4.9	4.1	0.0	20.4	6.8	1.7	0.2	49	59	7.0	0.8	8.8						
ADSP002		1	Ap	0	18	26	34	40	1.16	5.6	4.3	20.3	4.4	3.1	3.0	1.4	30	40	23.0	2.3	10.0	4.0	18	66	0.7	1.6	5.4
ADSP002		2	B1	18	52	25	23	52	1.17	5.1	4.1	20.8	5.8	3.5	3.0	1.0	37	36	16.8	1.6	10.5						
ADSP002		3	B2	52	90	20	20	60	1.14	5.4	4.3	10.4	6.3	3.5	3.0	0.8	33	41	12.6	1.3	9.7						
ADSP002		4	B3	90	146	6	18	76	1.14	5.6	4.6	10.5	6.3	3.7	2.9	0.5	29	46	11.7	1.0	11.7						
ADSP002		5	C	146	200	4	14	82	1.31	5.9	5.1	30.9	7.5	2.8	2.3	0.4	26	49	5.3	0.4	13.3						
AJJIP001		1	Ap	0	12	19	23	58	1.14	4.7	3.7	0.4	19.7	16.1	0.4	0.2	41	89	36.0	1.7	21.2	3.5	37	89	1.0	1.5	11
AJJIP001		2	AB	12	42	12	21	74	1.07	4.9	3.5	0.1	25.1	20.6	0.4	0.1	49	94	20.0	0.9	22.2						
AJJIP001		3	Bt1	42	90	2	18	81	1.02	4.5	3.4	0.5	31.4	18.8	0.5	0.1	54	94	11.0	0.5	22.0						
AJJIP001		4	Bt2	90	200				1.16	4.7	3.7	0.1	9.0	12.7	0.4	0.1	28	79	2.0	0.2	10.0						
AJJIP002		1	Ap	0	15	7	43	49	1.14	6.7	5.2	0.1	17.0	11.6	0.1	1.4	56	54	48.0	2.2	21.8	4.4	8	12	0.3	0.6	8.5
AJJIP002		2	AB	15	42	3	20	77	1.07	6.5	5.0	0.1	8.1	5.4	0.1	0.9	36	40	17.0	1.2	14.2						
AJJIP002		3	Bt1	42	105	1	18	81	1.02	6.7	4.6	0.1	13.4	2.7	0.1	0.1	30	54	9.0	1.1	8.2						
AJJIP002		4	Bt2	105	200				1.16	7.5	5.8	0.1	9.9	8.1	0.1	0.4	26	71	6.0	0.5	12.0						
AJJP001		1	Ap	0	20	12	34	54	1.14	5.3	4.0	0.1	23.5	12.7	0.5	1.2	40	95	22.0	1.2	18.3	2.9	33	98	1.2	2.3	6.5
AJJP001		2	AB	20	70	3	10	87	1.07	5.1	3.8	0.1	22.6	13.6	0.5	0.7	39	96	14.0	0.8	17.5						
AJJP001		3	Bt1	70	110	3	19	78	1.02	5.3	4.8	0.1	18.1	19.0	0.4	0.6	39	98	8.0	0.8	10.0						
AJJP001		4	Bt2	110	200				1.16	6.0	5.0	0.1	16.3	9.0	0.5	0.6	32	83									
AJJP002		1	Ap	0	30	5	12	83	1.73	7.7	6.5	0.5	24.6	20.2	1.1	0.1	76	61	37.0	2.2	16.8	1.1	8	12	0.3	0.6	7.8

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
AJJP002		2	B	30	110	9	12	80	1.93	8.0	6.5	0.9	36.7	37.2	2.0	0.2	77	99	13.0	1.4	9.3						
AJJP002		3	BCd	110	180				2.10	7.6	6.2	0.7	20.8	51.5	1.6	0.2	74	100	8.0	1.1	7.3						
AJJP002		4	Cd	180	185				2.03	8.2	6.8	0.5	22.6	20.8	1.2	0.2	52	86	7.0								
AJMP001		1	Ap	0	12	17	26	57	1.19	4.8	3.9	0.1	21.8	6.7	1.5	0.3	47	65	16.0	2.0	8.1	6.4	36	100	1.2	2.2	7.6
AJMP001		2	AB	12	36	16	27	57	1.14	5.0	4.1	0.0	16.6	5.0	1.5	0.3	46	51	13.8	1.6	8.7						
AJMP001		3	B	36	76	6	31	63	1.15	5.2	4.2	0.0	17.6	5.9	1.6	0.2	49	52	11.0	1.4	7.9						
AJMP001		4	Bt1	76	110	10	28	61	1.14	5.2	4.2	0.1	19.1	6.7	1.7	0.2	46	60	8.9	1.1	8.1						
AJMP001		5	Bt2	110	135	10	28	61	1.15	5.2	4.3	0.0	21.6	6.7	1.6	0.2	47	63	6.9	1.0	7.0						
AJMP001		6	Bt3	135	190	11	26	63	1.19	5.3	4.4	0.0	19.3	6.7	1.5	0.2	48	57	5.2	0.6	8.7						
AJMP002		1	Ap	0	10	21	22	57	1.18	5.0	4.3	0.1	23.5	7.6	1.6	0.8	54	62	16.1	1.9	8.5	7.0	38	94	1.1	2.0	9.8
AJMP002		2	B	10	30	12	26	62	1.14	5.0	4.2	0.0	20.6	6.6	1.6	0.3	47	62	11.4	1.4	8.1						
AJMP002		3	Bt1	30	65	5	36	59	1.12	5.2	4.4	0.0	17.5	5.8	1.9	0.2	43	58	8.6	1.1	7.8						
AJMP002		4	Bt2	65	100	7	34	59	1.11	5.1	4.3	0.0	15.8	5.8	1.7	0.1	46	51	8.5	0.9	9.4						
AJMP002		5	BC	100	132	2	35	63	1.11	5.3	4.4	0.1	18.5	6.7	1.6	0.2	47	57	7.2	0.9	8.0						
AJMP002		6	C	132	180	7	26	66	1.14	4.5	4.1	0.0	20.0	7.5	1.6	0.2	45	65	5.4	0.6	9.0						
AJZTP001		1	Ap	0	28	4	21	75	1.12	5.7	4.8	0.1	16.1	18.8	0.1	0.3	37	95	30.0	1.5	20.0	3.4	38	94	1.1	2.0	5.5
AJZTP001		2	AB	28	52	2	17	81	1.07	5.4	5.0	0.1	10.8	8.1	0.1	0.1	28	68	12.0	1.2	10.0						
AJZTP001		3	Bt1	52	88	2	16	81	1.02	5.5	5.1	0.1	12.5	10.8	0.1	0.1	29	81	9.0	0.8	11.3						
AJZTP001		4	Bt2	88	125	5	19	75	1.16	5.3	4.6	0.0	9.0	9.0	0.1	0.1	26	70	8.0	0.6	13.3						
AJZTP001		5	Bt3	125	200				1.17	5.1	4.3	0.0															
AJZTP002		1	Ap	0	27	34	28	37	1.14	5.7	4.8	0.1	10.8	14.3	0.1	0.5	31	83	17.0	0.9	18.9	6.0	8	12	0.3	0.6	6.2
AJZTP002		2	AB	27	58	27	25	48	1.07	5.6	4.6	0.0	9.0	10.8	0.1	0.3	26	78	13.0	0.8	16.3						
AJZTP002		3	Bt1	58	88	23	22	55	1.02	5.4	4.7	0.1	11.6	6.3	0.1	0.3	25	73	8.0	0.6	13.3						
AJZTP002		4	Bt2	88	200	23	22	55	1.16	5.6	4.8	0.0	9.9	8.1	0.1	0.4	26	71	6.0	0.5	12.0						
AMAMP001		1	Ap	0	12	16	23	61	1.14	4.8	4.0	0.1	17.5	5.8	1.5	0.4	48	52	14.9	1.8	8.3	2.4	8	12	0.3	0.6	11.1
AMAMP001		2	AB	12	40	13	25	63	1.07	5.8	4.9	0.1	19.3	5.0	1.6	0.3	43	61	13.4	1.7	7.9						
AMAMP001		3	Bt1	40	80	11	25	64	1.02	5.8	4.9	0.1	16.0	5.9	1.7	0.2	40	59	12.3	1.4	8.8						
AMAMP001		4	Bt2	80	170	17	25	57	1.16	5.1	4.4	0.0	15.0	5.8	1.6	0.1	35	65	7.0	0.8	8.8						
AMAMP001		5	C	170	200	16	30	55	1.17	5.1	4.3	0.0	17.6	5.9	1.6	0.1	47	54	5.7	0.6	9.5						
AMAMP002		1	Ap	0	16	12	34	54	1.07	5.3	4.0	0.1	23.5	12.7	0.5	1.2	40	95	37.0	2.2	16.8	3.5	8	12	0.3	0.6	12
AMAMP002		2	AB	16	57	3	10	87		5.1	3.8	0.1	22.6	13.6	0.5	0.7	39	96	13.0	1.4	9.3						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
AMAMP002	3	Bt1	57	100	3	19	78		5.3	4.8	0.1	18.1	19.0	0.4	0.6	39	98	8.0	1.1	7.3						
AMAMP002	4	C	100	200	5	20	75		6.0	5.0	0.1	16.3	9.0	0.5	0.6	32	83	7.0	0.8	8.8						
AMAP001	1	Ap	0	32	2	17	81	1.13	5.4	4.3	0.1	14.2	20.4	0.2	0.1	39	89	31.0	1.5	20.7	7.4	32	84	1.1	1.6	14.1
AMAP001	2	AB	32	70	2	10	88	1.05	5.4	4.6	0.1	9.9	17.0	0.2	0.1	37	74	10.0	1.1	9.1						
AMAP001	3	Bt1	70	130	2	14	84		5.5	4.9	0.1	9.0	17.9	0.2	0.1	34	80									
AMAP001	4	Bt2	130	160				1.13	5.1	4.4	0.1		7.0	0.2	0.1	33		7.0	0.8	8.8						
AMAP001	5	Bt3	160	200				1.12	5.1	4.3	0.1		7.2	0.2	0.1	37		5.7	0.6	9.5						
AMAP002	1	Ap	0	16	7	43	49	1.14	5.8	4.8	0.1	17.0	11.6	0.1	1.4	56	54	48.0	2.2	21.8	4.4	9	14	0.4	0.6	10.2
AMAP002	2	AB	16	75	3	20	77	1.07	5.1	4.0	0.1	8.1	5.4	0.1	0.9	36	40	17.0	1.2	14.2						
AMAP002	3	Bt1	75	110	1	18	81	1.02	5.2	4.6	0.1	13.4	2.7	0.1	0.1	30	54	9.0	1.1	8.2						
AMAP002	4	Bt2	110	200	4	16	80	1.16	5.1	4.4	0.0	21.0	7.0	0.1	0.1	33	85	7.0	0.8	8.8						
AMIP001	1	Ap	0	20	3	33	63	1.18	4.9	4.1	0.0	18.5	5.0	1.7	0.4	45	57	15.6	1.8	8.7	3.2	18	50	0.3	1.2	15.4
AMIP001	2	Bt1	20	42	19	27	55	1.15	4.6	4.1	0.0	16.6	5.0	1.4	0.3	42	55	14.3	1.6	8.9						
AMIP001	3	Bt2	42	69	5	32	63	1.14	5.2	4.3	0.0	16.8	5.9	1.4	0.2	49	50	13.1	1.5	8.7						
AMIP001	4	Bt3	69	99	7	34	60	1.12	5.0	4.3	0.0	12.5	4.2	1.5	0.2	30	60	11.8	1.4	8.4						
AMIP001	5	BC	99	130	5	33	63	1.13	5.2	4.3	0.0	12.6	4.2	1.6	0.2	32	57	11.2	1.2	9.3						
AMIP001	6	C	130	185	7	30	63	1.19	5.0	4.2	0.0	14.3	4.2	1.4	0.2	43	47	9.7	1.1	8.8						
AMIP002	1	Ap	0	20	3	16	80	1.15	5.5	4.0	0.2	17.9	1.8	0.2	0.6	37	55	28.0	2.2	12.7	3.6					13.4
AMIP002	2	ABg	20	95	2	12	86		6.1	4.8	0.2	9.0	6.3	0.1	0.2	29	54	12.0	0.9	13.3						
AMIP002	3	Bg1	95	140	2	10	88		7.1	5.8	1.4	8.0	3.6	0.1	0.1	23	51	6.0	0.6	10.0						
AMIP002	4	Bg2	140	200					7.6	6.5	0.6															
AMKP001	1	Ap	0	20	21	24	56	1.14	6.0	5.1	0.1	22.2	7.7	2.1	1.9	38	90	14.7	1.6	9.2	2.8	16	53	0.7	1.6	12.3
AMKP001	2	AB	20	57	4	36	60	1.13	4.8	4.0	0.1	22.3	7.7	2.3	1.0	35	96	13.3	1.4	9.5						
AMKP001	3	Bt1	57	98	7	30	63	1.11	4.9	4.1	0.0	22.4	8.6	2.3	0.6	38	88	11.4	1.2	9.5						
AMKP001	4	Bt2	98	130	9	29	62	1.12	5.2	4.4	0.1	21.3	7.7	3.0	0.2	39	83	10.5	1.0	10.5						
AMKP001	5	Bt3	130	200	2	34	64	1.13	5.0	4.2	0.0	14.5	5.1	3.1	0.2	30	77	8.8	1.0	8.8						
AMKP002	1	Ap	0	15	26	34	40	1.14	5.3	4.2	0.1	5.9	4.2	3.0	0.6	35	39	26.2	3.0	8.7	4.1	6	10	0.2	0.3	21
AMKP002	2	AB	15	49	22	26	52	1.07	5.0	3.8	0.1	4.8	2.3	2.8	0.3	31	33	17.7	1.9	9.3						
AMKP002	3	B1t	49	101	13	17	70	1.02	5.3	4.1	0.0	4.6	3.1	3.0	0.3	31	35	10.9	1.5	7.3						
AMKP002	4	Bt2	101	155	6	12	82	1.16	5.4	4.7	0.1	4.4	3.4	2.8	0.3	27	41	7.7	1.0	7.7						
AMKP002	5	Bt3	155	200	2	13	85	1.17	5.7	5.0	0.0	3.8	4.0	2.8	0.3	23	48	6.2	0.8	7.8						

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AMTWP001	1	Ap	0	21	5	23	71	1.14	5.2	4.3	0.1	18.2	8.2	0.1	0.4	46	58	24.0	1.5	16.0	3.2	9	14	0.2	0.7	11.3
AMTWP001	2	AB	21	53	1	11	88	1.07	4.7	4.1	0.0	8.1	5.4	0.1	0.2	32	43	12.0	0.8	15.0						
AMTWP001	3	Bt1	53	98	1	10	89	1.02	5.1	4.3	0.0	8.1	4.5	0.1	0.1	48	27	11.0	0.6	18.3						
AMTWP001	4	Bt2	98	200	1	10	89	1.16	5.7	4.7	0.0	7.2	5.4	0.1	0.1	28	46	15.0	0.8	18.8						
AMTWP002	1	Ap	0	14	7	31	62	1.14	5.5	4.7	0.1	12.5	10.8	0.1	0.5	46	52	38.0	1.8	21.1	4.2	7	105	0.2	0.5	8
AMTWP002	2	AB	14	55	1	13	86	1.07	5.1	4.1	0.0	10.8	10.8	0.1	0.1	33	66	13.0	1.2	10.8						
AMTWP002	3	Bt1	55	126	2	18	81	1.02	5.1	4.4	0.0	6.3	7.2	0.1	0.2	35	39	9.0	0.6	15.0						
AMTWP002	4	Bt2	126	200	2	17	81	1.16	5.4	4.3	0.1	21.0	7.0	0.1	0.1	33	85	7.0	0.8	8.8						
ASAAKP001	1	Ap	0	12	23	19	58	1.22	5.0	4.2	0.0	15.3	6.0	1.7	0.4	45	52	21.2	2.4	8.8	3.8	33	81	0.6	1.3	8.3
ASAAKP001	2	AB	12	40	13	25	62	1.17	4.9	4.1	0.0	13.9	4.3	1.6	0.3	35	58	18.9	1.9	9.9						
ASAAKP001	3	Bt1	40	95	14	25	62	1.15	5.2	4.5	0.0	20.6	6.9	1.6	0.3	32	91	16.9	1.8	9.4						
ASAAKP001	4	Bt2	95	110	10	28	62	1.12	5.2	4.2	0.0	22.2	7.7	1.7	0.1	34	94	15.2	1.6	9.5						
ASAAKP001	5	Bt3	110	190	8	28	64	1.13	5.4	4.6	0.0	22.2	8.0	1.9	0.1	39	83	12.4	1.4	8.9						
ASAAKP002	1	Ap	0	12	21	23	56	1.25	5.6	4.8	0.1	29.7	9.6	2.0	0.3	43	96	24.6	2.9	8.5	2.4	8	12	0.3	0.6	10.2
ASAAKP002	2	Bw1	12	35	18	24	58	1.20	5.5	4.8	0.1	21.1	7.9	1.8	0.2	41	76	20.9	2.3	9.1						
ASAAKP002	3	Bw2	35	100	29	15	55	1.30	5.7	4.9	0.1	32.4	11.4	1.5	0.1	49	93	19.3	2.1	9.2						
ASAAKP002	4	Bw3	100	185	24	18	58	1.36	5.9	5.1	0.1	35.5	11.5	1.5	0.1	59	82	15.2	1.4	10.9						
ASAAP001	1	Ap	0	20	23	19	58	1.22	5.1	4.4	0.1	18.7	6.0	1.2	0.3	41	64	30.7	2.8	11.0	5.2	29	63	0.8	1.3	5.1
ASAAP001	2	AB	20	60	14	24	63	1.18	5.1	4.3	0.0	15.5	6.9	1.2	0.2	35	67	15.5	1.8	8.6						
ASAAP001	3	Bt1	60	101	11	26	63	1.17	5.0	4.2	0.1	20.6	7.7	1.1	0.2	37	80	14.3	1.5	9.5						
ASAAP001	4	Bt2	101	133	12	26	62	1.18	5.0	4.1	0.1	19.6	6.8	1.2	0.1	37	75	12.9	1.3	9.9						
ASAAP001	5	Bt3	133	200	11	28	61	1.12	5.2	4.3	0.1	16.9	5.1	1.4	0.1	34	70	12.3	1.2	10.3						
ASAAP002	1	Ap	0	19	6	26	69	1.14	5.1	4.4	0.1	16.1	10.8	0.1	0.6	44	63	21.0	2.0	10.5	2.4	27	52	0.3	0.9	4.9
ASAAP002	2	AB	19	44	2	13	85	1.07	5.1	4.0	0.0	9.0	9.0	0.1	0.2	32	57	17.0	0.9	18.9						
ASAAP002	3	Bt1	44	79	1	32	67	1.02	5.0	4.5	0.0	10.9	7.3	0.1	0.1	30	61	10.0	0.8	12.5						
ASAAP002	4	Bt2	79	200	1	10	89	1.16	5.2	4.6	0.0	8.2	5.5	0.2	0.1	27	52	8.0	0.5	16.0						
ASAKGP001	1	Ap	0	13	18	21	61	1.20	5.0	4.2	0.0	17.5	4.2	1.7	0.4	57	41	20.6	2.2	9.4	2.6	30	77	0.9	1.2	6.7
ASAKGP001	2	AB	13	36	20	21	59	1.17	4.8	4.1	0.0	15.3	5.9	1.5	0.3	50	46	19.7	1.9	10.4						
ASAKGP001	3	Bt1	36	85	17	23	59	1.18	4.8	4.1	0.0	18.1	4.9	1.5	0.2	57	44	17.2	1.8	9.6						
ASAKGP001	4	Bt2	85	180	9	30	62	1.24	4.8	4.3	0.0	21.0	7.6	1.5	0.2	58	53	15.5	1.6	9.7						
ASAKGP002	1	Ap	0	21	5	23	71	1.14	5.2	4.3	0.1	18.2	8.2	0.1	0.4	46	58	24.0	1.5	16.0	3.2	10	11	0.3	0.5	10

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
ASAKGP002		2	B	21	55	1	11	88	1.07	4.7	4.1	0.0	8.1	5.4	0.1	0.2	32	43	12.0	0.8	15.0						
ASAKGP002		3	Bt1	55	85	1	10	89	1.02	5.1	4.3	0.0	8.1	4.5	0.1	0.1	48	27	11.0	0.6	18.3						
ASAKGP002		4	Bt2	85	200	1	10	89	1.16	5.7	4.7	0.0	7.2	5.4	0.1	0.1	28	46	15.0	0.8	18.8						
ASALP001		1	Ap	0	14	11	38	51	1.21	5.1	4.2	0.0	18.3	6.7	1.7	0.3	46	59	30.2	3.1	9.7	2.9					5.7
ASALP001		2	AB	14	34	9	32	58	1.17	5.0	4.2	0.0	23.1	7.4	1.7	0.2	37	88	18.1	2.3	7.9						
ASALP001		3	Bt1	34	59	16	24	60	1.10	5.2	4.3	0.0	19.3	6.7	1.6	0.2	43	65	9.4	1.1	8.5						
ASALP001		4	Bt2	59	100	13	26	61	1.13	5.1	4.1	0.0	17.5	5.8	1.6	0.2	44	56	7.4	0.9	8.2						
ASALP001		5	Bt3	100	120	14	28	58	1.12	4.9	4.0	0.0	15.1	5.0	1.3	0.2	33	66	7.2	0.7	10.3						
ASALP001		6	C	120	190	13	28	59	1.23	5.8	5.0	0.0	15.8	5.8	1.6	0.3	46	51	4.7	0.6	7.8						
ASALP002		1	Ap	0	13	7	34	58	1.14	4.7	3.7	0.4							36.0	1.7	21.2	1.3	18	70	0.6	1.6	6.3
ASALP002		2	AB	13	41	5	21	74	1.07	4.9	3.5	0.1	25.1	20.6	0.4	0.1	49	94	20.0	0.9	22.2						
ASALP002		3	Bt1	41	91	2	18	81	1.02	4.5	3.4	0.5	31.4	18.8	0.5	0.1	54	94	11.0	0.5	22.0						
ASALP002		4	Bt2	91	200	5	12	83	1.16	4.7	3.7	0.1	9.0	12.7	0.4	0.1	28	79	7.0	0.3	23.3						
Bu-Ba-P1		-9	Ap	0	20	43	20	37	1.12	6.2	5.4	0.1	19.1	6.6	0.6	0.3	34	79	25.1	2.5	10.1	18.6	92	79	15.7	0.9	17.99
Bu-Ba-P1		-9	Bt2	55	115	54	14	32	1.16	5.9	5.2	0.1	12.9	4.0	0.9	0.4	25	72	4.2	0.6	7.6						
Bu-Ba-P1		1	Ap	0	20	40	26	34	1.10	6.1	5.5	0.1	20.4	6.8	0.7	0.3	34	84	26.0	2.5	10.3	12.9	103	75	17.6	0.6	18.6
Bu-Ba-P1		2	Bt1	20	55	31	27	42	1.14	5.6	4.6	0.1	16.7	5.8	0.9	0.2	29	82	22.0	2.2	10.1						
Bu-Ba-P1		3	Bt2	55	115	29	21	50	1.13	4.6	3.7	0.0	12.5	4.2	0.6	0.2	27	64	10.6	1.3	8.0						
Bu-Ba-P1		4	C	115	150	31	23	46	1.11	3.9	3.2	0.2	12.6	4.2	0.6	0.3	29	62	7.2	0.7	9.7						
Bu-Ba-P1		5	R	150	155																						
Bu-Ba-P2		1	Ap	0	22	43	13	45	1.04	4.9	4.2	0.1	18.6	6.8	0.6	0.3	34	78	29.0	4.0	7.3	18.6	102	82	14.3	0.5	16.1
Bu-Ba-P2		2	AB	22	59	46	13	42	1.15	5.6	4.7	0.1	19.2	6.7	0.6	0.3	30	88	17.2	1.8	9.8						
Bu-Ba-P2		3	Bt	59	90	27	22	51	1.12	4.7	3.8	0.0	16.9	5.9	0.5	0.3	34	69	9.3	1.0	8.9						
Bu-Ba-P2		4	C1	90	150	35	22	43	1.22	4.4	3.5	0.0	18.1	6.1	0.5	0.3	38	67	3.2	0.5	7.2						
Bu-Ba-P2		5	C2	150	155	45	24	31	1.12	4.0	3.3	0.1	14.8	5.2	0.9	1.2	36	61	2.4	0.3	7.9						
Bu-De-P1		-9	Ah	22	75	38	18	44	1.12	4.6	3.8	0.0	14.8	4.4	0.9	1.1	33	65	21.0	1.7	12.5						
Bu-De-P1		1	Ap	0	22	37	20	42	1.06	5.3	4.5	0.1	17.8	5.9	0.7	0.6	35	71	23.3	1.9	12.0	13.4	113	69	7.5	0.6	14.5
Bu-De-P1		2	Ah	22	75	31	28	41	1.12	4.6	3.7	0.0	14.7	5.2	0.9	1.1	34	65	20.2	1.7	11.6						
Bu-De-P1		3	AB	75	110	27	23	51	1.19	4.7	3.9	0.0	13.7	4.3	0.9	0.8	29	67	18.5	1.7	11.2						
Bu-De-P1		4	Bt1	110	145	25	24	51	1.18	4.8	4.0	0.1	18.8	6.8	1.0	0.7	36	76	17.9	1.3	13.4						
Bu-De-P1		5	Bt2	145	150	19	28	52	1.15	4.2	3.5	0.0	13.0	4.3	1.0	0.5	28	67	15.6	1.1	14.7						

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Bu-De-P2		-9	AB	50	75	51	11	39	1.21	5.9	5.3	0.1	17.1	6.0	0.8	1.3	34	74	16.9	1.5	11.3						
Bu-De-P2		1	Ap	0	15	37	20	43	1.17	5.7	5.1	0.1	19.7	6.8	1.0	1.3	34	85	28.7	3.1	9.1	16.0	91	70	###	3.0	11.6
Bu-De-P2		2	Ah	15	50	30	22	47	1.23	5.9	5.3	0.1	21.3	7.7	1.0	1.0	38	82	18.4	1.9	9.5						
Bu-De-P2		3	AB	50	75	31	16	53	1.14	5.9	5.2	0.1	17.8	5.9	0.9	1.3	35	73	16.7	1.5	11.3						
Bu-De-P2		4	Bt1	75	115	15	22	63	1.21	6.0	5.3	0.1	16.2	5.1	0.9	2.2	38	63	11.5	1.3	8.6						
Bu-De-P2		5	Bt1	115	155	16	19	65	1.19	6.0	5.3	0.1	16.2	5.1	0.9	3.6	39	66	7.7	1.1	7.3						
Bu-De-P2		6	Bt2	155	160	16	21	63	1.14	5.7	5.1	0.1	16.2	6.0	0.9	0.8	37	64	7.2	0.9	8.0						
Bu-De-P2		7	Bt2	160	165	17	20	62	1.09	5.9	5.1	0.1	16.3	5.2	1.1	0.8	36	64	3.9	0.5	8.6						
Bu-De-P3		1	Ap	0	20	46	23	30	1.15	5.7	5.3	0.1	15.4	4.9	0.9	0.5	34	63	26.3	2.7	9.7	16.9	106	69	23.9	2.3	14.7
Bu-De-P3		2	Bw1	20	55	52	9	39	1.30	5.8	5.2	0.1	13.7	4.9	0.7	0.4	30	65	4.5	0.5	9.1						
Bu-De-P3		3	Bw2	55	82	52	14	34	1.28	5.8	5.4	0.1	14.5	4.9	0.8	0.4	26	78	4.5	0.4	10.6						
Bu-De-P3		4	Bw3	82	110	62	10	28	1.21	5.7	5.3	0.1	13.7	4.0	0.9	0.4	25	78	4.1	0.6	7.3						
Bu-De-P3		5	Bw4	110	140	50	12	38	1.15	5.5	5.2	0.1	14.5	5.6	0.8	0.6	28	77	2.5	0.3	8.8						
Bu-De-P3		6	Bw5	140	190	45	18	36	1.19	4.7	4.1	0.1	12.9	4.9	0.8	1.1	27	73	2.2	0.3	7.8						
Bu-De-P3		7	C	190	195	44	17	39	1.28	4.5	4.0	0.1	12.8	4.3	0.8	0.5	28	66	2.0	0.2	9.0						
Bu-IIa-P1		-9	Bt1	90	116	32	22	46	1.01	4.0	3.3	0.0	13.0	4.3	0.6	0.2	29	63	13.9	1.8	7.6						
Bu-IIa-P1		1	Ap	0	15	41	21	39	1.02	4.9	4.2	0.1	16.3	5.2	0.6	0.3	29	77	27.3	3.8	7.3	9.8	131	91	13.4	1.2	11.6
Bu-IIa-P1		2	Ah	15	45	36	23	41	1.04	4.8	4.1	0.0	11.2	4.3	0.5	0.2	27	61	26.4	2.9	9.2	12.3	156	79	7.1	2.4	12.7
Bu-IIa-P1		3	AB	45	90	39	24	37	1.01	3.9	3.4	0.0	12.9	4.3	0.7	0.2	32	57	25.4	2.6	9.9						
Bu-IIa-P1		4	Bt1	90	116	25	28	47	1.16	4.2	3.4	0.0	13.6	4.3	0.6	0.2	28	67	13.4	1.6	8.2						
Bu-IIa-P1		5	Bt1	116	138	22	30	48	1.06	4.3	3.5	0.0	12.9	4.3	0.6	0.2	28	64	8.6	1.1	8.2						
Bu-IIa-P1		6	Bt2	138	145	28	28	44	1.12	3.8	3.2	0.1	15.6	5.2	0.6	0.2	28	78	7.4	0.6	12.1						
Bu-IIIa-P2		-9	Ap	0	23	47	13	40	1.01	3.9	3.1	0.2	14.1	4.4	0.7	0.5	32	61	52.8	4.0	13.2	10.8	107	58	9.0	2.3	19.7
Bu-IIIa-P2		1	Ap	0	23	76	2	22	1.02	4.8	3.8	0.2	12.9	4.3	0.7	0.5	32	58	53.9	4.1	13.2	9.0	226	65	5.6	1.8	18.9
Bu-IIIa-P2		2	Ah	23	55	38	19	43	1.01	4.9	4.1	0.1	14.0	4.4	0.6	0.4	33	59	47.2	3.2	14.7	10.4	126	41	3.3	1.8	15.4
Bu-IIIa-P2		3	AB	55	80	33	21	45	1.19	4.0	3.4	0.0	12.0	4.3	0.6	0.5	31	56	20.5	2.5	8.1						
Bu-IIIa-P2		4	Bt1	80	105	23	23	53	1.18	4.0	3.3	0.0	15.3	5.1	0.6	0.3	28	75	8.2	1.0	7.9						
Bu-IIIa-P2		5	Bt1	105	130	33	25	42	1.13	4.1	3.3	0.0	18.0	6.0	0.6	0.2	30	82	6.9	0.8	9.2						
Bu-IIIa-P2		6	Bt2	130	135	28	20	52	1.09	4.0	3.2	0.0	14.7	4.3	0.7	0.2	28	71	5.9	0.6	9.8						
Bu-Si-P1		-9	BC	81	110	24	23	53	1.03	6.2	5.3	0.1	15.9	5.0	0.6	0.2	28	78	7.1	0.6	11.9						
Bu-Si-P1		1	Ap	0	22	68	11	21	1.01	6.0	5.3	0.1	19.5	6.8	0.7	0.5	31	87	33.0	2.8	11.8	15.6	118	84	31.9	6.4	18.3

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
Bu-Si-P1		2	Bt1	22	60	34	23	43	1.12	5.5	4.7	0.0	17.0	5.9	0.6	0.3	30	79	17.3	1.3	12.9						
Bu-Si-P1		3	Bt2	60	81	34	19	47	1.11	5.4	4.7	0.0	12.7	4.2	0.6	0.3	27	66	9.1	1.0	8.9						
Bu-Si-P1		4	BC	81	110	37	21	42	1.04	5.5	4.7	0.0	15.1	5.0	0.6	0.3	27	77	6.7	0.6	11.4						
Bu-Si-P1		5	C	110	115	31	21	48	1.01	6.1	5.3	0.1	15.9	4.2	0.6	0.4	29	74	5.4	0.4	12.2						
Ch-Ew-P1		-9	C1	70	110	20	27	53	1.19	5.8	4.9	0.2	27.6	8.0	1.0	0.7	48	77	8.2	0.8	10.5						
Ch-Ew-P1		1	A	0	20	24	21	54	1.25	6.3	5.5	0.1	33.0	10.7	0.7	0.6	53	85	10.7	1.1	9.8	12.3	64	50	4.0	1.9	6.5
Ch-Ew-P1		2	AC	20	70	25	26	49	1.18	5.7	4.9	0.1	28.4	8.9	1.0	0.7	45	87	10.3	0.9	11.1						
Ch-Ew-P1		3	C1	70	110	21	27	52	1.14	6.1	5.2	0.1	28.6	9.1	1.0	0.7	47	83	8.4	0.8	10.6						
Ch-Ew-P1		4	C2	110	130	11	19	70	1.18	7.3	6.4	0.2	28.0	9.5	0.9	0.5	45	86	5.4	0.5	11.5						
Ch-Ew-P1		5	C2	130	155	12	21	68	1.10	7.3	6.6	0.2	32.0	11.7	1.0	0.6	50	91	4.5	0.4	11.4						
Ch-Ew-P1		6	C3	155	160	20	34	46	1.07	7.1	6.3	0.1	26.2	8.9	0.8	0.4	44	82	3.8	0.3	12.2						
Ch-Mo-P1		-9	A	0	25	46	13	41	0.96	4.5	3.7	0.0	13.7	4.3	0.8	0.5	29	66	38.6	2.9	13.5	7.0	89	84	2.2	2.0	12.7
Ch-Mo-P1		1	A	0	25	31	25	44	0.93	4.5	3.6	0.0	13.7	4.3	0.8	0.5	30	64	38.0	2.8	13.4	6.9	83	77	4.2	2.2	12.3
Ch-Mo-P1		2	Ah	25	60	45	20	35	0.98	4.8	4.1	0.0	15.3	5.1	1.0	0.4	31	71	21.4	2.2	9.6	6.6	76	33	1.8	1.6	13.1
Ch-Mo-P1		3	AB	60	100	28	26	47	1.00	4.9	4.1	0.0	14.4	5.1	0.9	0.4	28	74	10.2	1.2	8.6						
Ch-Mo-P1		4	Bt1	100	150	33	24	44	1.10	5.1	4.3	0.0	17.0	6.8	0.9	0.4	32	78	6.5	0.6	10.8						
Ch-Mo-P1		5	Bt2	150	155	34	19	47	1.07	4.9	4.0	0.0	15.3	6.0	1.0	0.5	31	72	4.1	0.5	9.1						
Ch-Mo-P2		-9	Ap	0	35	59	5	36	0.99	4.7	3.8	0.1	13.5	4.2	1.0	0.6	31	63	27.6	2.2	12.5	8.0	89	73	5.8	2.5	8.7
Ch-Mo-P2		1	Ap	0	35	42	18	40	1.01	4.7	4.0	0.0	15.2	5.9	1.0	0.6	32	71	28.4	2.2	12.8	8.5	80	79	7.0	3.1	9.1
Ch-Mo-P2		2	Ah	35	68	30	18	52	1.10	4.6	3.7	0.0	14.3	4.2	1.0	0.5	33	61	12.4	1.0	12.0						
Ch-Mo-P2		3	Bt1	68	105	22	27	51	1.14	4.6	3.8	0.0	14.4	5.1	1.1	0.5	30	70	5.4	0.5	12.0						
Ch-Mo-P2		4	Bt2	105	140	24	28	48	1.13	4.8	4.0	0.0	19.0	6.9	1.0	0.5	31	87	4.6	0.3	15.2						
Ch-Mo-P2		5	Bt3	140	145	26	31	43	1.15	4.9	4.1	0.0	19.7	6.0	1.0	0.5	32	85	2.7	0.2	12.5						
Ch-Wo-P1		-9	C	120	130	27	36	37	0.99	4.4	3.6	0.1	11.0	3.4	0.9	1.5	27	62	6.3	0.6	10.6						
Ch-Wo-P1		1	Ap	0	22	23	40	37	0.93	6.5	5.7	0.1	19.9	6.8	0.7	2.0	36	82	36.6	3.1	11.8	11.6	80	76	23.6	2.0	5.3
Ch-Wo-P1		2	Ah	22	50	25	31	44	0.93	5.3	4.5	0.1	21.1	7.6	0.9	1.6	38	82	22.3	2.5	8.9	13.2	85	75	9.5	1.9	4.3
Ch-Wo-P1		3	Bt1	50	95	19	31	50	1.03	4.4	3.7	0.1	16.1	5.1	0.9	1.3	32	73	9.5	1.0	9.1						
Ch-Wo-P1		4	Bt2	95	120	23	27	50	0.98	4.4	3.7	0.1	17.8	5.9	0.9	1.5	32	82	7.0	0.7	9.4						
Ch-Wo-P1		5	C	120	130	32	30	39	0.99	4.4	3.7	0.1	12.8	4.3	1.0	1.3	30	65	6.1	0.6	10.2						
Ch-Wo-P1		6	C	130	140	26	36	38	1.03	4.4	3.6	0.1	15.4	5.1	0.9	0.9	28	80	5.2	0.5	11.5						
Ch-Wo-P2		-9	Ap	0	25	25	27	48	0.94	5.3	4.4	0.1	19.6	6.8	0.9	0.6	39	71	20.5	1.6	12.5	10.3	77	70	4.7	2.2	8.4

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
Ch-Wo-P2		1	Ap	0	25	26	25	49	0.95	5.2	4.3	0.1	21.5	7.7	1.0	0.6	40	78	20.4	1.7	12.3	12.7	76	73	12.4	2.5	9.9
Ch-Wo-P2		2	AC1	25	65	20	16	64	1.21	5.4	4.4	0.1	26.4	8.8	0.7	0.7	44	83	10.6	1.4	7.7						
Ch-Wo-P2		3	AC2	65	92	19	16	66	1.15	6.2	5.3	0.1	34.3	11.9	1.3	0.7	52	93	10.3	1.1	9.5						
Ch-Wo-P2		4	C1	92	160	19	11	70	1.14	5.3	4.6	0.1	32.9	10.7	0.8	0.7	52	86	8.6	0.8	11.0						
Ch-Wo-P2		5	C2	160	165	21	25	55	1.24	5.4	4.4	0.1	26.5	8.8	0.8	0.5	49	74	7.1	0.5	15.4						
Ch-Ye-P1		-9	A2	65	115	31	22	47	1.01	5.1	4.2	0.1	17.6	5.9	1.3	0.7	37	70	12.1	1.0	11.7						
Ch-Ye-P1		1	Ap	0	30	33	20	47	1.09	5.1	4.2	0.1	19.5	5.9	1.0	0.9	37	74	17.1	1.9	8.8	10.0	79	63	4.4	0.7	9.1
Ch-Ye-P1		2	Ah	30	65	37	20	43	1.05	4.9	4.1	0.0	17.8	5.9	1.1	0.7	38	67	13.2	1.3	9.9						
Ch-Ye-P1		3	A2	65	115	27	28	45	1.01	4.9	4.1	0.1	18.8	6.9	1.3	0.7	36	76	11.5	1.1	11.0						
Ch-Ye-P1		4	Bt1	115	160	36	19	45	1.04	5.8	5.0	0.1	19.5	6.8	1.2	1.6	35	82	10.2	0.7	13.8						
Ch-Ye-P1		5	Bt2	160	165	24	27	49	0.96	4.8	3.9	0.0	16.1	5.9	1.3	0.6	36	67	7.1	0.6	12.0						
Ch-Ye-P2		-9	Bt1	103	140	26	28	47	0.97	4.4	3.7	0.0	14.3	5.0	1.2	0.5	31	68	8.5	0.9	9.6						
Ch-Ye-P2		1	Ap	0	25	42	18	40	0.92	4.7	3.8	0.0	15.1	5.0	1.2	0.5	32	68	26.2	2.8	9.4	7.3	71	61	1.8	1.4	8.3
Ch-Ye-P2		2	Ah	25	62	38	20	41	0.96	4.3	3.5	0.0	15.3	5.9	1.2	0.4	33	70	17.7	1.9	9.1						
Ch-Ye-P2		3	AB	62	103	24	28	49	0.96	4.6	3.7	0.0	15.3	5.1	1.1	0.5	31	70	12.2	1.3	9.1						
Ch-Ye-P2		4	Bt1	103	140	23	28	49	1.04	4.3	3.6	0.0	14.4	4.2	1.2	0.5	32	64	8.4	0.9	9.4						
Ch-Ye-P2		5	Bt1	140	172	24	30	47	0.93	4.4	3.6	0.0	15.3	5.9	1.2	0.5	33	70	7.0	0.7	9.5						
Ch-Ye-P2		6	Bt2	172	180	24	26	50	1.02	4.6	3.8	0.0	16.0	5.9	1.0	0.5	28	82	4.7	0.4	10.7						
En-Ag-P1		-9	Ah	28	62	54	19	27	1.05	4.6	3.8	0.0	14.4	4.2	0.7	0.5	29	69	38.7	3.4	11.3	12.6	108	54	4.0	1.9	12.3
En-Ag-P1		1	Ap	0	28	41	23	36	1.02	5.2	4.3	0.0	13.5	4.2	0.9	0.4	27	70	34.2	2.8	12.2	12.7	72	43	2.0	1.5	9.9
En-Ag-P1		2	Ah	28	62	50	18	32	1.00	5.3	4.4	0.0	15.3	5.1	0.8	0.5	29	73	39.0	3.3	12.0	11.2	110	66	4.0	1.9	1.78
En-Ag-P1		3	Bt1	62	121	37	28	36	1.10	4.6	3.7	0.0	14.4	5.1	0.9	0.3	28	74	8.7	0.9	9.8						
En-Ag-P1		4	Bt2	121	175	37	25	39	1.08	4.8	3.9	0.0	17.9	6.8	0.7	0.3	32	80	6.3	0.6	10.4						
En-Ag-P1		5	Bt3	175	180	37	27	36	1.05	4.8	4.0	0.0	17.1	6.0	0.9	0.3	31	78	5.5	0.5	12.3						
En-Go-P1		-9	Ap	0	25	44	14	42	1.01	5.0	4.1	0.1	21.0	7.6	1.0	0.5	37	82	29.1	2.5	11.6	7.6	121	81	18.6	2.8	3.4
En-Go-P1		1	Ap	0	30	36	20	44	1.00	5.0	4.2	0.1	20.4	6.8	1.1	0.5	37	78	31.3	2.7	11.7	8.8	124	77	18.7	2.8	3.7
En-Go-P1		2	AB	30	75	36	21	43	1.07	5.2	4.4	0.0	22.3	7.7	1.1	0.5	36	88	20.6	2.3	9.1						
En-Go-P1		3	Bt1	75	110	32	20	47	1.07	5.4	4.5	0.0	20.5	6.9	1.2	1.4	37	80	12.7	1.4	9.4						
En-Go-P1		4	Bt2	110	155	30	23	47	1.08	5.3	4.4	0.0	21.6	6.9	1.0	1.4	37	83	11.6	1.2	9.6						
En-Go-P1		5	C	155	160	38	20	42	1.18	5.4	4.4	0.0	19.3	6.7	0.8	1.4	34	83	8.7	1.0	8.4						
En-Go-P2		-9	C3	120	125	21	27	51	1.19	6.1	4.8	0.1	26.6	9.4	1.4	0.6	41	92	2.4	0.3	8.1						

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En-Go-P2	1	Ap	0	25	36	25	39	0.99	4.9	4.0	0.0	16.6	5.8	0.9	0.4	33	72	18.0	1.6	11.2	11.0	140	84	9.3	3.5	3.9
En-Go-P2	2	AC	25	65	31	29	39	1.09	5.9	4.7	0.1	15.7	5.8	1.1	0.3	27	85	6.7	0.7	9.3						
En-Go-P2	3	C1	65	90	29	33	38	1.24	6.5	5.1	0.1	14.7	4.9	1.1	0.3	24	86	3.5	0.4	8.1						
En-Go-P2	4	C2	90	120	28	24	48	1.22	6.0	4.9	0.1	22.1	7.7	1.1	0.5	38	83	3.0	0.3	10.1						
En-Go-P2	5	C3	120	125	20	26	55	1.19	6.1	5.0	0.1	25.8	8.6	1.4	0.6	42	86	2.3	0.3	7.8						
En-Ke-P1	-9	Ap	0	25	28	29	43	1.03	5.3	4.4	0.1	14.1	5.0	0.8	1.6	31	69	20.9	2.5	8.4	8.8	77	71	19.8	2.1	7.4
En-Ke-P1	1	Ap	0	25	34	27	39	1.01	6.0	5.2	0.1	14.7	5.5	0.8	0.9	32	69	21.0	2.5	8.4	14.3	85	68	26.5	1.8	7.6
En-Ke-P1	2	AC	25	90	36	31	34	1.02	5.4	4.4	0.1	17.6	5.9	0.9	1.7	31	84	13.2	1.3	10.0						
En-Ke-P1	3	C1	90	110	30	38	32	1.12	5.6	4.7	0.0	14.8	4.9	0.9	0.8	25	86	6.2	0.7	8.6						
En-Ke-P1	4	C1	110	128	33	25	42	1.36	6.2	5.3	0.1	14.7	5.0	0.9	0.8	26	84	5.7	0.4	12.9						
En-Ke-P1	5	C2	128	162	29	22	49	1.27	6.5	5.6	0.1	21.6	7.0	1.3	0.9	38	80	4.1	0.4	10.4						
En-Ke-P1	6	C3	162	170	28	25	46	1.21	6.7	5.8	0.1	20.1	7.0	1.3	0.6	37	78	1.1	0.2	7.3						
En-Ku-P1	-9	Ap	0	21	43	16	41	0.90	4.7	3.9	0.0	15.9	5.9	0.8	0.6	34	68	43.6	3.4	12.9	11.7	99	65	10.4	3.3	11.7
En-Ku-P1	1	Ap	0	21	38	17	44	1.00	5.3	4.4	0.1	15.1	5.0	0.8	0.6	34	64	42.3	3.4	12.5	12.5	106	62	11.3	3.6	12.7
En-Ku-P1	2	Ah	21	52	37	26	37	1.02	4.5	3.7	0.0	12.6	4.2	0.8	0.4	28	64	40.3	3.1	13.1						
En-Ku-P1	3	AB	52	109	37	27	37	1.16	4.9	3.9	0.0	13.7	4.3	0.8	0.4	29	66	14.2	1.7	8.6						
En-Ku-P1	4	Bt1	109	131	33	19	48	1.17	5.6	4.7	0.1	18.5	6.7	1.2	1.6	35	80	12.6	1.3	9.5						
En-Ku-P1	5	Bt2	131	140	22	27	51	1.24	5.0	4.3	0.0	18.5	5.9	1.0	0.4	35	74	3.0	0.3	10.4						
En-Ku-P2	-9	Ap	0	25	40	17	43	1.03	5.4	4.5	0.0	23.9	8.5	1.0	1.1	38	91	34.9	3.4	10.1	14.0	81	76	22.1	2.5	10.9
En-Ku-P2	1	Ap	0	25	40	15	45	0.99	5.4	4.6	0.0	22.3	7.7	1.0	1.1	37	86	34.8	3.3	10.5	14.3	96	87	21.3	2.8	11.6
En-Ku-P2	2	Ah	25	67	29	15	55	0.95	5.5	4.6	0.0	17.3	6.0	1.2	0.9	36	70	30.8	3.2	9.7	12.0	100	67	6.9	2.3	8.865
En-Ku-P2	3	Bt1	67	92	20	25	56	1.10	4.9	4.1	0.0	15.3	5.1	1.1	0.7	33	68	8.0	0.7	10.7						
En-Ku-P2	4	Bt2	92	138	27	19	54	1.18	4.8	4.0	0.0	16.3	5.2	1.0	0.5	33	69	5.2	0.6	8.6						
En-Ku-P2	5	C	138	145	26	22	52	1.24	5.1	4.3	0.0	18.9	6.0	1.1	0.5	35	76	1.4	0.2	9.0						
HE/GRW/LH/P1	1	Apk1	0	20	40	7	53	1.34	7.8	6.9	0.2	33.3	11.7	0.8	0.9	52	90	13.5	1.5	9.3	22.5	13	3	7.3	2.7	10.6
HE/GRW/LH/P1	2	Bk2	20	45	30	6	64	1.28	7.9	7.0	0.3	29.6	10.2	1.0	1.0	44	95	5.7	0.6	9.7						
HE/GRW/LH/P1	3	BCk3	45	70	26	23	51	1.30	7.9	7.0	0.4	30.1	10.2	1.0	0.9	44	95	4.9	0.4	11.2						
HE/GRW/LH/P1	4	Ck4	70	110	21	30	49	1.31	7.9	7.0	0.4	28.8	9.7	1.0	0.9	42	95	2.3	0.3	7.7						
HE/GRW/LH/P1	5	Ck5	110	145	24	21	55	1.26	7.8	6.9	0.4	28.7	9.3	1.0	0.9	46	87	1.3	0.2	8.6						
HE/GRW/LH/P2	1	Ap	0	20	52	8	41	1.06	5.3	4.3	0.1	17.9	6.0	0.8	0.6	35	73	28.7	2.8	10.1	10.9	88	40	3.0	4.3	9.3
HE/GRW/LH/P2	2	B1	20	45	44	11	45	1.15	4.9	4.0	0.0	18.8	6.9	0.8	0.4	42	64	18.1	2.3	8.0						

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HE/GRW/LH/P2	3	B2	45	90	40	10	50	1.19	5.1	4.2	0.0	23.9	8.5	1.0	0.4	45	76	10.3	1.1	9.8						
HE/GRW/LH/P2	4	B3	90	120	33	11	56	1.23	5.3	4.3	0.0	21.4	7.7	1.0	0.4	46	67	9.2	0.8	12.3						
HE/GRW/LH/P2	5	BC	120	200	35	20	44	1.24	5.7	4.7	0.1	25.7	7.6	0.9	0.2	39	89	2.5	0.3	8.3						
HE/GRW/LT/P1	1	Ap	0	20	54	9	36	1.31	6.1	5.2	0.1	18.3	6.6	0.8	0.3	37	71	12.1	1.5	8.4	14.0	31	25	1.5	1.8	7.6
HE/GRW/LT/P1	2	A	20	50	50	14	36	1.31	6.1	5.2	0.1	15.8	5.4	0.8	0.3	33	68	11.6	1.2	10.0						
HE/GRW/LT/P1	3	B1	50	67	39	18	44	1.24	6.0	5.1	0.1	18.9	6.3	0.8	0.3	38	69	11.1	1.0	10.8						
HE/GRW/LT/P1	4	B2	67	160	30	22	49	1.34	6.0	5.3	0.1	13.3	4.1	0.8	0.4	30	63	1.5	0.1	10.6						
HE/GRW/LT/P2	1	Ap	0	30	10	27	64	1.26	6.0	5.0	0.1	25.2	8.4	0.9	0.4	50	69	20.2	2.5	8.1	15.5	29	24	2.4	3.2	11
HE/GRW/LT/P2	2	A	30	60	19	15	67	1.18	5.5	4.5	0.0	18.6	6.8	0.8	0.4	38	70	15.7	1.8	8.9						
HE/GRW/LT/P2	3	Bt1	60	85	17	20	62	1.13	5.6	4.6	0.0	23.0	7.7	0.8	0.3	47	68	12.8	1.3	9.6						
HE/GRW/LT/P2	4	BC	85	120	18	23	60	1.13	5.7	4.8	0.1	24.0	8.6	0.9	0.4	48	70	10.3	1.1	9.8						
HE/GRW/RJ/P1	1	Ap	0	35	33	19	48	1.18	6.0	5.0	0.1	22.7	7.6	0.8	0.5	44	71	11.1	1.0	10.8	13.8	61	88	4.7	6.1	11.9
HE/GRW/RJ/P1	2	B1	35	90	34	15	51	1.27	5.7	4.7	0.0	23.5	7.6	0.9	0.4	43	75	8.2	0.7	11.1						
HE/GRW/RJ/P1	3	B2	90	180	14	34	53	1.19	5.9	5.0	0.1	21.8	6.7	1.0	0.4	42	72	2.4	0.2	11.0						
HE/GRW/RJ/P2	1	Ap	0	35	24	12	64	1.23	6.3	5.5	0.1	36.3	12.1	0.8	0.5	52	96	14.7	1.5	9.7	17.2	37	18	1.4	3.3	12.8
HE/GRW/RJ/P2	2	C1	35	60	24	10	66	1.21	6.5	5.6	0.1	37.2	12.5	0.9	0.5	56	91	10.4	1.1	9.8						
HE/GRW/RJ/P2	3	Ci1	60	110	17	17	65	1.22	6.9	6.1	0.1	36.7	12.1	1.0	0.4	56	89	6.7	0.7	9.8						
HE/GRW/RJ/P2	4	Cg1i	110	150	12	26	62	1.21	6.9	5.0	0.1	35.8	12.2	1.2	0.5	55	90	5.0	0.5	10.9						
HE/GRW/RJ/P2	5	Cg2i	150	200	17	14	69	1.21	7.0	6.1	0.2	43.2	14.7	1.0	0.5	63	94	2.8	0.3	9.3						
HE/GRW/UJ/P1	1	Ap	0	20	33	19	48	1.21	6.1	5.1	0.1	26.9	9.2	0.8	1.3	43	88	22.2	2.1	10.8	16.2	63	57	5.3	0.9	11.3
HE/GRW/UJ/P1	2	A	20	50	33	21	46	1.29	5.9	5.8	0.1	22.3	7.1	0.8	1.3	35	91	14.2	1.6	8.8						
HE/GRW/UJ/P1	3	Bt1	50	70	30	13	57	1.20	6.1	5.2	0.1	23.9	8.0	0.9	0.6	41	81	13.9	1.3	10.5						
HE/GRW/UJ/P1	4	B	70	110	35	16	49	1.24	6.0	5.0	0.1	23.7	7.6	1.3	0.5	42	79	10.4	1.0	10.0						
HE/GRW/UJ/P1	5	Bt2	110	170	25	21	54	1.09	6.0	5.0	0.1	23.3	7.8	1.2	0.4	43	77	3.1	0.3	10.4						
HE/GRW/UJ/P2	1	Ap	0	15	15	18	67	1.19	6.4	5.5	0.1	36.8	12.8	1.0	0.7	55	93	15.4	1.6	9.8	16.1	26	21	2.3	2.8	13.4
HE/GRW/UJ/P2	2	A	15	35	32	14	54	1.25	6.6	5.6	0.1	35.9	12.1	1.2	0.2	52	96	3.4	0.5	7.5						
HE/GRW/UJ/P2	3	B	35	60	25	15	59	1.14	6.4	5.5	0.1	39.2	13.1	1.4	0.3	56	97	2.8	0.4	7.4						
HE/GRW/UJ/P2	4	BC	60	80	34	15	51	0.99	6.7	5.7	0.2	37.5	12.2	1.3	0.5	54	96	2.6	0.3	8.6						
HE/HMY/DJ/P1	1	Ap	0	20	24	21	56	1.26	7.8	7.0	0.1	34.7	11.7	1.0	1.2	55	89	10.4	1.1	9.8	13.4	9	6	3.3	3.1	15.8
HE/HMY/DJ/P1	2	A	20	50	25	25	50	1.23	8.0	7.1	0.2	26.8	9.4	1.0	0.9	46	82	8.9	0.7	12.1						
HE/HMY/DJ/P1	3	Bt	50	80	24	17	59	1.30	8.1	7.1	0.2	36.0	12.3	1.2	0.8	55	91	5.9	0.4	13.4						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
HE/HMY/DJ/P2	1	Ap	0	25	42	16	42	1.29	7.8	7.0	0.1	19.7	6.0	0.9	0.8	36	75	11.6	1.4	8.6	22.9					14.4
HE/HMY/DJ/P2	2	A1	25	50	48	17	36	1.19	8.0	7.1	0.1	20.9	7.5	1.3	0.6	35	87	9.7	1.0	9.5						
HE/HMY/DJ/P2	3	A2	50	90	49	18	33	1.34	7.8	6.9	0.1	18.1	6.7	1.1	0.7	34	78	8.0	0.7	10.8						
HE/HMY/DJ/P2	4	AC	90	150	54	13	33	1.32	7.6	6.7	0.1	14.4	5.0	0.8	0.3	27	75	5.0	0.4	11.5						
HE/HMY/DJ/P3	1	Apk1	0	20	46	27	27	1.30	7.8	7.0	0.1	21.1	7.0	1.1	0.5	37	80	9.1	1.0	9.0	12.2	6	6	1.1	1.6	19.1
HE/HMY/DJ/P3	2	Ak2	20	90	43	19	38	1.26	8.1	7.6	0.1	18.6	6.2	1.1	0.4	35	75	4.3	0.4	10.1						
HE/HMY/DJ/P4	1	Ap	0	16	55	12	33	1.28	6.8	5.8	0.1	11.5	4.1	1.0	0.4	27	63	13.4	1.4	9.3	13.0	15	12	1.3	1.6	6.7
HE/HMY/DJ/P4	2	At	16	30	51	13	36	1.25	6.6	6.2	0.1	14.4	5.4	0.9	0.4	32	65	10.3	1.0	10.2						
HE/HMY/DJ/P4	3	C	30	50	51	17	32	1.14	6.9	6.1	0.1	12.9	4.6	1.0	0.3	30	63	7.6	0.7	10.4						
HE/HMY/FI/P1	1	Ap	0	20	37	21	42	1.25	6.0	5.1	0.1	22.1	7.5	0.8	0.5	36	85	13.8	1.6	8.6	16.2	26	68	1.5	5.6	13.2
HE/HMY/FI/P1	2	A	20	36	41	17	42	1.23	6.6	5.7	0.1	17.6	5.9	0.9	0.6	33	75	11.1	1.0	10.8						
HE/HMY/FI/P1	3	Bt	36	45	44	13	44	1.22	6.5	5.6	0.1	16.7	5.4	0.8	0.5	38	61	7.4	0.7	10.1						
HE/HMY/FI/P1	4	BC	45	170	57	16	27	1.29	6.9	6.0	0.1	14.4	4.9	0.7	0.4	33	61	4.6	0.4	10.7						
HE/HMY/FI/P2	1	Ap	0	30	45	18	37	1.16	7.3	6.4	0.1	18.9	6.3	0.9	0.8	36	74	13.1	1.3	9.9	20.2	21	19	2.8	3.0	11.9
HE/HMY/FI/P2	2	Bt1	30	60	34	19	47	1.21	7.5	6.6	0.2	28.8	9.7	1.0	0.6	47	86	10.9	1.0	10.4						
HE/HMY/FI/P2	3	Btk1	60	105	33	10	57	1.25	8.0	7.1	0.2	34.2	11.7	1.6	0.5	55	87	4.5	0.4	10.3						
HE/HMY/FI/P2	4	BCk2	105	200	56	14	30	1.26	7.9	7.0	0.1	27.4	8.3	1.0	0.5	43	87	3.7	0.3	12.8						
HE/HMY/FI/P3	1	Ap	0	20	72	7	21	1.48	7.9	7.1	0.1	16.6	5.7	0.7	0.2	30	77	10.9	1.0	11.0	11.3	3	2	0.8	0.5	8
HE/HMY/FI/P3	2	A	20	40	61	15	23	1.36	8.0	7.2	0.1	19.9	6.5	0.7	0.2	33	83	9.8	0.9	11.5						
HE/HMY/FI/P3	3	Bt1	40	68	49	15	36	1.48	7.7	6.9	0.1	21.0	7.0	1.0	0.4	35	84	8.5	0.7	11.8						
HE/HMY/FI/P3	4	Btk1	68	120	25	25	50	1.31	8.0	7.1	0.2	36.2	12.1	1.2	0.7	55	91	8.3	0.7	12.6						
HE/HMY/FI/P4	1	Ah	0	27	28	21	51	1.20	7.6	6.8	0.1	28.7	9.3	0.9	0.6	48	82	13.2	1.6	8.1	9.4	19	13	1.5	2.6	5.9
HE/HMY/FI/P4	2	Ai1	27	64	27	15	58	1.27	7.9	7.0	0.1	30.4	10.3	1.0	0.6	47	89	12.6	1.5	8.4						
HE/HMY/FI/P4	3	B1k1	64	90	26	11	63	1.20	7.9	7.0	0.2	34.5	11.2	1.4	0.7	51	94	8.9	0.8	11.8						
HE/HMY/FI/P4	4	Bg1ik	90	140	27	16	56	1.23	8.1	7.4	0.2	33.6	11.6	1.6	0.6	51	94	3.5	0.3	11.8						
HE/HMY/FI/P4	5	Bg2ik	140	200	22	17	61	1.28	8.2	7.3	0.3	37.0	12.9	1.7	0.6	57	92	1.7	0.2	11.5						
HE/HMY/IO/P1	1	Apk1	0	35	14	19	67	1.13	8.2	7.2	0.2	37.0	12.3	2.1	0.9	58	90	14.0	1.7	8.2	11.4	9	5	3.9	6.3	11.4
HE/HMY/IO/P1	2	Ai1k	35	65	12	21	66	1.23	8.3	7.4	0.4	36.0	12.3	3.3	0.7	55	94	9.5	1.1	8.8						
HE/HMY/IO/P1	3	Ai2K	65	110	22	21	58	1.18	7.9	7.5	0.4	32.4	10.8	0.7	0.6	50	89	5.2	0.5	11.5						
HE/HMY/KJ/P1	1	Ah	0	25	54	9	37	1.25	7.1	6.2	0.1	15.7	4.9	0.9	1.2	36	63	14.8	1.6	9.3	19.8	16	13	2.1	1.5	2.7
HE/HMY/KJ/P1	2	A	25	80	55	17	28	1.25	6.9	6.0	0.1	14.5	4.6	1.1	0.6	33	62	8.0	0.7	10.9						

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HE/HMY/KJ/P1	3	Bt	80	160	45	16	39	1.26	6.9	5.9	0.1	17.4	6.2	1.2	0.7	37	68	3.3	0.3	11.4						
HE/KOM/BL/P1	1	Ah	0	15	21	33	46	1.11	6.5	5.6	0.1	24.2	8.3	0.8	0.5	40	84	13.2	1.2	11.3	10.7	27	23	1.1	3.0	4.6
HE/KOM/BL/P1	2	Bt1	15	40	26	15	59	1.12	5.8	5.0	0.1	30.4	10.1	1.1	0.6	49	85	11.3	1.0	11.0						
HE/KOM/BL/P1	3	Bt2	40	60	29	13	58	1.09	6.1	5.4	0.1	25.0	8.3	0.9	0.6	42	83	9.0	0.7	12.3						
HE/KOM/BL/P2	1	Ap	0	15	25	20	55	1.15	6.2	5.2	0.1	25.6	8.4	1.0	0.6	45	79	10.7	1.0	10.3	7.9	30	19	0.7	2.8	12.2
HE/KOM/BL/P2	2	Ai1	15	40	26	19	55	1.24	6.5	5.7	0.1	28.2	9.7	0.9	0.6	46	86	8.1	0.7	10.9						
HE/KOM/BL/P2	3	BCi2	40	80	26	13	61	1.17	7.0	6.2	0.1	28.6	9.2	0.9	0.6	45	87	6.3	0.6	10.7						
HE/KOM/BL/P2	4	Ci3	80	140	19	17	64	1.19	7.2	6.3	0.1	36.9	11.9	0.9	0.7	57	89	4.8	0.5	10.8						
HE/KOM/BL/P2	5	Ci4i	140	180	26	15	59	1.14	7.3	6.4	0.1	34.8	11.5	0.9	0.6	50	95	4.5	0.3	14.9						
HE/KOM/BL/P3	1	Ah	0	20	37	17	46	1.13	6.5	5.6	0.0	29.4	10.1	0.9	0.8	43	95	15.5	1.5	10.5	11.0	19	14	0.8	2.2	9.6
HE/KOM/BL/P3	2	AC	20	65	36	12	53	1.22	6.6	5.8	0.0	30.2	10.5	0.9	0.6	49	86	13.2	1.2	11.2						
HE/KOM/BL/P3	3	C1	65	95	41	21	38	1.26	6.4	5.5	0.1	28.3	9.2	1.1	0.6	46	85	12.7	1.0	12.4						
HE/KOM/BL/P3	4	2C	95	180	28	19	53	1.18	6.9	6.2	0.1	30.1	10.2	1.2	0.7	49	86	9.9	0.9	11.1						
HE/KOM/EG/P1	1	Ap	0	25	36	23	40	1.29	6.6	5.7	0.1	29.6	10.1	1.0	0.7	45	92	10.0	1.0	9.7	8.9					6.5
HE/KOM/EG/P1	2	Ah	25	45	40	20	40	1.32	6.9	6.1	0.1	27.1	9.3	0.9	0.5	45	84	6.5	0.5	12.6						
HE/KOM/EG/P1	3	Bw1	45	60	48	15	38	1.35	7.0	6.0	0.1	23.0	7.9	0.9	0.4	35	92	4.0	0.4	9.1						
HE/KOM/EG/P1	4	Bw2	60	90	52	20	29	1.44	6.9	5.9	0.1	20.6	7.0	0.9	0.3	37	77	3.4	0.3	11.8						
HE/KOM/EG/P1	5	Bw3	90	110	47	19	34	1.43	7.2	6.2	0.1	20.7	6.6	0.8	0.4	36	80	2.4	0.2	10.9						
HE/KOM/EG/P2	1	Ap	0	20	33	19	48	1.24	6.9	6.0	0.1	32.3	11.2	0.9	0.9	50	91	18.8	2.3	8.3	17.5	21	8	3.2	3.0	12.6
HE/KOM/EG/P2	2	AC	20	80	20	25	55	1.30	6.8	5.8	0.1	38.7	13.3	1.1	0.5	59	90	8.6	1.1	8.2						
HE/KOM/EG/P2	3	C	80	180	22	15	63	1.23	8.0	7.3	0.2	37.6	13.0	1.2	0.6	54	96	2.8	0.3	9.4						
HE/KOM/KK/P1	1	Ah	0	15	22	25	52	1.32	6.7	5.8	0.1	23.9	8.0	1.1	1.0	41	84	10.8	1.0	10.5	14.6	15	12	1.8	1.5	11.4
HE/KOM/KK/P1	2	Bt	15	58	29	13	59	1.13	6.5	5.7	0.1	21.8	7.5	1.0	1.0	43	73	8.7	0.7	11.9						
HE/KOM/KK/P1	3	B2	58	88	29	25	46	1.20	6.8	5.8	0.1	22.1	7.5	1.0	0.6	42	75	6.4	0.6	11.0						
HE/KOM/KK/P1	4	BC	88	140	31	28	40	1.23	6.2	5.4	0.0	17.3	5.5	0.8	0.4	31	77	5.1	0.4	11.5						
HE/KOM/KK/P1	5	C	140	200	51	10	39	1.24	5.9	5.4	0.0	18.0	5.7	1.5	0.2	31	83	1.0	0.1	14.0						
HE/KOM/WM/P1	1	Apk1	0	20	34	9	57	1.20	7.9	7.3	0.1	31.6	10.5	0.9	0.4	52	83	9.2	1.0	8.9	11.4					7.9
HE/KOM/WM/P1	2	2A	20	50	39	17	44	1.36	8.1	7.2	0.1	33.8	11.0	0.8	0.3	50	92	7.0	0.7	9.4						
HE/KOM/WM/P1	3	Bti1	50	130	19	15	66	1.21	8.1	7.4	0.2	37.9	13.1	1.1	0.5	57	93	5.7	0.6	9.3						
HE/KOM/WM/P1	4	Btik2	130	180	15	17	68	1.24	8.4	7.5	0.3	40.3	13.9	1.7	0.7	61	92	3.1	0.3	10.4						
HE/MTA/BO/P1	1	Ah	0	10	39	20	40	1.30	6.5	5.9	0.1	16.2	5.3	0.6	0.4	33	69	12.2	1.6	7.8	10.0	39	36	2.7	1.3	12.8

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HE/MTA/BO/P1	2	A	10	30	50	13	36	1.37	6.5	5.8	0.1	20.2	6.5	0.6	0.3	35	79	11.6	1.4	8.2						
HE/MTA/BO/P1	3	AC	30	50	50	12	38	1.35	6.5	5.7	0.1	19.4	6.1	0.9	0.2	35	75	11.1	1.3	8.7						
HE/MTA/BO/P1	4	C	50	70	52	16	32	1.30	6.8	5.9	0.1	23.7	7.8	0.9	0.2	38	86	6.9	0.7	9.7						
HE/MTA/BO/P2	1	Ap	0	15	27	31	42	1.21	6.3	5.4	0.1	30.5	9.8	0.9	0.4	46	90	17.5	2.1	8.4	12.4	53	50	3.5	1.2	5.7
HE/MTA/BO/P2	2	Ai1	15	60	22	35	42	1.17	6.1	5.1	0.1	31.4	10.6	1.1	0.4	46	95	16.1	1.8	9.1						
HE/MTA/BO/P2	3	Ai2K	60	95	33	27	40	1.16	6.1	5.1	0.1	26.5	8.4	1.1	0.5	40	92	10.4	1.2	8.8						
HE/MTA/BO/P2	4	Bt1i	95	135	24	18	58	1.27	6.6	5.8	0.1	32.0	10.8	1.2	0.9	50	89	5.0	0.6	8.3						
HE/MTA/BO/P2	5	Bt2i	135	185	15	23	62	1.25	6.5	5.7	0.1	35.0	11.7	1.1	0.9	59	82	3.2	0.3	10.6						
HE/MTA/CL/P1	1	Ah	0	20	51	10	39	1.34	6.0	5.1	0.0	11.8	5.8	0.7	0.2	32	57	4.5	0.4	10.5	11.5	24	20	1.4	2.0	11.2
HE/MTA/CL/P1	2	A1	20	60	49	12	39	1.32	5.9	5.0	0.0	14.4	4.2	1.5	0.2	34	59	3.9	0.4	10.8						
HE/MTA/CL/P1	3	A2	60	110	53	8	39	1.31	6.1	5.2	0.0	11.8	3.8	0.7	0.2	31	52	2.7	0.3	9.3						
HE/MTA/CL/P1	4	B1k1	110	150	37	23	40	1.19	6.8	5.9	0.1	18.5	6.7	0.8	0.2	38	68	2.5	0.2	11.5						
HE/MTA/CL/P1	5	B2	150	200	33	24	43	1.17	6.8	5.8	0.1	18.0	6.4	1.0	0.2	35	73	2.3	0.2	12.5						
HE/MTA/CL/P2	1	Apk1	0	20	34	11	55	1.33	7.2	6.3	0.1	21.8	7.3	0.8	0.5	40	75	10.3	1.1	9.8	9.6					10.9
HE/MTA/CL/P2	2	A1K	20	50	19	13	68	1.20	8.1	7.2	0.2	33.7	11.7	0.9	0.7	54	88	6.9	0.8	9.1						
HE/MTA/CL/P2	3	Ci1k	50	80	28	18	55	1.24	8.2	7.4	0.2	34.9	11.8	1.0	0.7	54	89	5.1	0.6	8.3						
HE/MTA/CL/P2	4	Cg1ik	80	130	19	13	68	1.22	7.9	7.0	0.2	35.8	12.2	0.8	0.7	53	94	3.7	0.5	8.1						
HE/MTA/CL/P2	5	Cg2ik	130	185	31	9	61	1.23	8.0	7.1	0.2	30.2	9.9	0.9	0.5	46	91	2.6	0.3	8.6						
HE/MTA/DB/P1	1	Ap	0	30	24	15	60	1.18	7.2	6.3	0.1	38.5	12.8	0.8	0.3	60	88	12.5	1.4	9.2	13.6	11	9	1.0	1.8	12
HE/MTA/DB/P1	2	A	30	60	34	25	41	1.20	7.7	6.6	0.1	36.4	12.0	0.9	0.5	53	95	9.9	1.1	9.4						
HE/MTA/DB/P1	3	Bt1	60	90	29	15	56	1.20	7.8	6.9	0.2	37.7	12.4	0.8	0.3	54	96	8.9	0.9	9.9						
HE/MTA/DB/P1	4	Bt2	90	165	20	17	63	1.20	7.8	6.8	0.1	37.7	12.8	1.0	0.3	62	84	7.1	0.8	9.4						
HE/MTA/DB/P2	1	Ap	0	17	46	6	47	1.09	6.4	5.5	0.1	38.5	12.8	0.7	0.6	58	91	17.6	1.7	10.7	11.0	26	30	3.1	5.1	12.5
HE/MTA/DB/P2	2	Ai1	17	60	34	10	56	1.12	6.7	5.8	0.1	39.7	13.0	0.9	0.5	56	97	9.0	1.1	8.5						
HE/MTA/DB/P2	3	Cg1i	60	130	18	12	70	1.11	7.9	6.9	0.4	36.6	12.6	1.3	0.6	54	95	3.4	0.5	7.3						
HE/MTA/DB/P2	4	Cg2i	130	190	21	11	68	1.10	7.9	7.0	0.4	39.2	13.1	0.8	0.7	55	98	2.9	0.3	9.5						
HE/MTA/HB/P1	1	Ah	0	30	24	39	37	1.38	6.7	5.8	0.1	15.8	5.8	0.8	0.1	33	69	5.6	0.6	9.8	21.5	12	12	0.4	1.3	8.6
HE/MTA/HB/P1	2	B1	30	100	53	7	40	1.30	7.1	6.2	0.1	16.5	4.1	0.7	0.1	32	66	3.6	0.4	8.3						
HE/MTA/HB/P1	3	B2	100	120	53	8	39	1.32	7.0	6.0	0.1	17.6	5.9	0.7	0.1	32	76	1.9	0.2	9.2						
HE/MTA/HB/P1	4	B3	120	180	46	15	39	1.31	6.5	5.6	0.1	19.4	6.9	0.7	0.2	33	81	1.7	0.1	12.2						
HE/MTA/HB/P2	1	Ah	0	30	35	16	49	1.14	7.2	6.4	0.1	31.2	10.4	0.8	1.3	48	91	13.0	1.3	9.9	###	34	30	2.4	3.8	14.6

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
HE/MTA/HB/P2	2	Ak1	30	130	34	20	46	1.28	7.1	6.2	0.1	29.4	10.1	1.0	0.5	45	91	7.2	0.7	9.7						
HE/MTA/HB/P2	3	Bt1k	130	200	27	13	60	1.25	8.0	7.2	0.2	33.9	11.5	1.0	0.6	50	93	6.3	0.6	10.6						
HW/HRO/BD/P1	1	Ap	0	20	18	19	63	1.22	6.4	5.4	0.1	39.4	13.0	0.9	1.1	56	96	18.0	2.4	7.4	12.5	31	27	2.5	5.1	6.4
HW/HRO/BD/P1	2	Ak1	20	70	23	14	63	1.13	7.0	6.1	0.2	36.7	12.5	1.2	0.8	54	95	14.5	1.5	9.6						
HW/HRO/BD/P1	3	Bk2	70	100	14	20	67	1.12	7.6	6.7	0.3	40.4	13.5	1.4	0.7	61	91	7.3	0.8	9.6						
HW/HRO/BD/P1	4	Bk3	100	130	13	19	68	1.20	7.7	6.8	0.3	42.7	13.9	1.8	0.7	60	98	6.9	0.6	11.3						
HW/HRO/BD/P1	5	Bk4	130	200	26	13	61	1.17	7.8	6.9	0.4	40.7	13.4	1.8	0.7	60	94	5.1	0.5	9.7						
HW/HRO/GG/P1	1	Ap	0	25	40	23	37	1.52	5.8	5.2	0.0	15.0	4.6	0.6	0.1	25	80	12.5	1.3	9.8	12.1	23	20	1.8	0.6	7.5
HW/HRO/GG/P1	2	A1	25	70	46	16	38	1.39	5.6	4.7	0.0	16.0	5.0	0.8	0.1	30	73	10.8	1.0	10.9						
HW/HRO/GG/P1	3	A2	70	110	46	14	40	1.31	5.4	4.8	0.0	16.0	4.2	0.5	0.1	31	67	5.4	0.6	8.4						
HW/HRO/GG/P1	4	B1	110	140	49	9	42	1.27	5.6	4.8	0.0	15.3	4.7	0.5	0.2	30	69	3.2	0.4	7.4						
HW/HRO/GG/P1	5	B2	140	200	47	12	41	1.32	6.0	5.3	0.0	15.8	5.8	0.6	0.2	33	68	2.1	0.2	10.1						
HW/HRO/GG/P2	1	Ap	0	30	31	23	46	1.25	6.8	5.8	0.1	38.6	12.9	1.5	0.7	58	92	18.6	2.0	9.5	18.6	41	35	2.0	11.9	12.1
HW/HRO/GG/P2	2	Ai1	30	80	38	8	54	1.32	7.2	6.3	0.1	34.1	11.4	1.4	0.4	51	93	16.3	1.6	10.1						
HW/HRO/GG/P2	3	ACi2	80	110	12	31	56	1.29	7.5	6.5	0.2	38.4	13.4	2.0	0.6	58	94	15.7	1.5	10.4						
HW/HRO/GG/P2	4	Ci3	110	140	18	21	61	1.19	7.8	6.8	0.2	42.4	14.3	2.2	0.6	61	97	12.5	1.4	9.2						
HW/HRO/GG/P2	5	Cik1	140	200	23	16	60	1.18	8.0	7.1	0.3	43.5	14.4	2.3	0.5	63	96	10.4	1.1	9.8						
HW/HRO/HC/P1	1	Ap	0	25	30	13	57	1.28	7.0	6.2	0.2	34.7	11.7	1.8	1.2	53	93	22.5	2.3	9.9	21.5	28	9	2.8	8.4	15.4
HW/HRO/HC/P1	2	Bt1	25	70	15	21	65	1.13	7.4	6.5	0.7	39.1	13.0	1.7	0.8	59	93	17.8	1.8	9.7						
HW/HRO/HC/P1	3	B1	70	110	14	21	65	1.18	8.1	7.2	0.5	40.3	13.2	1.5	0.9	61	92	16.8	1.7	10.0						
HW/HRO/HC/P1	4	Bk1	110	140	12	22	66	1.20	7.9	6.9	0.4	39.4	12.8	2.1	0.7	58	95	15.2	1.6	9.8						
HW/HRO/HC/P1	5	Bk2	140	200	18	15	66	1.20	7.6	6.8	0.3	35.9	12.3	1.8	0.7	56	90	14.9	1.4	10.8						
HW/HRO/IJ/P1	1	Ap	0	20	51	12	37	1.37	6.4	5.7	0.1	16.7	5.7	0.8	0.3	35	68	18.8	2.1	8.8	9.7	24	19	1.1	1.5	8.2
HW/HRO/IJ/P1	2	Bt1	20	60	37	19	44	1.32	7.0	6.0	0.1	41.1	13.7	1.2	0.6	59	96	16.8	2.1	8.0						
HW/HRO/IJ/P1	3	Btk1	60	100	26	22	53	1.28	7.6	6.7	0.2	39.1	12.9	1.7	0.6	57	95	13.8	1.4	10.2						
HW/HRO/IJ/P1	4	Btk2	100	140	32	12	56	1.28	7.9	7.0	0.2	40.6	13.4	2.1	0.7	60	95	8.6	1.1	8.2						
HW/HRO/IJ/P1	5	Bk3	140	200	20	24	56	1.19	8.0	7.0	0.2	39.7	13.4	2.3	0.8	59	95	4.8	0.5	10.8						
ILU/B/B/P1	1	Ap	0	7	14	26	60	1.06	5.6	4.7	0.0	20.1	7.9	1.6	1.4	58	53	28.4	2.6	10.9	12.4	66	34	7.9	1.4	37.8
ILU/B/B/P1	2	AB	7	25	22	16	62	1.03	5.7	4.8	0.1	21.8	7.9	1.6	1.0	59	54	18.1	2.0	9.1						
ILU/B/B/P1	3	Bt1g	25	54	4	30	66	1.07	5.6	4.4	0.0	19.0	6.9	1.6	1.1	70	41	13.3	1.2	11.1						
ILU/B/B/P1	4	Bt2g	54	98	6	27	68	1.01	5.3	4.4	0.0	19.4	7.0	1.5	1.0	66	44	10.0	1.1	9.1						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
ILU/B/B/P1	5	Bt3g	98	120	3	29	68	1.03	5.2	4.4	0.0	21.1	7.9	1.7	0.9	66	47	9.1	0.8	11.4						
ILU/B/B/P2	1	Ah	0	15	15	17	67	1.15	5.5	4.6	0.1	16.3	5.1	1.6	1.5	53	46	38.5	3.1	12.4	9.3	68	56	7.5	2.2	11.3
ILU/B/B/P2	2	AB	15	55	17	13	70	1.13	5.5	4.6	0.0	15.3	5.1	1.7	1.2	61	38	14.3	1.3	11.0						
ILU/B/B/P2	3	Bt1	55	90	5	24	70	1.03	5.5	4.6	0.0	12.7	4.2	1.4	0.9	57	34	10.6	1.0	10.6						
ILU/B/B/P2	4	Bt2	90	140	5	24	70	1.01	5.6	4.7	0.0	12.7	4.2	1.6	1.2	49	40	9.9	0.9	11.0						
ILU/B/B/P2	5	Bt3	140	145	5	27	69	1.01	5.5	4.7	0.0	11.9	3.4	1.6	1.6	41	45	4.2	0.4	10.5						
ILU/B/HG/P1	1	Ap	0	13	30	19	51	1.06	4.3	3.6	0.0	10.9	4.2	1.5	0.3	39	44	20.2	2.5	8.1	12.0	31	35	7.9	1.0	18.8
ILU/B/HG/P1	2	AB	13	33	25	17	58	1.03	4.1	3.7	0.0	11.8	4.2	1.4	0.3	38	46	17.8	1.9	9.4						
ILU/B/HG/P1	3	Bt1	33	62	9	30	61	1.03	4.2	3.7	0.0	11.8	4.2	1.4	0.3	32	56	15.8	1.5	10.5						
ILU/B/HG/P1	4	Bt2	62	85	11	24	65	1.04	4.3	3.7	0.0	12.6	4.2	1.6	0.3	36	52	10.8	1.0	10.8						
ILU/B/HG/P1	5	Bt3	85	125	31	17	52	1.04	4.0	3.2	0.0	11.8	4.2	1.2	0.3	29	60	4.0	0.4	10.0						
ILU/B/HG/P2	1	Ap	0	10	43	24	33	1.03	4.8	4.0	0.0	9.2	3.3	1.9	1.2	31	51	25.0	2.8	8.9	10.2	64	53	6.7	1.1	1.3
ILU/B/HG/P2	2	AB	10	25	31	17	52	1.13	4.9	4.1	0.0	12.6	4.2	1.6	1.0	48	40	15.5	1.9	8.2						
ILU/B/HG/P2	3	Bw	25	65	21	20	60	1.17	5.1	4.5	0.0	12.5	4.2	1.8	0.5	52	36	8.0	0.9	8.9						
ILU/B/HG/P2	4	BC	65	70	19	28	53	1.13	5.0	4.2	0.0	7.5	3.3	1.8	1.0	39	34	4.3	0.4	10.8						
ILU/B/MM/P1	1	Ap	0	17	28	23	50	1.04	4.7	3.8	0.0	12.8	5.1	1.6	0.3	34	59	30.8	3.1	9.9	11.6	38	29	9.4	1.3	4.7
ILU/B/MM/P1	2	AB	17	40	12	20	68	1.03	4.8	4.0	0.0	12.8	4.3	1.7	0.2	54	35	13.2	1.5	8.8						
ILU/B/MM/P1	3	Bt1	40	70	4	30	66	1.02	5.0	4.3	0.0	12.8	4.3	1.6	0.3	47	40	8.2	1.0	8.2						
ILU/B/MM/P1	4	Bt2	70	102	10	24	66	1.01	5.0	4.2	0.0	12.6	4.2	1.6	0.2	36	52	5.8	0.6	9.7						
ILU/B/MM/P1	5	Bt3	102	150	6	27	67	1.02	4.6	3.8	0.0	11.0	4.2	1.6	0.2	40	43	3.4	0.3	11.3						
ILU/B/Y/P1	1	Ap	0	15	23	20	56	1.01	4.3	3.6	0.0	11.0	4.2	1.7	0.4	38	45	21.4	2.5	8.6	9.3	36	27	0.8	0.7	8.5
ILU/B/Y/P1	2	AB	15	48	10	27	63	1.07	4.3	3.6	0.0	11.9	4.2	1.4	0.3	31	57	16.0	1.9	8.4						
ILU/B/Y/P1	3	Bt1	48	80	13	30	57	1.06	4.8	4.0	0.0	14.6	4.3	1.8	0.2	36	57	12.3	1.0	12.3						
ILU/B/Y/P1	4	Bt2	80	110	17	24	59	1.05	5.0	4.8	0.0	13.3	4.2	1.6	0.2	43	44	3.8	0.3	12.7						
ILU/B/Y/P2	1	Ap	0	15	43	20	37	1.12	4.6	3.9	0.0	14.3	4.2	1.2	0.3	33	61	13.9	2.2	6.3	7.4	57	45	1.3	0.3	2
ILU/B/Y/P2	2	AB	15	40	35	20	45	1.10	4.4	3.8	0.0	12.7	4.2	1.5	0.3	32	58	11.2	1.0	11.2						
ILU/B/Y/P2	3	Bw	40	85	31	23	46	1.06	4.4	3.8	0.0	12.6	4.2	1.7	0.2	37	51	5.7	0.7	8.1						
ILU/B/Y/P2	4	BC	85	90	34	21	45	1.05	4.3	3.7	0.0	17.0	5.1	1.6	0.3	35	69	3.3	0.3	11.0						
ILU/D/G/P1	1	Ap	0	15	38	13	50	1.02	5.4	4.7	0.0	13.4	5.0	1.9	1.0	52	41	28.7	3.2	9.0	8.4	55	53	4.3	1.6	3.9
ILU/D/G/P1	2	Bt1	15	55	17	14	70	1.02	5.3	4.6	0.0	12.6	5.0	1.7	0.8	53	38	13.0	1.3	10.0						
ILU/D/G/P1	3	Bt2	55	80	15	17	69	1.04	4.9	4.2	0.0	10.9	4.2	1.9	1.1	55	33	9.2	1.0	9.2						

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ILU/D/G/P1		4	Bt3	80	115	19	16	65	1.01	4.7	4.1	0.0	9.2	3.4	1.7	1.9	45	36	7.6	0.7	10.9						
ILU/D/G/P1		5	Bt4	115	120	9	19	72	1.05	4.5	3.8	0.0	10.1	4.9	1.6	1.2	53	34	6.7	0.6	11.2						
ILU/D/M/P1		1	Ah	0	18	37	17	46	1.07	5.1	4.4	0.1	18.7	6.8	1.4	1.1	38	73	24.4	2.8	8.7	11.0	55	52	2.6	0.8	11.5
ILU/D/M/P1		2	AB	18	42	13	18	68	1.06	4.7	4.1	0.0	10.3	3.4	1.8	0.4	42	38	13.7	1.2	11.4						
ILU/D/M/P1		3	Bt1	42	74	16	16	68	1.04	4.7	4.2	0.0	12.7	4.2	1.9	0.5	44	44	11.9	1.0	11.9						
ILU/D/M/P1		4	Bt2	74	122	15	16	69	1.05	4.7	4.1	0.0	13.6	5.1	1.6	0.4	40	52	7.6	0.7	10.9						
ILU/D/M/P1		5	Bt3	122	130	14	20	66	1.14	4.8	4.2	0.0	9.3	3.4	2.0	0.5	41	37	5.1	0.4	12.8						
ILU/D/S/P1		1	Ah	0	15	38	18	44	1.11	5.0	4.3	0.0	10.9	4.2	1.6	1.3	39	46	14.6	1.3	11.2	10.2	67	49	5.5	0.9	7.1
ILU/D/S/P1		2	AB	15	30	28	12	61	1.11	5.3	4.7	0.0	12.6	4.2	1.7	1.2	51	38	13.1	1.0	13.1						
ILU/D/S/P1		3	Bt1	30	60	18	16	66	1.09	5.4	4.7	0.0	12.6	5.0	1.6	1.0	43	47	7.7	0.7	11.0						
ILU/D/S/P1		4	Bt2	60	90	10	21	69	1.07	5.3	4.8	0.0	11.8	3.4	1.6	1.1	37	48	5.6	0.6	9.3						
ILU/D/S/P1		5	Bt3	90	120	10	20	70	1.02	5.2	4.7	0.0	12.6	5.0	1.6	0.9	45	45	5.2	0.4	13.0						
ILU/D/S/P2		1	Ah	0	10	34	17	49	1.00	5.4	4.8	0.0	15.2	5.1	1.8	0.5	37	61	33.8	4.1	8.2	13.2	59	54	4.9	0.7	12
ILU/D/S/P2		2	Bw	10	35	22	17	61	1.10	4.8	4.2	0.0	8.4	3.4	1.7	0.4	41	33	14.7	1.8	8.2						
ILU/D/S/P2		3	BC	35	40	37	12	51	1.14	5.0	4.3	0.0	9.2	3.3	1.7	0.3	35	41	8.8	1.0	8.8						
ILU/D/Y/P1		1	Ap	0	10	33	12	55	1.01	4.4	3.7	0.1	7.7	3.4	1.9	0.3	38	35	59.1	7.3	8.1	7.6	196	23	2.1	0.4	17.3
ILU/D/Y/P1		2	AB	10	40	24	24	52	1.01	4.4	3.8	0.0	10.9	4.2	1.5	0.2	42	40	32.8	2.8	11.7						
ILU/D/Y/P1		3	Bt1	40	60	32	9	59	1.19	4.7	4.0	0.0	7.5	2.5	1.7	0.1	32	37	12.5	1.3	9.6						
ILU/D/Y/P1		4	Bt2	60	85	30	16	55	1.21	4.6	3.9	0.0	9.2	4.2	1.5	0.1	29	51	5.7	0.6	9.5						
ILU/D/Y/P1		5	Bt3	85	90	4	32	64	1.23	4.4	3.5	0.0	16.3	6.0	1.5	0.3	37	65	4.7	0.4	11.8						
ILU/D/Y/P2		1	Ap	0	2	24	26	50	1.04	4.9	4.1	0.0	16.4	5.2	1.4	0.5	46	51	45.1	3.5	12.9	10.0	71	51	5.3	1.4	3.6
ILU/D/Y/P2		2	AB	2	35	15	17	68	1.01	4.8	3.9	0.0	12.1	4.3	1.8	0.3	52	36	34.1	2.9	11.8						
ILU/D/Y/P2		3	Bt1	35	85	10	29	62	1.02	4.5	3.8	0.0	11.3	4.4	1.6	0.3	36	48	31.1	2.6	12.0						
ILU/D/Y/P2		4	Bt2g	85	125	5	31	64	1.02	4.2	3.6	0.0	11.2	3.5	1.5	0.3	33	50	12.2	1.4	8.7						
ILU/D/Y/P2		5	Bt3g	125	130	5	29	66	1.12	4.4	3.7	0.0	12.8	4.3	1.5	0.5	30	63	8.6	1.0	8.6						
JIM/G/GC/P1		1	Ap	0	2	43	18	39	1.05	4.6	3.7	0.1	15.4	5.1	1.6	0.4	40	56	29.4	3.1	9.5	7.3	207	61	10.4	3.0	3.7
JIM/G/GC/P1		2	AB	2	23	30	21	48	1.04	4.8	4.0	0.0	14.5	5.1	1.9	0.3	44	49	15.1	1.6	9.4						
JIM/G/GC/P1		3	Bt1g	23	45	33	35	32	1.15	5.1	4.4	0.0	9.3	3.4	1.7	0.2	28	52	3.3	0.4	8.3						
JIM/G/GC/P1		4	Bt2g	45	70	35	34	31	1.12	5.3	4.7	0.0	12.8	4.3	1.9	0.2	36	53	2.9	0.4	7.3						
JIM/G/GC/P1		5	Bt3g	70	75	33	32	35	1.23	5.5	4.8	0.0	10.2	3.4	1.9	0.2	36	43	1.9	0.3	6.3						
JIM/G/GC/P2		1	Ap	0	25	24	18	57	1.02	6.2	5.5	0.1	18.9	6.9	0.9	2.5	57	52	30.3	3.2	9.5	12.9	124	44	7.7	1.6	13.6

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
JIM/G/GC/P2	2	Bt1g	25	45	6	30	64	1.01	5.4	4.3	0.1	8.6	3.4	2.0	4.1	46	39	11.8	1.3	9.1						
JIM/G/GC/P2	3	Bt2g	45	90	6	31	63	1.02	4.8	4.0	0.1	8.5	3.4	1.8	2.5	38	42	3.3	0.7	4.7						
JIM/G/GC/P2	4	Bt3g	90	125	8	29	63	1.03	4.6	3.9	0.0	7.7	2.6	2.0	1.6	38	36	1.7	0.4	4.3						
JIM/G/GC/P2	5	Bt4g	125	130	13	21	66	1.25	4.8	3.9	0.0	15.9	5.3	2.1	0.6	61	40	1.6	0.2	8.0						
JIM/G/KA/P1	1	Ap	0	10	48	25	28	1.02	4.6	3.9	0.1	11.1	4.3	1.7	0.5	41	43	35.2	4.0	8.8	8.0	213	18	5.7	2.2	4.5
JIM/G/KA/P1	2	E1g	10	40	29	26	45	1.21	4.8	4.0	0.0	9.2	3.4	1.8	0.1	49	30	10.2	1.0	10.2						
JIM/G/KA/P1	3	E2g	40	50	15	28	57	1.20	5.0	4.2	0.0	8.4	3.4	1.6	0.2	29	47	4.1	0.4	10.3						
JIM/G/KA/P1	4	Bt1g	50	80	16	17	68	1.15	4.6	3.8	0.0	15.6	5.2	1.8	0.4	55	42	2.0	0.3	6.7						
JIM/G/KA/P1	5	Bt2g	80	85	6	22	73	1.10	4.6	3.6	0.0	16.4	4.3	1.8	0.6	55	42	1.7	0.2	8.5						
JIM/G/SL/P1	1	Ap	0	13	34	22	44	1.07	4.3	3.6	0.0	10.1	4.2	1.4	0.4	41	39	39.8	4.3	9.3	9.7	271	61	6.9	1.0	4.4
JIM/G/SL/P1	2	E1g	13	40	23	26	51	1.05	4.6	3.9	0.0	7.5	2.5	1.7	0.3	27	44	11.5	1.2	9.6						
JIM/G/SL/P1	3	E2g	40	70	44	4	52	1.17	4.7	4.0	0.0	11.2	4.3	1.8	0.4	37	47	9.7	1.1	8.8						
JIM/G/SL/P1	4	Bt1g	70	100	16	15	69	1.20	5.1	4.3	0.0	15.9	6.2	1.9	0.5	48	51	2.7	0.3	9.0						
JIM/G/SL/P2	1	Ap	0	10	30	17	52	1.04	5.5	4.7	0.0	14.7	6.9	1.8	2.2	46	56	36.6	3.3	11.1	6.8	106	61	8.3	2.1	11.1
JIM/G/SL/P2	2	AB	10	30	20	11	69	1.02	4.9	4.4	0.0	13.0	4.3	1.8	1.7	43	48	19.4	2.3	8.4						
JIM/G/SL/P2	3	Bt1	30	60	13	21	66	1.04	4.6	4.1	0.0	10.2	3.4	1.4	1.4	37	44	15.4	1.3	11.8						
JIM/G/SL/P2	4	Bt2	60	105	11	27	63	1.07	4.6	4.0	0.0	10.2	3.4	1.5	1.3	38	43	11.3	1.0	11.3						
JIM/G/SL/P2	5	Bt3	105	110	8	27	65	1.04	4.5	3.9	0.0	12.0	4.3	1.5	1.0	38	49	3.5	0.3	11.7						
JIM/G/SL/P3	1	Ap	0	16	40	17	43	1.06	5.3	4.8	0.0	14.6	4.3	1.5	1.2	39	55	32.7	3.5	9.3	7.0	104	61	15.7	3.3	9.6
JIM/G/SL/P3	2	AB	16	45	10	20	70	1.04	5.4	4.7	0.0	12.9	4.3	1.8	1.0	38	52	11.2	1.0	11.2						
JIM/G/SL/P3	3	Bt1	45	60	8	23	69	1.10	4.8	4.2	0.0	9.4	3.4	1.7	0.6	41	37	8.7	0.7	12.4						
JIM/G/SL/P3	4	Bt2	60	75	5	27	68	1.12	4.6	4.0	0.0	8.6	3.4	1.8	0.5	43	33	5.8	0.6	9.7						
JIM/G/SL/P3	5	Bt3g	75	130	7	31	62	1.11	4.7	4.1	0.0	10.1	3.4	1.7	0.5	34	46	6.5	0.6	10.8						
JIM/G/WK/P1	1	Ap	0	13	44	17	39	1.07	5.1	4.5	0.0	11.2	3.4	1.7	1.3	39	45	28.9	2.9	10.0	5.5	134	70	6.9	3.3	5
JIM/G/WK/P1	2	AB	13	26	20	13	67	1.02	5.1	4.3	0.0	10.3	3.4	2.4	1.6	44	40	20.8	2.0	10.4						
JIM/G/WK/P1	3	Bt1	26	34	7	22	71	1.02	5.1	4.5	0.0	9.5	3.4	1.9	1.7	38	43	14.3	1.4	10.2						
JIM/G/WK/P1	4	Bt2	34	75	6	22	72	1.04	5.1	4.4	0.0	6.0	2.6	1.6	1.9	36	33	7.2	0.9	8.0						
JIM/G/WK/P1	5	Bt3	75	120	4	27	69	1.02	5.3	4.6	0.0	6.0	2.6	1.8	2.8	33	40	4.3	0.6	7.2						
JIM/G/WK/P1	6	Bt4	120	125	5	30	65	1.05	4.9	4.2	0.0	6.4	2.1	1.8	2.2	34	37	2.0	0.4	5.0						
JIM/LS/DG/P1	1	Ah	0	10	17	30	53	1.06	5.0	4.4	0.0	11.8	3.4	1.8	1.2	41	44	24.3	2.7	9.0	6.4	84	76	7.1	2.8	3.6
JIM/LS/DG/P1	2	Eg1	10	35	44	15	42	1.02	4.6	3.8	0.0	10.9	4.2	1.8	0.2	27	63	9.7	1.0	9.7						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
JIM/LS/DG/P1	3	Eg2	35	75	17	34	49	1.04	4.7	3.8	0.0	11.1	3.4	1.9	0.1	62	27	5.0	0.4	12.5						
JIM/LS/DG/P1	4	Bt1g	75	115	19	30	51	1.21	5.2	4.3	0.0	13.4	3.4	1.9	0.2	60	32	2.7	0.3	9.0						
JIM/LS/DG/P1	5	Bt2g	115	150	6	24	71	1.20	5.4	4.8	0.2	8.7	2.6	2.2	0.6	37	38	1.4	0.2	7.0						
JIM/LS/DG/P1	6	Bt3g	150	155	15	20	65	1.20	4.9	3.8	0.0	24.9	7.1	1.2	0.4	49	69	1.6	0.2	8.0						
JIM/LS/G/P1	1	Ap	0	10	10	30	60	1.08	4.9	3.8	0.0	6.0	2.6	2.0	0.5	32	34	21.7	2.5	8.7	5.9	56	44	1.3	1.5	26
JIM/LS/G/P1	2	Bt1	10	40	15	24	61	1.02	4.2	3.4	0.1	9.2	3.4	1.8	0.2	48	30	17.8	2.0	8.9						
JIM/LS/G/P1	3	Bt2	40	80	11	28	61	1.05	4.4	3.5	0.0	7.7	2.6	1.9	0.2	31	39	15.5	1.5	10.3						
JIM/LS/G/P1	4	Bt3	80	130	9	30	61	1.05	4.3	3.5	0.1	7.6	3.4	1.7	0.2	33	39	7.5	0.9	8.3						
JIM/LS/G/P1	5	Bt4	130	135	12	29	59	1.07	4.3	3.6	0.1	9.2	3.4	1.8	0.2	39	37	4.4	0.6	7.3						
JIM/LS/M/P1	1	Ah	0	8	24	26	50	1.05	5.3	4.7	0.3	8.3	3.3	1.8	0.4	32	43	35.6	3.9	9.1	10.7	228	6	15.2	2.0	3.2
JIM/LS/M/P1	2	Eg1	8	20	27	32	41	1.10	5.5	4.4	0.0	8.4	2.5	1.8	0.2	27	47	9.1	1.0	9.1						
JIM/LS/M/P1	3	Bt1Eg2	20	63	25	22	53	1.17	5.6	4.8	0.0	9.1	3.3	1.8	0.3	34	42	5.7	0.7	8.1						
JIM/LS/M/P1	4	Bt2Eg3	63	125	29	14	57	1.30	5.7	4.6	0.0	9.2	3.4	2.2	0.5	42	36	5.8	0.6	9.7						
JIM/LS/M/P1	5	Bt3	125	130	17	22	61	1.31	5.2	4.1	0.1	19.3	6.7	2.3	0.6	46	63	5.6	0.5	11.2						
JIM/LS/M/P2	1	Ap	0	12	26	21	53	1.11	5.4	4.6	0.0	11.8	3.4	1.8	0.8	39	46	25.5	2.5	10.2	4.3	105	61	6.7	1.9	4.5
JIM/LS/M/P2	2	Bt1	12	30	15	18	67	1.10	5.4	4.2	0.0	12.7	4.2	1.8	0.6	43	45	14.4	1.3	11.1						
JIM/LS/M/P2	3	Bt2g	30	90	13	29	58	1.17	5.7	4.8	0.0	9.3	3.4	1.9	0.5	33	45	7.7	0.9	8.6						
JIM/LS/M/P2	4	Bt3	90	145	11	29	60	1.08	7.3	6.3	0.0	9.3	3.4	1.0	0.5	33	43	4.8	0.6	8.0						
JIM/LS/M/P2	5	Bt4	145	150	14	25	61	1.06	5.3	4.7	0.0	8.4	3.4	1.8	0.5	39	36	3.0	0.5	6.0						
JIM/LS/S/P1	1	Ah	0	10	33	33	34	1.03	5.1	4.5	0.1	9.2	4.2	2.1	0.4	33	48	39.3	4.6	8.5	12.2	192	25	9.2	2.5	5.8
JIM/LS/S/P1	2	AB	10	28	24	12	64	1.15	5.1	4.4	0.0	12.7	4.2	1.9	1.2	36	56	11.6	1.3	8.9						
JIM/LS/S/P1	3	Bt1	28	55	11	20	68	1.11	5.2	4.5	0.0	11.0	4.2	1.9	1.2	53	34	6.3	1.0	6.3						
JIM/LS/S/P1	4	Bt2	55	105	14	27	59	1.08	5.2	4.8	0.0	8.5	3.4	2.0	1.4	32	47	5.3	0.7	7.6						
JIM/LS/S/P1	5	Bt3	105	110	12	29	59	1.04	5.6	4.9	0.0	9.3	3.4	2.0	1.6	32	51	2.0	0.4	5.0						
JIM/LS/S/P2	1	Ah	0	12	23	23	55	1.14	5.2	4.6	0.1	12.8	4.3	2.2	2.2	46	47	25.2	2.5	10.1	8.5	94	66	9.7	3.3	2.5
JIM/LS/S/P2	2	BA	12	30	13	23	64	1.21	5.3	4.5	0.1	16.0	6.7	1.6	0.9	38	66	12.1	1.3	9.3						
JIM/LS/S/P2	3	Bt1	30	90	12	26	61	1.12	5.3	4.5	0.0	12.7	4.2	1.9	0.6	33	59	8.3	0.9	9.2						
JIM/LS/S/P2	4	Bt2	90	145	12	29	59	1.04	5.1	4.5	0.0	10.2	3.4	2.0	0.6	29	56	4.9	0.6	8.2						
JIM/LS/S/P2	5	Bt3	145	150	12	27	62	1.06	5.6	4.8	0.0	9.3	3.4	2.0	0.7	33	47	3.3	0.4	8.3						
JIM/OMN/DY/P1	1	Ap	0	15	18	23	59	1.06	5.9	5.0	0.1	14.1	5.0	1.6	1.6	37	60	12.7	1.3	9.8	5.7	57	17	6.4	1.1	2.6
JIM/OMN/DY/P1	2	AB	15	30	13	17	70	1.17	5.4	4.8	0.1	12.7	4.2	1.5	1.7	45	45	8.2	0.7	11.7						

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JIM/OMN/DY/P1	3	Bt1	30	60	15	17	68	1.01	5.5	4.7	0.0	12.7	4.2	1.7	1.7	46	44	5.9	0.5	11.8						
JIM/OMN/DY/P1	4	Bt2	60	80	11	23	66	1.13	5.6	4.8	0.0	12.7	4.2	1.7	1.7	47	44	4.2	0.4	10.5						
JIM/OMN/DY/P2	1	Ap	0	10	22	29	48	1.08	5.4	4.8	0.1	11.8	5.0	1.6	1.9	47	43	15.1	1.5	10.1	4.5	88	57	8.2	0.8	4.6
JIM/OMN/DY/P2	2	AB	10	30	16	25	59	1.03	5.2	4.5	0.0	11.8	5.0	1.8	1.5	42	48	11.9	1.0	11.9						
JIM/OMN/DY/P2	3	Bt1	30	65	16	23	61	1.06	5.0	4.5	0.1	12.6	4.2	1.8	1.5	47	43	8.0	0.7	11.4						
JIM/OMN/DY/P2	4	Bt2	65	110	14	19	67	1.15	5.0	4.4	0.0	10.9	4.2	1.7	1.8	48	39	3.5	0.4	8.8						
JIM/OMN/DY/P2	5	Bt3	110	115	18	17	65	1.09	5.1	4.4	0.0	11.8	4.2	1.9	2.1	41	49	2.9	0.3	9.7						
JIM/OMN/DY/P3	1	Ap	0	15	24	32	45	1.16	5.5	4.8	0.0	17.8	5.9	1.7	1.7	41	65	18.8	1.6	11.8	4.7	99	61	23.4	1.3	2.9
JIM/OMN/DY/P3	2	B	15	40	21	30	49	1.16	5.3	4.7	0.0	16.1	5.9	1.8	1.3	46	55	16.2	1.3	12.5						
JIM/OMN/DY/P3	3	Bt1	40	75	18	15	67	1.18	5.4	4.8	0.0	17.1	6.9	1.8	1.2	62	44	10.4	1.0	10.4						
JIM/OMN/DY/P3	4	Bt2	75	110	13	20	68	1.18	5.5	4.8	0.0	18.1	7.8	2.0	1.2	57	51	9.2	0.9	10.2						
JIM/OMN/DY/P3	5	Bt3	110	115	10	24	66	1.21	5.6	4.7	0.0	17.3	6.9	1.8	1.1	60	45	7.4	0.8	9.3						
JIM/OMN/NB/P1	1	Ah	0	20	28	28	45	1.03	5.6	4.9	0.1	19.5	8.5	1.8	1.7	48	66	32.1	3.1	10.4	9.3	98	68	20.8	1.6	11.7
JIM/OMN/NB/P1	2	AB	20	35	19	19	62	1.08	5.2	4.6	0.1	17.0	6.8	1.8	1.0	56	47	15.5	1.8	8.6						
JIM/OMN/NB/P1	3	Bt1	35	60	17	17	66	1.13	5.3	4.5	0.0	15.3	5.1	1.8	0.8	57	41	9.8	1.0	9.8						
JIM/OMN/NB/P1	4	Bt2	60	100	13	21	66	1.13	5.3	4.5	0.0	13.6	4.2	1.6	0.8	48	42	5.7	0.6	9.5						
JIM/OMN/NB/P1	5	BC	100	105	14	25	61	1.14	5.1	4.5	0.0	18.5	6.7	2.0	0.9	37	75	3.1	0.3	10.3						
JIM/OMN/NB/P2	1	Ah	0	8	32	25	42	1.01	5.6	4.8	0.1	21.2	11.0	2.1	2.5	41	91	37.3	4.0	9.3	8.7	143	68	26.3	1.3	8.7
JIM/OMN/NB/P2	2	AB	8	28	16	23	61	1.08	5.9	5.0	0.1	15.1	5.0	1.9	2.6	38	64	16.6	1.8	9.2						
JIM/OMN/NB/P2	3	Bt1	28	50	15	28	57	1.12	5.4	4.8	0.1	13.6	4.2	2.0	2.6	35	63	12.5	1.3	9.6						
JIM/OMN/NB/P2	4	Bt2	50	85	17	17	66	1.15	5.5	4.7	0.0	11.0	4.2	2.0	2.8	40	51	7.7	0.9	8.6						
JIM/OMN/NB/P2	5	Bt3	85	90	29	11	60	1.06	5.6	4.8	0.0	12.7	5.1	1.9	0.9	40	52	3.8	0.4	9.5						
JIM/OMN/NC/P1	1	Ap	0	13	26	32	42	1.01	5.0	4.2	0.0	14.3	5.0	1.8	0.4	35	61	17.5	1.6	10.9	4.5	133	30	7.1	1.6	3.4
JIM/OMN/NC/P1	2	Bt1g	13	40	27	40	33	1.05	5.7	4.2	0.1	13.3	5.0	1.9	0.2	37	55	8.0	1.0	8.0						
JIM/OMN/NC/P1	3	Bt2g	40	55	25	26	49	1.16	5.4	4.2	0.1	21.0	7.6	2.1	1.1	54	59	6.7	0.8	8.4						
JIM/OMN/NC/P1	4	Bt3g	55	85	19	12	69	1.23	5.9	4.1	0.0	26.0	8.4	2.6	1.1	60	64	7.2	0.6	12.0						
JIM/OMN/NC/P1	5	Bt4g	85	90	19	18	63	1.15	7.3	6.3	0.2	48.0	15.3	2.0	1.1	66	100	3.5	0.3	11.7						
JIM/OMN/NC/P2	1	Ah	0	15	20	17	64	1.08	5.3	4.7	0.1	13.6	5.1	1.7	1.2	49	44	18.1	1.8	10.1	4.0	73	67	5.7	1.5	5.4
JIM/OMN/NC/P2	2	Bt1	15	50	21	26	53	1.10	5.1	4.5	0.0	12.7	5.1	1.8	1.5	46	46	11.8	1.0	11.8						
JIM/OMN/NC/P2	3	Bt2g	50	80	20	17	63	1.08	5.1	4.4	0.0	11.8	5.0	1.7	1.6	52	39	6.2	0.7	8.9						
JIM/OMN/NC/P2	4	Bt3g	80	110	16	17	67	1.14	5.2	4.5	0.0	12.6	4.2	1.8	1.4	53	38	5.1	0.5	10.2						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
JIM/OMN/NC/P2	5	Bt4g	110	115	16	17	67	1.10	5.2	4.8	0.0	10.9	4.2	1.9	1.3	47	39	4.6	0.4	11.5						
JIM/OMN/TB/P1	1	Ah	0	8	18	36	47	1.03	5.4	4.8	0.0	9.2	3.4	2.4	0.5	31	51	15.3	1.5	10.2	4.2	129	15	11.0	1.3	4.4
JIM/OMN/TB/P1	2	Eg1	8	25	24	28	48	1.10	5.2	4.5	0.0	9.2	4.2	2.1	0.5	27	59	10.7	1.3	8.2						
JIM/OMN/TB/P1	3	Eg2	25	40	63	16	21	1.03	5.0	4.5	0.0	7.4	2.5	2.0	0.3	20	61	9.1	1.0	9.1						
JIM/OMN/TB/P1	4	Bt1g	40	50	20	13	66	1.24	5.0	4.4	0.1	13.2	4.4	3.2	2.0	55	41	8.5	0.8	10.6						
JIM/OMN/TB/P1	5	Bt2g	50	85	19	14	68	1.28	5.1	4.4	0.1	20.4	8.9	3.2	2.2	52	67	5.8	0.6	9.7						
JIM/OMN/TB/P1	6	Bt3g	85	90	21	14	64	1.16	5.5	4.8	0.1	22.0	8.8	2.9	2.0	53	68	3.0	0.4	7.5						
Ma-Ft-P1	-9	Bt1	85	155	55	13	33	1.14	5.7	4.7	0.1	14.3	5.0	1.0	3.8	30	80	6.4	0.7	8.6						
Ma-Ft-P1	1	Ap	0	21	59	15	26	1.10	5.3	4.5	0.1	17.7	5.9	0.7	0.4	34	73	34.5	3.1	11.1	9.5	110	78	23.3	0.3	17.66
Ma-Ft-P1	2	Ah	21	43	49	18	33	1.14	6.3	5.4	0.0	16.4	5.5	0.5	0.5	32	71	18.5	2.2	8.4						
Ma-Ft-P1	3	AB	43	65	52	12	37	1.12	6.2	5.3	0.0	13.4	4.6	0.5	1.0	27	71	13.3	1.6	8.2						
Ma-Ft-P1	4	AB	65	85	47	8	44	1.16	6.4	5.5	0.1	14.4	5.5	0.7	2.5	32	72	10.0	1.0	9.7						
Ma-Ft-P1	5	Bt1	85	155	37	16	48	1.17	5.7	4.8	0.1	15.2	5.1	0.9	3.9	31	80	6.5	0.7	8.7						
Ma-Ft-P1	6	Bt2	155	160	36	17	47	1.09	4.7	3.7	0.0	17.0	5.9	0.8	1.6	30	83	6.3	0.6	10.6						
Ma-Ft-P2	-9	Ah	18	35	39	20	41	1.04	5.0	4.2	0.0	17.0	5.9	0.9	0.4	33	74	15.3	1.6	9.4	14.1	73	58	11.2	0.3	7.9
Ma-Ft-P2	1	Ap	0	18	35	19	46	1.07	5.7	4.9	0.1	17.6	5.9	0.8	0.3	32	77	21.5	2.5	8.6	10.3	85	50	35.2	0.6	14.3
Ma-Ft-P2	2	Ah	18	35	47	4	49	1.10	4.9	4.2	0.0	18.7	5.9	0.9	0.4	34	76	15.4	1.8	8.7	10.8	85	65	15.5	0.5	12.5
Ma-Ft-P2	3	Bt1	35	66	43	14	43	1.12	4.0	3.1	0.0	14.4	4.2	0.9	0.3	27	73	10.6	1.3	7.9						
Ma-Ft-P2	4	Bt2	66	115	34	18	48	1.04	3.9	3.0	0.0	12.7	4.2	0.6	0.4	26	68	10.5	1.0	10.1						
Ma-Ft-P2	5	Bt3	115	120	23	24	53	1.06	4.8	3.8	0.1	14.0	5.2	0.8	0.5	28	72	6.9	0.8	9.1						
Ma-Gu-P1	-9	Ap	0	20	43	11	46	1.12	5.8	5.3	0.1	18.5	6.7	1.0	0.5	39	69	26.5	2.1	12.8	16.2	77	59	22.1	1.6	17.7
Ma-Gu-P1	1	Ap	0	20	35	32	34	1.15	5.7	5.3	0.1	17.7	5.9	1.0	0.6	37	69	27.6	2.2	12.5	16.4	68	58	###	0.9	17.3
Ma-Gu-P1	2	Ah	20	42	46	21	33	1.15	6.1	5.8	0.1	19.1	5.8	0.9	0.5	37	71	23.7	1.6	14.8						
Ma-Gu-P1	3	Bt1	42	88	42	23	35	1.30	6.1	5.4	0.1	13.2	4.1	0.9	0.4	28	66	6.5	0.7	9.0						
Ma-Gu-P1	4	Bt2	88	129	50	15	36	1.31	4.9	3.4	0.0	15.1	5.9	0.9	0.5	34	66	3.0	0.3	10.3						
Ma-Gu-P1	5	Bt3	129	135	36	17	47	1.29	6.0	4.9	0.1	14.5	5.1	0.9	0.7	32	66	2.7	0.2	12.3						
Ma-Gu-P2	-9	Bt1	25	63	30	23	46	1.21	5.4	4.6	0.1	15.1	5.0	0.7	1.5	31	72	7.0	0.9	8.0						
Ma-Gu-P2	1	Ap	0	25	54	10	36	1.04	5.7	5.0	0.1	18.6	6.8	0.9	2.2	36	80	34.5	2.5	13.7	16.3	102	51	22.9	2.3	16.99
Ma-Gu-P2	2	Bt1	25	63	38	21	41	1.23	6.0	5.2	0.1	14.9	4.1	0.7	1.6	30	70	6.9	0.7	9.5						
Ma-Gu-P2	3	Bt2	63	90	42	25	33	1.32	5.2	4.4	0.1	15.7	4.9	0.6	1.0	27	83	6.3	0.6	10.9						
Ma-Gu-P2	4	Bt3	90	120	26	30	44	1.24	4.5	3.5	0.1	16.8	5.9	0.7	1.5	31	80	4.5	0.4	10.3						

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Ma-Gu-P2	5	Bt3	120	148	26	20	54	1.14	5.1	4.2	0.1	28.4	8.9	0.9	1.3	43	91	4.3	0.4	11.1						
Ma-Gu-P2	6	C	148	155	35	24	41	1.12	5.2	4.4	0.1	21.6	7.8	0.8	0.8	38	82	3.5	0.3	11.8						
Ma-Ko-P1	-9	Ah	22	71	32	23	45	1.13	6.3	5.5	0.1	16.1	5.1	0.5	1.6	33	71	11.7	1.3	8.8						
Ma-Ko-P1	1	Ap	0	22	48	20	32	1.04	6.4	5.5	0.1	14.7	5.5	0.6	1.7	32	70	17.9	1.9	9.3	17.3	71	70	###	1.4	12.95
Ma-Ko-P1	2	Ah	22	71	31	27	42	1.12	6.3	5.4	0.1	16.0	5.9	0.5	1.6	32	76	11.3	1.3	8.6						
Ma-Ko-P1	3	Bt1	71	90	29	26	45	1.16	5.7	4.8	0.1	20.6	6.9	1.3	0.8	34	87	7.4	1.1	7.0						
Ma-Ko-P1	4	Bt2	90	129	28	21	51	1.16	5.6	4.6	0.1	19.8	6.9	0.8	0.6	33	86	5.5	0.8	7.4						
Ma-Ko-P1	5	Bt3	129	135	25	23	52	1.21	5.3	4.4	0.1	21.6	7.8	1.0	0.6	38	82	4.6	0.6	7.7						
Ma-Si-P1	-9	Ap	0	20	55	11	33	1.06	6.0	4.9	0.2	18.3	5.8	0.6	0.4	32	80	14.2	1.5	9.8	15.8	93	60	9.4	0.5	16.7
Ma-Si-P1	1	Ap	0	20	58	8	33	1.06	4.5	3.6	0.0	17.5	5.8	0.6	0.4	31	79	13.2	1.3	10.0	14.3	83	52	9.2	0.4	15.46
Ma-Si-P1	2	Ah	20	45	53	17	30	1.14	4.9	4.1	0.0	14.8	4.9	0.6	0.3	27	77	11.9	1.0	11.8	8.9	97	39	8.3	0.7	11.3
Ma-Si-P1	3	Bw1	45	63	39	28	33	1.29	5.0	4.1	0.0	16.3	5.7	0.7	0.2	28	82	7.5	0.7	10.5						
Ma-Si-P1	4	Bw2	63	80	61	12	26	1.23	5.4	4.5	0.0	16.2	5.7	0.7	0.7	29	80	4.2	0.4	9.7						
Ma-Si-P1	5	C1	80	99	68	8	24	1.15	6.0	5.2	0.0	13.8	4.9	0.6	2.3	26	81	3.8	0.4	10.8						
Ma-Si-P1	6	C2	99	150	66	8	26	1.15	5.8	5.0	0.0	14.5	5.7	0.7	2.0	27	86	3.7	0.3	13.3						
Ma-Si-P1	7	C3	150	155	61	10	28	1.06	6.0	5.2	0.0	14.2	4.9	0.5	2.4	30	72	3.2	0.2	15.0						
Ma-Si-P2	-9	Ah	22	48	45	27	27	1.07	7.6	6.7	0.2	21.5	7.2	0.6	1.2	39	78	17.3	1.9	9.0						
Ma-Si-P2	1	Ap	0	22	61	9	30	1.15	6.1	5.3	0.1	14.9	5.4	0.3	0.7	27	78	30.9	2.5	12.6	13.4	71	60	21.7	1.2	13.8
Ma-Si-P2	2	Ah	22	48	42	24	34	1.18	7.4	6.5	0.1	20.2	6.7	0.6	1.1	39	74	17.6	2.1	8.6						
Ma-Si-P2	3	Bt1	48	71	36	17	47	1.09	6.3	5.5	0.1	18.8	6.0	0.6	0.7	40	65	13.2	1.4	9.8						
Ma-Si-P2	4	Bt2	71	120	25	17	58	1.09	5.0	4.2	0.1	22.2	6.8	1.1	0.6	41	75	7.0	0.8	9.3						
Ma-Si-P2	5	BC	120	125	46	12	42	1.09	7.7	6.8	0.2	23.1	8.0	0.5	1.7	41	82	11.0	1.0	10.7						
Me-Az-Ab-P1	-9	Bt2	155	160	29	24	47	1.20	5.3	4.5	0.0	17.6	5.9	1.1	0.5	31	82	3.9	0.4	8.9						
Me-Az-Ab-P1	1	Ap	0	30	51	22	27	1.14	4.9	4.0	0.1	13.4	4.2	1.2	0.6	27	71	21.0	2.2	9.5	10.9	95	74	16.9	1.8	7.4
Me-Az-Ab-P1	2	Ah	30	70	22	26	52	1.03	5.0	4.1	0.0	15.1	5.0	1.1	0.5	30	72	19.3	1.9	10.1	10.0	91	82	8.5	1.6	8.4
Me-Az-Ab-P1	3	AB	70	115	23	33	45	1.11	5.1	4.3	0.0	17.0	5.9	0.9	0.5	27	89	10.9	1.3	8.1						
Me-Az-Ab-P1	4	Bt1	115	155	21	34	45	1.13	5.2	4.4	0.0	15.1	5.0	1.3	0.4	27	80	4.5	0.6	7.7						
Me-Az-Ab-P1	5	Bt2	155	160	25	27	48	1.02	5.3	4.6	0.0	16.8	5.9	1.1	0.4	29	83	3.8	0.4	8.6						
Me-Az-Em-P2	-9	Ap	0	20	58	8	33	1.24	5.3	4.5	0.0	15.0	5.0	0.9	1.0	31	71	10.0	0.7	13.7	10.5	69	62	7.5	1.4	8.9
Me-Az-Em-P2	1	Ap	0	20	34	24	42	1.28	5.4	4.5	0.0	16.0	5.0	0.9	1.0	32	72	10.9	0.7	14.7	9.7	73	61	3.9	0.6	8.4
Me-Az-Em-P2	2	Bt1	20	59	33	21	46	1.14	5.3	4.5	0.0	12.7	4.2	0.9	0.8	26	71	8.8	0.6	14.9						

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Me-Az-Em-P2		3	Bt2	59	105	39	23	38	1.15	5.6	4.7	0.0	13.4	4.2	1.0	0.7	25	78	2.2	0.3	7.6						
Me-Az-Em-P2		4	Bt3	105	160	39	24	37	1.22	5.8	5.1	0.0	16.0	5.9	1.0	0.7	27	88	2.0	0.2	9.2						
Me-Az-Em-P2		5	C1	160	190	41	22	37	1.24	5.9	5.0	0.0	11.8	4.2	0.8	0.8	23	75	1.5	0.2	9.9						
Me-Az-Em-P2		6	C2	190	195	58	13	29	1.21	5.9	5.0	0.0	12.6	4.2	0.8	0.9	22	84	1.2	0.1	16.6						
Me-Az-Sb-P1		-9	AB	15	42	29	29	42	1.05	4.4	3.8	0.0	14.3	5.0	0.9	0.7	29	71	16.1	1.6	10.0						
Me-Az-Sb-P1		1	A	0	15	39	12	49	1.06	4.6	5.9	0.1	15.8	5.8	1.1	1.4	36	67	17.0	1.9	9.0	11.7	100	79	8.9	2.1	12.6
Me-Az-Sb-P1		2	AB	15	42	26	31	43	1.06	4.7	3.9	0.0	14.3	5.0	1.0	0.7	29	72	15.1	1.6	9.3						
Me-Az-Sb-P1		3	Bt1	42	105	23	33	44	1.10	4.7	4.0	0.0	15.1	5.0	1.0	0.5	25	88	9.3	1.3	7.1						
Me-Az-Sb-P1		4	Bt2	105	145	24	30	47	1.21	4.8	4.0	0.0	16.0	5.9	1.0	0.6	27	86	8.4	1.0	8.1						
Me-Az-Sb-P1		5	Bt3	145	150	28	25	46	1.30	4.8	4.0	0.0	15.1	5.0	1.0	0.6	26	82	1.2	0.2	7.9						
Me-Az-Sb-P2		-9	Ap	0	20	61	6	32	1.03	4.7	3.8	0.0	14.1	5.0	0.8	1.0	29	72	26.6	2.6	10.2	10.0	101	77	12.1	2.6	13.2
Me-Az-Sb-P2		1	Ap	0	20	30	28	42	1.02	5.5	4.6	0.6	14.3	4.2	0.8	1.0	28	72	25.8	2.5	10.3	9.9	105	72	10.5	1.9	9.04
Me-Az-Sb-P2		2	AB	20	65	32	26	42	1.05	4.5	3.7	0.0	14.3	4.2	1.1	0.9	30	69	15.9	1.3	12.1						
Me-Az-Sb-P2		3	Bt1	65	140	23	28	48	1.19	4.9	4.0	0.0	16.0	5.9	1.0	0.6	28	84	5.9	0.7	8.0						
Me-Az-Sb-P2		4	Bt2	140	145	23	29	48	1.24	5.0	4.2	0.0	18.8	6.0	1.1	0.6	31	85	1.6	0.2	10.5						
Me-Em-P1		-9	C2	95	135	15	21	64	1.03	8.1	7.3	0.3	29.3	8.4	3.1	1.3	46	92	6.6	0.8	8.4						
Me-Em-P1		1	Ap	0	20	50	13	38	1.03	5.4	4.5	0.1	15.1	5.9	1.0	0.3	34	65	25.6	2.1	12.4	9.4	134	72	9.1	2.3	9.8
Me-Em-P1		2	AC	20	40	38	27	35	1.02	6.1	5.1	0.0	12.4	4.1	1.4	0.3	28	66	13.2	1.3	10.1						
Me-Em-P1		3	C1	40	95	15	19	66	1.16	7.5	6.6	0.3	37.7	12.0	2.9	1.3	63	86	8.9	1.1	8.2						
Me-Em-P1		4	C2	95	135	13	29	58	1.02	7.8	6.9	0.3	29.8	8.9	3.2	1.2	47	91	6.7	0.8	8.5						
Me-Em-P1		5	C3	135	140	15	30	55	1.05	7.7	6.7	0.3	35.8	12.2	2.6	1.3	55	95	5.6	0.6	9.1						
Me-Ye-P1		-9	A	0	15	61	17	22	1.27	5.9	5.0	0.1	15.0	4.2	0.9	0.5	27	76	16.6	1.9	8.8	10.9	73	71	5.3	0.6	15.7
Me-Ye-P1		1	A	0	15	56	21	23	1.27	5.8	5.0	0.1	15.1	5.0	0.8	0.6	27	80	16.4	2.1	8.0	11.7	67	61	6.1	1.0	15
Me-Ye-P1		2	AB	15	45	46	26	28	1.24	5.9	4.9	0.1	16.8	5.9	1.0	0.9	36	69	8.4	1.0	8.1						
Me-Ye-P1		3	Bt1	45	75	35	26	39	1.23	6.0	5.2	0.1	18.8	6.9	0.8	0.9	32	85	5.3	0.6	8.9						
Me-Ye-P1		4	Bt2	75	131	40	15	45	1.23	6.0	5.2	0.1	25.7	8.6	0.9	1.3	44	83	1.6	0.2	7.5						
Me-Ye-P1		5	Bt3	131	140	36	23	41	1.15	6.3	5.3	0.1	20.5	6.9	1.0	1.1	36	82	1.0	0.1	14.7						
OR/BAK/AG/P1		1	Ap	0	25	24	13	62	1.25	5.9	4.9	0.1	29.9	9.7	0.7	1.0	47	88	10.4	1.2	8.4	11.0	70	20	0.4	2.5	8.7
OR/BAK/AG/P1		2	A2	25	150	19	7	74	1.25	6.9	6.1	0.2	40.9	13.8	1.3	1.2	65	88	8.1	0.9	8.7						
OR/BAK/AG/P2		1	Ap	0	15	36	16	48	1.19	5.3	4.4	0.1	28.6	9.2	0.8	1.5	46	88	28.0	2.2	12.6	9.8	67	58	0.9	2.0	14.8
OR/BAK/AG/P2		2	Bt	15	60	36	11	53	1.28	5.2	4.5	0.0	22.1	7.6	0.9	0.9	39	80	12.9	1.3	9.6						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
OR/BAK/AG/P2	3	B	60	150	31	18	51	1.17	5.3	4.5	0.0	19.5	7.6	1.0	0.8	36	80	8.5	0.7	11.5						
OR/BAK/AG/P2	4	C	150	155																						
OR/BAK/AG/P3	1	Ap	0	10	35	17	48	1.18	5.6	4.8	0.0	25.8	8.3	0.9	1.8	39	94	31.4	3.2	9.8	11.9	60	52	1.6	4.6	15.9
OR/BAK/AG/P3	2	AB	10	84	39	17	44	1.19	5.5	4.7	0.1	18.5	6.7	0.9	0.7	37	73	10.1	1.2	8.6						
OR/BAK/AG/P3	3	B	84	150	25	22	53	1.14	5.3	4.4	0.1	21.8	7.6	1.0	3.5	39	86	6.7	0.7	9.1						
OR/BAK/BE/P1	1	Ap	0	20	41	16	43	1.13	6.4	5.4	0.2	24.1	9.2	1.1	1.0	52	68	32.0	3.1	10.4	26	43	25	1.4	1.8	11.5
OR/BAK/BE/P1	2	Bt1	20	100	34	18	48	1.16	5.6	4.8	0.1	17.5	5.8	1.7	2.1	33	81	10.0	1.0	9.8						
OR/BAK/BE/P1	3	Bt2	100	150	31	19	50	1.03	4.7	3.9	0.2	21.6	7.5	0.9	1.1	36	86	6.2	0.6	10.8						
OR/BAK/BE/P1	4	C	150	155																						
OR/BAK/BE/P2	1	Ap	0	20	39	10	52	1.36	5.9	5.0	0.1	34.2	12.8	1.3	2.4	55	93	27.0	2.6	10.6	26.9	73	30	1.3	1.9	11.9
OR/BAK/BE/P2	2	AB	20	80	39	12	49	1.20	5.2	4.3	0.0	27.7	9.5	1.6	1.4	43	93	9.5	1.1	8.9						
OR/BAK/BE/P2	3	Bt	80	120	12	20	68	1.26	5.0	4.2	0.0	29.7	9.6	0.9	1.2	46	89	9.9	0.8	13.0						
OR/BAK/BE/P2	4	C	120	150																						
OR/BAK/DD/P1	1	Ap	0	20	28	14	58	1.25	6.4	5.4	0.1	28.6	8.4	1.0	1.4	46	85	17.7	2.2	8.0	21.8	39	35	1.3	1.9	14.4
OR/BAK/DD/P1	2	AB	20	60	28	17	55	1.23	6.1	5.1	0.0	31.0	10.2	1.1	1.2	50	87	11.4	1.3	8.5						
OR/BAK/DD/P1	3	Bt	60	90	26	15	60	1.21	6.0	5.1	0.0	31.4	11.0	1.1	2.9	48	96	9.9	1.0	9.5						
OR/BAK/DD/P1	4	B	90	150	30	18	52	1.17	6.0	5.1	0.0	22.9	7.6	1.1	1.6	39	86	8.7	0.7	11.8						
OR/BAK/DD/P2	1	Ap	0	25	47	11	42	1.23	6.1	5.2	0.1	21.6	7.9	0.9	1.1	42	76	35.3	3.2	11.0	26	106	49	1.9	2.8	14
OR/BAK/DD/P2	2	1B	25	100	44	19	38	1.15	6.3	5.4	0.1	16.6	5.4	2.6	1.4	36	72	7.2	0.7	9.9						
OR/BAK/DD/P2	3	2B	100	150	36	19	45	1.16	6.0	5.2	0.1	13.6	4.9	0.9	0.8	29	71	6.8	0.6	11.8						
OR/BAK/GM/P1	1	Ap	0	12	41	19	40	1.19	5.8	4.9	0.1	30.8	10.3	1.2	1.6	47	93	26.7	2.9	9.4	14.4	36	28	0.5	0.9	13.8
OR/BAK/GM/P1	2	R	12	15																						
OR/BAK/GM/P2	1	Ap	0	15	59	4	37	1.26	5.9	5.0	0.2	22.5	7.5	1.1	1.5	36	91	19.7	2.2	9.1	19.8	47	35	0.9	2.2	12.1
OR/BAK/GM/P2	2	1B	15	100	42	17	41	1.25	5.0	4.2	0.1	14.1	5.0	1.1	0.4	29	70	13.1	1.6	8.2						
OR/BAK/GM/P2	3	2B	100	150	48	19	33	1.26	5.2	4.3	0.0	15.0	5.8	1.3	0.4	32	71	11.4	1.0	11.2						
OR/BEC/AB/P1	1	Ap	0	20	54	15	31	1.28	6.1	5.1	0.1	21.2	7.9	0.6	0.9	37	82	10.6	0.9	12.2	17.2	55	47	0.9	1.9	10.6
OR/BEC/AB/P1	2	AB	20	50	26	23	52	1.15	7.0	6.1	0.1	36.0	12.0	1.4	1.3	59	86	8.2	0.8	11.0						
OR/BEC/AB/P1	3	B	50	80	26	19	55	1.10	7.9	7.0	0.1	42.3	14.4	1.4	1.3	62	96	4.8	0.5	10.5						
OR/BEC/AB/P1	4	BC	80	120																						
OR/BEC/AB/P1	5	C	120	125																						
OR/BEC/QO/P1	1	Ap	0	20	11	18	71	1.22	7.5	6.6	0.1	47.5	15.0	0.8	0.3	64	99	10.2	1.4	7.4	11.7	35	28	0.4	1.7	11.1

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
OR/BEC/QO/P1	2	B	20	50	12	16	72	1.25	8.1	7.2	0.1	44.4	15.5	1.7	0.3	63	98	6.4	0.8	8.2						
OR/BEC/QO/P1	3	B1	50	85	19	16	65	1.13	8.4	7.5	0.2	39.5	12.9	2.1	0.4	56	99	2.4	0.3	7.7						
OR/BEC/QO/P1	4	B2	85	150	14	22	64	1.07	8.2	7.3	0.1	42.7	14.4	2.2	0.3	62	97	1.7	0.2	7.3						
OR/BEC/QO/P2	1	Ap	0	20	28	21	51	1.28	6.7	5.7	0.1	35.7	11.3	1.5	0.2	49	99	13.1	1.3	9.9	13.4	42	36	0.5	3.0	7.6
OR/BEC/QO/P2	2	AB	20	43	29	12	59	1.05	8.4	7.4	0.2	39.8	14.1	5.1	0.3	60	98	9.6	1.1	9.1						
OR/BEC/QO/P2	3	B1	43	72	26	26	47	1.13	8.8	7.9	0.3	29.4	9.2	7.1	1.3	49	96	7.8	0.7	10.5						
OR/BEC/QO/P2	4	B2	72	150	16	28	56	1.20	8.3	7.5	0.4	33.4	11.1	2.8	1.3	51	96	7.3	0.7	11.0						
OR/BEC/SO/P1	1	Ap	0	20	38	14	48	1.20	5.8	5.0	0.1	27.7	9.2	1.6	0.9	53	75	26.5	1.9	13.9	16.7	98	58	0.6	3.9	8.2
OR/BEC/SO/P1	2	B	20	37	34	19	47	1.10	5.7	4.7	0.2	28.8	9.3	1.7	2.2	46	91	15.9	1.6	9.7						
OR/BEC/SO/P1	3	Bw	37	88	16	20	64	1.33	6.6	5.7	0.2	44.9	14.5	1.1	0.6	67	91	9.8	1.1	9.1						
OR/BEC/SO/P1	4	BC	88	150																						
OR/BEC/SO/P2	1	Ap	0	18	22	16	61	1.04	7.7	6.8	0.1	45.8	14.8	4.6	1.3	70	95	10.2	1.1	9.5	13.7	27	23	0.3	2.3	9.3
OR/BEC/SO/P2	2	1B	18	65	13	21	66	1.22	7.2	6.3	0.2	44.0	14.8	1.2	1.4	66	92	7.5	0.8	9.8						
OR/BEC/SO/P2	3	2B	65	115	19	17	65	1.02	7.6	6.7	0.2	33.0	11.0	4.1	1.1	56	87	1.7	0.2	11.3						
OR/BEC/SO/P2	4	2BC	115	175																						
OR/BEC/SO/P3	1	Ap	0	20	25	21	53	1.24	6.4	5.5	0.1	40.3	13.1	3.1	1.4	59	97	9.4	1.0	9.1	11.8	37	32	0.5	1.8	13.2
OR/BEC/SO/P3	2	A1	20	45	25	22	54	1.14	6.4	5.5	0.1	43.7	14.1	2.9	0.4	66	93	8.6	0.9	9.6						
OR/BEC/SO/P3	3	1B	45	70	15	20	66	1.15	7.3	6.3	0.1	44.5	14.4	1.9	0.9	66	93	4.8	0.6	7.9						
OR/BEC/SO/P3	4	2B	70	150	36	4	60	1.04	7.2	6.4	0.1	44.4	14.5	4.5	0.8	70	92	2.4	0.3	7.9						
OR/BEC/WE/P1	1	Ap	0	20	10	14	77	1.15	6.8	5.8	0.1	48.3	16.4	0.9	1.4	68	98	9.3	1.1	8.3	14.0	27	24	0.3	1.7	15.9
OR/BEC/WE/P1	2	A1	20	92	19	18	64	1.21	7.5	6.6	0.2	48.0	15.3	0.8	0.9	68	96	7.4	0.8	9.8						
OR/BEC/WE/P1	3	A2	92	131	20	13	67	1.12	8.4	7.6	0.3	48.8	14.7	4.5	0.8	73	94	2.4	0.3	7.7						
OR/BEC/WE/P2	1	Ap	0	20	49	10	41	1.22	6.4	5.4	0.1	27.6	9.5	0.7	0.8	45	86	12.1	1.3	9.3	25.1	46	38	1.2	2.8	8.4
OR/BEC/WE/P2	2	AB	20	56	41	11	48	1.03	7.1	6.2	0.1	37.4	12.5	0.7	0.7	58	88	9.8	1.2	8.4						
OR/BEC/WE/P2	3	Bw	56	80	42	10	48	1.01	8.2	7.4	0.1	37.4	12.5	4.6	1.1	62	90	9.4	1.0	9.2						
OR/BEC/WE/P2	4	Bb	80	150	36	11	54	1.25	8.3	7.3	0.3	44.5	13.3	6.5	1.3	67	97	7.7	0.8	10.3						
OR/EXCL/01	1		0	20	44	14	42	1.04	7.3	6.4	0.3	44.5	15.4	0.9	0.4	65	95	98.7	7.5	13.2	20.3	48	32	2.2	1.0	13.5
OR/EXCL/01	2		20	40	36	14	49	1.02	6.4	5.7	0.1	45.8	15.7	0.9	1.3	69	93	63.9	5.7	11.3						
OR/EXCL/02	1		0	20	36	14	50	1.08	5.6	4.9	0.1	35.6	12.7	1.0	1.5	55	93	41.8	4.5	9.4	20.8	135	50	1.7	1.5	13.9
OR/EXCL/02	2		20	40	40	12	48	1.09	6.0	5.0	0.1	36.5	11.9	0.8	1.3	53	95	28.0	2.1	13.5						
OR/EXCL/03	1		0	20	39	14	47	1.24	6.0	5.0	0.1	36.5	12.7	1.1	1.3	53	96	28.5	2.7	10.7	20.7	60	32	0.6	0.9	7.9

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
OR/EXCL/03	2		20	40	35	15	50	1.27	6.0	5.1	0.1	41.9	14.1	0.8	1.1	60	97	37.7	2.3	16.8						
OR/EXCL/04	1		0	20	49	11	41	1.05	6.1	5.2	0.1	27.3	9.6	0.8	1.4	49	79	25.9	3.2	8.0	19.3	91	62	1.1	3.5	16.2
OR/EXCL/04	2		20	40	45	12	43	1.15	6.3	5.3	0.0	31.5	10.5	0.8	0.5	46	95	11.4	1.0	11.1						
OR/EXCL/05	1		0	20	33	20	47	1.15	5.7	4.8	0.1	21.8	7.6	1.1	1.8	40	80	23.8	2.1	11.5	23.3	63	57	0.7	3.1	16.7
OR/EXCL/05	2		20	40	46	16	38	1.11	5.5	4.5	0.0	23.7	8.5	1.1	0.9	37	93	12.5	1.2	10.6						
OR/EXCL/06	1		0	20	48	10	42	1.21	6.4	5.4	0.1	29.7	9.6	0.9	1.2	44	95	21.1	1.9	11.1	20.0	62	33	0.4	1.6	13.6
OR/EXCL/06	2		20	40	38	17	45	1.05	5.4	4.6	0.1	23.5	8.4	1.1	0.6	39	87	19.2	1.6	11.8						
OR/EXCL/07	1		0	20	28	19	53	1.19	6.3	5.3	0.0	32.1	11.0	0.8	0.8	46	97	7.9	1.0	7.6	20.7	43	33	0.4	1.8	15.6
OR/EXCL/07	2		20	40	32	14	55	1.14	6.8	5.8	0.1	27.3	9.4	0.9	0.8	44	87	5.2	0.6	8.7						
OR/EXCL/08	1		0	20	34	27	39	1.01	6.0	5.1	0.1	28.6	9.3	0.8	0.5	44	89	30.3	3.2	9.3	20.1	108	61	0.9	4.2	18.4
OR/EXCL/08	2		20	40	29	26	45	1.12	6.0	5.0	0.1	28.3	9.2	1.0	0.6	40	97	17.5	1.3	13.4						
OR/GIM/AD/P1	1	Ap	0	21	28	22	50	1.41	7.8	6.9	0.1	33.1	11.3	0.6	1.2	54	86	8.4	1.1	7.8	10.9	9	5	0.4	1.6	11.9
OR/GIM/AD/P1	2	Bt1	21	40	18	21	61	1.23	8.0	7.0	0.2	34.3	12.3	0.4	1.2	49	98	7.2	0.9	7.8						
OR/GIM/AD/P1	3	Bt2	40	65	20	19	61	1.28	7.9	7.1	0.3	35.2	10.6	0.5	1.2	51	94	7.0	0.8	9.1						
OR/GIM/AD/P2	1	Ap	0	12	20	20	60	1.21	8.0	7.2	0.2	38.7	13.2	1.0	1.3	58	93	7.8	0.8	10.1	15.1	9	5	0.3	1.3	6.2
OR/GIM/AD/P2	2	R	12	20																						
OR/GIM/AR/P1	1	Ap	0	20	20	18	62	1.25	8.0	7.1	0.2	37.5	12.7	1.0	1.0	55	95	10.9	1.1	9.8	8.8	10	4	0.3	1.9	5.7
OR/GIM/AR/P1	2	Bw1	20	60	6	23	71	1.34	7.6	6.6	0.2	39.0	13.4	0.4	1.8	62	88	10.8	0.9	11.4						
OR/GIM/AR/P1	3	BC	60	100																						
OR/GIM/HS/P1	1	Ap	0	12	26	20	55	1.24	7.3	6.3	0.2	35.8	12.2	0.3	2.0	60	84	15.7	2.0	7.9	19.3	17	15	0.6	2.2	14.2
OR/GIM/HS/P1	2	R	12	15																						
OR/GIM/HS/P2	1	Ap	0	20	26	22	53	1.39	7.6	6.7	0.2	34.9	10.9	0.5	1.3	50	96	11.5	1.4	8.4	12.0	15	14	0.6	2.6	6.5
OR/GIM/HS/P2	2	1B	20	45	9	22	69	1.26	7.8	6.9	0.2	36.5	12.3	0.4	1.4	53	96	9.9	1.1	9.1						
OR/GIM/HS/P2	3	2CB	45	95																						
OR/GIM/HS/P2	4	3B	95	150	15	22	63	1.31	7.9	7.0	0.4	37.7	13.3	0.6	1.2	56	95	9.6	0.9	10.3						
OR/GIM/HS/P3	1	Ap	0	15	26	24	50	1.36	7.0	6.1	0.1	27.7	9.5	0.3	1.3	41	94	15.9	1.4	11.7	22.5	25	21	0.6	2.8	9.5
OR/GIM/HS/P3	2	Bt1	15	40	15	22	63	1.15	7.0	6.2	0.1	32.1	10.6	0.4	0.5	46	95	13.7	1.2	11.2						
OR/GIM/HS/P3	3	Bt2	40	70	14	18	68	1.18	7.2	6.3	0.1	31.4	10.0	0.4	0.6	44	97	13.1	1.1	12.2						
OR/GIM/HS/P3	4	R	70	75																						
OR/GIM/HS/P4	1	Ap	0	20	17	21	63	1.31	8.0	7.0	0.3	38.5	13.0	0.4	0.4	57	91	12.0	1.4	8.5	20.2	14	9	0.3	1.6	10.5
OR/GIM/HS/P4	2	A1	20	45	5	18	76	1.25	8.0	7.1	0.2	45.2	14.5	0.6	1.4	68	90	10.9	1.1	9.8						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
OR/GIM/HS/P4	3	A2	45	100	14	12	74	1.17	8.0	7.1	0.4	46.5	15.5	0.9	1.2	69	92	9.9	0.8	12.3						
OR/GIM/HS/P4	4	A3	100	165																						
OR/GIM/KO/P1	1	Ap	0	16	29	28	43	1.38	6.0	5.1	0.1	18.8	6.9	0.3	0.4	37	72	15.8	1.4	11.7	23.3	54	42	0.7	2.1	8.8
OR/GIM/KO/P1	2	A1	16	35	36	13	51	1.27	6.3	5.4	0.1	25.5	9.7	0.5	0.4	47	77	12.0	1.1	11.1						
OR/GIM/KO/P1	3	A2	35	65	20	18	62	1.27	7.0	6.2	0.1	33.0	10.6	0.9	1.4	50	91	11.5	1.0	11.5						
OR/GIM/KO/P1	4	AB	65	80	41	15	44	1.20	7.2	6.3	0.1	26.2	8.7	0.7	1.3	41	89	7.1	0.8	9.3						
OR/GIR/GG/P1	1	Ap	0	18	1	22	77	1.25	7.3	6.4	0.1	44.5	15.4	0.5	1.3	64	97	19.3	1.8	10.7	25.9	37	13	0.8	7.2	7.3
OR/GIR/GG/P1	2	AB	18	35	37	18	45	1.27	7.4	6.6	0.1	40.0	13.3	0.5	0.9	56	97	14.2	1.4	10.2						
OR/GIR/GG/P1	3	B1	35	60	12	18	70	1.27	7.8	6.9	0.2	45.3	16.0	0.5	0.8	70	90	11.6	1.1	10.6						
OR/GIR/GG/P1	4	B2	60	110	7	21	72	1.26	8.0	7.3	0.2	41.7	13.8	0.7	0.9	67	86	8.0	0.9	8.6						
OR/GIR/GG/P1	5	B3	110	170	12	16	73	1.19	8.1	7.2	0.2	42.7	14.5	1.1	1.2	61	97	5.7	0.8	7.4						
OR/GIR/GG/P1	6	BC	170	175																						
OR/GIR/GG/P2	1	Ap	0	15	28	15	56	1.34	7.0	6.1	0.1	41.9	14.0	0.3	0.5	58	97	14.8	1.7	8.8	20.7	42	17	0.7	6.6	5.3
OR/GIR/GG/P2	2	B1W	15	40	21	16	63	1.36	7.2	6.3	0.1	31.2	9.2	0.3	0.6	51	82	12.0	1.5	8.2						
OR/GIR/GG/P2	3	B2WC	40	50	17	19	64	1.27	7.7	6.8	0.2	44.0	15.4	0.4	0.6	62	98	10.0	1.2	8.2						
OR/GIR/GG/P2	4	C	50	150	48	14	39	1.33	7.9	6.9	0.1	39.4	13.0	0.8	0.4	57	94	4.6	0.6	7.3						
OR/GIR/GG/P3	1	Ap	0	10	41	17	41	1.31	6.6	5.7	0.1	35.4	12.1	0.8	0.6	51	96	12.6	1.4	9.3	22.0	66	16	0.6	5.6	7.4
OR/GIR/GG/P3	2	R	10	15																						
OR/GIR/KO/P2	1	Ap	0	20	25	21	54	1.25	7.2	6.2	0.1	31.5	10.1	0.8	1.0	45	96	8.3	0.8	10.7	22.6	39	30	0.4	2.2	6.4
OR/GIR/KO/P2	2	A1	20	80	17	22	61	1.21	7.7	6.7	0.1	37.6	12.5	0.9	0.9	58	90	6.7	0.5	14.8						
OR/GIR/KO/P2	3	Bb	80	150	29	17	54	1.31	8.0	7.1	0.2	38.1	13.3	2.5	0.6	58	94	1.1	0.2	7.5						
OR/GIR/TN/P1	1	Ap	0	18	40	21	39	1.28	5.4	4.5	0.0	21.6	6.7	1.2	0.8	38	79	14.4	1.3	11.0	29.5	67	44	0.6	3.9	18.4
OR/GIR/TN/P1	2	Bt	18	46	29	25	46	1.22	5.3	4.3	0.0	20.2	6.7	0.9	0.5	37	77	10.1	1.0	9.8						
OR/GIR/TN/P1	3	Bt	46	70	22	32	46	1.21	5.5	4.5	0.0	19.3	6.7	0.9	0.6	34	80	8.9	0.7	12.0						
OR/GIR/TN/P1	4	Bb	70	150	20	32	49	1.23	5.6	4.6	0.0	22.7	7.6	0.9	0.7	36	89	5.0	0.4	11.5						
OR/GIR/TN/P2	1	Ap	0	20	32	23	45	1.19	4.9	4.0	0.0	20.1	6.7	0.8	0.8	39	73	16.1	1.6	10.0	20.7	80	49	0.7	3.4	17.5
OR/GIR/TN/P2	2	Bt1	20	72	27	13	60	1.22	5.4	4.4	0.0	23.8	7.7	1.0	0.7	40	83	10.8	1.0	10.4						
OR/GIR/TN/P2	3	Bt2	72	150	15	25	59	1.04	5.8	5.0	0.0	19.5	6.8	0.9	0.8	34	81	4.0	0.4	9.0						
OR/GIR/TN/P3	1	Ap	0	20	27	16	56	1.15	6.1	5.2	0.1	37.1	12.6	0.7	0.7	55	94	35.6	3.7	9.7	25.9	153	35	1.0	13.9	17.6
OR/GIR/TN/P3	2	B	20	64	37	18	45	1.18	6.3	5.3	0.1	31.6	11.4	0.7	0.6	52	85	21.9	2.6	8.4						
OR/GIR/TN/P3	3	1B	64	100	51	9	41	1.25	6.2	5.3	0.1	35.7	11.5	0.8	0.6	53	92	15.2	1.8	8.5						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
OR/GIR/TN/P3	4	2B	100	121	45	11	44	1.13	6.5	5.6	0.1	34.7	11.3	0.8	0.7	53	90	14.7	1.5	9.7						
OR/GIR/TN/P3	5	Bb	121	200	43	13	44	1.25	7.0	6.2	0.1	41.7	13.9	1.1	0.8	61	94	10.4	0.8	13.7						
OR/GIR/WU/P1	1	Ap	0	20	49	15	36	1.30	5.1	4.1	0.0	16.1	5.1	0.8	0.3	32	69	12.1	1.0	11.6	20.9	62	52	0.5	2.3	16.2
OR/GIR/WU/P1	2	AB	20	35	40	20	40	1.17	5.2	4.2	0.0	17.9	5.5	0.8	0.2	31	77	10.9	0.9	12.2						
OR/GIR/WU/P1	3	Bw	35	100	38	19	43	1.08	5.4	4.5	0.0	24.0	8.6	1.0	0.5	39	87	9.6	0.8	12.8						
OR/GIR/WU/P1	4	R	100	105																						
OR/MUN/CH/P1	1	Ap	0	10	46	28	27	1.08	5.5	4.7	0.1	14.4	4.1	0.5	0.3	28	70	20.6	2.7	7.5	13.1	132	46	2.0	2.4	12
OR/MUN/CH/P1	2	AC	10	30	35	24	41	1.29	6.2	5.3	0.1	20.2	7.1	0.9	0.9	37	78	9.4	1.0	9.1						
OR/MUN/CH/P1	3	C	30	55																						
OR/MUN/CH/P1	4	1B	55	150	26	19	55	1.16	6.7	5.9	0.1	32.6	10.6	0.8	1.6	47	97	8.5	0.9	9.2						
OR/MUN/GE/P1	1	Ap	0	15	43	10	46	1.13	6.2	5.4	0.1	26.5	8.8	0.9	1.3	47	81	30.3	2.2	13.7	13.1	53	44	1.3	2.5	11.8
OR/MUN/GE/P1	2	E	15	40	35	25	40	1.16	6.4	5.4	0.1	28.6	9.2	0.9	1.1	46	87	17.1	1.8	9.7						
OR/MUN/GE/P1	3	Bt1	40	65	27	26	47	1.19	6.6	5.7	0.1	32.5	10.3	0.7	1.5	46	98	6.4	0.9	7.1						
OR/MUN/GE/P1	4	Bt2	65	150	28	17	54	1.27	6.8	5.9	0.1	38.9	13.4	0.9	0.4	55	97	5.5	0.6	9.2						
OR/MUN/GE/P1	5	C	150	155																						
OR/MUN/GU/P1	1	Ap	0	16	33	15	52	1.22	5.4	4.5	0.0	35.1	12.0	1.5	0.8	57	86	39.6	3.3	12.0	10.7	96	46	0.9	1.3	9.3
OR/MUN/GU/P1	2	Bt1	16	51	28	10	62	1.20	6.3	5.4	0.1	42.2	14.1	0.8	0.8	60	97	25.4	2.6	9.7						
OR/MUN/GU/P1	3	Bt2	51	86	11	13	75	1.25	6.4	5.6	0.1	41.4	13.6	0.9	1.0	61	94	14.8	1.9	8.0						
OR/MUN/GU/P1	4	B	86	150	10	13	77	1.19	7.0	6.1	0.1	42.7	14.5	1.0	0.7	60	98	11.0	1.1	10.2						
OR/MUN/GU/P2	1	Ap	0	30	26	32	43	1.10	5.8	4.8	0.0	27.5	8.9	0.7	2.7	42	94	24.0	2.6	9.1	12.0	118	55	1.9	4.0	9.9
OR/MUN/GU/P2	2	Bt1	30	60	21	25	54	1.22	6.5	5.6	0.1	35.4	12.1	0.8	0.3	49	98	10.0	1.0	9.8						
OR/MUN/GU/P2	3	Bt2	60	70	16	18	66	1.19	6.8	5.9	0.1	44.5	14.4	0.9	1.4	64	96	8.1	0.8	10.6						
OR/MUN/GU/P2	4	Bt3	70	150	10	22	67	1.15	7.0	6.1	0.1	43.1	14.7	1.0	0.4	63	94	6.4	0.8	8.2						
OR/MUN/GU/P3	1	Ap	0	15	46	20	34	1.03	5.1	4.2	0.2	18.5	6.2	0.7	0.5	36	71	29.1	2.3	12.6	14.0	80	19	2.0	1.6	10.2
OR/MUN/GU/P3	2	C1	15	25																						
OR/MUN/GU/P3	3	C2	25	50																						
OR/MUN/GU/P3	4	1B	50	150	24	19	58	1.22	6.1	5.2	0.1	27.6	9.5	0.8	1.3	44	89	5.9	0.7	8.3						
OR/MUN/GU/P4	1	Ap	0	12	45	11	44	1.10	5.9	5.0	0.1	26.2	8.7	1.0	1.2	45	82	21.8	2.0	11.0	14.0	96	36	0.7	2.6	9.8
OR/MUN/GU/P4	2	R	12	20																						
OR/MUN/MU/P1	1	Ap	0	12	51	13	35	1.16	5.2	4.4	0.1	20.6	8.2	0.7	1.3	36	85	19.0	2.5	7.8	9.3	112	61	4.3	2.7	8.2
OR/MUN/MU/P1	2	Bw1	12	37	54	15	31	1.15	5.4	4.6	0.1	14.1	4.6	0.5	0.5	27	73	16.9	1.6	10.6						

ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
OR/MUN/MU/P1	3	Bw2	37	78	52	17	31	1.22	5.7	4.8	0.0	14.6	4.6	0.5	0.3	27	75	8.5	1.0	8.3						
OR/MUN/MU/P1	4	Bb	78	150	48	17	35	1.13	5.7	4.8	0.1	15.0	5.0	0.5	0.4	28	74	4.1	0.6	7.1						
TALJ-ATS-P1	1	Ap	0	26	12	29	59	1.17	7.8	6.9	0.2	35.5	9.8	1.2	0.5	53	89	8.5	0.9	9.2	9.7	7	4	0.2	2.4	6.5
TALJ-ATS-P1	2	Bi1_1	26	60	6	35	59	1.30	7.3	6.5	0.1	26.6	8.9	1.2	0.5	40	94	7.1	0.9	8.3						
TALJ-ATS-P1	3	Bi1_2	60	105	11	33	55	1.27	6.7	5.9	0.1	29.9	9.7	1.2	0.5	44	93	7.0	0.8	9.1						
TALJ-ATS-P1	4	C	105	200																						
TALJ-AYB-P1	1	Ap	0	17	37	14	50	1.24	7.1	5.3	0.1	24.0	11.1	1.2	0.3	44	84	10.6	1.4	7.9	7.7	18	8	0.2	2.2	8.3
TALJ-AYB-P1	2	Bic1_1	17	56	30	21	50	1.26	7.6	6.6	0.1	29.4	10.4	1.0	0.3	47	86	6.1	0.8	8.0						
TALJ-AYB-P1	3	Bic1_2	56	95	29	27	43	1.38	7.8	6.8	0.1	30.2	9.9	1.2	0.3	45	92	5.7	0.7	8.4						
TALJ-AYB-P1	4	Bic2_1	95	143	19	24	57	1.33	7.9	7.0	0.3	31.7	10.1	1.2	0.4	48	91	5.4	0.6	8.6						
TALJ-AYB-P1	5	Bic2_2	143	200	10	26	64	1.28	8.1	7.2	0.3	32.4	10.2	1.1	0.5	53	83	5.1	0.5	9.4						
TALJ-AYB-P2	1	Ap	0	18	25	24	51	1.27	7.6	6.6	0.2	27.0	9.6	1.3	1.3	40	97	13.6	1.7	8.1	20.7	18	9	0.7	2.2	10.2
TALJ-AYB-P2	2	B	18	33	55	6	38	1.21	7.8	7.0	0.1	23.7	8.9	1.2	0.9	37	94	8.2	0.9	9.2						
TALJ-AYB-P2	3	C	33	58	61	7	32	1.27	7.9	7.1	0.1	21.0	8.4	1.3	1.0	34	93	8.2	0.9	9.3						
TALJ-AYB-P2	4	2ABb	58	105	40	16	43	1.30	7.2	6.3	0.2	29.4	9.5	1.2	0.7	42	97	7.1	0.8	9.3						
TALJ-AYB-P2	5	2Bb	105	180	44	13	43	1.25	7.4	6.4	0.2	32.8	9.5	1.3	0.3	45	99	6.2	0.6	10.4						
TALJ-SES-P1	1	Ap	0	20	25	19	56	1.16	7.3	6.6	0.2	29.8	9.8	1.0	0.5	51	81	9.8	1.4	7.0	14.1	7	5	0.2	1.3	7.6
TALJ-SES-P1	2	Bi1	20	57	9	30	61	1.21	7.6	6.8	0.4	31.2	10.6	1.1	0.6	54	80	8.5	1.1	7.8						
TALJ-SES-P1	3	Bi2	57	110	25	8	67	1.14	7.8	7.0	0.3	36.5	11.9	1.6	0.4	53	96	6.6	0.9	7.7						
TALJ-SES-P1	4	C	110	180	38	14	48	1.34	7.7	6.7	0.2	25.1	8.6	1.6	0.2	37	97	3.0	0.4	7.9						
TALJ-TEK-A1	1	Ap	0	30	44	18	37	1.43	6.8	6.0	0.1	29.7	14.8	1.0	0.2	47	96	8.8	1.0	9.1	9.3	13	5	0.1	0.9	8
TALJ-TEK-P1	1	Ap	0	25	50	16	35	1.38	7.0	6.0	0.3	25.2	8.4	1.2	2.5	39	96	15.2	1.6	9.4	24	10	6	0.3	0.9	11.5
TALJ-TEK-P1	2	Bw	25	90	54	15	32	1.26	7.0	6.0	0.2	21.8	7.6	1.1	2.1	35	94	14.5	1.3	11.0						
TALJ-TEK-P1	3	BC	90	150	47	15	38	1.20	7.2	6.2	0.1	24.4	7.7	1.2	4.7	39	98	4.9	0.6	8.2						
TALJ-TEK-P1	4	C(R)	150	207																						
TALJ-TEK-P2	1	Ap	0	15	30	21	49	1.21	6.3	5.4	0.1	25.4	9.3	1.1	0.5	46	79	18.3	2.2	8.2	14.2	39	25	0.6	3.2	7
TALJ-TEK-P2	2	Bw	15	44	31	22	48	1.22	6.6	5.7	0.1	25.1	9.5	1.1	0.6	45	80	12.6	1.5	8.3						
TALJ-TEK-P2	3	R	44	50																						
TALJ-TEK-P3	1	Ap	0	19	19	28	52	1.29	7.6	6.7	0.2	34.6	9.9	1.2	0.2	48	95	8.8	1.2	7.3	11.6	11	4	0.1	3.1	7.1
TALJ-TEK-P3	2	Bi1_1	19	80	20	31	49	1.40	7.5	6.6	0.2	34.3	10.1	1.1	0.2	48	95	8.5	1.1	7.8						
TALJ-TEK-P3	3	Bi1_2	80	130	12	32	56	1.25	7.8	6.8	0.3	31.1	11.1	1.3	0.3	46	95	6.2	0.9	7.3						

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TALJ-TEK-P3	4	Bi2	130	165	11	26	63	1.23	7.7	6.8	0.2	30.5	9.9	1.4	0.4	44	96	6.0	0.7	8.4						
TALJ-TEK-P3	5	BC	165	200	35	20	45	1.34	7.8	6.9	0.2	34.2	10.2	1.3	0.3	48	95	3.8	0.5	8.0						
TENM-MEK-P1	1	Ap	0	24	30	15	55	1.30	6.9	5.9	0.1	24.2	8.9	1.0	0.6	49	71	12.4	1.5	8.4	15.3	14	14	0.5	2.8	6.5
TENM-MEK-P1	2	Bi1_1	24	60	29	28	43	1.29	7.4	6.4	0.1	29.5	9.4	1.0	0.4	46	88	8.2	1.1	7.8						
TENM-MEK-P1	3	Bi1_2	60	90	41	18	41	1.31	7.7	6.8	0.1	25.7	9.4	1.0	0.4	45	82	8.0	1.0	8.2						
TENM-MEK-P1	4	Bi2	90	185	42	15	43	1.28	7.7	6.8	0.1	27.0	9.4	1.0	0.5	48	79	7.7	0.9	8.5						
TENM-MES-P1	1	Ap	0	23	26	18	55	1.24	6.8	6.0	0.1	27.7	10.4	1.2	0.8	49	81	13.6	1.7	8.2	12.9	16	9	0.6	4.4	6.8
TENM-MES-P1	2	Bic1	23	72	23	19	58	1.25	7.2	6.2	0.2	30.5	10.5	1.0	0.6	50	86	9.4	1.2	7.7						
TENM-MES-P1	3	Bic2_1	72	120	9	30	62	1.22	7.4	6.4	0.2	31.0	10.9	1.2	0.7	45	97	6.9	0.9	7.5						
TENM-MES-P1	4	Bic2_2	120	160	9	30	61	1.22	7.8	6.8	0.4	30.5	10.9	1.2	0.8	52	83	6.4	0.8	8.4						
TENM-MES-P1	5	Bc	160	195	50	13	37	1.11	7.9	6.8	0.1	26.2	8.7	1.6	0.2	38	97	3.7	0.5	8.1						
TENM-SHI-P1	1	Ap	0	23	7	22	71	1.21	7.4	6.4	0.1	37.0	12.3	1.1	0.7	55	93	15.4	1.7	9.1	11.7	16	8	0.4	4.5	7.1
TENM-SHI-P1	2	Bi1	23	80	5	27	69	1.27	7.9	6.8	0.2	39.6	13.2	1.4	0.5	58	94	12.3	1.4	8.8						
TENM-SHI-P1	3	Bi2	80	140	5	26	69	1.21	8.2	7.3	0.3	42.2	15.0	1.6	0.4	63	94	9.0	1.1	8.3						
TENM-SHI-P1	4	C	140	195	12	34	54	1.26	8.0	7.2	0.3	26.2	8.7	1.8	0.6	43	86	2.4	0.3	7.9						
TENM-SHI-P2	1	Ap	0	18	42	17	40	1.28	7.0	6.2	0.1	27.1	8.9	1.2	0.2	38	98	12.9	1.3	9.6	14.5	18	8	0.5	3.5	7
TENM-SHI-P2	2	B	18	40	38	21	41	1.26	8.1	7.2	0.1	28.0	9.3	1.1	0.3	42	92	12.6	1.3	9.4						
TENM-SHI-P2	3	C	40	200	53	13	33	1.26	8.1	7.2	0.1	26.4	8.8	1.2	0.2	37	98	2.6	0.3	8.4						
TENM-SHI-P3(RC)	1	Ap	0	30	54	17	29	1.34	7.0	6.1	0.1	26.5	8.4	1.1	0.3	37	97	9.6	1.3	7.3	11.0	8	5	0.1	0.8	6
TENM-SHI-P3(RC)	2	Bw	30	55	51	17	32	1.33	7.0	6.1	0.1	25.2	8.4	1.1	0.2	37	96	8.2	1.0	8.0						
TENM-SHI-P3(RC)	3	CB	55	115																						
TENM-SIM-P1	1	Ap	0	20	23	14	63	1.26	6.9	6.0	0.1	28.3	9.4	1.2	0.4	53	74	20.9	2.6	8.2	13.9	17	10	0.2	3.3	7.6
TENM-SIM-P1	2	Bi	20	50	20	24	56	1.32	7.3	6.5	0.1	28.9	9.9	1.2	0.4	45	90	18.0	2.1	8.5						
TENM-SIM-P1	3	Bic	50	66	16	26	57	1.30	7.9	6.9	0.2	36.2	11.8	1.3	0.5	51	97	16.1	2.3	7.0						
TENM-SIM-P1	4	BC	66	87	24	14	62	1.28	8.1	7.2	0.3	35.3	11.8	1.2	0.4	50	97	13.4	1.4	9.7						
TOFL-AGO-P1	1	Ap	0	25	23	36	41	1.27	6.4	5.5	0.1	25.6	8.5	0.7	0.2	42	84	14.9	1.8	8.3	31.7	43	25	1.3	3.7	7.6
TOFL-AGO-P1	2	Bi1_1	25	60	22	24	54	1.27	6.5	5.6	0.1	29.7	12.1	0.8	0.1	44	96	14.0	1.7	8.1						
TOFL-AGO-P1	3	Bi1_2	60	120	12	42	46	1.30	7.0	6.1	0.1	30.2	8.7	0.9	0.1	46	88	14.0	1.7	8.3						
TOFL-AGO-P1	4	Bi2	120	180	12	27	61	1.24	7.6	6.6	0.2	33.5	14.7	0.7	0.1	54	91	12.1	1.6	7.8						
TOFL-HAS-P1	1	Ap	0	25	21	30	49	1.16	6.6	5.7	0.1	26.8	8.3	0.9	0.4	46	79	17.7	2.3	7.7	29.5	18	10	0.5	3.9	7.4
TOFL-HAS-P1	2	Bi1_1	25	65	5	38	57	1.23	7.8	7.0	0.2	34.8	9.8	1.4	0.3	52	89	12.9	1.6	8.2						

	ProfileID	Nr	Horizon	Up Depth, cm	Low Depth, cm	Sand, g/100g	Silt, g/100g	Clay, g/100g	Bulk Dens, kg/dm3	pH H2O	pH KCl	Electric Cond., dS/m	Exch Ca, cmolc/kg	Exch Mg, cmolc/kg	Exch Na, cmolc/kg	Exch K, cmolc/kg	CEC, cmolc/kg	Base Saturation, %	Org. Carbon, g/kg	Total N, g/kg	C/N ratio	Available P, mg/kg	Extr Fe, mg/kg	Extr Mn, mg/kg	Extr Zn, mg/kg	Extr Cu, mg/kg	Extr S, mg/kg
TOFL-HAS-P1		3	Bi1_2	65	95	38	14	48	1.38	7.9	7.1	0.1	29.0	9.4	1.1	0.1	40	98	10.8	1.2	9.1						
TOFL-HAS-P1		4	Bi2_1	95	109	5	27	68	1.14	7.1	6.1	0.1	29.6	9.9	0.9	0.3	43	95	10.0	1.1	9.1						
TOFL-HAS-P1		5	Bi2_2	109	200	8	41	52	1.25	8.1	7.2	0.2	27.6	10.2	0.4	0.1	45	85	9.4	1.0	9.3						
TOFL-HUG-P1		1	Ap	0	25	49	15	36	1.50	6.8	5.8	0.1	25.4	8.9	1.1	0.2	39	91	9.6	1.0	9.2	9.5	6	2	0.0	0.5	6
TOFL-HUG-P1		2	Bw	25	55	42	15	43	1.41	6.9	6.0	0.1	24.0	8.1	0.9	0.1	35	95	7.4	0.9	8.2						
TOFL-HUG-P1		3	BC	55	90																						
TOFL-HUG-P1		4	R/C	90	150																						
TOFL-MEN-P1		1	Ap	0	10	46	14	40	1.06	7.8	7.2	0.3	27.3	9.7	1.1	0.1	41	93	20.7	2.8	7.4	25.9	17	6	0.2	1.1	8.7
TOFL-MEN-P1		2	B1	10	30	49	26	26	0.87	7.6	6.7	0.2	19.4	5.4	1.0	0.1	34	76	9.0	1.3	6.9						
TOFL-MEN-P1		3	B2	30	60	47	13	39	1.07	7.7	6.9	0.2	21.8	7.8	1.1	0.1	34	89	8.2	1.0	8.1						
TOFL-MEN-P1		4	B3	60	77	55	16	29	0.95	7.6	6.9	0.2	16.3	6.1	0.9	0.0	29	80	7.5	0.9	8.7						
TOFL-MEN-P1		5	2B1	77	105	51	10	39	0.94	7.8	6.9	0.2	19.6	6.1	1.2	0.1	33	81	6.6	0.7	9.3						
TOFL-MEN-P1		6	2B2	105	110	52	10	38	0.88	7.7	6.6	0.2	22.9	7.8	0.9	0.1	37	87	7.1	0.9	8.3						
TOFL-MEN-P1		7	2B3	110	120	54	18	28	0.88	7.8	6.9	0.2	15.0	6.5	0.9	0.0	28	81	6.4	0.7	8.9						
TOFL-MEN-P1		8	3B1	120	140	23	36	41	0.76	7.8	7.1	0.3	18.4	6.1	1.0	0.1	36	72	11.5	1.3	8.9						
TOFL-MEN-P1		9	4B1	140	185	44	16	40	0.35	8.1	7.2	0.4	23.6	8.6	1.2	0.1	37	90	13.2	1.7	8.0						
TOFL-MEN-P2		1	Ap	0	24	56	15	30	1.58	6.6	5.9	0.1	25.3	8.4	0.8	0.2	36	96	11.5	1.6	7.1	12.2	14	5	0.4	1.1	5.6
TOFL-MEN-P2		2	Bw1	24	78	45	19	36	1.43	6.6	5.8	0.1	25.0	8.9	1.0	0.1	37	95	11.6	1.3	8.6						
TOFL-MEN-P2		3	Bw2	78	90	40	18	42	1.45	6.7	5.8	0.0	22.1	7.9	0.8	0.1	38	81	8.5	1.2	7.2						
TOFL-MEN-P2		4	2ABb	90	145	45	11	44	1.40	6.9	6.0	0.1	25.7	9.7	1.0	0.1	38	96	7.7	1.0	8.0						
TOFL-MEN-P2		5	2Bb	145	200	34	11	55	1.36	7.2	6.2	0.1	33.1	8.9	0.8	0.1	43	99	6.4	0.7	8.6						
TRAL-GER-P1		1	Ap	0	25	33	29	38	1.37	8.0	7.1	0.2	26.1	8.6	0.5	0.2	38	93	13.5	1.5	9.0	22.2	10	4	0.2	2.1	7.2
TRAL-GER-P1		2	A1	25	40	65	8	27	1.54	7.6	6.7	0.1	14.5	4.6	0.3	0.1	29	67	11.2	1.2	9.6						
TRAL-GER-P1		3	A2	40	50	34	36	30	1.35	7.9	6.8	0.2	22.1	7.7	0.5	0.1	32	95	10.3	1.2	8.7						
TRAL-GER-P1		4	AB	50	60	49	13	38	1.41	8.1	7.2	0.3	20.8	6.4	0.8	0.3	33	86	9.7	1.0	9.3						
TRAL-GER-P1		5	B1	60	140	8	46	46	1.32	8.0	7.2	0.3	26.2	9.2	0.5	0.4	39	93	8.8	1.0	8.9						
TRAL-GER-P1		6	B2	140	200	4	42	55	1.18	8.3	7.3	0.3	31.1	8.9	1.2	0.3	45	92	7.5	0.9	8.1						
TRAL-SBK-P1		1	Ap	0	20	13	45	42	1.27	7.7	6.9	0.2	23.8	8.2	0.3	0.5	44	74	13.6	1.5	9.0	14.1	4	6	0.2	1.7	6.3
TRAL-SBK-P1		2	B1	20	59	32	24	44	1.42	8.1	7.2	0.2	23.5	8.6	0.4	0.1	39	84	8.7	1.1	8.3						
TRAL-SBK-P1		3	2B1	59	67	58	15	27	1.58	8.0	7.0	0.2	19.2	7.1	0.5	0.1	30	91	8.3	1.0	8.1						
TRAL-SBK-P1		4	2B2	67	85	43	17	40	1.42	8.2	7.2	0.2	22.8	8.2	0.5	0.2	36	89	7.2	0.9	8.0						

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TRAL-SBK-P1	5		85	94	80	10	10																			
TRAL-SBK-P1	6	3B1	94	111	35	22	43	1.39	8.1	7.1	0.3	25.8	8.6	0.5	0.2	36	98	7.0	0.8	8.4						
TRAL-SBK-P1	7		111	115	80	10	10																			
TRAL-SBK-P1	8	3B2	115	137	33	22	45	1.33	8.2	7.2	0.3	21.1	8.6	0.6	0.1	34	89	6.6	0.8	8.8						
TRAL-SBK-P1	9		137	146	80	10	10																			
TRAL-SBK-P10	10	3B3	146	169	42	13	45	1.37	8.1	7.2	0.5	21.3	8.1	1.1	0.2	31	97	6.5	0.7	8.8						
TRAL-SBK-P11	11	3B4	169	185	44	13	43	1.46	8.0	7.0	0.4	20.4	7.7	0.3	0.0	30	96	5.5	0.6	9.1						
TRAL-SBK-P12	12	4B	185	200	27	43	30	1.29	8.1	7.2	0.5	22.1	7.7	1.0	0.1	32	97	5.4	0.6	8.9						
TRAL-TAO-P1	1	Ap	0	20	34	25	42	1.30	7.9	7.1	0.2	20.4	7.7	0.7	0.5	34	87	11.0	1.3	8.2	11.9	1	4	0.1	1.1	4.5
TRAL-TAO-P1	2	Bi1-1	20	70	8	41	52	1.18	8.1	7.1	0.2	18.3	7.0	0.3	0.2	47	55	10.4	1.2	8.6						
TRAL-TAO-P1	3	Bi1-2	70	120	25	29	46	1.15	8.3	7.4	0.2	23.5	7.4	0.6	0.3	42	76	9.3	1.1	8.2						
TRAL-TAO-P1	4	Bi2	120	180	25	29	46	1.29	8.1	7.2	0.2	29.7	9.2	0.6	0.5	42	96	8.5	1.0	8.6						
TRAL-TIM-P1	1	Ap	0	20	31	25	44	1.29	8.1	7.2	0.3	25.6	9.2	0.7	0.7	41	89	14.8	1.6	9.1	14.5	6	10	0.2	2.3	7.5
TRAL-TIM-P1	2	A	20	60	33	23	44	1.20	8.3	7.5	0.2	23.1	8.0	0.3	0.1	41	77	14.7	1.6	9.1						
TRAL-TIM-P1	3	Bc1-1	60	90	20	32	48	1.24	7.9	7.0	0.2	25.5	9.2	0.5	0.1	44	81	13.6	1.5	8.8						
TRAL-TIM-P1	4	Bc1-2	90	125	23	32	45	1.27	7.9	7.0	1.5	26.6	9.6	0.7	0.1	39	95	14.0	1.7	8.3						
TRAL-TIM-P1	5	Bc2-1	125	155	10	36	55	1.14	7.7	6.8	0.2	27.7	9.1	0.4	0.2	48	78	14.1	1.7	8.5						
TRAL-TIM-P1	6	Bc2-2	155	200	23	31	46	1.18	7.7	6.9	3.4	26.2	9.6	0.5	0.1	41	88	12.6	1.4	9.2						
TRAL-TIM-P2	1	Ap	0	20	25	33	42	1.34	8.1	7.1	0.2	20.6	8.4	0.4	0.3	37	81	18.0	2.5	7.2	22	7	11	0.3	2.5	7.9
TRAL-TIM-P2	2	AB	20	40	27	29	44	1.28	7.8	7.0	0.2	26.5	9.8	0.8	0.5	42	89	14.8	1.7	9.0						
TRAL-TIM-P2	3	Bi1	40	88	24	29	47	1.25	8.0	7.1	0.2	22.2	8.3	0.3	0.4	40	78	14.7	1.7	8.7						
TRAL-TIM-P2	4	Bi2	88	123	29	30	41	1.20	8.2	7.3	0.2	23.8	8.8	0.4	0.8	39	86	13.5	1.4	9.7						
TRAL-TIM-P2	5	BC	123	170	44	18	38	1.38	7.0	6.2	0.2	25.7	8.6	0.7	0.4	38	94	5.4	0.5	12.0						
TRAZ-EBO-P1	1	Ap	0	23	35	13	52	1.34	7.9	7.1	0.2	28.9	9.9	0.5	0.2	51	77	14.1	1.7	8.5	13.1	5	6	0.2	1.0	8.3
TRAZ-EBO-P1	2	Bic1-1	23	62	10	28	62	1.13	8.1	7.2	0.4	35.5	13.3	1.9	0.4	62	83	13.4	1.4	9.6						
TRAZ-EBO-P1	3	Bic1-2	62	114	25	19	56	1.24	8.0	7.1	0.4	32.5	10.1	2.9	0.3	43	107	10.7	1.1	9.9						
TRAZ-EBO-P1	4	Bic2	114	180	9	24	67	1.19	8.1	7.1	0.8	28.6	10.6	3.0	0.4	47	90	5.1	0.6	8.3						
TRAZ-GEN-P1	1	Ap	0	28	6	32	62	1.12	7.5	6.6	0.2	31.5	10.4	0.4	0.2	59	72	20.0	2.4	8.5	23.8	3	7	0.4	1.7	5.6
TRAZ-GEN-P1	2	Bic1-1	28	85	3	28	69	1.09	7.6	6.7	0.3	26.7	8.1	0.5	0.1	56	64	18.0	1.9	9.5						
TRAZ-GEN-P1	3	Bic1-2	85	150	7	19	73	1.11	7.9	7.2	0.4	27.1	9.0	2.2	0.3	41	94	15.5	1.7	8.9						
TRAZ-GEN-P1	4	Bic2	150	185	22	21	56	1.10	8.0	7.3	0.4	21.8	8.9	1.0	0.2	39	81	5.0	0.5	10.7						

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TRAZ-GEN-P2		1	Ap	0	35	27	32	41	1.22	7.2	6.2	0.2	26.8	9.2	0.8	0.7	40	95	26.6	2.6	10.2	25.7	3	7	0.3	1.2	5.4
TRAZ-GEN-P2		2	Bic1	35	80	24	32	43	1.17	6.9	6.1	0.2	28.6	9.2	0.9	0.3	40	97	22.9	2.2	10.6						
TRAZ-GEN-P2		3	Bic2	80	150	28	26	46	1.12	7.8	7.0	0.3	24.3	8.9	0.4	0.2	39	86	20.4	2.0	10.1						
TRAZ-GEN-P2		4	Bic3	150	180	41	10	50	1.38	7.9	7.1	0.5	36.5	13.7	1.1	0.2	54	96	5.7	0.8	7.5						
TRAZ-KAS-P1		1	Ap	0	30	20	21	59	1.15	7.8	7.1	3.2	35.2	10.6	2.0	0.3	51	94	27.9	3.2	8.6	9.6	1	5	0.3	2.1	9.1
TRAZ-KAS-P1		2	Bi1-1	30	100	19	23	58	1.18	8.3	7.5	0.5	27.7	8.6	3.0	0.2	42	95	26.7	3.0	8.8						
TRAZ-KAS-P1		3	Bi1-2	100	170	8	22	70	1.22	8.4	7.5	0.4	25.1	9.6	0.6	0.1	42	85	24.1	2.7	8.9						
TRAZ-KAS-P1		4	Bi2	170	200	18	36	45	1.26	7.9	7.1	0.6	25.5	8.1	3.0	0.4	39	95	7.7	0.8	9.8						
TRAZ-TSE-P1		1	Ap	0	20	35	18	47	1.29	7.4	6.6	0.1	27.7	9.8	0.5	0.3	45	85	16.7	1.9	8.6	23.9	6	8	0.2	1.4	4.7
TRAZ-TSE-P1		2	B1	20	50	34	18	47	1.29	7.4	6.5	0.1	25.7	9.4	0.7	0.2	44	81	14.1	1.8	7.8						
TRAZ-TSE-P1		3	B2	50	83	22	34	44	1.20	7.6	6.8	0.1	25.8	10.1	0.5	0.1	42	87	13.6	1.8	7.7						
TRAZ-TSE-P1		4	Bc1	83	150	13	34	53	1.11	7.8	7.0	0.1	29.8	9.7	0.4	0.1	46	86	13.4	1.7	7.9						
TRAZ-TSE-P1		5	Bc2	150	180	23	23	54	1.05	7.8	6.9	0.1	32.7	10.9	0.5	0.1	46	95	12.8	1.7	7.6						
TRAZ-TSE-P2		1	Ah	0	34	48	10	42	1.31	7.8	7.0	0.2	19.7	7.0	0.3	0.2	39	71	13.3	1.5	8.7	14.5	3	5	0.1	0.7	6.3
TRAZ-TSE-P2		2	AC	34	92	49	15	36	1.24	8.2	7.3	0.2	28.6	8.5	0.8	0.1	42	90	5.4	0.6	8.5						
TRAZ-TSE-P2		3	R	92	100																						

Annex 4a Soil profile auger observations at woreda level, site data

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
AAUB_01	Becho	38.19458	8.70787	2203	TS	UF2	I	>	100	D	Adada	Calcic Vertisols (Calcaric)	A
AAUB_02	Becho	38.20637	8.73042	2128	BO	UF2	I	>	100	X	Gombore	Calcic Vertisols (Calcaric)	A
AAUB_03	Becho	38.14500	8.59600	2605	UP	UF2	I	>	100	D	Koticha	Haplic Luvisols (Hyper-eutric)	A
AAUB_04	Becho	38.14600	8.55500	2452	MS	UF2	I	>	100	D	Gombore	Haplic Luvisols (Hyper-eutric)	A
AAUB_05	Becho	38.15900	8.53800	2413	LS	UF2	I	>	100	D	Koticha	Haplic Luvisols (Hyper-eutric)	A
AAUB_06	Becho	38.18408	8.67840	2208	LS	UF2	I	>	100	M	Koticha	Haplic Vertisols (Eutric)	A
AAUB_07	Becho	38.14680	8.67217	2269	BO	UF2	I	>	100	D	Koticha	Gleyic Vertisols (Eutric)	A
AAUB_08	Becho	38.23413	8.63937	2197	TS	UF2	M	>	100	M	Adada	Haplic Vertisols (Calcaric)	A
AAUB_09	Becho	38.25042	8.64810	2198	TS	UF2	I	>	100	D	Gombore	Haplic Vertisols	A
AAUB_11	Becho	38.27187	8.66665	2174	BO	UU1	I	>	100	D	Koticha	Calcic Vertisols (Calcaric)	A
AAUB_12	Becho	38.20712	8.61563	2238	LS	UU1	M	>	100	D	Gombere	Haplic Vertisols (Calcaric)	A
AAUB_13	Becho	38.20270	8.59688	2290	LS	UU1	I	>	70	M	Adada	Gleyic Vertisols	A
AAUB_14	Becho	38.19675	8.58015	2322	LS	UL2	I	>	100	D	GOMBORE	Gleyic Vertisols	A
AAUB_15	Becho	38.19000	8.56630	2356	LS	UF2	I	>	90	M	Meldima	Gleyic Luvisols	A
AAUB_16	Becho	38.20700	8.54700	2378	LS	UF2	I	>	100	D	Meldima	Haplic Luvisols	A
AAUB_17	Becho	38.27700	8.61100	2209	LS	UF2	I	>	100	D	GOMBORE	Haplic Vertisols	A
AAUB_18	Becho	38.17155	8.62262	2273	TS	UU1	I	>	100	X	GOMBORE	Calcic Vertisols	A
AAUB_19	Becho	38.15745	8.60948	2331	LS	UU1	I	>	100	X	KOTICHA	Haplic Vertisols (Pellic)	A
AAUB_20	Becho	38.27100	8.63100	2187	LS	UF2	I	>	100	X	KOTICHA	Haplic Vertisols	A
AAUB_21	Becho	38.25000	8.63200	-	LS	UF2	I	>	100	D	KOTICHA	Haplic Vertisols	A
AAUB_22	Becho	38.23722	8.68428	2134	BO	UU1	I	>	100	X	Adada	Calcic Vertisols (Calcaric)	A
AAUB_23	Becho	38.27120	8.69387	2136	BO	UU1	P	>	100	X	KOTICHA	Haplic Vertisols (Eutric)	A
AAUB_24	Becho	38.28488	8.69167	2138	BO	UU1	P	>	90	M	GOMBORE	Calcic Vertisols	A
AAUB_25	Becho	38.29885	8.67790	2121	BO	UL2	P	>	100	X	KOTICHA	Calcic Vertisols	A
AAUB_26	Becho	38.31593	8.68130	2110	BO	UL2	P	>	100	X	KOTICHA	Haplic Vertisols (Calcaric)	A
AAUB_27	Becho	38.32810	8.74600	2103	TS	UL2	M	>	100	X	Adada	Haplic Vertisols (Eutric)	A
AAUB_28	Becho	38.32792	8.72500	2109	BO	UL2	P	>	100	X	Adada	Gleyic Vertisols (Eutric)	A
AAUB_29	Becho	38.34142	8.73140	2117	BO	UU1	I	>	100	X	KOTICHA	Haplic Vertisols (Calcaric)	A
AAUB_30	Becho	38.23588	8.67222	2163	BO	UU1	I	>	100	X	KOTICHA	Haplic Vertisols	A
AAUB_31	Becho	38.25535	8.68077	2154	BO	UU1	P	>	100	X	KOTICHA	Calcic Vertisols (Calcaric)	A
AAUB_32	Becho	38.27437	8.68060	2133	TS	UU1	M	>	100	X	Adada	Haplic Vertisols (Calcaric)	A
AAUB_33	Becho	38.28512	8.65088	2161	BO	UU1	P	>	100	D	KOTICHA	Haplic Vertisols	A
AAUBa_01	Bako Tibe	37.05290	9.15985	1813	MS	IA4	W	>	100	X	Demile	Alic Nitisols (Dystric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
AAUBa_02	Bako Tibe	37.06590	9.17943	1885	LS	IA4	M	=	70	M	Demile	Alic Nitisols (Dystric)	A
AAUBa_03	Bako Tibe	37.06450	9.19700	1887	LS	IA4	W	=	60	M	Demile	Haplic Regosols (Clayic)	A
AAUBa_04	Bako Tibe	37.12627	9.10503	1788	MS	IA4	W	>	85	M	Demile	Leptic Luvisols (Epi-dystric)	A
AAUBa_05	Bako Tibe	37.13328	9.11988	1788	MS	IA4	W	>	100	D	Biyyodima	Alic Nitisols (Dystric)	A
AAUBa_07	Bako Tibe	37.16005	9.09482	1689	TS	IA4	M	>	100	D	Demile	Alic Nitisols (Dystric)	A
AAUBa_08	Bako Tibe	37.16773	9.10365	1679	LS	IA4	M	>	100	X	Biyyo dimile	Alic Nitisols (Dystric)	A
AAUBa_09	Bako Tibe	37.17548	9.11347	1762	LS	IA4	W	>	100	D	Megala	Nitic Luvisols (Epi-dystric)	A
AAUBa_11	Bako Tibe	37.18603	9.12392	1947	MS	IA4	W	>	100	D	Bollele	Alic Nitisols (Dystric)	A
AAUBa_12	Bako Tibe	37.20673	9.11668	2078	LS	IA4	M	=	90	M	Bollele	Alic Nitisols (Dystric)	A
AAUBa_13	Bako Tibe	37.22545	9.12275	2162	TS	IA4	M	>	100	X	Biyye dima	Alic Nitisols (Dystric)	A
AAUBa_14	Bako Tibe	37.24305	9.12368	2144	LS	IA4	W	>	100	D	Megala	Nitic Luvisols (Epi-dystric)	A
AAUBa_15	Bako Tibe	37.25792	9.12143	2123	LS	IA4	M	>	100	M	Megala	Nitic Luvisols (Epi-dystric)	A
AAUBa_16	Bako Tibe	37.15678	9.12685	1849	TS	IA4	M	>	100	X	Bollele	Alic Nitisols (Dystric)	A
AAUBa_17	Bako Tibe	37.15638	9.14097	1926	LS	IA4	M	>	100	D	Bollele	Alic Nitisols (Dystric)	A
AAUBa_18	Bako Tibe	37.16908	9.15628	2033	MS	IA4	M	=	85	M	Bollele	Alic Nitisols (Dystric)	A
AAUBa_19	Bako Tibe	37.19712	9.19072	2111	LS	IA4	M	>	100	D	Demima	Alic Nitisols (Dystric)	A
AAUBa_20	Bako Tibe	37.19712	9.19072	2265	MS	IA4	W	>	80	M	Bollele	Alic Nitisols (Dystric)	A
AAUBa_21	Bako Tibe	37.15685	9.07877	1658	MS	IA4	M	>	80	M	Megala	Cutanic Luvisols (Epi-dystric)	A
AAUBa_22	Bako Tibe	37.16815	9.05262	1685	LS	IA4	I	>	100	X	Biye dima	Alic Nitisols (Dystric)	A
AAUBa_23	Bako Tibe	37.14792	9.05848	1613	BO	IA4	P	>	100	X	Biye Guracha	Haplic Vertisols	A
AAUBa_24	Bako Tibe	37.11728	9.04750	1588	BO	IB2	P	>	100	X	Koticha	Haplic Vertisols	A
AAUBa_25	Bako Tibe	37.16218	9.04192	1626	BO	IB2	P	>	100	X	Koticha	Haplic Vertisols	A
AAUBa_26	Bako Tibe	37.20308	9.02003	1702	TS	IA4	M	>	100	X	Bollele	Alic Nitisols (Dystric)	A
AAUBa_27	Bako Tibe	37.18007	9.00825	1668	TS	IA4	I	>	100	X	Biye dima	Alic Nitisols (Dystric)	A
AAUBa_28	Bako Tibe	37.19423	9.04133	1679	TS	IA4	I	>	100	X	Megala	Cutanic Luvisols (Epi-dystric)	A
AAUBa_29	Bako Tibe	37.21322	9.03978	1768	TS	IA4	I	>	100	X	Megala	Cutanic Luvisols (Epi-dystric)	A
AAUBa_30	Bako Tibe	37.21860	9.01710	1713	TS	IA4	I	>	100	X	Biye dima	Alic Nitisols (Dystric)	A
AAUBa_31	Bako Tibe	37.20970	9.00413	1655	TS	IA4	M	>	100	X	Biye dima	Alic Nitisols (Dystric)	A
AAUBa_32	Bako Tibe	37.19295	9.06413	1803	LS	IA4	W	>	100	D	Biye dima	Alic Nitisols (Dystric)	A
AAUBa_33	Bako Tibe	37.21118	9.07357	1987	MS	IA4	W	=	60	M	Megala	Haplic Regosols (Clayic)	A
AAUBa_34	Bako Tibe	37.23207	9.07770	2032	LS	IA4	S	=	70	M	Biye dima	Haplic Regosols (Clayic)	A
AAUBa_35	Bako Tibe	37.24503	9.08223	2131	TS	IA4	M	>	100	D	Megala	Cutanic Luvisols (Epi-dystric)	A
AAUGI_01	Gimbichu	39.22688	8.91686	2324	BO	IP4	I	>	100	D	koticha	Haplic Vertisols (Eutric)	A
AAUGI_02	Gimbichu	39.23338	8.97558	2325	BO	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_03	Gimbichu	39.18239	8.98583	2327	BO	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_04	Gimbichu	39.21279	9.00092	2370	TS	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_05	Gimbichu	39.23742	9.00276	2385	TS	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
AAUGI_06	Gimbichu	39.13333	9.02476	2492	TS	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_07	Gimbichu	39.14793	9.02719	2482	TS	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_08	Gimbichu	39.16815	9.02664	2437	TS	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_09	Gimbichu	39.17654	9.03987	2458	BO	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_10	Gimbichu	39.18905	9.05806	2466	BO	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_11	Gimbichu	39.22570	9.06664	2482	BO	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_12	Gimbichu	39.26767	9.04805	2454	TS	IP4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGI_13	Gimbichu	39.25101	9.08933	2479	TS	IP4	I	>	100	D	koticha	Haplic Vertisols (Eutric)	A
AAUGI_14	Gimbichu	39.08062	8.94090	2373	MS	IP4	I	>	100	D	Cari	Haplic Phaeozems	A
AAUGI_15	Gimbichu	39.17695	9.02134	2410	MS	IP4	I	>	100	D	Cari	Haplic Phaeozems	A
AAUGI_16	Gimbichu	39.20101	8.96991	2320	MS	IP4	I	>	100	D	Cari	Haplic Phaeozems	A
AAUGI_17	Gimbichu	39.20052	8.97231	2315	MS	IP4	I	>	100	D	Cari	Haplic Phaeozems	A
AAUGI_18	Gimbichu	39.19912	8.97766	2318	MS	IP4	I	>	100	D	Cari	Haplic Phaeozems	A
AAUGI_19	Gimbichu	39.19997	8.97861	2321	MS	IP4	I	>	100	D	Cari	Haplic Phaeozems	A
AAUGI_20	Gimbichu	39.30815	9.10303	2127	UP	IP4	W	=	15	V	Keyafer	Haplic Leptosols	A
AAUGI_21	Gimbichu	39.23545	9.11044	2243	UP	IP4	W	=	13	V	Chari	Haplic Leptosols	A
AAUGI_22	Gimbichu	39.32001	9.10310	1984	UP	IP4	W	=	12	V	Keyafer	Haplic Leptosols	A
AAUGI_23	Gimbichu	39.10315	9.05884	2513	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGI_24	Gimbichu	39.12393	9.07034	2504	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGI_25	Gimbichu	39.12577	9.07098	2504	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGI_26	Gimbichu	39.12762	9.07321	2503	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGI_27	Gimbichu	39.17986	8.92909	2269	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGI_28	Gimbichu	39.18316	9.00570	2381	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGI_29	Gimbichu	39.17233	8.93521	2327	MS	IA4	W	>	100	D	Gombore	Haplic Luvisols	A
AAUGIR_01	Girar Jarso	38.78802	9.72044	2577	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_02	Girar Jarso	38.80776	9.70129	2588	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_03	Girar Jarso	38.76871	9.70588	2555	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_04	Girar Jarso	38.71369	9.69034	2598	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_05	Girar Jarso	38.71638	9.67773	2597	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_06	Girar Jarso	38.82265	9.70924	2674	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_07	Girar Jarso	38.78361	9.77368	2615	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_08	Girar Jarso	38.75584	9.76402	2739	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_09	Girar Jarso	38.72738	9.69784	2665	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_10	Girar Jarso	38.78881	9.86189	1721	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_11	Girar Jarso	38.74650	9.73090	2647	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_12	Girar Jarso	38.74465	9.72161	2645	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_13	Girar Jarso	38.73345	9.71320	2689	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
AAUGIR_14	Girar Jarso	38.72634	9.72048	2735	LS	IB4	I	>	100	D	Koticha	Haplic Vertisols (Eutric)	A
AAUGIR_15	Girar Jarso	38.71262	9.83343	2727	UP	IA4	W	=	12	V	Hofi	Lithic Leptosols	A
AAUGIR_16	Girar Jarso	38.74427	9.81338	2700	UP	IA4	W	=	11	V	Hofi	Lithic Leptosols	A
AAUGIR_17	Girar Jarso	38.71632	9.81363	2879	UP	IA4	W	=	11	V	Hofi	Lithic Leptosols	A
AAUGIR_18	Girar Jarso	38.74694	9.74062	2745	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_19	Girar Jarso	38.74397	9.75624	2750	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_20	Girar Jarso	38.63351	9.68362	2764	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_21	Girar Jarso	38.65029	9.68974	2795	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_22	Girar Jarso	38.72376	9.72855	2731	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_23	Girar Jarso	38.73082	9.74775	2783	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_24	Girar Jarso	38.77939	9.87021	1715	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_25	Girar Jarso	38.75651	9.86381	1814	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_26	Girar Jarso	38.74108	9.81081	2773	MS	IA4	W	>	100	D	Gombore	Haplic Nitisols	A
AAUGIR_27	Girar Jarso	38.75367	9.85696	1824	MS	IA4	W	>	100	D	Gombore	Haplic Nitisols	A
AAUGIR_28	Girar Jarso	38.79678	9.73234	2618	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_29	Girar Jarso	38.66266	9.70393	2769	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUGIR_30	Girar Jarso	38.72052	9.71229	2730	MS	IA4	W	>	100	D	Gombore	Cutanic Luvisols (Hyper-eutric)	A
AAUMu_001	Munesa	38.93579	7.73419	2286	UP	IP4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
AAUMu_002	Munesa	38.94310	7.73241	2340	UP	IP4	I	=	60	M	Koticha	Haplic Vertisols (Pellic)	A
AAUMu_003	Munesa	38.94650	7.73292	2339	UP	IP4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
AAUMu_004	Munesa	38.96196	7.73352	2361	UP	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_005	Munesa	38.93317	7.63146	2526	UP	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_006	Munesa	38.93982	7.63195	2572	CR	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_007	Munesa	38.94702	7.63140	2579	CR	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_008	Munesa	38.95874	7.63440	2599	CR	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_009	Munesa	38.97044	7.63284	2582	CR	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_010	Munesa	38.91835	7.73290	2185	TS	IP4	M	>	100	D	Koticha	Vertic Cambisols	A
AAUMu_011	Munesa	38.91824	7.73552	2174	UP	IP4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
AAUMu_012	Munesa	38.92146	7.73372	2221	MS	IP4	E	=	10	V	Hofi	Lithic Leptosols	A
AAUMu_013	Munesa	38.92458	7.73177	2274	UP	IP4	W	>	100	D	Daleti	Haplic Phaeozems	A
AAUMu_014	Munesa	38.93595	7.73397	2290	MS	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_015	Munesa	38.97031	7.73281	2417	LS	IP4	E	=	10	V	Hofi	Lithic Leptosols	A
AAUMu_016	Munesa	38.93042	7.63443	2512	MS	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_017	Munesa	38.92651	7.63345	2510	MS	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_018	Munesa	38.90886	7.63351	2469	MS	IP4	I	=	80	M	Dimilie	Haplic Cambisols	A
AAUMu_019	Munesa	39.01402	7.63388	2566	CR	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_020	Munesa	39.02647	7.64566	2511	MS	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
AAUMu_021	Munesa	39.04345	7.63269	2523	MS	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_022	Munesa	39.10390	7.61910	2471	CR	IP4	I	>	100	D	Koticha	Haplic Planosols (Albic)	A
AAUMu_023	Munesa	38.96598	7.37161	2958	LS	IP4	I	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_024	Munesa	38.96108	7.36646	2906	MS	IP4	I	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_025	Munesa	38.95443	7.36476	2841	MS	IP4	I	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_026	Munesa	38.94912	7.36545	2796	LS	IP4	I	=	90	M	Dimilie	Haplic Alisols	A
AAUMu_027	Munesa	38.07972	7.44906	3042	UP	IP4	I	>	90	S	Dimilie	Gleyic Alisols	A
AAUMu_028	Munesa	39.03018	7.45316	3214	UP	IP4	W	=	45	S	Dimilie	Haplic Alisols	A
AAUMu_029	Munesa	38.91412	7.36742	2700	MS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_030	Munesa	38.92210	7.36754	2725	LS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_031	Munesa	38.92998	7.36704	2776	CR	IP4	W	>	100	D	Dimilie	Haplic Luvisols (Rhodic)	A
AAUMu_032	Munesa	38.93778	7.36730	2779	BO	IP4	W	>	100	D	Dimilie	Haplic Luvisols (Rhodic)	A
AAUMu_033	Munesa	39.07449	7.44740	3031	MS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_034	Munesa	39.02332	7.45412	3162	UP	IP4	W	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_035	Munesa	39.02874	7.42662	3235	LS	IP4	E	=	10	V	Hofi	Lithic Leptosols	A
AAUMu_036	Munesa	39.01522	7.45436	3141	LS	IP4	W	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_037	Munesa	39.01456	7.45136	3136	UP	IP4	W	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_038	Munesa	38.96397	7.45480	2870	MS	IP4	W	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_039	Munesa	38.95902	7.45509	2828	MS	IP4	W	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_040	Munesa	38.95241	7.45526	2792	LS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_041	Munesa	38.95012	7.45538	2792	CR	IP4	W	>	100	D	Dimilie	Haplic Alisols	A
AAUMu_042	Munesa	38.93437	7.45331	2770	LS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_043	Munesa	38.90675	7.45480	2650	UP	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_044	Munesa	38.90768	7.45477	2618	CR	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_045	Munesa	38.91257	7.45475	2629	LS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_046	Munesa	38.91866	7.45369	2665	MS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_047	Munesa	38.92424	7.45300	2724	UP	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_048	Munesa	38.92885	7.45280	2739	CR	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_049	Munesa	38.93571	7.45328	2742	MS	IP4	W	>	100	D	Dimilie	Vertic Luvisols	A
AAUMu_050	Munesa	38.96424	7.52947	2698	MS	IP4	I	>	90	M	Koticha	Gleyic Planosols	A
AAUMu_051	Munesa	38.92761	7.53068	2536	UP	IP4	W	>	100	D	Dimilie	Haplic Nitisols (Rhodic)	A
AAUMu_052	Munesa	38.91215	7.53732	2430	MS	IP4	W	>	100	D	Dimilie	Haplic Nitisols (Rhodic)	A
AAUMu_053	Munesa	38.90753	7.54622	2329	UP	IP4	E	=	10	V	Hofi	Lithic Leptosols	A
BDUB_001	Burie	37.06576	10.78895	2489	TS	UC1	W	>	102	M	Borebor	Haplic Luvisols (MnFe)	A
BDUB_002	Burie	37.07557	10.78152	2521	MS	UC1	W	=	20	V	Boda	Hyper-skeletic Leptosols	A
BDUB_003	Burie	37.04256	10.76010	2381	MS	UC1	S	=	30	S	Boda	Lithic Leptosols	A
BDUB_004	Burie	37.06963	10.74404	2257	TS	UC1	W	>	104	X	Keye Afer	Haplic Nitisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Altitude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
BDUB_005	Burie	37.05952	10.74255	2335	LS	UC1	W	>	100	D	Keye Afer	Haplic Nitisols	A
BDUB_006	Burie	37.06546	10.72203	2127	LS	UC1	W	>	87	M	Borebor	Haplic Luvisols	A
BDUB_007	Burie	37.06897	10.72162	2122	TS	UC1	M	>	114	X	Keye Afer	Haplic Nitisols	A
BDUB_008	Burie	37.06959	10.71031	2087	LS	IP4	W	>	80	M	Keye Afer	Haplic Nitisols (Skeletic)	A
BDUB_009	Burie	37.09634	10.70317	2068	BO	IP3	P	>	110	X	Keyate	Mollic Nitisols	A
BDUB_010	Burie	37.11637	10.70377	2026	BO	IP3	P	>	100	X	Walka	Vertisols (Chromic)	A
BDUB_011	Burie	37.03447	10.61157	2013	TS	IP3	P	>	103	X	Walka	Vertisols (Chromic)	A
BDUB_012	Burie	37.06636	10.78122	2481	MS	IB2	w	>	88	M	Borebor	Haplic Luvisols (Skeletic)	A
BDUB_013	Burie	37.04279	10.52531	1967	BO	UF2	V	>	105	X	Walka	Gleyic Vertisols	A
BDUB_014	Burie	37.03507	10.43251	2011	BO	IP3	V	>	70	X	Walka	Haplic Vertisols	A
BDUB_015	Burie	37.01782	10.29629	1117	MS	IB2	S	=	20	S	Boda	Lithic Leptosols	A
BDUB_016	Burie	37.02495	10.29748	1147	MS	IB2	S	=	21	S	Boda	Lithic Leptosols	A
BDUB_017	Burie	37.03626	10.32365	1374	MS	IB2	S	=	20	S	Boda	Lithic Leptosols	A
BDUB_018	Burie	37.03090	10.36291	1634	LS	UC1	W	>	70	M	Keye Afer	Luvic Nitisols	A
BDUB_019	Burie	37.03328	10.67425	2083	MS	IP4	W	>	60	M	Keye Afer	Luvic Nitisols	A
BDUB_020	Burie	37.03685	10.38314	1773	MS	IB2	W	=	23	V	Boda	Hyper-skeletic Leptosols	A
BDUB_021	Burie	37.13387	10.57509	1741	UP	IB2	W	=	25	S	Boda	Lithic Leptosols	A
BDUB_022	Burie	37.03566	10.41526	2020	TS	IP3	W	>	100	X	Keye Afer	Haplic Nitisols	A
BDUB_023	Burie	37.03804	10.40872	2045	MS	IP4	W	>	89	M	Borebor	Haplic Luvisols	A
BDUB_024	Burie	37.08926	10.78389	2233	TS	UC1	P	>	76	X	Walka	Haplic Vertisols	A
BDUB_025	Burie	37.11424	10.77319	2383	TS	UC1	P	>	120	X	Keye Afer	Mollic Nitisols	A
BDUB_026	Burie	37.09233	10.77415	2245	MS	UC1	w	>	79	m	Borebor	Haplic Luvisols (MnFe)	A
BDUB_027	Burie	37.04652	10.05000	1963	BO	IP2	P	>	100	X	Keye Afer	Haplic Nitisols	A
BDUB_028	Burie	37.02079	10.71805	2120	TS	IP1	P	>	105	D	Keye Afer	Haplic Nitisols	A
BDUB_029	Burie	37.02495	10.70377	2051	MS	IP4	W	>	90	M	Keye Afer	Haplic Nitisols (Skeletic)	A
BDUB_030	Burie	37.05707	10.69127	2103	UP	IP4	S	=	25	S	Boda	Lithic Leptosols	A
BDUD_001	Dera	37.50478	11.72507	1811	UP	UC1	W	=	25	S	Nechate Afer	Lithic Leptosols	A
BDUD_002	Dera	37.49756	11.72889	1828	BO	UF1	P	>	90	X	Walka	Haplic Vertisols (Chromic)	A
BDUD_003	Dera	37.56513	11.72549	1879	LS	IB2	W	>	105	X	Keye Afer	Luvic Nitisols	A
BDUD_004	Dera	37.53239	11.74822	1879	LS	IB2	P	>	106	X	Walka	Gleyic Vertisols	A
BDUD_005	Dera	37.53864	11.75922	1911	BO	IB2	M	>	120	X	Keye Afer	Haplic Nitisols	A
BDUD_006	Dera	37.54429	11.76755	1916	TS	UF2	P	>	85	X	Walka	Gleyic Vertisols (Chromic)	A
BDUD_007	Dera	37.55469	11.77439	1943	BO	UF3	P	>	115	X	Walka	Haplic Vertisols (Chromic)	A
BDUD_008	Dera	37.56927	11.78242	1947	TS	IB2	W	>	145	X	Bunama	Luvic Nitosols	A
BDUD_009	Dera	37.57522	11.77231	1979	up	UC1	S	=	25	S	Borebor	Lithic Leptosols	A
BDUD_010	Dera	37.58087	11.76934	1976	TS	IB2	W	>	95	W	Bunama	Haplic Nitisols (Skeletic)	A
BDUD_011	Dera	37.58890	11.76607	1946	MS	UC1	S	>	75	M	Walka	Haplic Vertisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
BDUD_012	Dera	37.59485	11.75922	1944	TS	IB2	W	>	100	X	Borebor	Haplic Luvisols	A
BDUD_013	Dera	37.59902	11.75893	1924	up	UC1	S	>	76	M	Borebor	Haplic Luvisols	A
BDUD_014	Dera	37.60923	11.74612	1963	TS	IB2	W	>	100	M	Merere/Walka	Haplic Vertisols	A
BDUD_015	Dera	37.59487	11.73102	1975	CR	UC1	S	=	25	S	Nechate Afer	Haplic Leptosols (Eutric)	A
BDUD_016	Dera	37.63396	11.69702	2061	MS	IB2	W	>	110	X	Dewol	Haplic Nitisols	A
BDUD_017	Dera	37.62419	11.69575	2086	up	UC1	S	>	85	D	Borebor	Haplic Luvisols (Skeletic)	A
BDUD_018	Dera	37.62419	11.70297	2105	TS	IB2	W	>	100	X	Bunama	Haplic Luvisols	A
BDUD_019	Dera	37.62717	11.67449	2124	TS	IB2	S	>	77	D	Bunama	Haplic Luvisols	A
BDUD_020	Dera	37.63057	11.71699	2039	BO	IB2	P	>	100	X	Walka	Haplic Vertisols (Chromic)	A
BDUD_021	Dera	37.59366	11.81693	1833	MS	UC1	W	>	70	D	bula	Haplic Cambisols	A
BDUD_022	Dera	37.60228	11.81841	1822	BO	IB2	P	>	83	X	Walka	Gleyic Vertisols	A
BDUD_023	Dera	37.63157	11.82252	1813	BO	UL2	V	>	120	X	Walka	Gleyic Vertisols	A
BDUD_024	Dera	37.63857	11.81009	1817	BO	UL2	P	>	100	X	Walka	Gleyic Vertisols (Pellic)	A
BDUD_025	Dera	37.60507	11.63710	2234	UP	UC1	S	=	40	S	Nechate Afer	Lithic Leptosols	A
BDUD_026	Dera	37.62504	11.63456	2230	UP	UC1	S	>	80	D	Borebor	Haplic Luvisols	A
BDUD_027	Dera	37.54940	11.70425	1930	BO	UC1	V	>	100	X	Merere/Walka	Gleyic Vertisols (Eutric)	A
BDUD_028	Dera	37.60407	11.76547	1922	MS	IB2	S	>	90	D	Borebor	Haplic Luvisols	A
BDUD_029	Dera	37.51711	11.71019	1826	TS	IB2	p	>	105	X	Merere/Walka	Haplic Vertisols (Chromic)	A
BDUD_030	Dera	37.68156	11.66643	2428	UP	IB2	S	=	15	V	Boda	Hyper-skeletic Leptosols	A
BDUJT_001	JabiTehnan	37.39888	10.73987	1905	BO	IB2	P	>	100	X	Keye Afer	Mollic Nitisols	A
BDUJT_002	JabiTehnan	37.40275	10.67593	2040	TS	IB2	M	>	85	D	Keye Afer	Haplic Nitisols	A
BDUJT_003	JabiTehnan	37.40899	10.76010	2028	BO	IB2	V	>	67	X	Walka	Gleyic Vertisols	A
BDUJT_004	JabiTehnan	37.39710	10.76991	1964	TS	IB2	P	>	75	X	Walka	Haplic Vertisols (Chromic)	A
BDUJT_005	JabiTehnan	37.13596	10.53405	1567	BO	IB2	P	>	86	X	Walka	Haplic Vertisols (Chromic)	A
BDUJT_006	JabiTehnan	37.13595	10.51115	1504	BO	IB2	V	>	100	X	Walka	Gleyic Vertisols	A
BDUJT_007	JabiTehnan	37.15586	10.53495	1545	BO	IB2	w	>	82	X	Keye Afer	Luvic Nitisols	A
BDUJT_008	JabiTehnan	37.15586	10.64589	1820	BO	IP1	M	>	70	X	Keye Afer	Haplic Nitisols	A
BDUJT_009	JabiTehnan	37.16391	10.65689	1956	MS	IP2	W	>	76	D	Keye Afer	Haplic Nitisols	A
BDUJT_010	JabiTehnan	37.27634	10.66136	1808	BO	IP2	V	>	99	X	Walka	Gleyic Vertisols	A
BDUJT_011	JabiTehnan	37.21002	10.71043	2020	TS	IP2	W	>	80	X	Keye Afer	Haplic Nitisols	A
BDUJT_012	JabiTehnan	37.22875	10.71519	1980	UP	IP2	W	>	88	D	Keye Afer	Haplic Nitisols	A
BDUJT_013	JabiTehnan	37.17195	10.69764	1988	MS	IP2	W	>	95	D	Keye Afer	Haplic Nitisols	A
BDUJT_014	JabiTehnan	37.21805	10.72530	1980	BO	IP2	P	>	100	X	Walka	Haplic Vertisols	A
BDUJT_015	JabiTehnan	37.22013	10.75058	2031	MS	IP2	S	=	25	S	Boda	Haplic Leptosols (Eutric)	A
BDUJT_016	JabiTehnan	37.21507	10.76426	2050	MS	IP2	E	=	25	V	Boda	Hyper-skeletic Leptosols	A
BDUJT_017	JabiTehnan	37.38788	10.64232	1817	BO	IP2	P	>	100	X	Walka	Haplic Vertisols (Chromic)	A
BDUJT_018	JabiTehnan	37.38342	10.64321	1786	BO	UC1	P	>	95	X	Walka	Haplic Vertisols (Chromic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
BDUJT_019	JabiTehnan	37.39977	10.63726	1993	MS	IP4	E	=	25	S	Boda	Lithic Leptosols	A
BDUJT_020	JabiTehnan	37.40432	10.62615	1786	TS	IP1	M	>	85	D	Keye Afer	Haplic Nitisols	A
BDUJT_021	JabiTehnan	37.39264	10.65124	1786	TS	IB2	W	>	80	D	Keye Afer	Haplic Nitisols	A
BDUJT_022	JabiTehnan	37.27396	10.68187	1780	TS	IB2	M	>	88	X	Keye Afer	Haplic Nitisols	A
BDUJT_023	JabiTehnan	37.30787	10.68128	1910	TS	IB2	M	>	90	X	Keye Afer	Mollic Nitisols	A
BDUJT_024	JabiTehnan	37.31798	10.68396	1910	BO	IB2	V	>	110	X	Walka	Gleyic Vertisols	A
BDUJT_025	JabiTehnan	37.32006	10.67771	1921	BO	IB2	P	>	90	X	Keye Afer	Mollic Nitisols	A
BDUJT_026	JabiTehnan	37.39383	10.64142	1877	MS	IP4	W	=	50	S	Boda	Haplic Leptosols	A
BDUJT_027	JabiTehnan	37.40870	10.64856	1831	MS	IP3	W	>	80	M	Keye Afer	Haplic Nitisols	A
BDUJT_028	JabiTehnan	37.40305	10.64945	1836	MS	IP3	S	=	50	S	Boda	Lithic Leptosols	A
BDUJT_029	JabiTehnan	37.40781	10.63934	1840	MS	IP3	E	=	25	V	Boda	Hyper-skeletic Leptosols	A
BDUM_001	Mecha	37.13786	11.41363	1925	BO	IB2	W	>	100	V	Keye Afer	Luvic Nitisols	A
BDUM_002	Mecha	37.16796	11.42320	2020	MS	IB2	S	>	93	S	Keye Afer	Luvic Nitisols	A
BDUM_003	Mecha	37.17599	11.42529	2036	BO	IB5	W	>	75	X	Walka	Haplic Vertisols	A
BDUM_004	Mecha	37.20395	11.39435	2029	BO	IB	M	>	110	X	Keye Afer	Luvic Nitisols	A
BDUM_005	Mecha	37.20900	11.43629	2020	BO	UF2	P	>	90	X	Keye Afer	Luvic Nitisols	A
BDUM_006	Mecha	37.21525	11.43986	2019	BO	UL2	P	>	140	X	Walka	Haplic Vertisols	A
BDUM_007	Mecha	37.22625	11.45711	2025	BO	IB2	M	>	85	X	Keye Afer	Haplic Nitisols	A
BDUM_008	Mecha	37.10906	11.31107	2009	TS	IB2	S	>	80	X	Keye Afer	Luvic Nitisols	A
BDUM_009	Mecha	37.24767	11.21946	2436	MS	IP2	W	=	35	V	Borebor	Hyper-skeletic Leptosols	A
BDUM_010	Mecha	37.21495	11.34171	2039	TS	UL2	V	>	110	X	Walka	Haplic Vertisols	A
BDUM_011	Mecha	37.14178	11.30691	2112	BO	IB2	M	>	104	X	Keye Afer	Luvic Nitisols	A
BDUM_012	Mecha	37.06052	11.35176	1991	TS	IB2	S	>	120	D	Keye Afer	Luvic Nitisols	A
BDUM_013	Mecha	37.24112	11.45235	2005	BO	IB2	P	>	130	X	Walka	Haplic Vertisols (Pellic)	A
BDUM_014	Mecha	37.24469	11.43510	2040	BO	IB2	V	>	105	X	Walka	Gleyic Vertisols	A
BDUM_015	Mecha	37.19888	11.30423	2089	TS	IB2	W	>	120	X	Keye Afer	Luvic Nitisols	A
BDUM_016	Mecha	37.25986	11.28966	2197	MS	IP1	S	=	40	S	Borebor	Lithic Leptosols	A
BDUM_017	Mecha	37.23577	11.30126	2091	MS	IP1	W	>	90	D	Keye Afer	Luvic Nitisols	A
BDUM_018	Mecha	37.03494	11.45348	1927	TS	IB2	M	>	125	X	Borebor	Haplic Luvisols (MnFe)	A
BDUM_019	Mecha	37.12477	11.40708	2005	BO	IB2	V	>	96	X	Walka	Gleyic Vertisols	A
BDUM_020	Mecha	37.10097	11.48620	1905	TS	IB2	M	>	99	X	Keye Afer	Luvic Nitisols	A
BDUM_021	Mecha	37.17479	11.39941	2015	BO	UL1	V	>	100	X	Walka	Gleyic Vertisols	A
BDUM_022	Mecha	37.16617	11.42014	2029	BO	IB2	P	>	95	X	Keye Afer	Haplic Nitisols	A
BDUM_023	Mecha	37.17093	11.43302	2045	MS	IB2	W	=	25	S	Nechate Afer	Lithic Leptosols	A
BDUM_024	Mecha	37.04744	11.47668	1917	BO	IB2	M	>	103	X	Borebor	Haplic Luvisols (MnFe)	A
BDUM_025	Mecha	37.07064	11.48858	1901	BO	IB2	p	>	90	X	Walka	Gleyic Vertisols	A
BDUM_026	Mecha	37.06945	11.50167	1871	TS	IB2	M	>	100	X	Keye Afer	Luvic Nitisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Altitude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
BDUM_027	Mecha	37.08432	11.62183	1818	BO	IB2	V	>	95	X	Walka	Gleyic Vertisols	A
BDUM_028	Mecha	37.17771	11.52249	1909	BO	IB2	p	>	70	X	Borebor	Haplic Luvisols (MnFe)	A
BDUM_029	Mecha	37.19175	11.34795	2022	BO	IB2	V	>	100	X	Walka	Haplic Vertisols	A
BDUM_030	Dera	37.14024	11.53973	1899	CR	IB2	S	>	100	D	Borebor	Haplic Luvisols	A
BDUSA_001	South Achefer	36.92815	11.56660	2053	BO	UC1	W	>	101	X	Borebor	Nitic Luvisols (Rhodic, MnFe)	A
BDUSA_002	South Achefer	36.90776	11.55366	2070	UP	UC1	S	=	25	S	Kelal afer	Lithic Leptosols	A
BDUSA_003	South Achefer	36.92787	11.50583	2050	BO	UF1	W	>	99	X	Borebor	Haplic Luvisols (MnFe)	A
BDUSA_004	South Achefer	36.89389	11.52093	2055	BO	UC1	P	>	100	X	Walka	Haplic Vertisols	A
BDUSA_005	South Achefer	36.84613	11.41279	2016	TS	UC1	P	>	76	X	Bunama	Luvic Nitisols	A
BDUSA_006	South Achefer	36.94202	11.54295	2007	BO	IB2	M	>	104	X	Borebor	Haplic Luvisols (MnFe)	A
BDUSA_007	South Achefer	36.95506	11.54621	2011	TS	IB2	M	>	100	X	Keye Afer	Luvic Nitisols	A
BDUSA_008	South Achefer	36.95190	11.53642	2002	TS	IB2	P	>	94	D	Walka	Haplic Vertisols (Chromic)	A
BDUSA_009	South Achefer	36.93794	11.52093	1967	BO	IB2	P	>	85	X	Borebor	Vertic Luvisols	A
BDUSA_010	South Achefer	36.94772	11.49564	1963	MS	IB2	S	=	33	M	Borebor	Leptic Luvisols	A
BDUSA_011	South Achefer	36.94119	11.48912	1950	TS	IB2	P	>	100	X	Walka	Haplic Vertisols (Chromic)	A
BDUSA_012	South Achefer	36.95180	11.48423	1927	TS	IB2	M	>	80	D	Gtosh meret	Haplic Luvisols	A
BDUSA_013	South Achefer	36.96082	11.47180	1910	BO	IB2	P	>	100	X	Keye Afer	Luvic Nitisols	A
BDUSA_014	South Achefer	36.95369	11.46657	1928	BO	IB2	V	>	100	X	Gtosh meret	Gleyic Vertisols	A
BDUSA_015	South Achefer	36.95416	11.45562	1946	BO	IB2	P	>	95	X	Borebor	Nitic Luvisols	A
BDUSA_016	South Achefer	36.95369	11.47514	1960	TS	IB2	M	>	95	X	Bunama	Luvic Nitisols	A
BDUSA_017	South Achefer	36.89896	11.34569	1983	BO	IB2	M	>	100	X	Bunama	Luvic Nitisols	A
BDUSA_018	South Achefer	36.94797	11.39757	2016	TS	IB2	P	>	100	X	Walka	Haplic Vertisols (Chromic)	A
BDUSA_019	South Achefer	36.92846	11.40946	2027	BO	IB2	P	>	100	X	Keyate	Vertic Luvisols	A
BDUSA_020	South Achefer	36.93084	11.40137	2009	TS	IB2	M	>	100	X	Keyate	Haplic Luvisols (MnFe)	A
BDUSA_021	South Achefer	36.94988	11.36949	2003	BO	IB2	M	>	99	X	Bunama	Luvic Nitisols	A
BDUSA_022	South Achefer	36.84251	11.47852	1945	TS	IB2	M	>	96	X	Borebor	Haplic Luvisols (Skeletic)	A
BDUSA_023	South Achefer	36.98747	11.35902	1953	BO	IB2	V	>	105	X	Walka	Gleyic Vertisols	A
BDUSA_024	South Achefer	36.97798	11.34665	1946	BO	IB2	P	>	108	X	Keyate	Haplic Luvisols (MnFe)	A
BDUSA_025	South Achefer	37.00365	11.36378	1955	MS	IB2	W	>	60	M	Borebor	Haplic Luvisols (Skeletic)	A
BDUSA_026	South Achefer	37.01174	11.38234	1960	BO	IB2	P	>	100	X	Bunama	Luvic Nitisols	A
BDUSA_027	South Achefer	37.02317	11.36235	1935	TS	IB2	W	>	100	X	Bunama	Luvic Nitisols	A
BDUSA_028	South Achefer	36.81071	11.46384	1925	MS	UC1	W	=	25	S	Boda	Lithic Leptosols	A
BDUSA_029	South Achefer	36.78542	11.46202	1619	MS	UC1	W	=	25	V	Boda	Hyper-skeletic Leptosols	A
BDUSA_030	South Achefer	36.99842	11.45229	1919	LS	IB2	S	=	25	S	Boda	Lithic Leptosols	A
HMUG_001	Girawa	41.85711	9.08473	2364	CR	IB2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_002	Girawa	41.85841	9.08452	2342	UP	IB2	M	>	100	D	Guracha	Vertic Cambisols	A
HMUG_003	Girawa	41.86131	9.08396	2301	LS	IB2	M	>	100	D	Guracha	Vertic Cambisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HMUG_004	Girawa	41.86335	9.08383	2246	MS	IB2	I	=	90	M	Guracha	Haplic Vertisols (Pellic)	A
HMUG_005	Girawa	41.84766	9.12682	2387	MS	SC2	W	=	70	M	Kefera	Haplic Luvisols	A
HMUG_006	Girawa	41.90320	8.90000	1450	MS	SO1	E	=	10	V	Ashewa	Lithic Leptosols (Lithic)	A
HMUG_007	Girawa	41.91468	8.90054	1400	BO	SO1	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_008	Girawa	41.90685	8.90010	1410	MS	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_009	Girawa	41.91513	8.94663	1631	MS	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_010	Girawa	41.97965	8.90959	1395	MS	SO1	I	>	80	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_011	Girawa	41.98509	8.91843	1380	MS	SO1	M	=	10	V	Ashewa	Haplic Leptosols (Calcaric)	A
HMUG_012	Girawa	41.96004	8.92884	1486	UP	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_013	Girawa	41.95248	8.93004	1566	CR	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_014	Girawa	41.91896	8.97408	1998	CR	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_015	Girawa	41.91327	8.98250	2022	MS	SO1	I	=	70	M	Guracha	Haplic Vertisols (Pellic)	A
HMUG_016	Girawa	41.90810	8.99399	2014	UP	SO1	W	=	80	M	Dima	Vertic Luvisols	A
HMUG_017	Girawa	41.90990	9.00169	1995	MS	SO1	W	=	40	M	Dima	Vertic Luvisols	A
HMUG_018	Girawa	41.90388	9.00190	2032	MS	SO1	W	=	40	M	Dima	Vertic Luvisols	A
HMUG_019	Girawa	41.88459	9.00546	2030	UP	SO1	W	=	50	M	Dima	Vertic Luvisols	A
HMUG_020	Girawa	41.78620	9.00400	2024	UP	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_021	Girawa	41.88278	9.02304	2059	CR	SO1	E	>	80	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUG_022	Girawa	41.88001	9.04382	2200	CR	SO1	E	>	80	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUG_023	Girawa	41.85023	9.07843	2048	MS	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_024	Girawa	41.81617	9.08702	2142	MS	SO1	E	=	30	V	Ashewa	Lithic Leptosols	A
HMUG_025	Girawa	41.84453	9.08779	2135	MS	SO1	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_026	Girawa	41.73999	9.08698	2130	MS	SO1	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_027	Girawa	41.90640	9.14605	1906	UP	SO1	S	=	25	V	Ashewa	Haplic Regosols (Eutric)	A
HMUG_028	Girawa	41.14751	9.14160	1962	UP	SO1	W	=	80	M	Guracha	Vertic Luvisols	A
HMUG_029	Girawa	41.89355	9.14963	1996	UP	SO1	W	=	80	M	Dima	Vertic Luvisols	A
HMUG_030	Girawa	41.88606	9.14031	2045	UP	SO1	S	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUG_031	Girawa	41.87598	9.13186	2168	TS	SO1	I	>	80	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_032	Girawa	41.86679	9.13135	2273	UP	SO1	W	>	100	D	Dima	Vertic Luvisols	A
HMUG_033	Girawa	41.86393	9.13305	2304	MS	SO1	W	>	100	D	Dima	Vertic Luvisols	A
HMUG_034	Girawa	41.85839	9.13120	2367	UP	SO1	W	>	100	D	Dima	Vertic Luvisols	A
HMUG_035	Girawa	41.89236	9.13443	2427	UP	SO1	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_036	Girawa	41.84619	9.13504	2499	UP	SO1	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_037	Girawa	41.73925	8.98702	1365	LS	SO1	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_038	Girawa	41.78067	8.98698	1358	LS	SC2	E	=	45	S	Ashewa	Haplic Regosols (Eutric)	A
HMUG_039	Girawa	41.76424	8.98560	1343	LS	SC2	E	>	100	S	Ashewa	Haplic Regosols (Eutric)	A
HMUG_040	Girawa	41.73532	8.98499	1329	BO	SC2	W	>	100	D	Kefera	Vertic Luvisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HMUG_041	Girawa	41.73999	9.01094	1369	LS	IB2	E	=	10	V	Ashewa	Lithic Leptosols (Lithic)	A
HMUG_042	Girawa	41.73775	9.01591	1348	LS	SC2	W	>	100	D	Bekola	Vertic Luvisols	A
HMUG_043	Girawa	41.73611	9.01044	1387	MS	SC2	W	>	100	D	Bekola	Vertic Luvisols	A
HMUG_044	Girawa	41.73997	9.01683	1364	BO	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_045	Girawa	41.76652	9.97867	1940	UP	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_046	Girawa	41.78213	9.00588	1907	UP	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_047	Girawa	41.77034	9.01706	2017	UP	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_048	Girawa	41.78903	8.90787	1375	BO	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_049	Girawa	41.78890	8.90950	1400	LS	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_050	Girawa	41.80352	8.95052	1450	LS	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUG_051	Girawa	41.80913	8.95841	1445	BO	SC2	I	>	10	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_052	Girawa	41.80177	9.00003	1535	BO	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUG_053	Girawa	41.80914	9.00005	1850	UP	IB2	E	=	20	V	Ashewa	Lithic Leptosols	A
HMUG_054	Girawa	41.77617	9.13151	2197	UP	SC2	E	>	100	M	Ashewa	Haplic Regosols (Eutric)	A
HMUG_055	Girawa	41.79781	9.15006	2369	LS	SC2	M	=	50	M	Guracha	Vertic Cambisols	A
HMUG_056	Girawa	41.82026	9.13608	2458	UP	SC2	M	=	50	M	Guracha	Vertic Cambisols	A
HMUHB_001	Habro	40.37162	8.70988	1931	LS	IB2	E	=	20	V	Kururi	Mollic Leptosols	A
HMUHB_002	Habro	40.37205	8.70711	1895	TS	SC2	W	=	50	S	Shira	Vertic Luvisols	A
HMUHB_003	Habro	40.37342	8.70469	1868	UP	SC2	W	=	50	S	Shira	Vertic Luvisols	A
HMUHB_004	Habro	40.37675	8.70344	1828	UP	SC2	W	=	50	S	Shira	Vertic Luvisols	A
HMUHB_005	Habro	40.37878	8.70119	1800	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_006	Habro	40.38217	8.69709	1767	UP	SC2	W	=	50	S	Ashewa	Haplic Cambisols (Eutric)	A
HMUHB_007	Habro	40.38402	8.69122	1747	MS	SC2	W	=	50	S	Ashewa	Haplic Cambisols (Eutric)	A
HMUHB_008	Habro	40.38689	8.68146	1715	UP	SC2	E	=	40	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_009	Habro	40.38757	8.67497	1742	CR	SC2	E	=	40	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_010	Habro	40.39636	8.67067	1742	CR	SC2	E	=	40	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_011	Habro	40.39360	8.66844	1725	UP	SC2	E	=	40	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_012	Habro	40.39059	8.66646	1747	MS	SC2	E	=	40	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_013	Habro	40.42475	8.74594	1891	LS	IB2	E	=	20	V	Ashewa	Mollic Leptosols	A
HMUHB_014	Habro	40.42792	8.74157	1817	UP	SC2	E	=	40	M	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_015	Habro	40.43184	8.73961	1823	CR	SC2	E	=	40	M	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_016	Habro	40.43818	8.73605	1735	MS	SC2	E	=	40	M	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_017	Habro	40.48022	8.66183	1776	CR	SC2	W	=	45	S	Chirecha	Haplic Luvisols	A
HMUHB_018	Habro	40.47809	8.67199	1769	UP	SC2	w	=	55	M	Chirecha	Haplic Luvisols	A
HMUHB_019	Habro	40.47291	8.68329	1761	MS	SC2	W	>	55	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_020	Habro	40.46532	8.68629	1757	MS	SC2	W	>	55	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_021	Habro	40.46827	8.69427	1782	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HMUHB_022	Habro	40.46835	8.70018	1784	MS	SC2	W	>	55	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_023	Habro	40.46154	8.71238	1748	UP	SC2	E	=	60	M	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_024	Habro	40.45723	8.71538	1743	UP	SC2	E	=	60	M	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_025	Habro	40.45327	8.78452	1759	LS	SC2	W	=	80	M	Dima	Haplic Luvisols	A
HMUHB_026	Habro	40.56023	8.62131	1762	UP	SC2	W	>	100	D	Dima	Vertic Luvisols	A
HMUHB_027	Habro	40.55339	8.63514	1775	UP	SC2	W	>	100	D	Dima	Vertic Luvisols	A
HMUHB_028	Habro	40.53064	8.67044	1782	UP	SC2	W	>	100	D	Dima	Vertic Luvisols	A
HMUHB_029	Habro	40.52528	8.68744	1863	UP	SC2	I	>	100	S	Faro	Haplic Vertisols (Pellic)	A
HMUHB_030	Habro	40.52039	8.71060	1858	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_031	Habro	40.51587	8.71776	1845	LS	SC2	W	>	100	D	Dima	Vertic Luvisols	A
HMUHB_032	Habro	40.50389	8.73445	1795	MS	SC2	W	>	100	D	Dima	Vertic Luvisols	A
HMUHB_033	Habro	40.49804	8.74926	1831	MS	SC2	W	=	70	M	Chirecha	Haplic Nitisols	A
HMUHB_034	Habro	40.48892	8.76967	1863	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHB_035	Habro	40.48574	8.78339	1783	MS	SC2	W	>	100	M	Chirecha	Haplic Nitisols	A
HMUHB_036	Habro	40.48655	8.78685	1772	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_037	Habro	40.46752	8.79795	1824	MS	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHB_038	Habro	40.45654	8.82518	1737	MS	IB2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_039	Habro	40.46484	8.82130	1727	MS	IB2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_040	Habro	40.48104	8.82029	1844	UP	IB2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_041	Habro	40.49580	8.81946	1861	MS	IB2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_042	Habro	40.58763	8.87394	1905	LS	IB2	E	=	10	V	Kokari	Lithic Leptosols	A
HMUHB_043	Habro	40.58710	8.86881	1821	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_044	Habro	40.58675	8.86328	1810	CR	SC2	W	>	100	D	Dima	Haplic Nitisols (Pellic)	A
HMUHB_045	Habro	40.58462	8.85952	1784	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHB_046	Habro	40.58396	8.85603	1771	MS	SC2	M	=	60	M	Guracha	Vertic Cambisols	A
HMUHB_047	Habro	40.58372	8.84804	1704	LS	SC2	E	=	100	M	Ashewa	Haplic Cambisols (Eutric)	A
HMUHB_048	Habro	40.58376	8.83987	1799	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHB_049	Habro	40.58370	8.83851	1781	LS	SC2	E	>	10	M	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_050	Habro	40.50534	8.78631	1890	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHB_051	Habro	40.58704	8.78929	1897	UP	SC2	W	>	100	D	Guracha	Vertic Cambisols	A
HMUHB_052	Habro	40.58864	8.77294	1910	MS	SC2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_053	Habro	40.58986	8.77761	1920	UP	SC2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_054	Habro	40.58097	8.78582	1935	UP	SC2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_055	Habro	40.58725	8.78884	1938	UP	SC2	E	=	10	V	Ashewa	Haplic Leptosols (Eutric)	A
HMUHB_056	Habro	40.58445	8.79481	1935	CR	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHB_057	Habro	40.58193	8.80163	1952	MS	SC2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HMUHB_058	Habro	40.58475	8.81025	1895	UP	SC2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HMUHB_059	Habro	40.50508	8.81917	1885	MS	SC2	E	=	25	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHB_060	Habro	40.58593	8.82666	1804	MS	SC2	E	>	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_001	Haremaya	41.98810	9.26001	1874	UP	SC2	E	=	35	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_002	Haremaya	41.98928	9.26668	1882	CR	SC2	E	=	55	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_003	Haremaya	41.99015	9.27527	1897	UP	SC2	E	=	35	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_004	Haremaya	41.99341	9.26830	1880	MS	SC2	E	=	30	S	Beda	Haplic Regosols (Eutric)	A
HMUHR_005	Haremaya	41.98248	9.26872	1937	MS	SC2	E	>	100	S	Kefera	Haplic Arenosols (Eutric)	A
HMUHR_006	Haremaya	41.98604	9.26850	1931	MS	SC2	W	>	100	D	Kefera	Haplic Nitisols (Eutric)	A
HMUHR_007	Haremaya	41.99032	9.27514	1902	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_008	Haremaya	41.99618	9.27999	1912	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_009	Haremaya	41.99493	9.28498	1921	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_010	Haremaya	41.97609	9.28680	1901	MS	SC2	E	=	30	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_011	Haremaya	41.98262	9.30008	1992	MS	SC2	W	>	100	D	Kefera	Haplic Nitisols (Rhodic)	A
HMUHR_012	Haremaya	41.98976	9.30293	1991	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHR_013	Haremaya	42.00042	9.31412	1950	UP	SC2	E	=	60	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_014	Haremaya	42.00852	9.32943	1904	MS	SC2	E	=	35	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_015	Haremaya	41.99488	9.32355	1958	UP	SC2	E	=	35	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_016	Haremaya	41.98587	9.33314	2022	CR	SC2	W	=	60	M	Kefera	Haplic Luvisols	A
HMUHR_017	Haremaya	41.98206	9.33342	1986	LS	SC2	E	=	60	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_018	Haremaya	41.98452	9.34064	1980	MS	SC2	W	>	100	W	Kefera	Haplic Nitisols (Rhodic)	A
HMUHR_019	Haremaya	41.98285	9.35899	1892	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_020	Haremaya	42.00912	9.19170	1703	UP	SC2	S	=	40	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_021	Haremaya	42.00863	9.18098	1645	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHR_022	Haremaya	42.01250	9.19643	1743	MS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHR_023	Haremaya	42.01914	9.20117	1752	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHR_024	Haremaya	42.01632	9.20205	1732	MS	SC2	E	=	30	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_025	Haremaya	42.03045	9.26388	1884	MS	SC2	w	>	100	D	Kefera	Haplic Nitisols (Rhodic)	A
HMUHR_026	Haremaya	42.03040	9.26796	1875	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_027	Haremaya	42.03263	9.26816	1864	UP	SC2	E	=	60	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_028	Haremaya	42.03505	9.27851	1886	CR	SC2	E	=	60	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_029	Haremaya	42.04031	9.28847	1915	LS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_030	Haremaya	42.04701	9.29925	1971	MS	SC2	W	>	100	D	Kefera	Haplic Nitisols (Rhodic)	A
HMUHR_031	Haremaya	42.05368	9.31482	1979	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_032	Haremaya	42.05656	9.31981	1998	MS	SC2	W	>	100	D	Kefera	Haplic Nitisols (Rhodic)	A
HMUHR_033	Haremaya	42.05685	9.32812	2029	MS	SC2	W	>	100	D	Kefera	Haplic Nitisols (Rhodic)	A
HMUHR_034	Haremaya	41.95328	9.33206	1983	UP	SC2	E	=	75	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_035	Haremaya	41.94889	9.32944	1995	UP	SC2	E	=	75	M	Ashewa	Haplic Arenosols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HMUHR_036	Haremaya	41.93069	9.27541	1871	CR	SC2	E	=	50	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_037	Haremaya	41.93644	9.29224	1932	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHR_038	Haremaya	41.92922	9.30240	1975	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUHR_039	Haremaya	41.91442	9.32211	1958	UP	SC2	E	=	10	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_040	Haremaya	41.65700	9.33198	2005	UP	SC2	E	>	90	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_041	Haremaya	41.91773	9.33183	2220	CR	SC2	E	=	20	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_042	Haremaya	41.89975	9.30656	1935	UP	SC2	E	=	20	V	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_043	Haremaya	41.89117	9.32601	1949	UP	SC2	E	>	100	M	Ashewa	Haplic Cambisols (Eutric)	A
HMUHR_044	Haremaya	41.89449	9.33184	1950	UP	SC2	S	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_045	Haremaya	41.89882	9.33133	1903	UP	SC2	S	>	90	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_046	Haremaya	41.95025	9.39923	2033	BO	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHR_047	Haremaya	41.95769	9.40615	2034	BO	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHR_048	Haremaya	41.93940	9.46058	2108	LS	SC2	E	=	80	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_049	Haremaya	41.94235	9.45805	2063	BO	UF2	I	>	100	D	Guracha	Haplic Fluvisols (Eutric)	A
HMUHR_050	Haremaya	41.93992	9.44091	2041	BO	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUHR_051	Haremaya	42.00900	9.49320	2115	LS	SC2	M	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUHR_052	Haremaya	42.02740	9.49741	2114	CR	SC2	E	=	40	S	Ashewa	Haplic Regosols (Eutric)	A
HMUHR_053	Haremaya	42.03223	9.47298	2090	MS	SC2	S	>	70	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUHR_054	Haremaya	42.02092	9.39343	2089	UP	SC2	M	>	90	M	Guracha	Vertic Cambisols	A
HMUHR_055	Haremaya	42.02637	9.39142	2088	UP	SC2	I	>	100	D	Guracha	Haplic Vertisols (Chromic)	A
HMUK_001	Kombolcha	42.06326	9.49936	2160	UP	SC2	E	=	35	S	Ashewa	Haplic Regosols (Eutric)	A
HMUK_002	Kombolcha	42.06818	9.49626	2172	TS	SC2	W	=	90	M	Kefera	Vertic Luvisols	A
HMUK_003	Kombolcha	42.07245	9.48989	2172	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_004	Kombolcha	42.07335	9.46723	2194	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_005	Kombolcha	42.09669	9.49402	2274	MS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_006	Kombolcha	42.09921	9.50246	2278	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_007	Kombolcha	42.10968	9.52462	2210	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_008	Kombolcha	42.12744	9.53570	2038	LS	SC2	W	=	55	M	Kefera	Vertic Luvisols	A
HMUK_009	Kombolcha	42.13287	9.53374	2194	LS	SC2	W	=	55	M	Kefera	Vertic Luvisols	A
HMUK_010	Kombolcha	42.13146	9.54169	2006	BO	SC2	W	=	55	M	Kefera	Vertic Luvisols	A
HMUK_011	Kombolcha	42.13417	9.54726	1994	CR	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_012	Kombolcha	42.13872	9.54967	1920	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_013	Kombolcha	42.14370	9.55401	1810	BO	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUK_014	Kombolcha	42.17210	9.56712	1834	BO	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUK_015	Kombolcha	42.18240	9.56663	1883	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_016	Kombolcha	42.18287	9.52218	1897	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_017	Kombolcha	42.07611	9.39599	2203	MS	SC2	M	=	45	S	Guracha	Haplic Vertisols (Chromic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HMUK_018	Kombolcha	42.07557	9.39923	2303	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUK_019	Kombolcha	42.07948	9.39059	2162	MS	SC2	W	>	100	D	Kefera	Vertic Luvisols	A
HMUK_020	Kombolcha	42.08176	9.39061	2128	MS	SC2	I	>	100	D	Guracha	Haplic Vertisols (Pellic)	A
HMUK_021	Kombolcha	42.14331	9.39347	2037	MS	SC2	E	=	35	S	Ashewa	Haplic Regosols (Eutric)	A
HMUK_022	Kombolcha	42.15740	9.41875	2040	MS	SC2	E	>	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_023	Kombolcha	42.17782	9.41865	2030	UP	SC2	E	>	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_024	Kombolcha	42.18805	9.41845	2015	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_025	Kombolcha	42.20087	9.41870	2045	MS	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUK_026	Kombolcha	42.21357	9.41876	2078	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUK_027	Kombolcha	42.17957	9.50010	2162	UP	SC2	W	>	100	D	Kefera	Haplic Luvisols	A
HMUK_028	Kombolcha	42.17501	9.50203	2123	MS	SC2	W	>	100	D	Kefera	Haplic Luvisols	A
HMUK_029	Kombolcha	42.17115	9.50283	2154	UP	SC2	W	>	100	D	Kefera	Haplic Luvisols	A
HMUK_030	Kombolcha	42.14623	9.50081	2164	UP	SC2	W	>	100	D	Kefera	Haplic Nitisols	A
HMUK_031	Kombolcha	42.13774	9.49193	2184	MS	SC2	W	>	100	D	Kefera	Haplic Luvisols	A
HMUK_032	Kombolcha	42.17167	9.43220	1894	BO	SC2	E	=	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_033	Kombolcha	42.16354	9.43386	1973	MS	SC2	E	=	25	S	Ashewa	Haplic Regosols (Eutric)	A
HMUK_034	Kombolcha	42.15831	9.43400	2119	CR	SC2	E	>	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_035	Kombolcha	42.15015	9.43662	2099	UP	SC2	E	>	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_036	Kombolcha	42.14112	9.44152	2083	UP	SC2	E	>	100	D	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_037	Kombolcha	42.09121	9.40005	2134	UP	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_038	Kombolcha	42.09373	9.40173	2111	LS	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_039	Kombolcha	42.09824	9.40035	2143	MS	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_040	Kombolcha	42.10131	9.40089	2185	UP	SC2	E	=	20	V	Ashewa	Lithic Leptosols	A
HMUK_041	Kombolcha	42.10621	9.40193	2224	UP	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_042	Kombolcha	42.11023	9.40424	2214	MS	SC2	E	>	20	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_043	Kombolcha	42.11442	9.40297	2141	BO	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_044	Kombolcha	42.03142	9.40314	2124	UP	SC2	E	>	100	M	Ashewa	Haplic Luvisols	A
HMUK_045	Kombolcha	42.13567	9.39525	2075	UP	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_046	Kombolcha	42.13904	9.39598	2070	UP	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUK_047	Kombolcha	42.12560	9.41498	2085	UP	SC2	E	>	100	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUM_001	Meta	41.48782	9.50464	1567	CR	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_002	Meta	41.48914	9.48022	1832	BO	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUM_003	Meta	41.52010	9.46504	2045	MS	SC2	W	>	100	D	Guracha	Haplic Cambisols (Eutric)	A
HMUM_004	Meta	41.53656	9.46338	2088	LS	SC2	W	>	100	D	Guracha	Haplic Cambisols (Eutric)	A
HMUM_005	Meta	41.54522	9.50710	1699	UP	SC2	E	=	9	V	Ashewa	Lithic Leptosols	A
HMUM_006	Meta	41.55252	9.50219	1749	TS	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUM_007	Meta	41.56131	9.45740	1632	MS	SC2	W	>	100	D	Guracha	Haplic Cambisols (Eutric)	A

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HMUM_008	Meta	41.53629	9.08157	1308	BO	SC2	E	=	60	M	Ashewa	Haplic Arenosols (Eutric)	A
HMUM_009	Meta	41.52346	9.08215	1368	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_010	Meta	41.55178	9.08201	1392	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_011	Meta	41.53320	9.13300	1375	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_012	Meta	41.53214	9.13112	1340	BO	SC2	S	>	100	M	Guracha	Haplic Vertisols (Chromic)	A
HMUM_013	Meta	41.55703	9.13265	1382	LS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_014	Meta	41.52472	9.23841	1742	LS	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUM_015	Meta	41.52960	9.23952	1610	BO	UF1	S	>	100	D	Guracha	Haplic Fluvisols (Eutric)	A
HMUM_016	Meta	41.58940	9.23845	1762	MS	SC2	E	=	30	V	Ashewa	Haplic Regosols (Eutric)	A
HMUM_017	Meta	41.60903	9.24001	1838	MS	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_018	Meta	41.53002	9.25626	1632	BO	SC2	E	>	100	D	Guracha	Haplic Fluvisols (Eutric)	A
HMUM_019	Meta	41.55944	9.33369	2181	MS	IB2	I	=	85	M	Guracha	Haplic Vertisols (Chromic)	A
HMUM_020	Meta	41.56839	9.33347	2659	UP	IB2	W	=	65	M	Dima	Vertic Luvisols	A
HMUM_021	Meta	41.61346	9.33387	2490	UP	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_022	Meta	41.55711	9.33385	2596	CR	IB2	W	=	75	M	Dima	Vertic Luvisols	A
HMUM_023	Meta	41.56424	9.33357	2428	UP	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_024	Meta	41.53236	9.33396	2470	MS	IB2	I	=	90	M	Guracha	Haplic Vertisols (Pellic)	A
HMUM_025	Meta	41.56786	9.33672	2465	MS	IB2	I	=	80	M	Guracha	Haplic Vertisols (Pellic)	A
HMUM_026	Meta	41.56873	9.43325	2620	LS	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_027	Meta	41.58943	9.33463	2564	MS	IB2	M	=	55	M	Guracha	Vertic Cambisols	A
HMUM_028	Meta	41.60057	9.34012	2062	LS	IB2	E	=	30	S	Ashewa	Haplic Regosols (Eutric)	A
HMUM_029	Meta	41.63387	9.33421	2684	LS	IB2	E	=	30	S	Ashewa	Haplic Regosols (Eutric)	A
HMUM_030	Meta	41.53321	9.32517	2035	MS	IB2	I	=	80	M	Guracha	Haplic Vertisols (Pellic)	A
HMUM_031	Meta	41.60591	9.46897	2428	LS	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_032	Meta	41.59764	9.23472	2439	MS	IB2	I	=	80	M	Guracha	Haplic Vertisols (Pellic)	A
HMUM_033	Meta	41.61102	9.22801	2472	LS	IB2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_034	Meta	41.55368	9.43990	1904	LS	SC2	M	>	100	D	Guracha	Vertic Cambisols	A
HMUM_035	Meta	41.54115	9.43901	1918	LS	SC2	M	>	100	D	Guracha	Vertic Cambisols	A
HMUM_036	Meta	41.55684	9.44286	1922	LS	SC2	M	>	100	D	Guracha	Vertic Cambisols	A
HMUM_037	Meta	41.56292	9.44298	1944	MS	SC2	M	>	100	D	Guracha	Vertic Cambisols	A
HMUM_038	Meta	41.57097	9.44260	2010	UP	SC2	E	=	10	V	Ashewa	Lithic Leptosols	A
HMUM_039	Meta	41.63874	9.33549	2670	UP	SC2	S	=	50	S	Guracha	Vertic Cambisols	A
HMUM_040	Meta	41.64255	9.33653	2675	UP	SC2	S	=	50	S	Guracha	Vertic Cambisols	A
HMUM_041	Meta	41.62790	9.36453	2021	BO	SC2	E	=	20	V	Ashewa	Haplic Regosols (Eutric)	A
HMUM_042	Meta	41.63012	9.37302	2105	BO	SC2	E	=	25	V	Ashewa	Haplic Regosols (Eutric)	A
HWUBU_001	Bule	38.35875	6.12845	2673	LS	IB4	W	=	90	M	Tilokie	Haplic Alisols	A
HWUBU_002	Bule	38.35320	6.12955	2682	MS	IB4	W	=	80	M	Tilokie	Haplic Alisols	A

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HWUBU_003	Bule	38.34636	6.13145	2734	UP	IB4	W	=	90	M	Tilokie	Haplic Alisols	A
HWUBU_004	Bule	38.34387	6.13401	2736	CR	IB4	W	>	100	M	Tilokie	Haplic Luvisols	A
HWUBU_005	Bule	38.33440	6.12711	2720	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_006	Bule	38.33821	6.12911	2734	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_007	Bule	38.33964	6.13098	2764	CR	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_008	Bule	38.34340	6.13013	2772	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_009	Bule	38.30251	6.13456	2784	UP	IB4	W	>	100	M	Tilokie	Haplic Luvisols	A
HWUBU_010	Bule	38.30533	6.13426	2805	CR	IB4	S	=	25	V	Dimokie	Umbric Leptosols	A
HWUBU_011	Bule	38.31419	6.13462	2750	MS	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_012	Bule	38.30985	6.13168	2712	LS	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_013	Bule	38.30610	6.13273	2783	MS	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_014	Bule	38.32147	6.16776	2796	UP	IB4	W	>	100	M	Tilokie	Haplic Luvisols	A
HWUBU_015	Bule	38.41302	6.18219	2948	UP	IB4	W	>	100	D	Tilokie	Haplic Alisols	A
HWUBU_016	Bule	38.40998	6.18262	2749	UP	IB4	W	=	90	M	Tilokie	Haplic Alisols	A
HWUBU_017	Bule	38.40761	6.18558	2761	MS	IB4	W	=	60	M	Tilokie	Haplic Alisols	A
HWUBU_018	Bule	38.40226	6.18596	2760	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_019	Bule	38.39796	6.18678	2766	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_020	Bule	38.37284	6.19622	2863	BO	UF2	W	>	100	D	Dimokie	Haplic Fluvisols (Dystric)	A
HWUBU_021	Bule	38.39027	6.18965	2813	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_022	Bule	38.38722	6.19135	2809	UP	IB4	W	>	100	D	Tilokie	Haplic Alisols	A
HWUBU_023	Bule	38.38127	6.19484	2869	UP	IB4	W	>	100	D	Tilokie	Haplic Alisols	A
HWUBU_024	Bule	38.37762	6.19747	2908	CR	IB4	W	>	100	M	Tilokie	Haplic Alisols	A
HWUBU_025	Bule	38.36727	6.19700	1820	MS	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_026	Bule	38.36265	6.19956	2460	CR	IB4	W	>	100	M	Tilokie	Haplic Luvisols	A
HWUBU_027	Bule	38.34811	6.20326	2977	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_028	Bule	38.34159	6.20354	2973	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_029	Bule	38.33770	6.20032	2986	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_030	Bule	38.33452	6.19686	2917	MS	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_031	Bule	38.32877	6.19696	2845	LS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_032	Bule	38.32371	6.19655	2855	UP	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_033	Bule	38.30471	6.19563	2419	MS	IB4	W	>	150	D	Tilokie	Vertic Luvisols	A
HWUBU_034	Bule	38.31213	6.20767	2513	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_035	Bule	38.31487	6.21009	2540	LS	IB4	W	>	100	D	Tilokie	Haplic Nitisols	A
HWUBU_036	Bule	38.29260	6.18902	2434	LS	IB4	W	>	150	D	Tilokie	Vertic Luvisols	A
HWUBU_037	Bule	38.29989	6.19122	2454	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_038	Bule	38.33695	6.23502	2496	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_039	Bule	38.33824	6.23464	2456	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HWUBU_040	Bule	38.31966	6.19313	2769	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_041	Bule	38.31774	6.19670	2700	LS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_042	Bule	38.31573	6.20310	2605	LS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_043	Bule	38.31081	6.24303	2512	CR	IB4	W	=	80	M	Dimokie	Haplic Nitisols	A
HWUBU_044	Bule	38.31978	6.24014	2526	MS	IB4	W	>	100	M	Dimokie	Haplic Nitisols	A
HWUBU_045	Bule	38.32542	6.23541	2535	MS	IB4	W	>	100	D	Dimokie	Haplic Nitisols	A
HWUBU_046	Bule	38.40020	6.20886	2901	UP	IB4	W	>	100	D	Tilokie	Haplic Alisols	A
HWUBU_047	Bule	38.40468	6.21482	2908	UP	IB4	W	>	100	D	Tilokie	Haplic Alisols	A
HWUBU_048	Bule	38.40823	6.22286	3034	CR	IB4	W	=	10	V	Odosie	Umbric Leptosols	A
HWUBU_049	Bule	38.40521	6.22735	3018	UP	IB4	W	>	100	D	Tilokie	Haplic Alisols	A
HWUBU_050	Bule	38.38767	6.23896	2875	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_051	Bule	38.39437	6.23256	2973	CR	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_052	Bule	38.41228	6.27056	2776	LS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_053	Bule	38.41564	6.27174	2788	MS	IB4	W	>	100	D	Tilokie	Vertic Luvisols	A
HWUBU_054	Bule	38.39848	6.23180	3005	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_055	Bule	38.40179	6.22780	3024	UP	IB4	W	>	100	D	Tilokie	Haplic Luvisols	A
HWUBU_056	Bule	38.40107	6.32712	2794	CR	IB4	W	>	100	D	Dimokie	Haplic Nitisols (Rhodic)	A
HWUBU_057	Bule	38.40581	6.32778	2006	MS	IB4	W	>	100	M	Tilokie	Vertic Luvisols	A
HWUBU_058	Bule	38.40330	6.32661	2828	UP	IB4	W	=	45	S	Tilokie	Haplic Luvisols	A
HWUBU_059	Bule	38.39853	6.32815	2748	LS	IB4	W	>	100	D	Dimokie	Haplic Nitisols (Rhodic)	A
HWUCH_001	Cheha	37.90826	8.04941	2245	MS	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_002	Cheha	37.91570	8.04691	2224	MS	IA4	w	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_003	Cheha	37.91844	8.05159	2274	CR	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_004	Cheha	37.92960	8.05025	2295	UP	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_005	Cheha	37.92429	8.04996	2270	UP	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_006	Cheha	37.88191	8.09657	2037	UP	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_007	Cheha	37.85115	8.09957	2080	UP	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_008	Cheha	37.88784	8.10065	2080	UP	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_009	Cheha	37.89841	8.10392	2019	UP	IA4	w	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_010	Cheha	37.89901	8.10212	2040	MS	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_011	Cheha	37.94012	8.04660	2306	MS	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_012	Cheha	37.94330	8.05775	2317	MS	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_013	Cheha	37.92596	8.10275	2104	UP	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_014	Cheha	37.92220	8.10087	2126	UP	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_015	Cheha	37.92301	8.04899	2456	CR	IA4	w	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_016	Cheha	37.92104	8.10138	2124	UP	IA4	w	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_017	Cheha	37.93178	8.12187	2045	CR	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HWUCH_018	Cheha	37.95327	8.10085	2168	UP	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_019	Cheha	37.94675	8.10895	2172	MS	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_020	Cheha	37.95914	8.10380	2170	MS	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_021	Cheha	37.97126	8.04911	2440	MS	IA4	w	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_022	Cheha	37.64975	8.16926	1737	UP	IA4	E	=	10	V	Bisha	Lithic Leptosols	A
HWUCH_023	Cheha	37.67281	8.16836	1784	MS	IA4	I	>	75	M	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_024	Cheha	37.68130	8.16404	1846	MS	IA4	I	>	100	M	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_025	Cheha	37.69946	8.16863	1831	MS	IA4	I	>	100	M	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_026	Cheha	37.71763	8.17043	1904	MS	IA4	I	>	100	M	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_027	Cheha	37.72353	8.17425	1907	MS	IA4	I	>	100	M	Genbena	Haplic Planosols (Albic)	A
HWUCH_028	Cheha	37.72042	8.20758	1846	UP	IA4	W	>	60	M	Bisha	Vertic Luvisols	A
HWUCH_029	Cheha	37.71591	8.20575	1870	MS	IA4	I	>	80	M	Genbena	Haplic Planosols (Albic)	A
HWUCH_030	Cheha	37.69715	8.20097	1827	UP	IA4	I	>	100	D	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_031	Cheha	37.70461	8.20085	1848	CR	IA4	I	>	100	D	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_032	Cheha	37.83834	8.20041	1935	CR	IA4	I	>	100	M	Genbena	Haplic Planosols (Albic)	A
HWUCH_033	Cheha	37.85282	8.20188	1930	MS	IA4	I	>	80	M	Genbena	Haplic Planosols (Albic)	A
HWUCH_034	Cheha	37.84891	8.20093	1934	LS	IA4	W	>	100	D	Bisha	Haplic Nitisols (Rhodic)	A
HWUCH_035	Cheha	37.74794	8.16667	1923	CR	IA4	I	>	100	M	Genbena	Haplic Planosols (Albic)	A
HWUCH_036	Cheha	37.75080	8.16639	1915	MS	IA4	I	>	100	M	Genbena	Haplic Vertisols (Pellic)	A
HWUCH_037	Cheha	37.80879	8.16708	1932	CR	IA4	W	>	100	D	Bisha	Vertic Luvisols	A
HWUCH_038	Cheha	37.80600	8.16752	1926	MS	IA4	I	>	80	M	Genbena	Haplic Planosols (Albic)	A
HWUCH_039	Cheha	37.88734	8.16605	1962	MS	IA4	W	>	100	D	Tuba	Vertic Luvisols	A
HWUCH_040	Cheha	37.88075	8.16708	1947	CR	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUCH_041	Cheha	37.84436	8.19946	1916	LS	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUCH_042	Cheha	37.87913	8.16285	1951	UP	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_001	Enemor &Ener	37.73986	7.90150	2012	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_002	Enemor &Ener	37.74550	7.90190	2020	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_003	Enemor &Ener	37.74741	7.90050	2025	LS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_004	Enemor &Ener	37.73432	7.90236	1983	CR	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_005	Enemor &Ener	37.74158	7.90174	2007	CR	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_006	Enemor &Ener	37.79092	7.89758	2125	CR	IA4	W	>	100	D	Awuyatie	Haplic Nitisols	A
HWUEN_007	Enemor &Ener	37.79636	7.90029	2132	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols	A
HWUEN_008	Enemor &Ener	37.77658	7.90108	2099	CR	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_009	Enemor &Ener	37.84061	7.90293	2239	UP	IA4	W	>	100	D	Tuba	Vertic Luvisols	A
HWUEN_010	Enemor &Ener	37.87217	7.89674	2334	LS	IA4	W	>	100	D	Tuba	Vertic Luvisols	A
HWUEN_011	Enemor &Ener	37.77117	7.96565	2043	UP	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_012	Enemor &Ener	37.77628	7.96526	2069	UP	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HWUEN_013	Enemor &Ener	37.78194	7.96854	2030	MS	IA4	E	=	10	V	Owarie	Lithic Leptosols	A
HWUEN_014	Enemor &Ener	37.77909	7.96815	2053	LS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_015	Enemor &Ener	37.78912	7.96757	2042	LS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_016	Enemor &Ener	37.82268	7.89944	2190	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_017	Enemor &Ener	37.72512	7.96761	1863	MS	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_018	Enemor &Ener	37.72004	7.96654	1838	UP	IA4	I	>	80	M	Genbena	Haplic Vertisols (Pellic)	A
HWUEN_019	Enemor &Ener	37.73394	7.96629	1981	MS	IA4	W	>	100	D	Tuba	Vertic Luvisols	A
HWUEN_020	Enemor &Ener	37.67763	8.09988	1875	CR	IA4	W	>	100	D	Genbena	Haplic Vertisols	A
HWUEN_021	Enemor &Ener	37.67119	8.10009	1844	UP	IA4	W	>	100	M	Genbena	Haplic Vertisols	A
HWUEN_022	Enemor &Ener	37.66692	8.10064	1827	UP	IA4	E	=	10	V	Owarie	Lithic Leptosols	A
HWUEN_023	Enemor &Ener	37.68231	8.10002	1860	LS	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_024	Enemor &Ener	37.68896	8.10125	1863	UP	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_025	Enemor &Ener	37.69387	8.10112	1874	MS	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_026	Enemor &Ener	37.70269	8.10087	1900	UP	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_027	Enemor &Ener	37.70009	8.10094	1896	CR	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_028	Enemor &Ener	37.71236	8.10109	1986	UP	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_029	Enemor &Ener	37.70299	8.10009	1819	UP	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_030	Enemor &Ener	37.70041	8.05547	1884	MS	IA4	I	>	100	D	Genbena	Haplic Vertisols	A
HWUEN_031	Enemor &Ener	37.70966	8.04635	1895	LS	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_032	Enemor &Ener	37.74766	8.05731	1959	UP	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_033	Enemor &Ener	37.75195	8.03954	1961	UP	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_034	Enemor &Ener	37.77408	8.03444	1993	CR	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_035	Enemor &Ener	37.86227	8.03284	2122	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_036	Enemor &Ener	37.85630	8.03247	2118	UP	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_037	Enemor &Ener	37.84601	8.03336	2094	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_038	Enemor &Ener	37.83294	8.03384	2110	MS	IA4	W	>	100	D	Tuba	Vertic Luvisols	A
HWUEN_039	Enemor &Ener	37.81675	8.03406	2120	MS	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_040	Enemor &Ener	37.81004	8.10187	1992	CR	IA4	W	>	100	D	Awuyatie	Haplic Nitisols (Rhodic)	A
HWUEN_041	Enemor &Ener	37.80502	8.10207	1983	CR	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUEN_042	Enemor &Ener	37.79432	8.10107	1994	CR	IA4	I	>	100	D	Genbena	Haplic Planosols (Albic)	A
HWUMA_001	M/Azernet	37.99314	7.73350	2110	MS	IP4	S	=	40	S	Busha	Haplic Regosols (Eutric)	A
HWUMA_002	M/Azernet	37.98826	7.73375	2122	MS	IP4	S	=	25	V	Busha	Haplic Regosols (Eutric)	A
HWUMA_003	M/Azernet	37.98334	7.73367	2125	MS	IP4	S	=	25	V	Busha	Haplic Regosols (Eutric)	A
HWUMA_004	M/Azernet	37.98089	7.73427	2134	MS	IP4	S	=	25	S	Busha	Haplic Regosols (Eutric)	A
HWUMA_005	M/Azernet	37.97713	7.73674	2179	LS	IP4	W	=	50	S	NA	Haplic Luvisols	A
HWUMA_006	M/Azernet	37.96847	7.73159	2340	MS	IP4	E	=	10	V	Busha	Lithic Leptosols	A
HWUMA_007	M/Azernet	38.01678	7.76792	2332	CR	IP4	W	>	90	M	NA	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Altitude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HWUMA_008	M/Azernet	38.01788	7.76783	2229	MS	IP4	W	>	90	M	NA	Haplic Nitisols (Rhodic)	A
HWUMA_009	M/Azernet	38.01929	7.76190	2218	MS	IP4	E	=	20	V	NA	Lithic Leptosols	A
HWUMA_010	M/Azernet	38.02122	7.76927	2238	MS	IP4	W	>	90	M	NA	Haplic Nitisols (Rhodic)	A
HWUMA_011	M/Azernet	38.01935	7.76932	2219	MS	IP4	E	=	20	V	NA	Lithic Leptosols	A
HWUMA_012	M/Azernet	38.02907	7.76982	2276	UP	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_013	M/Azernet	38.03166	7.76649	2250	MS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_014	M/Azernet	38.03289	7.76690	2141	MS	IP4	W	>	90	M	NA	Haplic Nitisols (Rhodic)	A
HWUMA_015	M/Azernet	38.03493	7.76536	2224	MS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_016	M/Azernet	38.03145	7.76570	2201	MS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_017	M/Azernet	38.00781	7.73324	2135	UP	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_018	M/Azernet	38.00564	7.73529	2110	LS	IP4	E	=	10	V	NA	Lithic Leptosols	A
HWUMA_019	M/Azernet	38.00124	7.73325	2122	CR	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_020	M/Azernet	37.99824	7.73157	2070	BO	IP4	S	=	40	S	NA	Haplic Regosols (Eutric)	A
HWUMA_021	M/Azernet	37.99409	7.73145	2100	UP	IP4	W	>	100	D	NA	Haplic Planosols (Albic)	A
HWUMA_022	M/Azernet	37.98804	7.76863	2274	LS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_023	M/Azernet	37.98533	7.76672	2256	LS	IP4	W	>	100	D	NA	Haplic Luvisols	A
HWUMA_024	M/Azernet	37.99325	7.76945	2241	LS	IP4	E	=	40	S	NA	Haplic Regosols (Eutric)	A
HWUMA_025	M/Azernet	37.99652	7.77062	2269	CR	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_026	M/Azernet	37.99150	7.76986	2250	UP	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_027	M/Azernet	38.00398	7.76890	2253	UP	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_028	M/Azernet	38.00380	7.76782	2210	BO	IP4	E	=	10	V	NA	Mollic Leptosols	A
HWUMA_029	M/Azernet	38.00837	7.76755	2234	CR	IP4	w	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_030	M/Azernet	38.01286	7.76811	2257	MS	IP4	w	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_031	M/Azernet	38.03791	7.79777	2336	UP	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_032	M/Azernet	38.06674	7.83023	2346	CR	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_033	M/Azernet	38.06253	7.83092	2402	MS	IP4	E	=	10	V	NA	Lithic Leptosols	A
HWUMA_034	M/Azernet	38.06034	7.83302	2454	CR	IP4	W	>	100	D	NA	Haplic Luvisols	A
HWUMA_035	M/Azernet	38.03479	7.83189	2423	MS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_036	M/Azernet	38.03154	7.83271	2423	MS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_037	M/Azernet	37.97892	7.80129	2402	MS	IP4	E	=	10	V	NA	Lithic Leptosols	A
HWUMA_038	M/Azernet	37.99802	7.79861	2403	MS	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_039	M/Azernet	37.98403	7.79909	2406	LS	IP4	W	>	100	D	NA	Haplic Nitisols (Rhodic)	A
HWUMA_040	M/Azernet	38.02879	7.80296	2320	LS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_041	M/Azernet	38.03529	7.80086	2351	UP	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_042	M/Azernet	38.04103	7.79542	2371	CR	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_043	M/Azernet	38.04676	7.80931	2398	CR	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_044	M/Azernet	38.05265	7.83311	2433	UP	IP4	W	>	100	D	NA	Vertic Luvisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HWUMA_045	M/Azernet	38.05542	7.83306	2444	CR	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_046	M/Azernet	38.02182	7.83307	2408	LS	IP4	W	>	60	M	NA	Haplic Vertisols (Pellic)	A
HWUMA_047	M/Azernet	38.02574	7.83379	2411	LS	IP4	W	>	60	M	NA	Haplic Vertisols (Pellic)	A
HWUMA_048	M/Azernet	38.02691	7.83224	2410	UP	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMA_049	M/Azernet	38.00081	7.80108	2360	UP	IP4	E	=	10	V	NA	Lithic Leptosols	A
HWUMA_050	M/Azernet	37.99671	7.79842	2370	LS	IP4	W	>	100	D	NA	Vertic Luvisols	A
HWUMAL_001	Malga	38.67831	6.99423	2623	MS	IA4	P	>	100	M	Kolisho	Haplic Gleysols (Dystric)	A
HWUMAL_002	Malga	38.70236	6.96679	2671	UP	IA4	W	>	100	D	Dura	Vertic Alisols	A
HWUMAL_003	Malga	38.70456	6.96320	2689	CR	IA4	p	>	100	M	Kolisho	Haplic Gleysols (Dystric)	A
HWUMAL_004	Malga	38.70783	6.95751	2676	MS	IA4	W	>	100	D	Dura	Haplic Alisols	A
HWUMAL_005	Malga	38.70858	6.95145	2658	UP	IA4	W	>	85	M	Dura	Haplic Alisols	A
HWUMAL_006	Malga	38.70794	6.94786	2671	UP	IA4	W	>	85	M	Dura	Haplic Alisols	A
HWUMAL_007	Malga	38.70814	6.94475	2671	UP	IA4	W	>	100	M	Dura	Haplic Alisols	A
HWUMAL_008	Malga	38.69293	6.98242	2659	CR	IA4	W	>	100	M	Dura	Haplic Alisols	A
HWUMAL_009	Malga	38.69662	6.97011	2673	CR	IA4	I	>	100	D	Kolisho	Haplic Gleysols (Dystric)	A
HWUMAL_010	Malga	38.70134	6.97116	2672	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_011	Malga	38.70170	6.96236	2681	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_012	Malga	38.70599	6.93448	2679	UP	IA4	W	>	100	D	Dura	Haplic Alisols	A
HWUMAL_013	Malga	38.70530	6.92784	2684	UP	IA4	W	>	100	D	Dura	Haplic Alisols	A
HWUMAL_014	Malga	38.70103	6.92557	2680	CR	IA4	W	>	100	D	Dura	Haplic Alisols	A
HWUMAL_015	Malga	38.69831	6.92026	2677	CR	IA4	W	>	100	D	Dura	Haplic Alisols	A
HWUMAL_016	Malga	38.69126	6.91493	2677	CR	IA4	W	>	100	D	Dura	Haplic Alisols	A
HWUMAL_017	Malga	38.69023	6.91053	2674	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_018	Malga	38.66885	6.95622	2578	MS	IA4	W	>	90	D	Kolisho	Haplic Alisols	A
HWUMAL_019	Malga	38.66970	6.95741	2612	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_020	Malga	38.67706	6.95781	2625	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_021	Malga	38.60047	6.97323	2300	LS	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A
HWUMAL_022	Malga	38.60131	6.97245	2324	UP	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A
HWUMAL_023	Malga	38.60678	6.96349	2400	CR	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A
HWUMAL_024	Malga	38.63522	6.95688	2519	MS	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_025	Malga	38.63516	6.95570	2539	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_026	Malga	38.66743	6.94524	2617	LS	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A
HWUMAL_027	Malga	38.66881	6.94543	2643	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_028	Malga	38.66565	6.95700	2534	LS	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_029	Malga	38.66118	6.95578	2596	UP	IA4	W	>	100	D	Dura	Haplic Luvisols	A
HWUMAL_030	Malga	38.60655	6.96145	2320	LS	IA4	W	>	100	D	Dura	Vertic Luvisols	A
HWUMAL_031	Malga	38.59969	6.96399	2351	UP	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
HWUMAL_032	Malga	38.60077	6.96648	2353	UP	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A
HWUMAL_033	Malga	38.60744	6.96131	2414	UP	IA4	W	>	100	D	Dimo	Haplic Nitisols (Rhodic)	A
HWUMAL_034	Malga	38.63890	6.95775	2571	LS	IA4	W	>	100	D	Dura	Vertic Luvisols	A
HWUMAL_035	Malga	38.63247	6.95300	2549	CR	IA4	W	>	100	D	Dura	Vertic Luvisols	A
HWUMAL_036	Malga	38.66698	6.94758	2529	LS	IA4	S	>	100	S	Kolisho	Haplic Gleysols (Eutric)	A
HWUMAL_037	Malga	38.66741	6.94518	2615	UP	IA4	S	>	100	S	Kolisho	Haplic Alisols	A
HWUMAL_038	Malga	38.67395	6.86583	2690	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_039	Malga	38.67647	6.86585	2676	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_040	Malga	38.67865	6.86689	2625	BO	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_041	Malga	38.61468	6.90976	2462	MS	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_042	Malga	38.61640	6.91063	2482	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HWUMAL_043	Malga	38.62878	6.91058	2546	CR	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_044	Malga	38.63333	6.90965	2574	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HWUMAL_045	Malga	38.63331	6.91086	2505	UP	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_046	Malga	38.63300	6.90470	2560	MS	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_047	Malga	38.63945	6.90654	2592	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
HWUMAL_048	Malga	38.65688	6.89945	2639	CR	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_049	Malga	38.66998	6.89305	2646	UP	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_050	Malga	38.66757	6.89213	2676	CR	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_051	Malga	38.66555	6.89189	2674	UP	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_052	Malga	38.66490	6.91573	2625	MS	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_053	Malga	38.68201	6.86846	2682	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_054	Malga	38.68742	6.87103	2690	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_055	Malga	38.68851	6.87931	2693	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_056	Malga	38.68965	6.88502	2683	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_057	Malga	38.69045	6.89121	2691	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_058	Malga	38.69088	6.89972	2685	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_059	Malga	38.69069	6.90608	2676	UP	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_060	Malga	38.66635	6.92046	2628	LS	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_061	Malga	38.66590	6.91901	2662	CR	IA4	W	>	100	D	Kolisho	Haplic Alisols	A
HWUMAL_062	Malga	38.63250	6.93528	2534	CR	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_063	Malga	38.63334	6.93364	2517	LS	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_064	Malga	38.59939	6.93178	2378	LS	IA4	W	>	100	D	Meka	Haplic Luvisols	A
HWUMAL_065	Malga	38.59917	6.93099	2417	UP	IA4	W	>	100	D	Meka	Haplic Luvisols	A
JMUBD_001	Bedelle	36.44074	8.48830	1647	LS	IB2	W	>	45	S	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_002	Bedelle	36.44002	8.49261	1617	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_003	Bedelle	36.44110	8.49803	1618	UP	IB2	S	=	25	V	Chirecha	Haplic Regosols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
JMUBD_004	Bedelle	36.44126	8.50605	1592	MS	IB2	S	=	45	V	Chirecha	Haplic Regosols (Eutric)	A
JMUBD_005	Bedelle	36.45615	8.57537	1367	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_006	Bedelle	36.45639	8.57224	1357	MS	IB2	P	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMUBD_007	Bedelle	36.45789	8.56666	1380	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_008	Bedelle	36.46576	8.56095	1348	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_009	Bedelle	36.47338	8.56291	1348	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_010	Bedelle	36.47674	8.55104	1354	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_011	Bedelle	36.47143	8.54143	1348	LS	IB2	P	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMUBD_012	Bedelle	36.46025	8.53418	1385	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_013	Bedelle	36.45440	8.52346	1497	UP	IB2	S	=	25	V	Chirecha	Haplic Regosols (Eutric)	A
JMUBD_014	Bedelle	36.45640	8.51872	1455	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_015	Bedelle	36.45021	8.50324	1532	LS	IB2	S	=	25	V	Chirecha	Haplic Regosols (Eutric)	A
JMUBD_016	Bedelle	36.43775	8.48003	1876	LS	IB2	S	=	25	V	Chirecha	Haplic Regosols (Eutric)	A
JMUBD_017	Bedelle	36.42118	8.45144	2002	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_018	Bedelle	36.45565	8.58061	1384	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_019	Bedelle	36.45728	8.52971	1375	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_020	Bedelle	36.45752	8.53938	1461	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_021	Bedelle	36.29128	8.53226	2029	CR	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_022	Bedelle	36.28962	8.51778	2005	UP	IB2	W	>	60	M	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_023	Bedelle	36.28912	8.51002	1982	MS	IB2	W	>	60	M	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_024	Bedelle	36.29084	8.52611	1992	CR	IB2	W	>	100	M	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_025	Bedelle	36.29916	8.48234	1947	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_026	Bedelle	36.29926	8.46781	1898	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_027	Bedelle	36.29916	8.47515	1939	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_028	Bedelle	36.28863	8.36875	1957	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_029	Bedelle	36.28180	8.37168	1959	CR	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_030	Bedelle	36.28531	8.36915	1925	CR	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_031	Bedelle	36.26676	8.38077	1955	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUBD_032	Bedelle	36.29275	8.40235	1885	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_033	Bedelle	36.36263	8.48857	1936	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_034	Bedelle	36.36412	8.50783	1888	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_035	Bedelle	36.36880	8.52528	1890	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_036	Bedelle	36.37046	8.55161	1883	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUBD_037	Bedelle	36.36419	8.56004	1884	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_001	Dedesa	36.53909	8.11147	1802	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_002	Dedesa	36.53938	8.11822	1750	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_003	Dedesa	36.53806	8.18432	1629	BO	IB2	M	>	100	D	Guracha	Vertic Luvisols	A

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JMUDD_004	Dedesa	36.54197	8.12768	1729	LS	IB2	S	=	25	V	Chirecha	Haplic Regosols (Eutric)	A
JMUDD_005	Dedesa	36.60879	8.01430	1662	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_006	Dedesa	36.61159	8.02190	1666	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_007	Dedesa	36.61437	8.05108	1642	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_008	Dedesa	36.61117	8.05660	1658	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_009	Dedesa	36.60968	8.07892	1780	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_010	Dedesa	36.59993	8.09985	1737	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_011	Dedesa	36.58105	8.11291	1778	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_012	Dedesa	36.56829	8.13879	1767	CR	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_013	Dedesa	36.57318	8.14053	1734	BO	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_014	Dedesa	36.57651	8.14085	1774	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_015	Dedesa	36.56170	8.12928	1703	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_016	Dedesa	36.56962	8.12902	1691	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_017	Dedesa	36.62763	8.13345	1701	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_018	Dedesa	36.63274	8.12751	1689	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_019	Dedesa	36.63094	8.12546	1697	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_020	Dedesa	36.63242	8.14321	1710	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_021	Dedesa	36.41628	8.18927	2095	LS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_022	Dedesa	36.40934	8.18704	2173	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_023	Dedesa	36.39466	8.19095	2242	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_024	Dedesa	36.38543	8.18634	2254	CR	IB2	W	=	40	S	Guracha	Haplic Luvisols	A
JMUDD_025	Dedesa	36.37967	8.18484	2265	MS	IB2	W	>	100	D	Guracha	Haplic Luvisols	A
JMUDD_026	Dedesa	36.36722	8.18575	2279	UP	IB2	W	>	100	D	Guracha	Haplic Luvisols	A
JMUDD_027	Dedesa	36.36083	8.18001	2241	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_028	Dedesa	36.45998	8.10569	2082	LS	IB2	W	=	20	S	Chirecha	Haplic Regosols (Eutric)	A
JMUDD_029	Dedesa	36.45745	8.09605	2054	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_030	Dedesa	36.44362	8.07729	1834	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_031	Dedesa	36.43131	8.07731	1855	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_032	Dedesa	36.42942	8.08001	1849	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUDD_033	Dedesa	36.42662	8.08333	1833	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUDD_034	Dedesa	36.42242	8.08791	1855	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUGR_001	Gera	36.18400	7.58223	1724	LS	IB2	W	>	45	M	Guracha	Vertic Luvisols	A
JMUGR_002	Gera	36.18457	7.57517	1691	MS	IB2	W	>	50	M	Guracha	Vertic Luvisols	A
JMUGR_003	Gera	36.18438	7.58672	1681	LS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_004	Gera	36.18780	7.57833	1706	MS	IB2	W	>	70	M	Guracha	Vertic Luvisols	A
JMUGR_005	Gera	36.20671	7.58792	1802	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_006	Gera	36.20887	7.61932	1797	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Altitude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
JMUGR_007	Gera	36.22508	7.63583	1844	LS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_008	Gera	36.24276	7.64400	1865	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_009	Gera	36.24453	7.66991	1915	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_010	Gera	36.24317	7.66918	1985	LS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_011	Gera	36.24249	7.67565	2003	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_012	Gera	36.24367	7.68946	1947	CR	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_013	Gera	36.24538	7.69644	1982	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_014	Gera	36.25315	7.70597	2008	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_015	Gera	36.25939	7.71840	2014	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_016	Gera	36.13894	7.72352	2668	CR	IA4	W	>	50	S	Guracha	Haplic Alisols	A
JMUGR_017	Gera	36.15470	7.72693	2582	CR	IA4	W	>	50	S	Guracha	Haplic Alisols	A
JMUGR_018	Gera	36.16683	7.73272	2453	MS	IA4	W	>	55	M	Guracha	Haplic Luvisols	A
JMUGR_019	Gera	36.18710	7.73320	2281	UP	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMUGR_020	Gera	36.19506	7.73820	2266	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_021	Gera	36.22184	7.73752	2141	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_022	Gera	36.18623	7.69261	2236	UP	IA4	W	>	100	D	Guracha	Haplic Alisols	A
JMUGR_023	Gera	36.19227	7.69454	2207	CR	IA4	W	>	100	D	Guracha	Haplic Alisols	A
JMUGR_024	Gera	36.19576	7.70324	2164	LS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_025	Gera	36.19817	7.71109	2183	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_026	Gera	36.20828	7.71899	2178	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_027	Gera	36.22063	7.72945	2139	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_028	Gera	36.23735	7.73404	2083	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_029	Gera	36.27482	7.86948	2154	UP	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUGR_030	Gera	36.27496	7.86470	2187	UP	IB2	W	>	65	M	Guracha	Vertic Luvisols	A
JMUGR_031	Gera	36.27051	7.85980	2187	UP	IB2	W	>	100	M	Dima	Haplic Nitisols (Rhodic)	A
JMUGR_032	Gera	36.27645	7.85598	2100	BO	IB2	W	>	100	M	Guracha	Haplic Luvisols	A
JMUGR_033	Gera	36.26531	7.84674	2183	CR	IB2	W	>	65	M	Guracha	Vertic Luvisols	A
JMUGR_034	Gera	36.25747	7.83852	2238	UP	IB2	W	>	90	M	Guracha	Vertic Luvisols	A
JMUGR_035	Gera	36.25619	7.83017	2235	UP	IB2	W	>	90	M	Guracha	Vertic Luvisols	A
JMUGR_036	Gera	36.24298	7.81733	2294	MS	IB2	W	>	90	M	Guracha	Vertic Luvisols	A
JMUGR_037	Gera	36.23634	7.80924	2320	UP	IB2	W	>	90	M	Guracha	Vertic Luvisols	A
JMUGR_038	Gera	36.22561	7.80133	2340	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUGR_039	Gera	36.21856	7.79408	2357	CR	IB2	W	>	90	M	Guracha	Vertic Luvisols	A
JMUGR_040	Gera	36.23575	7.78258	2308	LS	IB2	W	>	90	M	Guracha	Vertic Luvisols	A
JMUGR_041	Gera	36.41456	7.83956	2414	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMUGR_042	Gera	36.40845	7.83957	2484	UP	IB2	W	>	70	M	Guracha	Vertic Luvisols	A
JMUGR_043	Gera	36.40619	7.83205	2452	CR	IB2	W	>	90	M	Guracha	Vertic Luvisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
JMUGR_044	Gera	36.40833	7.82025	2375	LS	IB2	W	>	80	M	Guracha	Vertic Luvisols	A
JMUGR_045	Gera	36.41224	7.81273	2238	UP	IB2	W	>	85	M	Dima	Haplic Nitisols (Rhodic)	A
JMULS_001	Limu Seka	36.86369	8.53193	1798	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_002	Limu Seka	36.87025	8.53104	1777	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_003	Limu Seka	36.87299	8.53189	1804	UP	IA4	W	>	55	M	Dima	Vertic Luvisols	A
JMULS_004	Limu Seka	36.87724	8.53311	1736	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_005	Limu Seka	36.88189	8.53302	1746	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_006	Limu Seka	36.88692	8.53314	1789	MS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMULS_007	Limu Seka	36.90980	8.60169	1458	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_008	Limu Seka	36.91378	8.60123	1434	BO	IA4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_009	Limu Seka	36.91967	8.60015	1499	UP	IA4	I	=	30	V	Koticha	Leptic Vertisols	A
JMULS_010	Limu Seka	36.92414	8.60013	1508	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_011	Limu Seka	36.92835	8.60423	1492	MS	IA4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_012	Limu Seka	36.93198	8.60000	1536	MS	IA4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_013	Limu Seka	36.93740	8.60012	1557	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_014	Limu Seka	36.89847	8.55456	1582	MS	IA4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_015	Limu Seka	36.82002	8.60000	1695	MS	IA4	W	>	50	M	Cherecha	Haplic Luvisols	A
JMULS_016	Limu Seka	36.82210	8.60022	1710	UP	IA4	W	>	50	M	Cherecha	Haplic Luvisols	A
JMULS_017	Limu Seka	36.83236	8.60192	1631	BO	IA4	W	>	100	M	Guracha	Vertic Luvisols	A
JMULS_018	Limu Seka	36.83918	8.60036	1660	MS	IA4	W	>	100	M	Dima	Haplic Nitisols (Rhodic)	A
JMULS_019	Limu Seka	36.82610	8.60026	1665	MS	IA4	S	=	20	M	Cherecha	Haplic Regosols (Eutric)	A
JMULS_020	Limu Seka	36.82600	8.56867	1690	MS	IA4	S	=	20	M	Cherecha	Haplic Regosols (Eutric)	A
JMULS_021	Limu Seka	36.83522	8.58038	1668	MS	IA4	W	>	100	M	Dima	Haplic Nitisols (Rhodic)	A
JMULS_022	Limu Seka	36.85846	8.49535	1704	CR	IA4	W	>	100	M	Dima	Haplic Nitisols (Rhodic)	A
JMULS_023	Limu Seka	36.78350	8.53544	1447	MS	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_024	Limu Seka	36.76600	8.52831	1394	BO	IA4	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_025	Limu Seka	36.77030	8.52934	1382	LS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_026	Limu Seka	36.77834	8.53329	1443	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_027	Limu Seka	36.78353	8.53541	1438	MS	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_028	Limu Seka	36.78090	8.53549	1475	MS	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_029	Limu Seka	36.98512	8.50870	1714	BO	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_030	Limu Seka	36.98812	8.50553	1733	MS	IB2	S	=	40	S	Cherecha	Haplic Cambisols (Eutric)	A
JMULS_031	Limu Seka	36.27510	7.85980	1621	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_032	Limu Seka	36.77508	8.32000	1592	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_033	Limu Seka	36.78068	8.32098	1575	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_034	Limu Seka	36.79865	8.33451	1690	CR	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_035	Limu Seka	36.81336	8.34202	1594	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
JMULS_036	Limu Seka	36.82706	8.33700	1633	UP	IB2	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_037	Limu Seka	36.83203	8.33515	1717	LS	IB2	I	>	100	D	Koticha	Haplic Vertisols (Pellic)	A
JMULS_038	Limu Seka	36.84518	8.33737	1734	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_039	Limu Seka	36.87610	8.33445	1486	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_040	Limu Seka	36.89440	8.33300	1540	MS	IB2	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_041	Limu Seka	36.95981	8.33302	2000	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_042	Limu Seka	36.94341	8.33828	2024	UP	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_043	Limu Seka	36.94687	8.34090	2059	UP	IB2	E	=	10	V	Cherecha	Lithic Leptosols	A
JMULS_044	Limu Seka	36.95480	8.34090	2023	MS	IB2	W	>	65	M	Guracha	Vertic Luvisols	A
JMULS_045	Limu Seka	36.85786	8.20650	1440	LS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_046	Limu Seka	36.84118	8.20541	1436	LS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_047	Limu Seka	36.84559	8.20622	1434	BO	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_048	Limu Seka	36.85253	8.20503	1489	MS	IA4	W	>	100	D	Guracha	Vertic Luvisols	A
JMULS_049	Limu Seka	36.93669	8.22381	1895	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMULS_050	Limu Seka	36.93915	8.22411	1836	MS	IB2	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_001	Omonada	37.15649	7.64623	1810	LS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_002	Omonada	37.16461	7.64640	1831	MS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_003	Omonada	37.16787	7.64840	1836	CR	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_004	Omonada	37.16914	7.64613	1867	CR	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_005	Omonada	37.17475	7.64568	1853	LS	IA4	I	>	100	D	Bore	Haplic Planosols (Albic)	A
JMUON_006	Omonada	37.17686	7.64529	1865	UP	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_007	Omonada	37.07302	7.64184	1727	MS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_008	Omonada	37.04498	7.53283	1865	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_009	Omonada	37.06760	7.64010	1723	MS	IA4	I	>	100	M	Bore	Haplic Planosols (Albic)	A
JMUON_010	Omonada	37.04750	7.53138	1853	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_011	Omonada	37.11120	7.53426	2329	MS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_012	Omonada	37.17204	7.46058	2778	MS	IA4	W	>	70	S	Guracha	Umbric Andosols	A
JMUON_013	Omonada	37.17479	7.46013	2784	CR	IA4	W	>	70	S	Guracha	Umbric Andosols	A
JMUON_014	Omonada	37.17828	7.46827	2762	MS	IA4	W	>	65	M	Guracha	Umbric Andosols	A
JMUON_015	Omonada	37.18340	7.46802	2772	UP	IA4	W	>	65	M	Guracha	Haplic Luvisols	A
JMUON_016	Omonada	37.17217	7.53691	2445	LS	IA4	W	>	70	M	Dima	Haplic Luvisols	A
JMUON_017	Omonada	37.17356	7.53609	2442	UP	IA4	W	>	100	D	Dima	Umbric Andosols	A
JMUON_018	Omonada	37.12984	7.46175	2626	UP	IA4	W	>	100	D	Guracha	Umbric Andosols	A
JMUON_019	Omonada	37.13268	7.46526	2647	UP	IA4	W	>	70	M	Guracha	Umbric Andosols	A
JMUON_020	Omonada	37.13754	7.46574	2658	MS	IA4	W	>	100	M	Guracha	Umbric Andosols	A
JMUON_021	Omonada	37.12679	7.44618	2775	LS	IA4	W	>	100	M	Guracha	Umbric Andosols	A
JMUON_022	Omonada	37.16416	7.49911	2671	MS	IA4	W	>	100	M	Guracha	Umbric Andosols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
JMUON_023	Omonada	37.16910	7.50310	2653	UP	IA4	W	>	100	M	Guracha	Umbric Andosols	A
JMUON_024	Omonada	37.24072	7.67366	1728	MS	IA4	I	>	100	M	Bore	Haplic Planosols (Albic)	A
JMUON_025	Omonada	37.31514	7.72436	1782	UP	IA4	P	>	100	D	Bore	Haplic Planosols (Albic)	A
JMUON_026	Omonada	37.25506	7.71816	1783	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_027	Omonada	37.25190	7.70260	1786	UP	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_028	Omonada	37.22776	7.72869	1778	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_029	Omonada	37.22712	7.74447	1754	MS	IA4	P	>	100	D	Bore	Haplic Planosols (Albic)	A
JMUON_030	Omonada	37.33412	7.49325	2431	UP	IA4	W	>	100	D	Dima	Haplic Luvisols	A
JMUON_031	Omonada	37.33923	7.49727	2416	UP	IA4	E	=	20	V	Dima	Mollic Leptosols	A
JMUON_032	Omonada	37.34068	7.50071	2408	UP	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_033	Omonada	37.34157	7.50096	2365	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_034	Omonada	37.35397	7.50295	2290	MS	IA4	W	>	100	D	Dima	Haplic Nitisols (Rhodic)	A
JMUON_035	Omonada	37.33400	7.50563	2471	LS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_036	Omonada	37.32649	7.51466	2484	MS	IA4	W	>	100	D	Dima	Vertic Luvisols	A
JMUON_037	Omonada	37.31478	7.53275	2681	UP	IA4	W	>	100	D	Dima	Haplic Luvisols	A
JMUON_038	Omonada	37.31812	7.53310	2680	UP	IA4	W	>	100	D	Dima	Haplic Luvisols	A
JMUON_039	Omonada	37.32112	7.52912	2645	UP	IA4	E	=	10	V	Dima	Lithic Leptosols	A
JMUON_040	Omonada	37.32460	7.53524	2600	MS	IA4	S	=	30	V	Guracha	Haplic Regosols (Dystric)	A
JMUON_041	Omonada	37.32107	7.53697	2629	MS	IA4	W	>	60	M	Dima	Haplic Luvisols	A
JMUON_042	Omonada	37.30740	7.55413	2774	CR	IA4	W	>	65	M	Guracha	Umbric Andosols	A
JMUON_043	Omonada	37.26309	7.53272	2866	UP	IA4	W	>	100	D	Guracha	Umbric Andosols	A
JMUON_044	Omonada	37.26787	7.53371	2862	UP	IA4	W	>	100	D	Guracha	Umbric Andosols	A
JMUON_045	Omonada	37.26590	7.52410	2879	CR	IA4	W	>	55	M	Guracha	Umbric Andosols	A
JMUON_046	Omonada	37.27044	7.53343	2860	UP	IA4	W	>	65	M	Guracha	Umbric Andosols	A
JMUON_047	Omonada	37.26072	7.53414	2838	MS	IA4	W	>	65	M	Guracha	Umbric Andosols	A
JMUON_048	Omonada	37.28782	7.53824	2872	CR	IA4	W	>	65	M	Guracha	Umbric Andosols	A
MKU_001	Alaje	39.34641	12.96765	2117	MS	S	S	=	40	S	Baekel	Haplic Cambisols (Eutric)	A
MKU_002	Alaje	39.34880	12.95908	2036	LS	S	W	>	100	M	Baekel	Haplic Cambisols (Eutric)	A
MKU_003	Alaje	39.34305	12.97114	2267	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_004	Alaje	39.34619	13.00458	2493	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_005	Alaje	39.36248	12.99928	2511	TS	I	M	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_006	Alaje	39.40928	13.01831	2670	TS	I	M	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_007	Alaje	39.32036	12.84657	1989	MS	I	W	>	100	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_008	Alaje	39.31001	12.89765	1955	LS	S	W	>	100	M	Tsada Bakel	Haplic Cambisols (Eutric)	A
MKU_009	Alaje	39.37413	12.90191	2109	MS	S	S	>	100	M	Keahtay	Leptic Cambisols	A
MKU_010	Alaje	39.40343	12.90949	2448	MS	S	W	=	30	M	Hutsa	Haplic Leptosols	A
MKU_011	Alaje	39.42195	12.91484	2654	UP	I	M	>	100	D	Walka	Calcic Vertisols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_012	Alaje	39.46320	12.96079	2619	TS	I	M	>	100	D	Walka	Haplic Vertisols	A
MKU_013	Alamata	39.59661	12.53535	1610	TS	S	W	>	100	D	Boda	Haplic Vertisols (Eutric)	A
MKU_014	Alamata	39.60526	12.52084	1599	UP	I	W	=	30	V	Shahsher	Haplic Leptosols	A
MKU_015	Alamata	39.63359	12.52958	1510	MS	I	W	>	100	D	Boda	Haplic Cambisols (Eutric)	A
MKU_016	Alamata	39.65377	12.52722	1466	MS	I	W	>	100	D	Walka	Haplic Vertisols	A
MKU_017	Alamata	39.67383	12.51484	1454	MS	I	W	>	100	D	Walka	Haplic Vertisols	A
MKU_018	Raya Azebo	39.67730	12.50727	1447	MS	I	M	>	100	M	Walka	Haplic Vertisols	A
MKU_019	Raya Azebo	39.68924	12.51834	1463	MS	I,S	W	>	100	M	Walka	Haplic Vertisols	A
MKU_020	Raya Azebo	39.66763	12.43232	1409	MS	I,S	W	>	100	M	Boda	Haplic Vertisols	A
MKU_021	Raya Azebo	39.66465	12.42509	1407	LS	I,S	W	>	100	M	Walka	Haplic Vertisols	A
MKU_022	Alamata	39.61391	12.42550	1442	LS	I,S	W	>	60	M	Boda	Calcic Fluvisols	A
MKU_023	Alamata	39.61158	12.41453	1444	MS	I,S	W	>	60	M	Boda	Calcic Fluvisols	A
MKU_024	Alamata	39.61391	12.42550	1442	LS	I,S	W	>	75	M	Boda	Calcic Fluvisols	A
MKU_025	Raya Azebo	39.76275	12.47797	1635	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_026	Raya Azebo	39.75286	12.52074	1744	MS	I,S	W	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_027	Raya Azebo	39.76086	12.63963	1574	MS	I,S	W	>	100	D	Red Walka	Haplic Vertisols (Eutric)	A
MKU_028	Raya Azebo	39.74312	12.75246	1580	LS	I	I	>	100	V	Walka	Haplic Vertisols (Eutric)	A
MKU_029	Alamata	39.32229	12.34483	2208	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_030	Alamata	39.34512	12.34902	2218	LS	I	S	>	100	M	Shahsher	Haplic Leptosols (Eutric)	A
MKU_031	Alamata	39.40180	12.34921	2420	UP	I	W	>	100	V	Shahsher	Haplic Leptosols (Eutric)	A
MKU_032	Alamata	39.43540	12.37160	2457	LS	I	W	>	120	D	Medium Walka	Haplic Vertisols (Eutric)	A
MKU_033	Alamata	39.54389	12.34962	1648	UP	I,S	I	>	125	D	Walka	Haplic Vertisols (Eutric)	A
MKU_034	Alamata	39.70416	12.33464	1413	UP	I,S	E	>	100	D	Boda	Haplic Vertisols (Eutric)	A
MKU_035	Alamata	39.68611	12.31753	1389	BO	S	E	>	100	D	Boda	Haplic Fluvisols (Eutric)	A
MKU_036	Ofla	39.52978	12.45485	2210	MS	I	E	=	40	S	Shahsher	Haplic Leptosols	A
MKU_037	Endamehoni	39.45297	12.77627	2289	MS	I	E	>	120	D	Boda	Haplic Leptosols	A
MKU_038	Endamehoni	39.34605	12.76034	2509	LS	I	E	>	100	D	Walka	Haplic Cambisols	A
MKU_039	Endamehoni	39.35467	12.76163	2647	MS	I	E	=	15	V	keyahtay	Haplic Leptosols (Eutric)	A
MKU_040	Endamehoni	39.36809	12.75667	2820	MS	I	E	=	15	V	keyahtay	Haplic Leptosols (Eutric)	A
MKU_041	Endamehoni	39.36287	12.75749	2796	MS	I	E	>	15	D	keyahtay	Haplic Cambisols (Eutric)	A
MKU_042	Endamehoni	39.41412	12.76609	2412	UP	I	E	=	15	V	Shahsher	Haplic Leptosols	A
MKU_043	Endamehoni	39.42499	12.77141	2421	MS	I	E	=	25	V	Shahsher	Haplic Leptosols	A
MKU_044	Endamehoni	39.42988	12.77627	2452	MS	I	W	>	25	D	Walka	Haplic Vertisols (Eutric)	A
MKU_045	Endamehoni	39.43441	12.77513	2469	MS	I	W	>	25	D	Walka	Haplic Vertisols (Eutric)	A
MKU_046	Endamehoni	39.44508	12.77868	2363	MS	S	E	=	25	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_047	Endamehoni	39.45434	12.77827	2211	NS	S	E	=	25	V	Shahsher	Haplic Leptosols	A
MKU_048	Ofla	39.34587	12.67382	2463	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_049	Ofla	39.34311	12.67385	2515	CR	I	W	=	25	V	Shahsher	Haplic Leptosols	A
MKU_050	Ofla	39.34715	12.66086	2643	LS	I	W	>	100	D	Shahsher	Haplic Leptosols	A
MKU_051	Ofla	39.35837	12.66726	2747	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_052	Ofla	39.22054	12.64042	2081	UP	I	E	=	25	V	Keyahtay	Haplic Leptosols	A
MKU_053	Ofla	39.22774	12.63120	2133	CR	S	E	=	30	V	Keyahtay	Haplic Leptosols	A
MKU_054	Ofla	39.24351	12.62304	2085	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_055	Ofla	39.28540	12.51286	2330	LS	I	W	>	100	D	Walka	Vertic Cambisols	A
MKU_056	Ofla	39.27306	12.58408	2044	MS	I	W	>	95	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_057	Ofla	39.33162	12.48572	2632	CR	I	W	>	70	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_058	Ofla	39.52434	12.49303	2475	LS	I	I	>	120	D	Walka	Haplic Vertisols	A
MKU_059	Alamata	39.32469	12.35058	2198	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_060	Alamata	39.33179	12.34824	2257	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_061	Alamata	39.35136	12.35060	2196	MS	I	W	>	100	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_062	Alamata	39.35337	12.35210	2210	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_063	Alamata	39.35646	12.35035	2200	LS	I,S	W	>	60	M	Boda	Calcic Fluvisols	A
MKU_064	Alamata	39.35720	12.34874	2209	LS	I,S	W	>	60	M	Boda	Calcic Fluvisols	A
MKU_065	Alamata	39.36137	12.34910	2274	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_066	Alamata	39.36340	12.34931	2245	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_067	Alamata	39.36052	12.35047	2207	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_068	Alamata	39.36622	12.34897	2268	MS	I	W	>	100	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_069	Alamata	39.38312	12.34673	2290	MS	I	W	>	100	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_070	Alamata	39.38316	12.34439	2331	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_071	Alamata	39.38989	12.34710	2334	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_072	Alamata	39.40074	12.34714	2445	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_073	Alamata	39.40085	12.35379	2413	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_074	Alamata	39.40799	12.35790	2486	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_075	Alamata	39.41164	12.36194	2563	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_076	Alamata	39.41212	12.36819	2501	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_077	Alamata	39.42548	12.37544	2575	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_078	Alamata	39.43162	12.37443	2489	LS	I	W	>	120	D	Medium Walka	Haplic Vertisols (Eutric)	A
MKU_079	Alamata	39.43781	12.36859	2423	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_080	Alamata	39.44136	12.36105	2288	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_081	Alamata	39.44409	12.36172	2206	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_082	Alamata	39.46264	12.36973	2195	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_083	Alamata	39.46783	12.37006	2226	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_084	Alamata	39.47638	12.36851	2232	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_085	Alamata	39.48382	12.36260	2096	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A

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MKU_086	Alamata	39.49034	12.36098	2047	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_087	Alamata	39.49562	12.35991	2025	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_088	Alamata	39.51256	12.35451	1805	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_089	Alamata	39.52785	12.35149	1755	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_090	Alamata	39.55148	12.34711	1621	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_091	Alamata	39.54500	12.34928	1601	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_092	Alamata	39.57841	12.34143	1518	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_093	Alamata	39.60417	12.34471	1468	UP	I,S	I	>	70	D	Walka	Haplic Vertisols (Eutric)	A
MKU_094	Alamata	39.60162	12.35212	1470	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_095	Alamata	39.64682	12.34713	1418	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_096	Alamata	39.64753	12.35650	1418	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_097	Alamata	39.63520	12.32208	1421	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_098	Alamata	39.62021	12.31810	1436	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_099	Alamata	39.66086	12.32993	1402	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_100	Alamata	39.67159	12.32086	1398	UP	I,S	I	>	120	D	Walka	Haplic Vertisols (Eutric)	A
MKU_101	Alamata	39.69024	12.32657	1386	BO	S	E	>	100	D	Boda	Haplic Fluvisols (Eutric)	A
MKU_102	Alamata	39.70202	12.33116	1397	UP	I,S	E	>	100	D	Boda	Haplic Vertisols (Eutric)	A
MKU_103	Alamata	39.71291	12.34009	1525	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_104	Raya Azebo	39.66997	12.42367	1401	MS	I,S	W	>	100	M	Boda	Haplic Vertisols	A
MKU_105	Raya Azebo	39.68594	12.42509	1475	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_106	Raya Azebo	39.69160	12.42439	1491	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_107	Raya Azebo	39.69667	12.42861	1492	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_108	Raya Azebo	39.69812	12.43290	1500	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_109	Raya Azebo	39.71332	12.43569	1503	LS	I,S	W	>	75	M	Boda	Calcic Fluvisols	A
MKU_110	Raya Azebo	39.71656	12.43459	1524	LS	I,S	W	>	75	M	Boda	Calcic Fluvisols	A
MKU_111	Raya Azebo	39.72031	12.43619	1551	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_112	Raya Azebo	39.72524	12.43804	1610	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_113	Raya Azebo	39.72995	12.44508	1640	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_114	Raya Azebo	39.73777	12.43806	1594	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_115	Raya Azebo	39.75219	12.43421	1545	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_116	Raya Azebo	39.75502	12.44789	1569	MS	I,S	W	>	60	M	Boda	Calcic Fluvisols	A
MKU_117	Raya Azebo	39.75486	12.45116	1582	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_118	Raya Azebo	39.75473	12.45863	1638	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_119	Raya Azebo	39.75360	12.46097	1659	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_120	Raya Azebo	39.75810	12.46423	1633	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_121	Raya Azebo	39.76022	12.46760	1639	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_122	Raya Azebo	39.76185	12.47892	1675	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_123	Raya Azebo	39.76112	12.48163	1688	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_124	Raya Azebo	39.76250	12.48449	1692	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_125	Raya Azebo	39.76492	12.49351	1735	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_126	Raya Azebo	39.76439	12.49828	1724	MS	I,S	W	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_127	Raya Azebo	39.76206	12.51014	1724	MS	I,S	W	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_128	Raya Azebo	39.76330	12.52403	1742	MS	I,S	W	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_129	Raya Azebo	39.76815	12.55346	1761	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_130	Raya Azebo	39.76843	12.57214	1723	MS	I,S	W	>	100	D	Red Walka	Haplic Vertisols (Eutric)	A
MKU_131	Raya Azebo	39.76804	12.58136	1735	MS	I,S	W	>	100	D	Red Walka	Haplic Vertisols (Eutric)	A
MKU_132	Raya Azebo	39.76947	12.59307	1749	LS	I,S	W	>	100	M	Boda	Haplic Cambisols (Eutric)	A
MKU_133	Raya Azebo	39.77195	12.60349	1725	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_134	Raya Azebo	39.72556	12.74422	1597	LS	I	I	>	100	V	Walka	Haplic Vertisols (Eutric)	A
MKU_135	Raya Azebo	39.71063	12.83461	1708	LS	I	I	>	100	V	Walka	Haplic Vertisols (Eutric)	A
MKU_136	Raya Azebo	39.68207	12.80319	1707	LS	I	I	>	100	V	Walka	Haplic Vertisols (Eutric)	A
MKU_137	Raya Azebo	39.69566	12.83262	1781	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_138	Raya Azebo	39.67983	12.44961	1494	LS	I	S	=	45	S	Shahsher	Haplic Leptosols	A
MKU_139	Alamata	39.62073	12.51935	1577	UP	I	W	=	30	V	Shahsher	Haplic Leptosols	A
MKU_140	Ofla	39.52648	12.45973	2435	MS	I	E	=	40	S	Shahsher	Haplic Leptosols	A
MKU_141	Ofla	39.52352	12.47468	2392	MS	I	W	>	95	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_142	Ofla	39.52248	12.48445	2487	MS	I	W	>	95	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_143	Ofla	39.45786	12.52758	2513	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_144	Ofla	39.44012	12.51364	2794	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_145	Ofla	39.43064	12.51113	2762	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_146	Ofla	39.41345	12.50244	2580	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_147	Ofla	39.41612	12.50409	2572	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_148	Ofla	39.39690	12.49440	2550	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_149	Ofla	39.39559	12.48735	2577	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_150	Ofla	39.38181	12.49482	2713	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_151	Ofla	39.37057	12.49028	2869	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_152	Ofla	39.35697	12.48883	2754	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_153	Ofla	39.34354	12.49070	2692	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_154	Ofla	39.32475	12.48357	2621	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_155	Ofla	39.30678	12.49742	2421	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_156	Ofla	39.28424	12.50361	2341	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_157	Ofla	39.28123	12.51599	2260	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_158	Ofla	39.27478	12.51443	2157	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_159	Ofla	39.27174	12.51409	2196	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_160	Ofla	39.26288	12.51536	2079	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_161	Ofla	39.25949	12.51521	2071	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_162	Ofla	39.25440	12.51037	1902	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_163	Ofla	39.23139	12.62169	2161	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_164	Ofla	39.25197	12.62181	2142	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_165	Ofla	39.25287	12.61705	2085	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_166	Ofla	39.25619	12.60600	2203	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_167	Ofla	39.26056	12.59989	2101	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_168	Ofla	39.26092	12.59544	2052	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_169	Ofla	39.26647	12.59097	2041	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_170	Ofla	39.28369	12.57389	1988	MS	I	W	>	95	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_171	Ofla	39.28705	12.56600	1939	MS	I	W	>	95	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_172	Ofla	39.28362	12.55617	2022	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_173	Ofla	39.28399	12.55039	1983	MS	I	W	>	95	D	Bakel	Haplic Cambisols (Eutric)	A
MKU_174	Ofla	39.28509	12.54673	2001	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_175	Ofla	39.28715	12.53729	2130	MS	I	S	=	25	V	Shahsher	Haplic Leptosols	A
MKU_176	Ofla	39.43357	12.61487	2830	CR	S	E	=	30	V	Keyahtay	Haplic Leptosols	A
MKU_177	Ofla	39.42195	12.63570	3034	CR	S	E	=	30	V	Keyahtay	Haplic Leptosols	A
MKU_178	Ofla	39.37891	12.64101	3002	CR	S	E	=	30	V	Keyahtay	Haplic Leptosols	A
MKU_179	Ofla	39.37171	12.64441	2869	CR	S	E	=	30	V	Keyahtay	Haplic Leptosols	A
MKU_180	Ofla	39.36351	12.65425	2709	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_181	Ofla	39.33756	12.66733	2565	CR	S	E	=	30	V	Keyahtay	Haplic Leptosols	A
MKU_182	Endamehoni	39.34987	12.76209	2543	MS	I	E	=	20	V	Boda	Haplic Leptosols	A
MKU_183	Endamehoni	39.35930	12.76069	2761	MS	I	E	=	15	V	keyahtay	Haplic Leptosols (Eutric)	A
MKU_184	Endamehoni	39.35951	12.75835	2777	MS	I	E	>	80	D	keyahtay	Haplic Cambisols (Eutric)	A
MKU_185	Endamehoni	39.39075	12.75543	2723	MS	I	E	>	80	D	keyahtay	Haplic Cambisols (Eutric)	A
MKU_186	Endamehoni	39.42211	12.77100	2349	MS	I	E	=	25	V	Shahsher	Haplic Leptosols	A
MKU_187	Endamehoni	39.43108	12.77471	2454	MS	I	E	=	25	V	Shahsher	Haplic Leptosols	A
MKU_188	Endamehoni	39.44786	12.77884	2327	MS	I	W	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_189	Endamehoni	39.45282	12.77788	2211	MS	I	E	=	20	D	Boda	Haplic Leptosols	A
MKU_190	Alaje	39.34030	12.95962	2125	MS	S	S	=	40	S	Baekel	Haplic Cambisols (Eutric)	A
MKU_191	Alaje	39.34617	12.97796	2312	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_192	Alaje	39.34725	12.97917	2305	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_193	Alaje	39.36318	12.99261	2500	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_194	Alaje	39.36033	12.99640	2493	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_195	Alaje	39.35268	13.00201	2491	TS	I	I	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_196	Alaje	39.37422	13.00224	2554	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Altitude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_197	Alaje	39.37803	13.00470	2592	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_198	Alaje	39.38366	13.00970	2549	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_199	Alaje	39.39006	13.01181	2691	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_200	Alaje	39.38958	13.01341	2637	LS	S	W	>	100	M	Baekel	Haplic Cambisols (Eutric)	A
MKU_201	Alaje	39.40330	13.01350	2801	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_202	Alaje	39.40866	13.01667	2676	TS	I	M	>	100	D	Walka	Haplic Vertisols (Eutric)	A
MKU_203	Alaje	39.41351	13.00659	2941	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_204	Alaje	39.42229	12.99953	2976	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_205	Alaje	39.42562	12.99708	3015	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_206	Alaje	39.43081	12.99242	2972	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_207	Alaje	39.44035	12.98834	2920	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_208	Alaje	39.45740	12.97590	2641	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_209	Alaje	39.46613	12.95800	2609	TS	I	M	>	100	D	Walka	Haplic Vertisols	A
MKU_210	Alaje	39.46865	12.96035	2608	TS	I	M	>	100	D	Walka	Haplic Vertisols	A
MKU_211	Alaje	39.47197	12.95755	2622	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_212	Alaje	39.47840	12.95594	2612	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_213	Alaje	39.48417	12.95490	2629	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_214	Alaje	39.48689	12.95827	2559	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_215	Alaje	39.49232	12.95881	2528	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_216	Alaje	39.49678	12.96101	2538	UP	I,S	E	=	35	S	Shahsher	Haplic Leptosols	A
MKU_217	Alaje	39.49823	12.95399	2530	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_218	Alaje	39.31923	12.84119	1998	TS	S	E	=	25	V	Hutsa	Haplic Leptosols (Eutric)	A
MKU_219	Alaje	39.32188	12.84924	1975	MS	I	W	>	100	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_220	Alaje	39.32277	12.85598	1961	MS	I	W	>	100	V	Shahsher	Haplic Cambisols (Eutric)	A
MKU_221	Alaje	39.29631	12.88769	2102	MS	S	W	=	30	M	Hutsa	Haplic Leptosols	A
MKU_222	Alaje	39.29956	12.89069	2091	MS	S	W	=	30	M	Hutsa	Haplic Leptosols	A
MKU_223	Alaje	39.30625	12.89471	1980	LS	S	W	>	100	M	Tsada Bakel	Haplic Cambisols (Eutric)	A
MKU_224	Alaje	39.38007	12.90025	2123	MS	S	S	=	75	M	Keahtay	Leptic Cambisols	A
MKU_225	Alaje	39.38846	12.90253	2180	MS	S	S	=	75	M	Keahtay	Leptic Cambisols	A
MKU_226	Alaje	39.39894	12.90966	2289	MS	S	W	=	30	M	Hutsa	Haplic Leptosols	A
MKU_227	Alaje	39.41801	12.91876	2624	MS	S	W	=	30	M	Hutsa	Haplic Leptosols	A
MKU_228	Alaje	39.42305	12.91567	2679	UP	I	M	>	100	D	Walka	Calcic Vertisols	A
MKU_229	Alaje	39.42815	12.91486	2696	MS	S	W	=	30	M	Hutsa	Haplic Leptosols	A
MKU_230	Alaje	39.43347	12.91797	2698	LS	I	W	>	100	D	Walka	Vertic Cambisols	A
MKU_231	Raya Alamata	39.36792	12.34743	2310	-	-	-	=	20	-	NA	Leptic Regosols	A
MKU_232	Raya Alamata	39.50589	12.34721	1841	-	-	-	=	35	-	NA	Leptic Regosols	A
MKU_233	Raya Alamata	39.64386	12.34692	1421	-	-	-	>	105	-	NA	Leptic Regosols	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_234	Raya Azebo	39.78182	12.34656	1391	-	-	-	=	40	-	NA	Vertic Cambisols	A
MKU_235	Raya Azebo	39.78222	12.48219	1744	-	-	-	=	30	-	NA	Leptic Cambisols	A
MKU_236	Raya Alamata	39.64419	12.48256	1425	-	-	-	>	120	-	NA	Leptic Regosols	A
MKU_237	Ofla	39.50615	12.48285	2612	-	-	-	>	90	-	NA	Lithic Leptosols	A
MKU_238	Ofla	39.36811	12.48308	2740	-	-	-	=	58	-	NA	Fluvic Cambisols	A
MKU_239	Ofla	39.23007	12.48323	1833	-	-	-	=	50	-	NA	Haplic Cambisols	A
MKU_240	Ofla	39.23019	12.61887	2117	-	-	-	=	70	-	NA	Haplic Regosols (Skeletic)	A
MKU_241	Ofla	39.50642	12.61849	2473	-	-	-	>	56	-	NA	Haplic Fluvisols	A
MKU_242	Raya Azebo	39.64453	12.61820	1635	-	-	-	>	160	-	NA	Leptic Regosols	A
MKU_243	Raya Azebo	39.78263	12.61783	1620	-	-	-	=	15	-	NA	Lithic Leptosols	A
MKU_244	Raya Azebo	39.78305	12.75346	1554	-	-	-	>	105	-	NA	Leptic Regosols	A
MKU_245	Raya Azebo	39.64487	12.75383	1733	-	-	-	>	130	-	NA	Haplic Luvisols (Arenic)	A
MKU_246	Endamehoni	39.50669	12.75413	2529	-	-	-	=	89	-	NA	Vertic Cambisols	A
MKU_247	Endamehoni	39.36850	12.75436	2803	-	-	-	=	25	-	NA	Leptic Regosols	A
MKU_248	Alaje	39.36870	12.89000	2179	-	-	-	=	71	-	NA	Haplic Leptosols	A
MKU_249	Alaje	39.50696	12.88977	2902	-	-	-	=	45	-	NA	Leptic Calcisols	A
MKU_250	Raya Azebo	39.64521	12.88947	2192	-	-	-	=	33	-	NA	Leptic Calcisols	A
MKU_251	Raya Azebo	39.78347	12.88909	1576	-	-	-	=	78	-	NA	Haplic Vertisols	A
MKU_252	Alaje	39.50723	13.02541	2597	-	-	-	=	65	-	NA	Haplic Cambisols	A
MKU_253	Alaje	39.53199	12.97532	3097	-	-	-	>	140	-	NA	Haplic Cambisols	A
MKU_254	Endamehoni	39.56538	12.86109	2982	-	-	-	=	40	-	NA	Leptic Regosols	A
MKU_255	Ofla	39.53458	12.57943	2483	-	-	-	>	50	-	NA	Haplic Fluvisols	A
MKU_256	Korem Town	39.51082	12.52348	2430	-	-	-	=	20	-	NA	Leptic Regosols	A
MKU_257	Ofla	39.46059	12.53393	2454	-	-	-	=	25	-	NA	Leptic Regosols	A
MKU_258	Ofla	39.30525	12.49697	2415	-	-	-	=	10	-	NA	Haplic Leptosols	A
MKU_259	Alaje	39.37340	12.90050	2094	-	-	-	=	10	-	NA	Lithic Leptosols	A
MKU_260	Alaje	39.43020	12.99240	2997	-	-	-	=	10	-	NA	Haplic Leptosols	A
MKU_261	Ofla	39.47370	12.52260	2664	-	-	-	=	55	-	NA	-	A
MKU_262	Alaje	39.53450	12.93130	2464	-	-	-	>	130	-	NA	Haplic Vertisols	A
MKU_263	Raya Azebo	39.64610	12.74450	1726	-	-	-	>	210	-	NA	Haplic Fluvisols (Calcaric)	A
MKU_264	Raya Azebo	39.61720	12.79380	1834	-	-	-	>	200	-	NA	Mollic Fluvisols	A
MKU_265	Raya Azebo	39.72270	12.64030	1511	-	-	-	>	145	-	NA	Haplic Vertisols (Eutric)	A
MKU_266	Raya Azebo	39.67790	12.80990	1719	-	-	-	>	193	-	NA	Haplic Fluvisols (Eutric)	A
MKU_267	Ofla	39.51900	12.61960	2466	-	-	-	>	120	-	NA	Haplic Vertisols (Eutric)	A
MKU_268	Ofla	39.50970	12.62740	-9999	-	-	-	>	115	-	NA	Haplic Cambisols (Eutric)	A
MKU_269	Endamehoni	39.51910	12.74860	2528	-	-	-	>	165	-	NA	Haplic Cambisols (Eutric)	A
MKU_270	Raya Azebo	39.74890	12.70590	1541	-	-	-	>	150	-	NA	Haplic Vertisols (Eutric)	A

ProfileID	Woreda	X_LonDD	Y_LatDD	Alti tude	Slope Position	Parent Material	Drain	Rock	Rock Depth	Rootbl Depth	Local soil name	WRB2006	O
MKU_271	Raya Azebo	39.72650	12.82020	1673	-	-	-	>	200	-	NA	Haplic Vertisols (Eutric)	A

Annex 4b Soil profile auger observations at woreda level, morphologic layer data

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUB_01	1	Ap	0	20	SiC	N	0	10YR4/1	N	FI	ST	2	N	Y	-
AAUB_01	2	A1	20	75	CL	N	0	10YR3/2	V	FI	VST	1	N	Y	-
AAUB_01	3	A2	75	100	C	N	0	10YR4/2	V	VFI	VST	1	N	Y	-
AAUB_02	1	Ap	0	25	SiCL	V	1	10YR4/2	N	FR	SST	3	N	Y	-
AAUB_02	2	A1	25	65	SiC	N	0	10YR3/3	N	FI	ST	2	N	Y	-
AAUB_02	3	B1	65	90	C	N	0	10YR3/2	V	VFI	VST	1	Y	Y	-
AAUB_02	4	B2	90	100	CL	N	0	10YR3/1	N	FI	VST	1	N	Y	-
AAUB_03	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_04	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_05	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_06	1	Ap	0	20	SiC	N	0	10YR3/1	N	FI	ST	2	N	Y	-
AAUB_06	2	AB	20	80	C	N	0	10YR2/2	V	FI	VST	2	Y	Y	-
AAUB_06	3	B	80	100	C	N	0	10YR2/2	F	FI	VST	1	Y	N	-
AAUB_07	1	Ap	0	25	CL	N	0	10YR2/2	N	FI	ST	2	N	Y	-
AAUB_07	2	AB	25	70	C	N	0	10YR2/1	F	FI	VST	2	-	Y	-
AAUB_07	3	B	70	100	C	N	0	10YR3/2	F	FI	VST	2	-	Y	-
AAUB_08	1	Ap	0	20	C	N	0	10YR4/1	N	FI	VST	2	N	Y	-
AAUB_08	2	AB	20	80	SiC	N	0	10YR5/2	N	FI	ST	2	N	Y	-
AAUB_08	3	B	80	100	C	N	0	10YR5/4	N	VFI	VST	1	N	Y	-
AAUB_09	1	Ap	0	25	CL	N	0	10YR3/1	N	FI	ST	2	N	Y	-
AAUB_09	2	B	25	80	C	N	0	10YR3/2	N	FI	VST	1	N	Y	-
AAUB_09	3	BA	80	100	C	N	0	10YR3/3	N	FI	VST	1	N	-	-
AAUB_11	1	Ap	0	25	SiC	N	0	10YR2/2	N	FI	ST	1	N	Y	-
AAUB_11	2	AB	25	75	C	N	0	10YR3/1	V	VFI	VST	1	Y	Y	-
AAUB_11	3	B	75	100	SiC	N	0	10YR4/2	F	VFI	VST	1	Y	Y	-
AAUB_12	1	Ap	0	20	SiC	V	1	10YR3/1	N	FI	ST	2	N	Y	-
AAUB_12	2	BA	20	70	C	N	0	10YR2/2	N	VFI	VST	1	N	Y	-
AAUB_12	3	B	70	100	CL	N	0	10YR3/2	N	FI	ST	1	N	Y	-
AAUB_13	1	Ap	0	20	SiCL	N	0	10YR4/2	N	FR	SST	3	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUB_13	2	B	20	55	CL	N	0	10YR3/2	N	FI	ST	2	N	Y	-
AAUB_13	3	C	55	70	SC	N	0	10YR3/1	N	FI	ST	2	Y	N	-
AAUB_14	1	Ap	0	20	CL	F	3	10YR3/1	N	FI	ST	2	N	Y	-
AAUB_14	2	BA	20	70	C	N	0	10YR2/2	N	FI	VST	2	N	Y	-
AAUB_14	3	B	70	100	C	N	0	10YR3/2	F	VFI	VST	1	N	Y	-
AAUB_15	1	Ap	0	20	SiC	V	1	7.5YR4/4	N	FR	SST	2	N	Y	-
AAUB_15	2	B	20	65	SiC	V	1	7.5YR4/2	N	FI	SST	2	N	Y	-
AAUB_15	3	BC	65	90	SC	C	10	7.5YR3/2	N	FR	SST	1	N	N	-
AAUB_16	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_17	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_18	1	Ap	0	25	SiC	N	0	10YR3/1	N	FI	ST	2	N	Y	-
AAUB_18	2	AB	25	70	C	N	0	10YR2/2	N	VFI	VST	1	N	Y	-
AAUB_18	3	B	70	100	C	N	0	10YR3/2	N	VFI	VST	1	Y	Y	-
AAUB_19	1	Ap	0	25	SiC	N	0	10YR2/2	N	FI	ST	2	N	Y	-
AAUB_19	2	BA	25	80	C	F	3	10YR2/1	N	VFI	VST	2	N	Y	-
AAUB_19	3	B	80	100	C	V	1	10YR3/1	N	VFI	VST	1	N	Y	-
AAUB_20	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_21	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUB_22	1	Ap	0	25	C	N	0	10YR3/1	N	FI	ST	3	N	Y	-
AAUB_22	2	AB	25	80	C	N	0	10YR2/2	F	VFI	VST	2	N	Y	-
AAUB_22	3	B	80	100	SiC	N	0	10YR4/3	V	FI	ST	1	N	Y	-
AAUB_23	1	Ap	0	25	SiC	N	0	10YR3/2	N	FI	ST	2	N	Y	-
AAUB_23	2	AB	25	70	SiC	N	0	10YR2/2	F	FI	ST	2	N	Y	-
AAUB_23	3	B	70	100	SiCL	N	0	10YR4/2	F	FR	SST	2	N	Y	-
AAUB_24	1	-	0	90	-	-	-	-	-	-	-	-	-	-	-
AAUB_25	1	A	0	25	C	N	0	10YR3/1	N	FI	VST	2	N	Y	-
AAUB_25	2	AB	25	75	C	N	0	10YR2/2	V	VFI	VST	1	Y	Y	-
AAUB_25	3	BA	75	100	C	N	0	10YR3/2	N	VFI	VST	1	N	Y	-
AAUB_26	1	Ap	0	30	C	N	0	10YR3/1	N	FI	VST	2	N	Y	-
AAUB_26	2	AB	30	80	SiC	N	0	10YR2/1	C	VFI	VST	1	Y	Y	-
AAUB_26	3	B	80	100	SiC	N	0	10YR2/2	F	VFI	VST	2	Y	Y	-
AAUB_27	1	A	0	30	CL	N	0	10YR5/3	N	FR	ST	3	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUB_27	2	BA	30	70	SIC	N	0	10YR2/2	N	FI	ST	2	N	Y	-
AAUB_27	3	B	70	100	C	N	0	-	N	FI	ST	1	N	Y	-
AAUB_28	1	A	0	30	SiC	N	0	10YR3/1	N	FR	ST	3	N	Y	-
AAUB_28	2	AB	30	65	C	N	0	10YR3/2	N	FI	VST	2	N	Y	-
AAUB_28	3	B	65	100	SiC	F	3	10YR4/4	N	FI	ST	1	N	Y	-
AAUB_29	1	A	0	25	C	N	0	10YR3/1	N	FI	ST	3	N	Y	-
AAUB_29	2	BA	25	75	CL	N	0	10YR3/2	N	FI	VST	2	N	Y	-
AAUB_29	3	B	75	100	SiC	N	0	10YR5/4	N	VFI	VST	1	N	Y	-
AAUB_30	1	Ap	0	20	C	N	0	10YR2/2	N	FI	ST	2	N	Y	-
AAUB_30	2	A1	20	70	C	N	0	10YR3/1	N	VFI	VST	1	N	Y	-
AAUB_30	3	A2	70	100	SiC	N	0	10YR2/1	N	VFI	VST	1	N	Y	-
AAUB_31	1	Ap	0	25	SiC	N	0	10YR3/1	N	FR	ST	2	N	Y	-
AAUB_31	2	AB	25	65	C	N	0	10YR3/2	N	FI	ST	2	N	Y	-
AAUB_31	3	B	65	100	SiC	V	1	10YR4/3	N	FR	ST	1	N	Y	-
AAUB_32	1	Ap	0	20	CL	F	3	10YR3/1	N	FR	ST	3	N	Y	-
AAUB_32	2	AB	20	75	C	V	1	10YR4/2	N	FI	VST	2	N	Y	-
AAUB_32	3	B	75	100	SiC	F	3	10YR3/2	N	FI	ST	2	N	Y	-
AAUB_33	1	-	0	100	-	-	-	-	-	-	-	-	-	-	-
AAUBa_01	1	Ap	0	25	C	N	0	2.5YR4/4	N	FR	SST	3	N	Y	Nitic
AAUBa_01	2	B1	25	80	C	N	0	2.5YR4/6	N	FI	ST	2	N	Y	-
AAUBa_01	3	B2	80	100	C	N	0	2.5YR4/6	N	FI	ST	2	N	Y	-
AAUBa_02	1	Ap	0	20	C	C	10	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
AAUBa_02	2	B	20	40	C	F	3	2.5YR3/3	N	FI	ST	2	Y	Y	-
AAUBa_02	3	BC	40	70	CL	V	1	2.5YR3/6	N	FR	ST	3	Y	N	-
AAUBa_02	4	R	70	75	-	D	95	-	-	-	-	-	-	N	-
AAUBa_03	1	A	0	25	C	N	0	7.5YR4/3	N	FI	ST	3	N	Y	-
AAUBa_03	2	Bt	25	60	C	N	0	7.5YR4/4	N	FR	SST	2	N	Y	-
AAUBa_03	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
AAUBa_04	1	Ap	0	20	SiC	F	3	2.5YR3/3	N	FR	SST	3	Y	Y	Argic
AAUBa_04	2	Bt	20	50	C	V	1	2.5YR4/4	N	FI	ST	2	N	Y	-
AAUBa_04	3	BC	50	85	C	C	10	2.5YR4/3	N	FR	SST	2	N	N	-
AAUBa_05	1	A	0	20	C	V	1	5YR3/3	N	FI	ST	3	N	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUBa_05	2	BA	20	70	C	N	0	5YR3/2	N	FI	ST	1	N	Y	-
AAUBa_05	3	B	70	100	C	C	10	5YR4/4	N	FR	SST	2	N	Y	-
AAUBa_07	1	A	0	25	SiCL	F	3	2.5YR3/2	N	FR	ST	3	N	Y	Nitic
AAUBa_07	2	BA	25	75	C	V	1	2.5YR3/4	N	FR	ST	3	Y	Y	-
AAUBa_07	3	B	75	100	C	C	10	2.5YR4/4	N	FI	VST	2	Y	Y	-
AAUBa_08	1	AB	0	20	SiC	N	0	2.5YR3/2	N	FI	ST	3	N	Y	Nitic
AAUBa_08	2	BA	20	65	C	N	0	2.5YR3/3	N	VFI	VST	3	Y	Y	-
AAUBa_08	3	B	65	100	C	N	0	2.5YR3/4	N	FI	ST	2	Y	Y	-
AAUBa_09	1	A	0	20	SiC	C	10	7.5YR3/3	N	FR	ST	3	N	Y	Argic
AAUBa_09	2	Bt	20	80	C	F	3	7.5YR3/2	N	FR	ST	3	N	Y	-
AAUBa_09	3	B	80	100	C	C	10	7.5YR4/3	N	FI	VST	2	N	Y	-
AAUBa_11	1	BA	0	25	SiCL	C	10	7.5RY3/2	N	FR	ST	4	N	Y	Nitic
AAUBa_11	2	B	25	70	C	V	1	7.5RY3/3	N	FI	ST	3	N	Y	-
AAUBa_11	3	BC	70	100	SiC	F	3	7.5YR4/2	N	FI	ST	2	N	Y	-
AAUBa_12	1	BA	0	20	SiC	V	1	2.5YR3/3	N	FI	ST	3	N	Y	Nitic
AAUBa_12	2	B	20	60	C	F	3	2.5YR3/4	N	FR	SST	2	N	Y	-
AAUBa_12	3	BC	60	90	C	C	10	2.5YR4/3	N	FR	SST	2	N	Y	-
AAUBa_12	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
AAUBa_13	1	A	0	25	SiC	V	1	2.5YR3/3	N	FI	ST	3	N	Y	Nitic
AAUBa_13	2	AB	25	80	C	N	0	2.5YR3/4	N	FI	ST	2	N	Y	-
AAUBa_13	3	B	80	100	C	N	0	2.5YR3/2	N	FI	ST	2	N	Y	-
AAUBa_14	1	A	0	25	SCL	F	3	7.5YR3/2	N	VFR	SST	3	N	Y	Argic
AAUBa_14	2	Bt1	25	75	C	V	1	7.5YR4/2	N	FI	ST	3	N	Y	-
AAUBa_14	3	Bt2	75	100	C	C	10	7.5YR3/3	N	FI	ST	2	N	Y	-
AAUBa_15	1	A	0	25	C	F	3	7.5YR4/2	N	FI	ST	3	N	Y	Argic
AAUBa_15	2	Bt1	25	80	C	V	1	7.5YR3/2	N	FI	ST	2	N	Y	-
AAUBa_15	3	Bt2	80	100	SiC	V	1	7.5YR3/3	N	VFI	VST	2	Y	Y	-
AAUBa_16	1	A	0	25	SiCL	N	0	2.5YR2.5/3	N	FR	ST	4	N	Y	Nitic
AAUBa_16	2	AB	25	70	C	N	0	2.5YR2.5/4	N	FI	ST	4	N	Y	-
AAUBa_16	3	B	70	100	C	V	1	2.5YR3/3	N	VFI	VST	3	N	Y	-
AAUBa_17	1	A	0	25	SiC	N	0	2.5YR3/2	N	FI	ST	3	N	Y	Nitic
AAUBa_17	2	AB	25	75	C	N	0	2.5YR3/3	N	VFI	VST	3	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUBa_17	3	B	75	100	C	N	0	2.5YR4/2	-	VFI	VST	2	N	Y	-
AAUBa_18	1	AB	0	25	SiCL	M	27	2.5YR3/3	N	FR	SST	3	N	Y	Nitic
AAUBa_18	2	B	25	65	C	C	10	2.5YR3/2	N	FI	ST	3	N	Y	-
AAUBa_18	3	BC	65	85	C	C	10	2.5YR4/2	N	FI	ST	2	N	N	-
AAUBa_18	4	R	85	90	-	D	95	-	-	-	-	-	-	N	-
AAUBa_19	1	A	0	30	SiC	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
AAUBa_19	2	AB	30	75	C	N	0	2.5YR2.5/3	N	FI	ST	3	N	Y	-
AAUBa_19	3	B	75	100	C	N	0	2.5YR3/4	N	FI	ST	2	N	Y	-
AAUBa_20	1	A	0	20	SiC	N	0	2.5YR3/2	N	FI	ST	3	N	Y	Nitic
AAUBa_20	2	B	20	55	C	F	3	2.5YR3/3	N	FI	ST	2	N	Y	-
AAUBa_20	3	BC	55	80	CL	C	10	2.5YR4/2	N	FI	ST	2	N	Y	-
AAUBa_21	1	A	0	20	SiCL	F	3	7.5YR3/2	N	FR	SST	3	N	Y	Argic
AAUBa_21	2	Bt1	20	60	C	N	0	7.5YR3/3	N	FI	ST	2	N	Y	-
AAUBa_21	3	Bt2	60	80	C	C	10	7.5YR/2.5/3	N	FI	ST	2	N	Y	-
AAUBa_22	1	A	0	25	SiC	N	0	2.5YR3/2	N	FI	ST	3	N	Y	Nitic
AAUBa_22	2	AB	25	70	C	N	0	2.5YR3/3	N	FI	ST	2	N	Y	-
AAUBa_22	3	B	70	100	C	N	0	2.5YR3/6	N	FR	ST	2	N	Y	-
AAUBa_23	1	A	0	25	CL	N	0	10YR3/2	V	FI	ST	2	N	Y	Argic
AAUBa_23	2	Bt1	25	70	C	N	0	10YR2/2	F	VFI	VST	2	Y	Y	-
AAUBa_23	3	Bt2	70	100	C	N	0	10YR3/1	C	VFI	VST	1	Y	Y	-
AAUBa_24	1	A	0	30	SiCL	N	0	10YR3/2	N	FR	SST	2	N	Y	Vertic
AAUBa_24	2	AB	30	75	C	N	0	10YR3/1	F	VFI	VST	2	Y	Y	-
AAUBa_24	3	B	75	100	C	N	0	10YR2/2	C	FI	ST	1	Y	Y	-
AAUBa_25	1	A	0	25	C	N	0	10YR3/2	N	FI	ST	2	N	Y	Vertic
AAUBa_25	2	BA	25	80	C	F	3	10YR2/2	F	FI	VST	1	N	Y	-
AAUBa_25	3	B	80	100	C	C	10	10YR2/1	C	VFI	VST	1	N	Y	-
AAUBa_26	1	A	0	20	SiC	N	0	2.5YR4/4	N	FI	ST	3	N	Y	Nitic
AAUBa_26	2	AB	20	80	C	N	0	2.5YR4/6	N	VFI	VST	2	Y	Y	-
AAUBa_26	3	B	80	100	C	N	0	2.5YR3/6	N	VFI	VST	2	Y	Y	-
AAUBa_27	1	A	0	25	SiC	N	0	2.5YR3/3	N	FI	ST	3	N	Y	Nitic
AAUBa_27	2	AB	25	75	C	N	0	2.5YR4/4	N	FI	ST	2	N	Y	-
AAUBa_27	3	BA	75	100	C	N	0	2.5YR3/6	N	FR	SST	2	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUBa_28	1	A	0	25	CL	N	0	7.5YR3/2	N	FI	ST	3	N	Y	Argic
AAUBa_28	2	BA	25	65	C	N	0	7.5YR3/3	N	FI	ST	3	N	Y	-
AAUBa_28	3	B	65	100	C	N	0	7.5YR2.5/3	N	VFI	VST	2	N	Y	-
AAUBa_29	1	A	0	25	SiC	N	0	7.5YR3/3	N	FI	ST	3	N	Y	Argic
AAUBa_29	2	BA	25	65	C	N	0	7.5YR3/2	N	FI	ST	2	N	Y	-
AAUBa_29	3	B	65	100	C	N	0	7.5YR3/4	N	VFI	VST	2	N	Y	-
AAUBa_30	1	A	0	25	SiC	N	0	2.5YR4/4	N	FI	ST	3	N	Y	-
AAUBa_30	2	AB	25	80	C	N	0	2.5YR3/4	N	VFI	VST	3	N	Y	-
AAUBa_30	3	B	80	100	C	N	0	2.5YR3/6	N	VFI	VST	2	N	Y	-
AAUBa_31	1	A	0	20	SiC	N	0	2.5YR3/2	N	FI	ST	3	N	Y	-
AAUBa_31	2	BA	20	75	c	N	0	2.5YR3/3	N	FI	ST	3	N	Y	-
AAUBa_31	3	B	75	100	C	N	0	2.5YR3/4	N	VFI	VST	2	N	Y	-
AAUBa_32	1	A	0	25	CL	N	0	2.5YR3/3	N	FI	ST	3	N	Y	-
AAUBa_32	2	BA	25	70	C	N	0	2.5YR3/6	N	FI	ST	3	N	Y	-
AAUBa_32	3	B	70	100	C	N	0	2.5YR2.5/4	N	VFI	VST	2	N	Y	-
AAUBa_33	1	A	0	25	C	C	10	7.5YR3/2	N	FR	ST	3	N	Y	-
AAUBa_33	2	Bt	25	60	C	C	10	7.5YR3/3	N	VFR	SST	2	N	N	-
AAUBa_33	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
AAUBa_34	1	A	0	20	SCL	C	10	2.5YR3/3	N	VFR	SST	3	N	Y	-
AAUBa_34	2	B	20	70	SC	M	27	2.5YR3/4	N	FR	SST	2	N	Y	-
AAUBa_34	3	R	70	75	-	D	95	-	-	-	-	-	-	N	-
AAUBa_35	1	A	0	25	SiC	N	0	7.5YR3/2	N	FI	ST	3	N	Y	Argic
AAUBa_35	2	Bt1	25	80	SiC	N	0	7.5YR3/2	N	FI	ST	2	N	Y	-
AAUBa_35	3	Bt2	80	100	C	N	0	7.5YR3/4	N	VFI	VST	2	N	Y	-
AAUGI_01	1	Ap	0	30	C	N	0	10YR3/1	N	FR	STP	2	N	Y	-
AAUGI_01	2	A1	30	50	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
AAUGI_01	3	A2	50	100	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
AAUGI_02	1	Ap	0	25	C	N	0	10YR3/1	N	FR	STP	2	N	Y	-
AAUGI_02	2	A1	25	50	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
AAUGI_02	3	A2	50	100	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
AAUGI_03	1	Ap	0	20	C	N	0	10YR3/1	N	FR	STP	2	N	Y	-
AAUGI_03	2	A1	20	50	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm		Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence		Diagnostic
AAUGI_03	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_04	1	Ap	0	20	C	N		0	10YR3/1	N	FR	STP	2	N	Y	-	
AAUGI_04	2	A1	20	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_04	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_05	1	Ap	0	25	C	N		0	10YR2/1	N	FR	STP	2	N	Y	-	
AAUGI_05	2	A1	25	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_05	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_06	1	Ap	0	25	C	N		0	10YR2/1	N	FR	STP	2	N	Y	-	
AAUGI_06	2	A1	25	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_06	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_07	1	Ap	0	25	C	N		0	10YR3/1	N	FR	STP	2	N	Y	-	
AAUGI_07	2	A1	25	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_07	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_08	1	Ap	0	25	C	N		0	10YR2/1	N	FR	STP	2	N	Y	-	
AAUGI_08	2	A1	25	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_08	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_09	1	Ap	0	30	C	N		0	10YR3/1	N	FR	STP	2	N	Y	-	
AAUGI_09	2	A1	30	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_09	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_10	1	Ap	0	25	C	N		0	10YR3/1	N	FR	STP	2	N	Y	-	
AAUGI_10	2	A1	25	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_10	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_11	1	Ap	0	30	C	N		0	10YR2/1	N	FR	STP	2	N	Y	-	
AAUGI_11	2	A1	30	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_11	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_12	1	Ap	0	20	C	N		0	10YR2/1	N	FR	STP	2	N	Y	-	
AAUGI_12	2	A1	20	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_12	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_13	1	Ap	0	25	C	N		0	10YR2/1	N	FR	STP	2	N	Y	-	
AAUGI_13	2	A1	25	50	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_13	3	A2	50	100	C	N		0	10YR2/1	N	FR	VST	2	N	Y	-	
AAUGI_14	1	Ap	0	20	C	N		0	10YR 2/1	N	VFR	SST	3	N	Y	-	

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUGI_14	2	B1	20	45	C	N	0	10YR 3/1	N	VFR	ST	3	N	Y	-
AAUGI_14	3	B2	45	100	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_15	1	Ap	0	18	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_15	2	B1	18	37	C	N	0	10YR 3/1	N	VFR	ST	3	N	Y	-
AAUGI_15	3	B2	37	100	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_16	1	Ap	0	25	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_16	2	B1	25	45	C	N	0	10YR 3/1	N	VFR	ST	3	N	Y	-
AAUGI_16	3	B2	45	100	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_17	1	Ap	0	20	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_17	2	B1	20	35	C	N	0	10YR 3/1	N	VFR	ST	3	N	Y	-
AAUGI_17	3	B2	35	100	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_18	1	Ap	0	16	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_18	2	B1	16	40	C	N	0	10YR 3/1	N	VFR	ST	3	N	Y	-
AAUGI_18	3	B2	40	100	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_19	1	Ap	0	15	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_19	2	B1	15	38	C	N	0	10YR 3/1	N	VFR	ST	3	N	Y	-
AAUGI_19	3	B2	38	100	C	N	0	10YR 2/1	N	VFR	SST	3	N	Y	-
AAUGI_20	1	Ap	0	15	C	N	0	10YR 3/2	N	VFR	SST	3	N	Y	-
AAUGI_20	2	R	15	20	-	D	95	-	-	-	-	-	-	N	-
AAUGI_21	1	Ap	0	13	C	N	0	10YR 3/2	N	VFR	SST	3	N	Y	-
AAUGI_21	2	R	13	18	-	D	95	-	-	-	-	-	-	N	-
AAUGI_22	1	Ap	0	12	C	N	0	10YR 3/2	N	VFR	SST	3	N	Y	-
AAUGI_22	2	R	12	17	-	D	95	-	-	-	-	-	-	N	-
AAUGI_23	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	-
AAUGI_23	2	Bt1	25	80	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
AAUGI_23	3	Bt2	80	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
AAUGI_24	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	-
AAUGI_24	2	Bt1	25	80	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
AAUGI_24	3	Bt2	80	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
AAUGI_25	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUGI_25	2	A	20	40	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
AAUGI_25	3	Bt	40	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUGI_26	1	Ap	0	20	L	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
AAUGI_26	2	A	20	90	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUGI_26	3	Bt	90	100	C	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Argic
AAUGI_27	1	A	0	25	CL	N	0	7.5YR3/2	N	FI	ST	3	N	Y	Argic
AAUGI_27	2	Bt1	25	65	C	N	0	7.5YR3/3	N	FI	ST	3	N	Y	-
AAUGI_27	3	Bt2	65	100	C	N	0	7.5YR2.5/3	N	VFI	VST	2	N	Y	-
AAUGI_28	1	A	0	25	SiC	N	0	7.5YR3/3	N	FI	ST	3	N	Y	Argic
AAUGI_28	2	Bt1	25	65	C	N	0	7.5YR3/2	N	FI	ST	2	N	Y	-
AAUGI_28	3	Bt2	65	100	C	N	0	7.5YR3/4	N	VFI	VST	2	N	Y	-
AAUGI_29	1	A	0	25	CL	N	0	7.5YR3/2	N	FI	ST	3	N	Y	Argic
AAUGI_29	2	Bt1	25	65	C	N	0	7.5YR3/3	N	FI	ST	3	N	Y	-
AAUGI_29	3	Bt2	65	100	C	N	0	7.5YR2.5/3	N	VFI	VST	2	N	Y	-
AAUMu_001	1	Ap	0	20	C	N	0	10YR2/1	N	FR	ST	3	N	Y	-
AAUMu_001	2	A	20	45	C	N	0	10YR3/2	N	FI	ST	3	N	Y	Vertic
AAUMu_001	3	A2	45	100	C	N	0	10YR3/1	N	FI	VST	3	N	N	Vertic
AAUMu_002	1	Ap	0	20	C	N	0	10YR3/2	N	FI	ST	3	N	Y	-
AAUMu_002	2	A	20	60	C	N	0	10YR2/2	N	FI	ST	3	N	Y	Vertic
AAUMu_002	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
AAUMu_003	1	Ap	0	20	CL	N	0	10YR3/2	N	FR	ST	4	N	Y	-
AAUMu_003	2	A1	20	60	C	N	0	10YR2/2	N	FR	ST	4	N	Y	Vertic
AAUMu_003	3	A2	60	100	C	N	0	10YR3/3	N	FI	ST	4	N	N	Vertic
AAUMu_004	1	Ap	0	20	SiC	N	0	10YR3/2	N	FR	ST	4	N	Y	Albic
AAUMu_004	2	A1	20	70	C	N	0	10YR3/3	N	FR	ST	3	N	Y	Vertic
AAUMu_004	3	A2	70	100	C	N	0	10YR2/2	N	FR	ST	3	N	N	Vertic
AAUMu_005	1	Ap	0	20	SiC	N	0	10YR3/2	F	FR	ST	4	N	Y	Albic
AAUMu_005	2	A1	20	60	C	N	0	10YR3/2	F	FR	ST	3	N	Y	Vertic
AAUMu_005	3	A2	60	100	C	N	0	10YR5/2	F	FR	ST	3	N	N	Vertic
AAUMu_006	1	Ap	0	20	SiC	N	0	10YR3/2	F	FR	ST	4	N	Y	Albic
AAUMu_006	2	A1	20	60	C	N	0	10YR3/2	F	FR	ST	3	N	Y	Vertic
AAUMu_006	3	A2	60	100	C	N	0	10YR5/2	F	FR	ST	3	N	N	Vertic
AAUMu_007	1	Ap	0	20	SiC	N	0	10YR3/2	F	FR	ST	4	N	Y	Albic
AAUMu_007	2	A1	20	60	C	N	0	10YR3/2	F	FR	ST	3	N	Y	Vertic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUMu_007	3	A2	60	100	C	N	0	10YR5/2	F	FR	ST	3	N	N	Vertic
AAUMu_008	1	Ap	0	15	SiC	N	0	10YR3/2	F	FR	ST	4	N	Y	Albic
AAUMu_008	2	A1	15	30	C	N	0	10YR4/3	F	FR	ST	3	N	Y	Vertic
AAUMu_008	3	A2	30	100	C	N	0	10YR3/1	F	FR	ST	3	N	N	Vertic
AAUMu_009	1	Ap	0	15	SiC	N	0	10YR3/2	F	FR	ST	4	N	Y	Albic
AAUMu_009	2	A1	15	30	C	N	0	10YR4/3	F	FR	ST	3	N	Y	Vertic
AAUMu_009	3	A2	30	100	C	N	0	10YR3/1	F	FR	ST	3	N	N	Vertic
AAUMu_010	1	Ap	0	20	SiCL	N	0	7.5YR3/2	N	VFR	ST	4	N	Y	Mollic
AAUMu_010	2	A1	20	60	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	-
AAUMu_010	3	A2	60	100	C	N	0	7.5YR2.5/1	N	FR	ST	4	N	N	Cambic
AAUMu_011	1	Ap	0	20	C	N	0	10YR3/2	N	FR	ST	3	N	Y	-
AAUMu_011	2	A1	20	70	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Vertic
AAUMu_011	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	3	N	Y	Vertic
AAUMu_012	1	Ap	0	10	SCL	C	10	7.5YR4/3	N	FR	NST	4	N	Y	-
AAUMu_012	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
AAUMu_013	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	LO	ST	4	N	Y	Mollic
AAUMu_013	2	A	20	60	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_013	3	B	60	100	C	N	0	5YR3/2	N	FR	ST	4	N	Y	-
AAUMu_014	1	Ap	0	15	SiC	N	0	10YR2/1	N	VFR	SST	4	N	Y	Mollic
AAUMu_014	2	E	15	25	SiCL	N	0	10YR3/1	N	FR	SST	5	N	Y	Albic
AAUMu_014	3	B	25	70	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Vertic
AAUMu_014	4	BC	70	100	C	N	0	10YR3/2	N	FR	ST	4	N	N	-
AAUMu_015	1	Ap	0	10	CL	C	10	10YR2/1	N	FR	SST	4	N	Y	-
AAUMu_015	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
AAUMu_016	1	Ap	0	20	SiL	N	0	10YR3/1	N	VFR	NST	4	N	Y	Mollic
AAUMu_016	2	E	20	30	SiL	N	0	10YR4/1	V	VFR	SST	4	N	Y	Albic
AAUMu_016	3	B	30	100	C	N	0	10YR2/1	N	N	ST	3	N	Y	Vertic
AAUMu_017	1	Ap	0	20	SiL	N	0	10YR3/1	N	VFR	NST	4	N	Y	Mollic
AAUMu_017	2	E	20	30	SiL	N	0	10YR4/1	V	VFR	SST	4	N	Y	Albic
AAUMu_017	3	B	30	100	C	N	0	10YR2/1	N	N	ST	3	N	Y	Vertic
AAUMu_018	1	Ap	0	25	SiCL	N	0	7.5YR2.5/3	N	VFR	SST	4	N	Y	Mollic
AAUMu_018	2	A	25	40	SiCL	N	0	7.5YR4/2	C	FR	SST	5	N	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUMu_018	3	B	40	80	CL	N	0	5YR3/2	N	FR	ST	4	N	Y	Cambic
AAUMu_018	4	R	80	85	-	D	95	-	-	-	-	-	-	N	-
AAUMu_019	1	Ap	0	20	SiL	N	0	10YR3/1	N	VFR	NST	4	N	Y	Mollic
AAUMu_019	2	E	20	30	SiL	N	0	10YR4/1	V	VFR	SST	4	N	Y	Albic
AAUMu_019	3	B	30	100	C	N	0	10YR2/1	N	N	ST	3	N	Y	Vertic
AAUMu_020	1	Ap	0	20	SiL	N	0	10YR3/1	N	VFR	NST	4	N	Y	Mollic
AAUMu_020	2	E	20	30	SiL	N	0	10YR4/1	V	VFR	SST	4	N	Y	Albic
AAUMu_020	3	B	30	100	C	N	0	10YR2/1	N	N	ST	3	N	Y	Vertic
AAUMu_021	1	Ap	0	20	SiL	N	0	10YR3/1	N	VFR	NST	4	N	Y	Mollic
AAUMu_021	2	E	20	30	SiL	N	0	10YR4/1	V	VFR	SST	4	N	Y	Albic
AAUMu_021	3	B	30	100	C	N	0	10YR2/1	N	-	ST	3	N	Y	Vertic
AAUMu_022	1	Ap	0	20	CL	N	0	10YR3/2	N	VFR	NST	4	N	Y	Mollic
AAUMu_022	2	E	20	35	SiCL	N	0	10YR4/3	F	FR	SST	5	N	Y	Albic
AAUMu_022	3	A	35	100	C	N	0	10YR2/1	N	FR	ST	3	N	Y	Vertic
AAUMu_023	1	Ap	0	20	CL	N	0	7.5YR3/2	N	VFR	ST	4	N	Y	Umbric
AAUMu_023	2	A	20	60	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Umbric
AAUMu_023	3	B	60	100	C	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Argic
AAUMu_024	1	Ap	0	20	CL	N	0	7.5YR3/2	N	VFR	ST	4	N	Y	Umbric
AAUMu_024	2	A	20	60	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Umbric
AAUMu_024	3	B	60	100	C	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Argic
AAUMu_025	1	Ap	0	20	CL	N	0	7.5YR3/2	N	VFR	ST	4	N	Y	Umbric
AAUMu_025	2	A	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Umbric
AAUMu_025	3	AB	60	80	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	-
AAUMu_025	4	B	80	100	C	N	0	5YR3/3	N	FI	ST	4	N	N	Argic
AAUMu_026	1	Ap	0	20	SiCL	N	0	7.5YR4/4	N	FR	ST	4	N	Y	Umbric
AAUMu_026	2	A	20	50	SiC	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Umbric
AAUMu_026	3	B	50	90	C	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Argic
AAUMu_026	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
AAUMu_027	1	Ap	0	20	SiCL	N	0	10YR3/3	C	FR	ST	2	N	Y	Albic
AAUMu_027	2	A	20	40	SIC	N	0	10YR3/2	C	FI	ST	2	N	Y	Vertic
AAUMu_027	3	BC	40	90	C	N	0	10YR4/2	C	FI	ST	1	N	N	Gleyic
AAUMu_028	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	-

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AAUMu_028	2	B	20	45	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
AAUMu_028	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
AAUMu_029	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	-
AAUMu_029	2	Bt1	25	80	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
AAUMu_029	3	Bt2	80	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
AAUMu_030	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	-
AAUMu_030	2	Bt1	25	80	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
AAUMu_030	3	Bt2	80	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
AAUMu_031	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_031	2	A	20	40	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
AAUMu_031	3	Bt	40	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
AAUMu_032	1	Ap	0	20	L	N	0	5YR2.5/2	N	FR	ST	4	N	Y	Mollic
AAUMu_032	2	A	20	90	CL	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_032	3	Bt	90	100	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Argic
AAUMu_033	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_033	2	A	20	60	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	-
AAUMu_033	3	Bt	60	90	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Argic
AAUMu_033	4	BC	90	100	C	N	0	7.5YR4/3	N	FR	ST	4	N	N	-
AAUMu_034	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_034	2	A	20	50	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	Mollic
AAUMu_034	3	Bt	50	100	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Argic
AAUMu_035	1	Ap	0	10	CL	C	10	7.5YR3/2	N	FR	SST	3	N	Y	-
AAUMu_035	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
AAUMu_036	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_036	2	A	20	50	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	Mollic
AAUMu_036	3	Bt	50	100	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Argic
AAUMu_037	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_037	2	A	20	50	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	Mollic
AAUMu_037	3	Bt	50	100	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Argic
AAUMu_038	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_038	2	AB	20	40	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	-
AAUMu_038	3	Bt	40	100	C	N	0	7.5YR2.5/3	N	FR	ST	3	N	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUMu_039	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_039	2	AB	20	40	CL	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	-
AAUMu_039	3	Bt	40	100	C	N	0	7.5YR2.5/3	N	FR	ST	3	N	Y	Argic
AAUMu_040	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_040	2	AB	20	40	C	N	0	5YR2.5/2	N	FR	ST	4	N	Y	-
AAUMu_040	3	Bt	40	100	C	N	0	2.5YR3/2	N	FR	ST	3	N	Y	Argic
AAUMu_041	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_041	2	A	20	50	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	Mollic
AAUMu_041	3	Bt	50	100	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Argic
AAUMu_042	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
AAUMu_042	2	AB	20	40	C	N	0	5YR2.5/2	N	FR	ST	4	N	Y	-
AAUMu_042	3	Bt	40	100	C	N	0	2.5YR3/2	N	FR	ST	3	N	Y	Argic
AAUMu_043	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_043	2	AB	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	-
AAUMu_043	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_044	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_044	2	AB	20	70	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	-
AAUMu_044	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_045	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_045	2	AB	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	-
AAUMu_045	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_046	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_046	2	AB	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	-
AAUMu_046	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_047	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_047	2	AB	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	-
AAUMu_047	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_048	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_048	2	AB	20	70	C	N	0	5YR3/3	N	FR	ST	4	N	Y	-
AAUMu_048	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_049	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	N	Y	Mollic
AAUMu_049	2	AB	20	70	C	N	0	5YR3/3	N	FR	ST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
AAUMu_049	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
AAUMu_050	1	Ap	0	10	C	N	0	10YR2/2	N	FR	ST	4	N	Y	-
AAUMu_050	2	E	10	40	CL	N	0	10YR3/2	F	FR	ST	4	N	Y	Mollic
AAUMu_050	3	B1	40	70	SiCL	N	0	10YR3/3	C	FR	ST	3	N	Y	Albic
AAUMu_050	4	B2	70	90	C	N	0	10YR4/2	C	FR	VST	3	N	N	Vertic
AAUMu_051	1	Ap	0	20	C	N	0	5YR3/3	N	FR	VST	2	N	N	Mollic
AAUMu_051	2	AB	20	40	C	N	0	2.5YR3/3	N	FR.	ST	3	N	y	-
AAUMu_051	3	B	40	70	C	N	0	2.5YR2.5/2	N	FR	ST	3	N	y	Nitic
AAUMu_051	4	BC	70	100	C	N	0	10YR3/3	N	FR	ST	3	N	y	Nitic
AAUMu_052	1	Ap	0	20	C	N	0	5YR3/3	N	FR	VST	2	N	N	Mollic
AAUMu_052	2	AB	20	40	C	N	0	2.5YR3/3	N	FR	ST	3	N	y	-
AAUMu_052	3	B	40	70	C	N	0	2.5YR2.5/2	N	FR	ST	3	N	y	Nitic
AAUMu_052	4	BC	70	100	C	N	0	10YR3/3	N	FR	ST	3	N	y	Nitic
AAUMu_053	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	ST	3	N	Y	-
AAUMu_053	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
BDUB_001	1	Ap	0	16	CL	N	0	2.5YR4/2	N	FR	ST	3	N	Y	-
BDUB_001	2	Bt1	16	56	C	V	1	2.5YR4/3	N	VFR	ST	3	N	Y	-
BDUB_001	3	Bt2	56	102	C	V	1	2.5YR3/4	N	VFR	VST	3	N	Y	-
BDUB_002	1	Ap	0	20	SL	V	1	2.5YR5/4	N	LO	NST	4	N	Y	-
BDUB_002	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
BDUB_003	1	Ap	0	30	SL	V	1	2.5YR4/3	N	LO	NST	4	N	Y	-
BDUB_003	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
BDUB_004	1	Ap	0	18	CL	N	0	5YR4/3	C	FRF	SST	4	N	Y	-
BDUB_004	2	B1	18	59	SIC	V	1	5YR4/4	N	FR	ST	2	Y	Y	-
BDUB_004	3	B2	59	104	C	N	0	5YR3/3	N	FR	ST	2	Y	Y	-
BDUB_005	1	Ap	0	17	CL	N	0	5YR4/3	C	FRF	SST	4	N	Y	-
BDUB_005	2	B1	17	50	SIC	V	1	5YR4/4	N	FR	ST	2	Y	Y	-
BDUB_005	3	B2	50	100	C	N	0	5YR3/3	N	FR	ST	2	Y	Y	-
BDUB_006	1	Ap	0	18	CL	N	0	2.5YR5/3	N	FR	ST	3	Y	Y	-
BDUB_006	2	Bt1	18	57	C	V	1	2.5YR3/2	N	VFR	VST	2	N	Y	-
BDUB_006	3	Bt2	57	87	C	V	1	2.5YR3/3	N	VFR	VST	2	N	Y	-
BDUB_007	1	Ap	0	19	CL	N	0	5YR4/3	C	FRF	SST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUB_007	2	B1	19	60	SIC	V	1	5YR4/4	N	FR	ST	2	Y	Y	-
BDUB_007	3	B2	60	114	C	N	0	5YR3/3	N	FR	ST	2	Y	Y	-
BDUB_008	1	Ap	0	25	CL	V	1	7.5YR4/2	F	FR	SST	4	N	N	-
BDUB_008	2	B1	25	60	C	N	0	7.5YR3/2	N	FR	ST	4	N	Y	-
BDUB_008	3	BC	60	80	SICL	N	0	7.5YR3/3	N	VFR	SST	5	N	Y	-
BDUB_009	1	Ap	0	16	CL	N	0	7.5YR4/3	N	FR	ST	3	N	Y	-
BDUB_009	2	AB	16	58	C	V	1	7.5YR3/2	N	VFR	NST	3	N	Y	-
BDUB_009	3	Bt1	58	110	C	V	1	7.5YR2.5/3	N	VFR	NST	4	N	Y	-
BDUB_010	1	Ah	0	21	SIC	V	1	10YR3/1	F	FI	ST	3	Y	N	-
BDUB_010	2	A1	21	60	C	N	0	10YR2/1	N	FI	ST	2	Y	Y	-
BDUB_010	3	Bg	60	100	C	N	0	10YR2/1	N	VFR	VST	2	Y	Y	-
BDUB_011	1	Ah	0	15	SIC	V	1	10YR3/1	F	FI	ST	3	Y	N	-
BDUB_011	2	A1	15	60	C	N	0	10YR2/1	N	FI	ST	2	Y	Y	-
BDUB_011	3	AC1	60	103	C	N	0	10YR2/1	N	VFR	VST	2	Y	Y	-
BDUB_012	1	Ap	0	14	CL	V	1	2.5YR5/3	N	FR	ST	4	Y	Y	-
BDUB_012	2	Bt1	14	56	C	V	1	2.5YR3/3	N	FR	VST	2	Y	Y	-
BDUB_012	3	Bt2	56	88	C	V	1	10YR3/4	C	FR	VST	2	W	N	-
BDUB_013	1	Ah	0	14	C	V	1	10YR3/1	F	FI	ST	2	Y	N	-
BDUB_013	2	A1	14	47	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUB_013	3	A2	47	105	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUB_014	1	Ah	0	15	C	V	1	10YR3/1	F	FI	ST	2	Y	N	-
BDUB_014	2	A1	15	40	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUB_014	3	A2	40	70	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUB_015	1	Ap	0	20	C	V	1	10YR4/1	N	FR	NST	2	Y	Y	-
BDUB_015	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
BDUB_016	1	Ap	0	21	SL	V	1	2.5YR4/3	N	LO	NST	4	N	Y	-
BDUB_016	2	R	21	26	-	D	95	-	-	-	-	-	-	N	-
BDUB_017	1	Ap	0	20	SL	V	1	2.5YR4/4	N	LO	NST	4	N	Y	-
BDUB_017	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
BDUB_018	1	Ap	0	21	CL	V	1	5YR4/2	N	FR	ST	4	N	Y	-
BDUB_018	2	AB	21	35	C	N	0	5YR3/2	N	FR	ST	4	N	Y	-
BDUB_018	3	B	35	70	C	N	0	5YR3/3	N	VFR	ST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Stone Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUB_019	1	Ap	0	23	CL	V	1	5YR4/2	N	FR	ST	4	N	Y	-
BDUB_019	2	AB	23	30	C	N	0	5YR3/2	N	FR	ST	4	N	Y	-
BDUB_019	3	B	30	60	C	N	0	5YR3/3	N	VFR	ST	4	N	Y	-
BDUB_020	1	Ap	0	23	SL	V	1	2.5YR4/3	N	FR	NST	4	N	Y	-
BDUB_020	2	R	23	28	-	D	95	-	-	-	-	-	-	N	-
BDUB_021	1	Ap	0	25	SL	V	1	7.5YR4/2	N	FR	NST	4	N	Y	-
BDUB_021	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUB_022	1	Ap	0	16	SIC	V	1	7.5YR4/2	N	FR	SST	4	N	Y	-
BDUB_022	2	AB	16	56	CL	V	1	7.5YR3/2	N	FR	ST	2	N	Y	-
BDUB_022	3	B	56	100	C	V	1	7.5YR2.5/2	C	FR	ST	2	N	N	-
BDUB_023	1	Ap	0	17	CL	N	0	2.5YR5/3	N	FR	ST	3	Y	Y	-
BDUB_023	2	Bt1	17	67	C	V	1	2.5YR3/2	N	VFR	VST	2	N	Y	-
BDUB_023	3	Bt2	67	89	C	V	1	2.5YR3/3	N	VFR	VST	2	N	Y	-
BDUB_024	1	Ah	0	17	C	N	0	10YR4/1	C	FI	SST	2	Y	Y	-
BDUB_024	2	A1	17	47	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUB_024	3	AC	47	76	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUB_025	1	Ap	0	18	CL	N	0	7.5YR4/3	N	FR	ST	3	N	Y	-
BDUB_025	2	AB	18	68	C	V	1	10YR3/2	N	VFR	NST	3	N	Y	-
BDUB_025	3	Bt1	68	120	C	V	1	10YR2.5/3	N	VFR	NST	4	N	Y	-
BDUB_026	1	Ap	0	19	CL	N	0	2.5YR5/3	N	FR	ST	3	Y	Y	-
BDUB_026	2	Bt1	19	56	C	V	1	2.5YR3/2	N	VFR	VST	2	N	Y	-
BDUB_026	3	Bt2	56	79	C	V	1	2.5YR3/3	N	VFR	VST	2	N	Y	-
BDUB_027	1	Ap	0	14	SIC	V	1	7.5YR4/2	N	FR	SST	4	N	Y	-
BDUB_027	2	AB	14	56	CL	V	1	7.5YR3/2	N	FR	ST	2	N	Y	-
BDUB_027	3	B	56	100	C	V	1	7.5YR2.5/2	C	FR	ST	2	N	N	-
BDUB_028	1	Ap	0	13	SIC	V	1	7.5YR4/2	N	FR	SST	4	N	Y	-
BDUB_028	2	AB	13	66	CL	V	1	7.5YR3/2	N	FR	ST	2	N	Y	-
BDUB_028	3	B	66	105	C	V	1	7.5YR2.5/2	C	FR	ST	2	N	N	-
BDUB_029	1	Ap	0	15	SIC	V	1	7.5YR4/2	N	FR	SST	4	N	Y	-
BDUB_029	2	AB	15	70	CL	V	1	7.5YR3/2	N	FR	ST	2	N	Y	-
BDUB_029	3	B	70	90	C	V	1	7.5YR2.5/2	C	FR	ST	2	N	N	-
BDUB_030	1	Ap	0	25	SL	V	1	2.5YR4/3	N	FR	NST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUB_030	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUD_001	1	Ap	0	25	LS	V	1	10YR4/1	N	VFR	NST	4	N	Y	-
BDUD_001	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUD_002	1	Ap	0	20	C	V	1	10YR4/1	N	FI	ST	1	Y	Y	-
BDUD_002	2	AB	20	45	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUD_002	3	B1	45	90	C	V	1	10YR2/1	C	VFI	VST	1	Y	Y	-
BDUD_003	1	Ap	0	12	SiC	V	1	7.5YR4/4	F	FR	ST	3	N	Y	-
BDUD_003	2	A	12	46	SICL	N	0	7.5YR3/3	N	FI	ST	4	Y	Y	-
BDUD_003	3	B1	46	105	CL	N	0	7.5YR2.5/2	N	FI	ST	4	Y	Y	-
BDUD_004	1	Ap	0	17	SL	N	0	7.5YR5/3	N	FI	ST	1	Y	Y	-
BDUD_004	2	A1	17	55	SL	N	0	7.5YR4/3	N	FI	VST	1	Y	Y	-
BDUD_004	3	B1	55	106	SCL	N	0	7.5YR3/3	N	VFI	VST	1	Y	Y	-
BDUD_005	1	Ap	0	30	CL	N	0	10YR2/2	V	FRF	SST	4	N	Y	-
BDUD_005	2	A	30	80	C	V	1	10YR2/1	F	FR	ST	4	Y	Y	-
BDUD_005	3	Bt1	80	120	C	N	0	10YR2/1	C	FR	ST	3	Y	Y	-
BDUD_006	1	Ap	0	15	LS	V	1	10YR3/2	M	FI	ST	1	Y	Y	-
BDUD_006	2	A1	15	40	S	V	1	10YR4/1	F	VFI	VST	1	Y	Y	-
BDUD_006	3	A2	40	85	S	V	1	10YR3/1	C	VFI	VST	1	Y	Y	-
BDUD_007	1	Ap	0	20	SIC	V	1	2.5YR5/3	N	FI	ST	2	Y	Y	-
BDUD_007	2	A1	20	60	C	V	1	2.5YR4/4	N	VFI	VST	2	Y	Y	-
BDUD_007	3	A2	60	115	C	V	1	2.5YR3/3	C	VFI	VST	2	W	N	-
BDUD_008	1	Ap	0	20	SIC	V	1	7.5YR4/4	N	FR	ST	4	N	N	-
BDUD_008	2	AB	20	70	C	N	0	5YR3/3	N	VFR	ST	4	N	Y	-
BDUD_008	3	B1	70	145	C	N	0	2.5YR3/2	N	VFR	VST	5	N	Y	-
BDUD_009	1	Ap	0	25	SCL	N	0	2.5YR5/4	C	FRF	SST	4	N	Y	-
BDUD_009	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUD_010	1	Ap	0	30	CL	V	1	7.5YR4/3	N	FR	ST	4	N	Y	-
BDUD_010	2	AB	30	70	C	V	1	7.5YR4/3	N	VFR	VST	3	N	Y	-
BDUD_010	3	B1	70	95	C	V	1	7.5YR2.5/3	N	VFR	VST	3	N	Y	-
BDUD_011	1	Ah	0	25	C	V	1	10YR4/1	N	FI	ST	2	Y	Y	-
BDUD_011	2	AB	25	56	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUD_011	3	B	56	75	C	V	1	10YR2/1	C	VFI	VST	1	Y	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUD_012	1	Ap	0	25	SIC	V	1	7.5YR3/4	N	FR	SST	4	N	N	-
BDUD_012	2	B1	25	75	C	N	0	7.5YR3/4	N	FI	ST	4	N	Y	-
BDUD_012	3	B2	75	100	C	N	0	7.5YR3/4	N	FI	ST	5	N	Y	-
BDUD_013	1	Ap	0	17	SCL	N	0	2.5YR5/3	C	FRF	SST	4	N	Y	-
BDUD_013	2	Bt1	17	45	C	V	1	2.5YR4/3	N	FR	ST	4	Y	Y	-
BDUD_013	3	Bt2	45	76	C	N	0	2.5YR3/3	N	FR	ST	3	Y	Y	-
BDUD_014	1	Ap	0	15	C	V	1	10YR4/1	N	FR	ST	2	Y	Y	-
BDUD_014	2	A1	15	35	C	V	1	10YR3/1	N	FR	ST	2	Y	Y	-
BDUD_014	3	ABg	35	100	C	V	1	10YR2/1	N	VFR	VST	2	Y	Y	-
BDUD_015	1	Ap	0	25	SL	V	1	7.5YR4/3	N	FR	NST	4	N	Y	-
BDUD_015	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUD_016	1	Ap	0	25	SICL	V	1	7.5YR4/4	N	FI	ST	4	N	N	-
BDUD_016	2	B1	25	80	SIC	N	0	7.5YR3/4	N	FR	ST	4	N	Y	-
BDUD_016	3	B2	80	110	C	N	0	7.5YR3/3	N	VFR	ST	5	N	Y	-
BDUD_017	1	Ap	0	30	SCL	N	0	2.5YR5/4	C	FRF	SST	4	N	Y	-
BDUD_017	2	B	30	60	C	V	1	2.5YR4/4	N	FR	ST	4	Y	Y	-
BDUD_017	3	Bt1	60	85	C	N	0	2.5YR3/3	N	FR	ST	3	Y	Y	-
BDUD_018	1	Ap	0	30	SIC	V	1	10YR4/5	N	VFR	NST	4	N	Y	-
BDUD_018	2	AB	30	70	C	V	1	10YR5/3	N	VFR	NST	4	N	Y	-
BDUD_018	3	Bt1	70	100	C	V	1	7.5YR3/4	N	FR	ST	3	N	Y	-
BDUD_019	1	Ap	0	12	S	V	1	7.5YR5/3	N	FR	ST	2	Y	Y	-
BDUD_019	2	Bt1	12	46	S	V	1	7.5YR3/2	N	FR	ST	2	Y	Y	-
BDUD_019	3	Bt2	46	77	S	V	1	7.5YR3/3	C	LO	NST	2	W	N	-
BDUD_020	1	Ah	0	30	SIC	V	1	10YR4/1	F	LO	ST	3	Y	N	-
BDUD_020	2	A1	30	68	C	N	0	10YR3/1	N	FI	VST	2	Y	Y	-
BDUD_020	3	A2	68	100	C	N	0	10YR2/1	N	FI	VST	2	Y	Y	-
BDUD_021	1	Ap	0	16	SCL	N	0	5YR4/1	C	FRF	SST	4	N	Y	-
BDUD_021	2	AB	16	45	C	V	1	5YR3/1	N	FR	ST	4	Y	Y	-
BDUD_021	3	BC	45	70	C	N	0	5YR3/1	N	FR	ST	3	Y	Y	-
BDUD_022	1	Ap	0	25	LS	V	1	5YR4/1	N	FI	ST	2	Y	Y	-
BDUD_022	2	AB	25	54	S	V	1	5YR3/1	N	VFI	VST	1	Y	Y	-
BDUD_022	3	BC	54	83	S	V	1	5YR3/1	N	VFI	VST	1	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUD_023	1	Ah	0	25	C	N	0	10YR4/1	N	FI	VST	4	Y	Y	-
BDUD_023	2	A1	25	75	C	N	0	10YR3/1	N	VFI	VST	2	Y	Y	-
BDUD_023	3	ABg	75	120	C	N	0	10YR2/1	C	FR	VST	2	Y	N	-
BDUD_024	1	Ap	0	20	C	V	1	10YR5/1	F	FI	VST	1	N	N	-
BDUD_024	2	B1g	20	70	C	N	0	10YR4/1	N	FI	VST	1	N	Y	-
BDUD_024	3	B2g	70	100	C	N	0	10YR3/1	N	VFR	SST	5	N	Y	-
BDUD_025	1	Ap	0	15	SIC	N	0	7.5YR5/2	C	FR	SST	4	Y	Y	-
BDUD_025	2	AC	15	40	C	V	1	7.5YR4/1	N	VFI	NST	4	Y	Y	-
BDUD_025	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
BDUD_026	1	Ap	0	20	CL	V	1	2.5YR5/3	N	VFR	NST	4	N	Y	-
BDUD_026	2	Bt1	20	50	C	V	1	2.5YR4/3	N	VFR	NST	4	N	Y	-
BDUD_026	3	Bt2	50	80	C	V	1	2.5YR3/2	N	VFR	NST	4	N	Y	-
BDUD_027	1	Ap	0	30	SL	V	1	10YR4/1	N	FI	ST	4	Y	Y	-
BDUD_027	2	AB	30	70	S	V	1	10YR3/1	N	VFI	VST	2	Y	Y	-
BDUD_027	3	AC	70	100		-	-	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUD_028	1	Ap	0	20	CL	V	1	5YR5/3	F	FR	ST	2	N	N	-
BDUD_028	2	Bt1	20	60	C	N	0	5YR3/3	N	FI	VST	2	N	Y	-
BDUD_028	3	Bt2	60	90	C	N	0	5YR3/4	N	FI	VST	2	N	Y	-
BDUD_029	1	Ah	0	16	C	N	0	5YR5/1	C	FI	ST	2	Y	Y	-
BDUD_029	2	A1	16	70	C	V	1	5YR4/1	N	VFI	VST	1	Y	Y	-
BDUD_029	3	A2	70	105	C	N	0	5YR3/1	N	VFI	VST	1	Y	Y	-
BDUD_030	1	Ap	0	15	CL	V	1	2.5YR5/3	N	VFR	ST	4	N	Y	-
BDUD_030	2	R	15	20	-	D	95	-	-	-	-	-	-	N	-
BDUJT_001	1	Ap	0	15	SIC	N	0	2.5YR4/3	N	FR	SST	2	N	Y	-
BDUJT_001	2	AB	15	49	C	V	1	2.5YR2.5/3	N	VFR	ST	2	N	Y	-
BDUJT_001	3	Bt1	49	100	C	V	1	2.5YR2.5/4	N	VFR	ST	2	N	Y	-
BDUJT_002	1	Ap	0	16	CL	V	1	7.5YR3/4	N	FR	SST	4	Y	Y	-
BDUJT_002	2	Bt1	16	61	C	V	1	2.5YR3/4	N	FR	ST	2	Y	Y	-
BDUJT_002	3	Bt2	61	85	C	V	1	2.5YR2.5/3	C	FR	ST	2	N	N	-
BDUJT_003	1	Ap	0	13	c	V	1	10YR4/1	F	FI	ST	2	Y	N	-
BDUJT_003	2	A1	13	33	c	N	0	7.5YR3/3	N	FR	VST	1	Y	Y	-
BDUJT_003	3	A2	33	67	c	N	0	7.5YR3/1	N	VFR	VST	1	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUJT_004	1	Ap	0	10	C	N	0	10YR4/1	C	FI	ST	2	N	Y	-
BDUJT_004	2	B1	10	41	C	N	0	10YR5/1	N	VFI	VST	2	Y	Y	-
BDUJT_004	3	Bg	41	75	C	N	0	10YR5/2.5	N	FI	VST	1	Y	Y	-
BDUJT_005	1	Ah	0	20	C	V	1	10YR4/1	N	VFI	VST	1	Y	Y	-
BDUJT_005	2	A1	20	36	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUJT_005	3	A2	36	86	S	V	1	10YR2/1	N	FR	VST	1	Y	Y	-
BDUJT_006	1	Ap	0	13	CL	N	0	10YR4/1	N	VFI	VST	1	Y	Y	-
BDUJT_006	2	B1	13	40	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUJT_006	3	B2	40	100	C	V	1	10YR2/1	N	FR	VST	1	N	Y	-
BDUJT_007	1	Ap	0	10	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_007	2	AB	10	40	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_007	3	Bt1	40	82	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_008	1	Ap	0	15	SICL	V	1	7.5YR3/4	F	FR	SST	3	N	N	-
BDUJT_008	2	Bt1	15	40	C	N	0	7.5YR3/3	N	FR	ST	2	N	Y	-
BDUJT_008	3	Bt2	40	70	C	N	0	7.5YR3/2	N	VFR	VST	2	N	Y	-
BDUJT_009	1	Ap	0	19	CL	N	0	5YR4/3	C	FRF	SST	4	N	Y	-
BDUJT_009	2	AB	19	46	C	V	1	2.5YR3/3	N	FR	ST	3	N	Y	-
BDUJT_009	3	Bt1	46	76	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	-
BDUJT_010	1	Ap	0	20	C	V	1	10YR4/2	N	FI	ST	2	Y	Y	-
BDUJT_010	2	A1	20	59	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUJT_010	3	A2	59	99	C	V	1	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUJT_011	1	Ap	0	11	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_011	2	AB	11	45	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_011	3	Bt1	45	80	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_012	1	Ap	0	14	CL	V	1	2.5YR5/3	N	FR	ST	4	Y	Y	-
BDUJT_012	2	Bt1	14	56	C	V	1	2.5YR3/3	N	FR	VST	2	Y	Y	-
BDUJT_012	3	Bt2	56	88	C	V	1	10YR3/4	C	FR	VST	2	W	N	-
BDUJT_013	1	Ap	0	14	CL	V	1	2.5YR5/3	N	FR	ST	4	Y	Y	-
BDUJT_013	2	Bt1	14	56	C	V	1	2.5YR3/3	N	FR	VST	2	Y	Y	-
BDUJT_013	3	Bt2	56	95	C	V	1	10YR3/4	C	FR	VST	2	W	N	-
BDUJT_014	1	Ap	0	20	Sic	N	0	10YR41	C	FI	ST	3	N	Y	-
BDUJT_014	2	A1	20	60	C	V	1	10YR3/1	N	VFI	vST	2	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUJT_014	3	Acg	60	100	C	N	0	10YR2/1	N	VFI	vST	2	Y	Y	-
BDUJT_015	1	Ap	0	25	SL	V	1	2.5YR4/3	N	FR	NST	4	N	Y	-
BDUJT_015	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUJT_016	1	Ap	0	25	SL	V	1	2.5YR4/3	N	FR	NST	4	N	Y	-
BDUJT_016	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUJT_017	1	Ap	0	25	C	V	1	10YR4/1	N	FI	ST	3	Y	Y	-
BDUJT_017	2	A1	25	50	C	V	1	10YR3/3	N	VFI	VST	2	Y	Y	-
BDUJT_017	3	AC	50	100	C	V	1	10YR2/1	N	VFI	VST	1	-	-	-
BDUJT_018	1	Ah	0	20	SIC	V	1	5YR4/1	F	FR	ST	4	Y	N	-
BDUJT_018	2	A1	20	50	L	N	0	5YR3/1	N	FI	ST	4	Y	Y	-
BDUJT_018	3	AC	50	95	C	N	0	5YR2.5/1	N	VFI	VST	2	Y	Y	-
BDUJT_019	1	Ap	0	25	SL	V	1	2.5YR4/3	N	FR	NST	4	N	Y	-
BDUJT_019	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUJT_020	1	Ap	0	12	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_020	2	AB	12	55	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_020	3	Bt1	55	85	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_021	1	Ap	0	11	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_021	2	AB	11	40	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_021	3	Bt1	40	80	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_022	1	Ap	0	15	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_022	2	AB	15	45	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_022	3	Bt1	45	88	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_023	1	Ap	0	10	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_023	2	AB	10	35	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_023	3	Bt1	35	90	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_024	1	Ap	0	20	C	N	0	10YR4/1	C	FI	ST	2	Y	Y	-
BDUJT_024	2	A1	20	70	C	V	1	10YR3/1	N	FI	VST	2	Y	Y	-
BDUJT_024	3	AC	70	110	C	N	0	10YR2/1	N	FR	ST	3	Y	Y	-
BDUJT_025	1	Ap	0	14	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_025	2	AB	14	70	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_025	3	Bt1	70	90	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_026	1	Ah	0	25	CL	N	0	7.5YR5/3	N	FR	ST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUJT_026	2	AC	25	50	SL	V	1	7.5YR3/3	N	VFR	NST	4	N	Y	-
BDUJT_026	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
BDUJT_027	1	Ap	0	18	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_027	2	AB	18	45	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_027	3	Bt1	45	80	C	V	1	5YR3/4	C	FR	ST	2	W	N	-
BDUJT_028	1	Ap	0	17	CL	V	1	7.5YR3/2	N	FR	SST	4	Y	Y	-
BDUJT_028	2	AC	17	50	CL	V	1	5YR3/3	N	FR	SST	2	Y	Y	-
BDUJT_028	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
BDUJT_029	1	Ah	0	15	CL	N	0	7.5YR5/3	N	FR	ST	4	N	Y	-
BDUJT_029	2	AC	15	25	SL	V	1	7.5YR3/3	N	VFR	NST	4	N	Y	-
BDUJT_029	3	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUM_001	1	Ap	0	25	SIC	N	0	5YR3/4	N	FR	ST	4	N	Y	-
BDUM_001	2	B1	25	75	C	V	1	5YR3/3	N	VFR	ST	4	N	Y	-
BDUM_001	3	B2	75	100	C	V	1	5YR3/2	N	VFR	ST	4	N	Y	-
BDUM_002	1	Ap	0	25	S	V	1	7.5YR5/3	N	FR	ST	4	Y	Y	-
BDUM_002	2	AB	25	55	S	V	1	7.5YR4/3	N	FR	ST	2	Y	Y	-
BDUM_002	3	B1	55	93	S	V	1	7.5YR3/2	C	FR	ST	2	W	N	-
BDUM_003	1	Ap	0	10	C	V	1	10YR4/1	N	FR	ST	2	Y	N	-
BDUM_003	2	A1	10	42	C	N	0	10YR3/1	N	FI	VST	1	Y	Y	-
BDUM_003	3	A2	42	75	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_004	1	Ap	0	40	SCL	N	0	5YR4/4	N	FR	ST	4	N	Y	-
BDUM_004	2	Bt1	40	70	C	V	1	7.5YR2.5/3	N	FR	ST	4	Y	Y	-
BDUM_004	3	Bt2	70	110	C	N	0	5YR3/4	N	FR	ST	3	Y	Y	-
BDUM_005	1	Ap	0	15	SICL	V	1	7.5YR4/3	N	VFR	SST	3	Y	Y	-
BDUM_005	2	AB	15	50	CL	V	1	7.5YR3/3	N	VFR	SST	2	N	Y	-
BDUM_005	3	B1	50	90	C	V	1	7.5YR2.5/3	N	VFR	VST	2	N	Y	-
BDUM_006	1	Ap	0	25	CL	N	0	10YR3/1	C	FI	ST	2	Y	Y	-
BDUM_006	2	A1	25	70	C	V	1	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_006	3	Cg	70	140	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUM_007	1	Ap	0	15	CL	V	1	5YR5/3	N	FR	ST	2	N	N	-
BDUM_007	2	AB	15	40	C	V	1	5YR4/3	N	FI	SST	2	Y	Y	-
BDUM_007	3	B1	40	85	C	V	1	5YR3/2	N	FI	SST	2	Y	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUM_008	1	Ap	0	12	CL	V	1	5YR5/3	N	FR	ST	3	N	N	-
BDUM_008	2	AB	12	34	C	V	1	5YR63/3	N	FI	SST	2	Y	Y	-
BDUM_008	3	B1	34	80	C	V	1	5YR3/2	N	FI	SST	2	Y	N	-
BDUM_009	1	Ap	0	25	SCL	C	10	5YR5/2	F	VFR	NST	4	N	Y	-
BDUM_009	2	C	25	30		M	27	-	-	-	-	-	-	-	-
BDUM_009	3	R	30	35		D	90	-	-	-	-	-	-	-	-
BDUM_009	4	R	35	40	-	D	95	-	-	-	-	-	-	N	-
BDUM_010	1	Ap	0	16	C	N	0	10YR4/1	C	FI	VST	2	Y	Y	-
BDUM_010	2	A1	16	48	C	N	0	10YR2/1	F	VFI	VST	2	Y	Y	-
BDUM_010	3	A2	48	110	C	N	0	10YR2/1	N	VFI	VST	2	Y	Y	-
BDUM_011	1	Ap	0	18	SiCL	N	0	5YR4/4	N	FR	SST	4	N	Y	-
BDUM_011	2	AB	18	59	SIC	V	1	5YR3/4	N	VFR	ST	4	N	Y	-
BDUM_011	3	B1	59	104	SCL	V	1	5YR3/2	N	VFR	ST	4	N	Y	-
BDUM_012	1	Ap	0	15	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUM_012	2	BA	15	70	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUM_012	3	B	70	120	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUM_013	1	Ap	0	25	C	N	0	10YR4/1	C	FI	VST	1	Y	Y	-
BDUM_013	2	A1	25	80	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_013	3	A2	80	130	C	N	0	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_014	1	Ap	0	18	C	N	0	10YR4/1	C	FI	VST	1	Y	Y	-
BDUM_014	2	A1	18	49	C	N	0	10YR2/1	F	VFI	VST	1	Y	Y	-
BDUM_014	3	A2	49	105	C	N	0	10YR2/1	N	VFI	VST	2	Y	Y	-
BDUM_015	1	Ap	0	17	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUM_015	2	BA	17	80	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUM_015	3	B	80	120	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUM_016	1	Ap	0	25	SCL	C	10	5YR5/2	F	VFR	NST	4	N	Y	-
BDUM_016	2	C	25	35		M	27	-	-	-	-	-	-	-	-
BDUM_016	3	R	35	40		D	90	-	-	-	-	-	-	-	-
BDUM_016	4	R	40	45	-	D	95	-	-	-	-	-	-	N	-
BDUM_017	1	Ap	0	15	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUM_017	2	BA	15	60	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUM_017	3	B	60	90	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Stone Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUM_018	1	Ap	0	25	CL	V	1	7.5YR5/2	F	VFR	VST	3	N	Y	-
BDUM_018	2	Bt1	25	60	C	V	1	7.5YR4/2	N	VFR	VST	2	-	-	-
BDUM_018	3	Bt2	60	125	C	V	1	7.5YR3/2	N	VFR	SST	5	N	Y	-
BDUM_019	1	Ap	0	14	SIC	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUM_019	2	BA	14	51	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUM_019	3	B	51	96	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUM_020	1	Ap	0	15	CL	V	1	7.5YR4/12	N	VFR	NST	4	N	Y	-
BDUM_020	2	AB	15	47	C	V	1	7.5YR4/2	N	VFR	NST	4	N	Y	-
BDUM_020	3	B1	47	99	C	V	1	7.5YR43/2	N	VFR	NST	4	N	Y	-
BDUM_021	1	Ap	0	13	CL	V	1	10YR4/1	N	FI	ST	2	Y	Y	-
BDUM_021	2	BA	13	83	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUM_021	3	B	83	100	C	V	1	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_022	1	Ap	0	17	CL	V	1	5YR5/3	N	FR	ST	2	N	N	-
BDUM_022	2	AB	17	45	C	V	1	5YR63/3	N	FI	SST	2	Y	Y	-
BDUM_022	3	B1	45	95	C	V	1	5YR3/2	N	FI	SST	2	Y	N	-
BDUM_023	1	Ap	0	25	SL	V	1	7.5YR4/3	F	LO	NST	4	N	N	-
BDUM_023	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUM_024	1	Ap	0	15	CL	N	0	2.5YR4/4	N	RF	SST	3	N	Y	-
BDUM_024	2	Bt1	15	45	C	N	0	2.5YR3/3	N	FI	VST	2	Y	Y	-
BDUM_024	3	Bt2	45	103	C	N	0	2.5YR3/4	N	FI	VST	2	Y	Y	-
BDUM_025	1	Ap	0	20	C	V	1	10YR4/2	N	FI	ST	2	Y	Y	-
BDUM_025	2	A1	20	45	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUM_025	3	A2	45	90	C	V	1	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_026	1	Ap	0	16	SIC	N	0	7.5YR3/4	N	FR	ST	3	Y	Y	-
BDUM_026	2	AB	16	57	CL	V	1	10YR3/4	N	FI	ST	2	N	Y	-
BDUM_026	3	B	57	100	C	V	1	10YR3/4	N	FI	VST	2	N	Y	-
BDUM_027	1	Ap	0	21	C	V	1	10YR4/2	N	FI	ST	2	Y	Y	-
BDUM_027	2	A1	21	55	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUM_027	3	A2	55	95	C	V	1	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUM_028	1	Ap	0	15	CL	V	1	7.5YR5/3	F	FR	ST	4	N	N	-
BDUM_028	2	Bt1	15	45	C	N	0	7.5YR3/2	N	FI	VST	2	N	Y	-
BDUM_028	3	Bt2	45	70	C	N	0	7.5YR3/3	N	FI	VST	2	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUM_029	1	Ap	0	15	C	V	1	10YR4/1	N	FI	ST	2	Y	Y	-
BDUM_029	2	BA	15	85	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUM_029	3	B	85	100	C	V	1	10YR2.5/1	N	VFI	VST	1	Y	Y	-
BDUM_030	1	Ap	0	11	CL	V	1	10YR4/1	N	FI	ST	2	Y	Y	-
BDUM_030	2	BA	11	70	C	V	1	10YR3/1	N	VFI	VST	1	Y	Y	-
BDUM_030	3	B	70	100	C	V	1	10YR2/1	N	VFI	VST	1	Y	Y	-
BDUSA_001	1	Ap	0	17	SIC	N	0	7.5YR4/3	N	FR	ST	4	N	Y	-
BDUSA_001	2	AB	17	71	C	V	1	7.5YR3/2	N	VFR	ST	4	N	Y	-
BDUSA_001	3	B1	71	101	C	V	1	7.5YR3/3	N	VFR	ST	4	N	Y	-
BDUSA_002	1	Ap	0	25	SCL	C	10	5YR5/2	F	VFR	NST	4	N	Y	-
BDUSA_002	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUSA_003	1	Ap	0	15	CL	V	1	7.5YR4/12	N	VFR	NST	4	N	Y	-
BDUSA_003	2	AB	15	47	C	V	1	7.5YR4/2	N	VFR	NST	4	N	Y	-
BDUSA_003	3	B1	47	99	C	V	1	7.5YR43/2	N	FI	ST	2	Y	Y	-
BDUSA_004	1	Ap	0	20	C	C	10	7.5YR5/2	N	VFI	VST	1	Y	Y	-
BDUSA_004	2	A1	20	52	C	M	27	7.5YR4/1	N	VFI	VST	1	Y	Y	-
BDUSA_004	3	A2	52	100	C	N	0	7.5YR2.5/1	N	FR	ST	3	Y	Y	-
BDUSA_005	1	Ap	0	19	CL	V	1	5YR4/3	N	FR	SST	3	N	Y	-
BDUSA_005	2	AB	19	46	CL	V	1	2.5YR3/3	N	FR	ST	2	N	Y	-
BDUSA_005	3	B	46	76	C	V	1	2.5YR3/3	N	VFR	ST	2	N	Y	-
BDUSA_006	1	Ap	0	18	CL	N	0	5YR4/4	N	FR	ST	3	N	Y	-
BDUSA_006	2	Bt1	18	59	C	V	1	5YR4/6	N	VFR	VST	2	N	Y	-
BDUSA_006	3	Bt2	59	104	C	V	1	2.5YR3/3	N	VFR	VST	1	N	Y	-
BDUSA_007	1	Ap	0	25	S	V	1	10YR6/58	N	LO	SST	4	Y	Y	-
BDUSA_007	2	AB	25	75	SIC	V	1	7.5YR3/4	N	FR	ST	4	Y	Y	-
BDUSA_007	3	Bt1	75	100	CL	V	1	7.5YR3/4	C	FR	ST	4	Y	N	-
BDUSA_008	1	Ap	0	25	C	V	1	7.5YR3/4	N	VFR	ST	4	N	Y	-
BDUSA_008	2	AB	25	50	C	V	1	7.5YR4/2	N	VFR	ST	4	N	Y	-
BDUSA_008	3	B1	50	94	C	V	1	7.5YR43/2	N	VFR	ST	4	N	Y	-
BDUSA_009	1	Ap	0	30	SIC	N	0	2.5YR5/3	C	FRF	SST	4	N	Y	-
BDUSA_009	2	Bt1	30	55	C	V	1	2.5YR4/3	N	FR	ST	4	Y	Y	-
BDUSA_009	3	Bt2	55	85	C	N	0	2.5YR3/3	N	FR	ST	3	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUSA_010	1	Ap	0	15	LS	V	1	7.5YR6/3	N	VFR	NST	4	N	Y	-
BDUSA_010	2	AC	15	33	S	V	1	7.5YR4/3	N	VFR	SST	4	N	Y	-
BDUSA_010	3	R	33	38	-	D	95	-	-	-	-	-	-	N	-
BDUSA_011	1	Ap	0	13	C	V	1	10YR4/1	N	FI	ST	4	Y	Y	-
BDUSA_011	2	A1	13	50	C	V	1	10YR3/1	N	VFI	VST	2	Y	Y	-
BDUSA_011	3	A2	50	100	C	V	1	10YR2/1	N	VFI	VST	1	Y	-	-
BDUSA_012	1	Ap	0	12	SIC	M	27	5YR6/3	F	VFR	NST	4	Y	Y	-
BDUSA_012	2	A1	12	34	SICL	C	10	5YR5/3	N	VFR	NST	2	Y	Y	-
BDUSA_012	3	A2	34	80	CL	F	3	5YR3/3	C	FR	SST	2	Y	N	-
BDUSA_013	1	Ap	0	17	CL	V	1	7.5YR4/4	N	VFR	ST	4	Y	Y	-
BDUSA_013	2	Bt1	17	55	C	V	1	7.5YR3/3	N	VFR	ST	3	N	Y	-
BDUSA_013	3	Bt2	55	100	C	-	-	7.5YR2.5/2	-	VFR	ST	2	N	Y	-
BDUSA_014	1	Ah	0	15	C	N	0	10YR4/1	C	FRF	ST	2	N	Y	-
BDUSA_014	2	A1	15	46	C	N	0	10YR3/1	N	FR	VST	2	Y	Y	-
BDUSA_014	3	A2	46	100	C	N	0	10YR2/1	N	FR	VST	2	Y	Y	-
BDUSA_015	1	Ah	0	14	C	N	0	10YR4/2	C	FRF	ST	2	N	Y	-
BDUSA_015	2	A1	14	40	C	N	0	10YR3/2	N	FR	VST	2	Y	Y	-
BDUSA_015	3	A2	40	95	C	N	0	10YR3/2	N	FR	VST	2	Y	Y	-
BDUSA_016	1	Ap	0	16	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUSA_016	2	BA	16	82	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUSA_016	3	B	82	95	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUSA_017	1	Ap	0	14	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUSA_017	2	BA	14	76	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUSA_017	3	B	76	100	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUSA_018	1	Ap	0	20	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUSA_018	2	BA	20	86	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUSA_018	3	B	86	100	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUSA_019	1	Ap	0	15	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUSA_019	2	BA	15	66	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-
BDUSA_019	3	B	66	100	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUSA_020	1	Ap	0	20	CL	V	1	2.5YR4/3	N	FR	ST	4	N	Y	-
BDUSA_020	2	BA	20	56	CL	V	1	2.5YR3/4	N	FR	ST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
BDUSA_020	3	B	56	100	C	V	1	2.5YR3/3	N	FR	ST	4	N	Y	-
BDUSA_021	1	Ap	0	15	CL	V	1	7.5YR4/12	N	VFR	ST	4	N	Y	-
BDUSA_021	2	AB	15	47	C	V	1	7.5YR4/2	N	VFR	ST	4	N	Y	-
BDUSA_021	3	B1	47	99	C	V	1	7.5YR43/2	N	VFR	ST	4	N	Y	-
BDUSA_022	1	Ap	0	20	CL	V	1	2.5YR5/2	N	FR	ST	4	Y	Y	-
BDUSA_022	2	Bt1	20	59	C	V	1	2.5YR5/3	N	FI	VST	3	-	-	-
BDUSA_022	3	Bt2	59	96	C	V	1	2.5YR3/4	N	FI	VST	2	-	-	-
BDUSA_023	1	Ah	0	20	SIC	V	1	10YR3/1	F	FI	ST	3	Y	N	-
BDUSA_023	2	A1	20	61	C	N	0	10YR2/1	N	FI	ST	2	Y	Y	-
BDUSA_023	3	Bg	61	105	C	N	0	10YR2/1	N	VFR	VST	2	Y	Y	-
BDUSA_024	1	Ah	0	13	SIC	N	0	2.5YR5/3	C	FRF	SST	3	N	Y	-
BDUSA_024	2	Bt1	13	55	C	V	1	2.5YR4/4	N	FR	ST	2	Y	Y	-
BDUSA_024	3	Bt2	55	108	C	N	0	2.5YR3/3	N	FR	ST	1	Y	Y	-
BDUSA_025	1	Ap	0	15	LS	V	1	2.5YR5/3	N	VFR	NST	4	N	Y	-
BDUSA_025	2	Bt1	15	35	S	V	1	2.5YR4/4	N	VFR	ST	4	N	Y	-
BDUSA_025	3	Bt2	35	60	S	V	1	2.5YR3/3	N	VFR	ST	3	N	Y	-
BDUSA_026	1	Ap	0	15	CL	N	0	7.5YR4/3	N	FR	ST	3	N	Y	-
BDUSA_026	2	AB	15	48	C	V	1	10YR3/2	N	VFR	NST	3	N	Y	-
BDUSA_026	3	Bt1	48	100	C	V	1	10YR2.5/3	N	VFR	NST	4	N	Y	-
BDUSA_027	1	Ap	0	16	SICL	V	1	5YR5/3	N	FR	ST	4	Y	Y	-
BDUSA_027	2	Bt1	16	57	C	V	1	5YR4/3	N	FR	ST	3	Y	Y	-
BDUSA_027	3	Bt2	57	100	C	V	1	5YR3/2	C	FR	ST	2	Y	N	-
BDUSA_028	1	Ap	0	25	SL	M	27	10YR7/21	F	LO	NST	4	N	N	-
BDUSA_028	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUSA_029	1	Ap	0	25	SL	M	27	10YR7/21	F	LO	NST	4	N	N	-
BDUSA_029	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
BDUSA_030	1	Ap	0	25	SL	M	27	10YR7/21	F	LO	NST	4	N	N	-
BDUSA_030	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HMUG_001	1	Ap	0	20	C	N	0	10YR3/1	N	FI	ST	3	N	Y	-
HMUG_001	2	A1	20	80	C	N	0	10YR2/2	N	FR	VST	3	N	Y	-
HMUG_001	3	A2	80	100	C	N	0	10YR3/1	N	FR	VST	3	N	Y	-
HMUG_002	1	Ap	0	20	C	N	0	10YR3/3	N	FI	ST	3	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUG_002	2	A	20	70	C	N	0	10YR3/1	N	FR	VST	3	N	Y	-
HMUG_002	3	B	70	100	C	N	0	10YR2/1	N	FR	VST	3	N	Y	-
HMUG_003	1	Ap	0	20	C	N	0	10YR3/3	N	FI	ST	3	N	Y	-
HMUG_003	2	A	20	70	C	N	0	10YR3/1	N	FR	VST	3	N	Y	-
HMUG_003	3	B	70	100	C	N	0	10YR2/1	N	FR	VST	3	N	Y	-
HMUG_004	1	Ap	0	20	C	N	0	10YR2/1	N	FR	ST	3	N	Y	-
HMUG_004	2	A	20	50	C	N	0	10YR3/2	N	FR	VST	3	N	Y	-
HMUG_004	3	AC	50	90	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
HMUG_004	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
HMUG_005	1	Ap	0	15	SCL	N	0	7.5YR3/2	N	FR	NST	5	N	Y	-
HMUG_005	2	B	15	50	CL	N	0	7.5YR2.5/2	N	FR	SST	4	N	Y	-
HMUG_005	3	BC	50	70	SCL	N	0	7.5YR3/3	N	FR	NST	5	N	Y	-
HMUG_005	4	R	70	75	-	D	95	-	-	-	-	-	-	N	-
HMUG_006	1	Ap	0	10	C	N	0	7.5YR3/1	N	VFR	N	4	N	Y	-
HMUG_006	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_007	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUG_007	2	A1	30	70	C	N	0	10YR3/2	N	FR	VST	3	N	Y	-
HMUG_007	3	A2	70	100	C	N	0	10YR3/3	N	FR	VST	3	N	Y	-
HMUG_008	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_008	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_009	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_009	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_010	1	Ap	0	20	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
HMUG_010	2	A	20	80	C	N	0	10YR3/2	N	FI	VST	3	N	Y	-
HMUG_011	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_011	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_012	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_012	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_013	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_013	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_014	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_014	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUG_015	1	Ap	0	30	C	N	0	10YR3/3	N	FR	ST	4	N	Y	-
HMUG_015	2	A	30	70	C	N	0	10YR2/2	N	FR	ST	4	N	Y	-
HMUG_015	3	R	70	75	-	D	95	-	-	-	-	-	-	N	-
HMUG_016	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_016	2	A	20	50	C	N	0	5YR3/2	N	FR	ST	4	N	Y	-
HMUG_016	3	Bt	50	80	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
HMUG_016	4	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUG_017	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	SST	4	N	Y	-
HMUG_017	2	Bt	20	40	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Argic
HMUG_017	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUG_018	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	SST	4	N	Y	-
HMUG_018	2	Bt	20	40	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	-
HMUG_018	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUG_019	1	Ap	0	20	C	N	0	5YR3/2	N	FR	SST	4	N	Y	-
HMUG_019	2	Bt	20	50	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Argic
HMUG_019	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUG_020	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_020	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_021	1	Ap	0	30	SCL	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUG_021	2	A	30	80	SCL	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUG_022	1	Ap	0	30	SCL	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUG_022	2	A	30	80	SCL	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUG_023	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_023	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_024	1	Ap	0	30	CL	N	0	7.5YR3/3	N	FR	SST	4	N	Y	-
HMUG_024	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUG_025	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUG_025	2	A1	30	70	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
HMUG_025	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	3	N	N	-
HMUG_026	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUG_026	2	A1	30	70	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
HMUG_026	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	3	N	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUG_027	1	Ap	0	25	CL	N	0	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUG_027	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HMUG_028	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	N	Y	-
HMUG_028	2	Bt	20	80	C	N	0	5YR3/4	N	FR	ST	4	N	Y	Argic
HMUG_028	3	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUG_029	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	N	Y	-
HMUG_029	2	Bt	20	80	C	N	0	5YR3/4	N	FR	ST	4	N	Y	Argic
HMUG_029	3	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUG_030	1	Ap	0	30	CL	N	0	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUG_030	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUG_031	1	Ap	0	25	C	N	0	5YR3/3	N	FR	ST	4	N	Y	-
HMUG_031	2	Bt	25	80	C	N	0	5YR3/4	N	FR	ST	4	N	Y	Argic
HMUG_032	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUG_032	2	A	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	-
HMUG_032	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
HMUG_033	1	Ap	0	20	SCL	C	10	10YR3/3	N	LO	NST	4	N	Y	-
HMUG_033	2	A	20	50	CL	C	10	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUG_033	3	Bt	50	100	C	C	10	5YR3/4	N	FR	ST	3	N	Y	Argic
HMUG_034	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUG_034	2	A	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	-
HMUG_034	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
HMUG_035	1	Ap	0	20	C	N	0	10YR3/3/	N	FR	VST	3	N	Y	-
HMUG_035	2	A	20	100	C	N	0	10YR3/2	N	FI	VST	3	N	Y	Vertic
HMUG_036	1	Ap	0	20	C	N	0	10YR3/3/	N	FR	VST	3	N	Y	-
HMUG_036	2	A	20	100	C	N	0	10YR3/2	N	FI	VST	3	N	Y	Vertic
HMUG_037	1	Ap	0	10	SL	D	90	7.5YR3/2	N	LO	NST	5	N	Y	-
HMUG_037	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_038	1	Ap	0	20	SCL	VF	VF	7.5YR3/3	N	VFR	NST	4	N	Y	-
HMUG_038	2	A	20	45	SCL	N	0	7.5YR3/3	N	FR	NST	4	N	Y	-
HMUG_038	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
HMUG_039	1	Ap	0	30	LS	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUG_039	2	A1	30	70	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUG_039	3	A2	70	100	SL	N	0	7.5YR3/4	N	LO	NST	5	N	N	-
HMUG_040	1	Ap	0	20	SCL	VF	VF	10YR3/3	N	VFR	NST	4	N	Y	-
HMUG_040	2	A	20	60	CL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUG_040	3	Bt	60	100	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	-
HMUG_041	1	Ap	0	10	CL	D	90	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUG_041	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_042	1	Ap	0	30	LS	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUG_042	2	A1	30	70	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUG_042	3	A2	70	100	SL	N	0	7.5YR3/4	N	LO	NST	5	N	N	-
HMUG_043	1	Ap	0	30	LS	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUG_043	2	A1	30	70	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUG_043	3	A2	70	100	SL	N	0	7.5YR3/4	N	LO	NST	5	N	N	-
HMUG_044	1	Ap	0	20	CL	N	0	10YR3/4	N	FR	SST	4	N	Y	-
HMUG_044	2	A	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	-
HMUG_044	3	Bt	60	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
HMUG_045	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	NST	5	N	Y	-
HMUG_045	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_046	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	NST	5	N	Y	-
HMUG_046	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_047	1	Ap	0	10	CL	N	0	7.5YR3/2	N	FR	NST	5	N	Y	-
HMUG_047	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_048	1	Ap	0	20	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
HMUG_048	2	A1	20	50	C	N	0	10YR3/4	N	FI	VST	3	N	Y	Vertic
HMUG_048	3	A2	50	100	C	N	0	7.5YR3/2	N	FI	VST	3	N	Y	Vertic
HMUG_049	1	Ap	0	10	CL	N	0	10YR3/4	N	FR	SST	4	N	Y	-
HMUG_049	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_050	1	Ap	0	10	CL	N	0	10YR3/4	N	FR	SST	4	N	Y	-
HMUG_050	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUG_051	1	Ap	0	10	CL	N	0	10YR3/4	N	FR	SST	4	N	Y	-
HMUG_052	1	Ap	0	20	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
HMUG_052	2	A1	20	50	C	N	0	10YR3/4	N	FI	VST	3	N	Y	Vertic
HMUG_052	3	A2	50	100	C	N	0	7.5YR3/2	N	FI	VST	3	N	Y	Vertic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUG_053	1	Ap	0	20	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
HMUG_053	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUG_054	1	Ap	0	30	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUG_054	2	A1	30	70	SCL	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUG_054	3	A2	70	100	SCL	N	0	7.5YR3/4	N	LO	NST	5	N	N	-
HMUG_055	1	Ap	0	20	CL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUG_055	2	B	20	50	C	N	0	10YR3/3	N	FR	ST	3	N	Y	Cambic
HMUG_055	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUG_056	1	Ap	0	20	CL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUG_056	2	B	20	50	C	N	0	10YR3/3	N	FR	ST	3	N	Y	Cambic
HMUG_056	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUHB_001	1	Ap	0	20	CL	A	60	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUHB_001	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUHB_002	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	N	Y	-
HMUHB_002	2	B	20	50	C	N	0	7.5YR2.5/1	N	FR	ST	4	N	Y	Argic
HMUHB_002	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUHB_003	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	N	Y	-
HMUHB_003	2	B	20	50	C	N	0	7.5YR2.5/1	N	FR	ST	4	N	Y	Argic
HMUHB_003	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUHB_004	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	N	Y	-
HMUHB_004	2	B	20	50	C	N	0	7.5YR2.5/1	N	FR	ST	4	N	Y	Argic
HMUHB_004	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUHB_005	1	Ap	0	20	C	N	0	10YR2/1	N	FI	ST	3	N	Y	-
HMUHB_005	2	A1	20	60	C	N	0	10YR2/1	N	FI	VST	3	N	Y	Vertic
HMUHB_005	3	A2	60	85	C	N	0	10YR3/1	N	FI	VST	3	N	Y	Vertic
HMUHB_005	4	A3	85	100	C	N	0	10YR3/2	N	FI	VST	3	N	N	Vertic
HMUHB_006	1	Ap	0	20	SCL	N	0	7.5YR3/2	N	VFR	SST	4	N	Y	-
HMUHB_006	2	B	20	50	CL	N	0	5YR3/3	N	VFR	SST	4	N	Y	Cambic
HMUHB_006	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUHB_007	1	Ap	0	20	SCL	N	0	7.5YR3/2	N	VFR	NST	4	N	Y	-
HMUHB_007	2	B	20	50	CL	N	0	5YR3/3	N	FR	SST	4	N	Y	Cambic
HMUHB_007	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHB_008	1	Ap	0	20	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUHB_008	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_008	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_009	1	Ap	0	20	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUHB_009	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_009	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_010	1	Ap	0	20	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUHB_010	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_010	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_011	1	Ap	0	20	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUHB_011	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_011	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_012	1	Ap	0	20	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUHB_012	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_012	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_013	1	Ap	0	20	SL	N	0	5YR4/3	N	LO	NST	4	N	Y	-
HMUHB_013	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUHB_014	1	Ap	0	20	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUHB_014	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_014	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_015	1	Ap	0	20	SL	N	0	10YR3/3	N	LO	NST	4	N	Y	-
HMUHB_015	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_015	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_016	1	Ap	0	20	SL	N	0	10YR3/3	N	LO	NST	4	N	Y	-
HMUHB_016	2	A	20	40	SCL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUHB_016	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHB_017	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUHB_017	2	B	20	45	C	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Argic
HMUHB_017	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
HMUHB_018	1	Ap	0	20	SCL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Mollic
HMUHB_018	2	A	20	40	CL	N	0	7.5YR2.5/2	N	FR	SST	4	N	Y	-
HMUHB_018	3	Bt	40	55	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHB_018	4	R	55	60	-	D	95	-	-	-	-	-	-	N	-
HMUHB_019	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
HMUHB_019	2	A	20	40	C	N	0	2.5YR3/2	N	FR	ST	3	N	Y	Mollic
HMUHB_019	3	B	40	55	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_020	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
HMUHB_020	2	A	20	40	C	N	0	2.5YR3/2	N	FR	ST	3	N	Y	Mollic
HMUHB_020	3	B	40	55	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_021	1	Ap	0	25	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUHB_021	2	A1	25	60	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHB_021	3	A2	60	100	C	N	0	10YR3/1	N	FR	VST	3	N	Y	Vertic
HMUHB_022	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
HMUHB_022	2	A	20	40	C	N	0	2.5YR3/2	N	FR	ST	3	N	Y	Mollic
HMUHB_022	3	B	40	55	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_023	1	Ap	0	15	CL	N	0	10YR4/3	N	FR	SST	4	N	Y	-
HMUHB_023	2	A	15	60	CL	N	0	10YR4/3	N	FR	SST	4	N	Y	-
HMUHB_023	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHB_024	1	Ap	0	15	CL	N	0	10YR4/3	N	FR	SST	4	N	Y	-
HMUHB_024	2	A	15	60	CL	N	0	10YR4/3	N	FR	SST	4	N	Y	-
HMUHB_024	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHB_025	1	Ap	0	20	CL	N	0	7.5YR4/3	N	FR	SST	4	N	Y	-
HMUHB_025	2	Bt	20	80	C	N	0	7.5YR2.5/2	N	FR	SST	4	N	Y	Argic
HMUHB_025	3	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUHB_026	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	N	Y	Mollic
HMUHB_026	2	A	20	50	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Mollic
HMUHB_026	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
HMUHB_027	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	N	Y	Mollic
HMUHB_027	2	A	20	50	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Mollic
HMUHB_027	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
HMUHB_028	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	N	Y	Mollic
HMUHB_028	2	A	20	50	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Mollic
HMUHB_028	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	N	Y	Argic
HMUHB_029	1	Ap	0	20	C	N	0	10YR3/1	N	FR	ST	3	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHB_029	2	A1	20	40	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHB_029	3	A2	40	100	C	N	0	7.5YR2.5/1	N	FR	VST	3	N	Y	Vertic
HMUHB_030	1	Ap	0	20	C	N	0	10YR3/1	N	FR	ST	3	N	Y	-
HMUHB_030	2	A1	20	70	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHB_030	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	3	N	Y	Vertic
HMUHB_031	1	Ap	0	20	C	N	0	5YR3/2	N	FR	SST	4	N	Y	Mollic
HMUHB_031	2	A	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Mollic
HMUHB_031	3	Bt	40	100	C	N	0	5YR3/2	N	FR	ST	3	N	Y	Argic
HMUHB_032	1	Ap	0	20	C	N	0	5YR3/2	N	FR	SST	4	N	Y	Mollic
HMUHB_032	2	A	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Mollic
HMUHB_032	3	Bt	40	100	C	N	0	5YR3/2	N	FR	ST	3	N	Y	Nitic
HMUHB_033	1	Ap	0	20	SCL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Mollic
HMUHB_033	2	A	20	50	SC	N	0	5YR3/3	N	FR	SST	3	N	Y	Mollic
HMUHB_033	3	B	50	70	CL	N	0	2.5YR3/2	N	FR	SST	3	N	Y	Nitic
HMUHB_033	4	R	70	75	-	D	95	-	-	-	-	-	-	N	-
HMUHB_034	1	Ap	0	10	SCL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUHB_034	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHB_035	1	Ap	0	20	C	N	0	5YR3/2	N	FR	SST	4	N	Y	Mollic
HMUHB_035	2	A	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Mollic
HMUHB_035	3	B	40	100	C	N	0	5YR3/2	N	FR	ST	3	N	Y	Nitic
HMUHB_036	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUHB_036	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	3	N	Y	Vertic
HMUHB_036	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHB_037	1	Ap	0	10	SCL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUHB_037	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHB_038	1	Ap	0	30	SCL	M	27	7.5YR3/2	N	FR	NST	4	N	Y	-
HMUHB_038	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUHB_039	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUHB_039	2	A1	30	80	C	N	0	10YR2/1	N	FR	ST	3	N	Y	Vertic
HMUHB_039	3	A2	80	100	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHB_040	1	Ap	0	30	SCL	N	0	7.5YR3/2	N	FR	NST	4	N	Y	-
HMUHB_040	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHB_041	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUHB_041	2	A1	30	80	C	N	0	10YR2/1	N	FR	ST	3	N	Y	Vertic
HMUHB_041	3	A2	80	100	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHB_042	1	Ap	0	10	SCL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUHB_042	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHB_043	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUHB_043	2	A1	30	80	C	N	0	10YR3/2	N	FR	ST	3	N	Y	Vertic
HMUHB_043	3	A2	80	100	C	N	0	10YR2/2	N	FR	VST	3	N	Y	Vertic
HMUHB_044	1	Ap	0	20	C	V	1	5YR3/3	N	FR	ST	3	N	Y	Mollic
HMUHB_044	2	A	20	50	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Nitic
HMUHB_044	3	B	50	100	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_045	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUHB_045	2	A1	30	80	C	N	0	10YR3/2	N	FR	ST	3	N	Y	Vertic
HMUHB_045	3	A2	80	100	C	N	0	10YR2/2	N	FR	VST	3	N	Y	Vertic
HMUHB_046	1	Ap	0	20	CL	C	10	10YR3/3	N	FR	SST	4	N	Y	Mollic
HMUHB_046	2	B	20	60	C	F	3	7.5YR2.5/2	N	FR	ST	3	N	Y	Cambic
HMUHB_046	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHB_047	1	Ap	0	20	SL	N	0	5YR3/4	N	VFR	NST	4	N	Y	-
HMUHB_047	2	A1	20	50	SC	N	0	2.5YR4/4	N	FR	SST	4	N	Y	-
HMUHB_047	3	A2	50	100	SC	N	0	2.5YR4/6	N	FR	SST	4	N	Y	Cambic
HMUHB_047	4	R	100	105	-	D	95	-	-	-	-	-	-	N	-
HMUHB_048	1	Ap	0	10	SL	F	3	10YR4/3	N	LO	NST	4	N	Y	-
HMUHB_048	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHB_049	1	Ap	0	10	SL	F	3	10YR4/3	N	LO	NST	4	N	Y	-
HMUHB_050	1	Ap	0	10	SL	F	3	10YR4/3	N	LO	NST	4	N	Y	-
HMUHB_050	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHB_051	1	Ap	0	20	CL	N	0	10YR2/2	N	FR	ST	4	N	Y	-
HMUHB_051	2	B1	20	40	C	N	0	7.5YR3/2	N	FR	VST	3	N	Y	Cambic
HMUHB_051	3	B2	40	100	C	N	0	7.5YR3/4	N	FR	VST	3	N	Y	Cambic
HMUHB_052	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	3	N	Y	Mollic
HMUHB_052	2	A	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_052	3	B	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHB_053	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	3	N	Y	Mollic
HMUHB_053	2	A	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_053	3	B	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
HMUHB_054	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	3	N	Y	Mollic
HMUHB_054	2	A	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_054	3	B	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
HMUHB_055	1	Ap	0	10	SL	F	3	10YR4/3	N	LO	NST	4	N	Y	-
HMUHB_055	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHB_056	1	Ap	0	20	SL	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUHB_056	2	A1	20	40	SL	N	0	10YR3/6	N	LO	NST	5	N	Y	-
HMUHB_056	3	A2	40	100	SL	N	0	10YR3/6	N	LO	NST	5	N	Y	-
HMUHB_057	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	3	N	Y	Mollic
HMUHB_057	2	A	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_057	3	B	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
HMUHB_058	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	3	N	Y	Mollic
HMUHB_058	2	A	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
HMUHB_058	3	B	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
HMUHB_059	1	Ap	0	25	SL	N	0	10YR3/4	N	LO	NST	5	N	Y	-
HMUHB_059	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HMUHB_060	1	Ap	0	20	SCL	N	0	5YR4/4	N	VFR	NST	4	N	Y	-
HMUHB_060	2	A1	20	50	SCL	N	0	7.5YR2.5/2	N	VFR	NST	4	N	Y	-
HMUHB_060	3	BC	50	100	SCL	N	0	10YR2/2	N	VFR	-	4	N	N	-
HMUHR_001	1	Ap	0	35	LS	C	10	10YR4/3	N	VFR	NST	5	N	Y	-
HMUHR_001	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
HMUHR_002	1	Ap	0	55	LS	F	3	10YR4/3	N	VFR	NST	5	N	Y	-
HMUHR_002	2	R	55	60	-	D	95	-	-	-	-	-	-	N	-
HMUHR_003	1	Ap	0	35	SL	N	0	7.5YR3/3	N	VFR	NST	5	N	Y	-
HMUHR_003	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
HMUHR_004	1	Ap	0	30	SL	N	0	7.5YR3/3	N	VFR	NST	5	N	Y	-
HMUHR_004	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUHR_005	1	Ap	0	20	SCL	N	0	5YR3/3	N	VFR	NST	5	N	Y	-
HMUHR_005	2	A1	20	60	SCL	N	0	2.5YR3/3	N	VFR	NST	5	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHR_005	3	A2	60	100	SCL	N	0	2.5YR2.5/4	N	VFR	NST	5	N	Y	-
HMUHR_006	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
HMUHR_006	2	B	20	70	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Nitic
HMUHR_006	3	BC	70	100	C	N	0	5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_007	1	Ap	0	30	C	N	0	10YR3/2	N	FR	ST	4	N	Y	-
HMUHR_007	2	A1	30	70	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_007	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_008	1	Ap	0	30	C	N	0	10YR3/2	N	FR	ST	4	N	Y	-
HMUHR_008	2	A1	30	70	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_008	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_009	1	Ap	0	30	C	N	0	10YR3/2	N	FR	ST	4	N	Y	-
HMUHR_009	2	A1	30	70	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_009	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_010	1	Ap	0	30	LS	C	10	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_010	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUHR_011	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
HMUHR_011	2	B	20	70	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_011	3	Bt	70	100	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Argic
HMUHR_012	1	Ap	0	20	C	N	0	10YR2/2	N	FI	VST	3	N	Y	-
HMUHR_012	2	A1	20	80	C	N	0	10YR2/1	N	FI	VST	3	N	Y	Vertic
HMUHR_012	3	A2	80	100	C	N	0	10YR2/1	N	FI	VST	3	N	Y	Vertic
HMUHR_013	1	Ap	0	30	SL	F	3	5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_013	2	B	30	60	SCL	V	1	2.5YR3/3	N	VFR	NST	5	N	N	-
HMUHR_013	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHR_014	1	Ap	0	35	LS	N	0	7.5YR3/2	N	LO	NST	5	N	Y	-
HMUHR_014	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
HMUHR_015	1	Ap	0	35	LS	N	0	7.5YR3/2	N	LO	NST	5	N	Y	-
HMUHR_015	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
HMUHR_016	1	Ap	0	20	SCL	N	0	7.5YR3/3	N	FR	SST	5	N	Y	Mollic
HMUHR_016	2	B	20	60	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Argic
HMUHR_016	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHR_017	1	Ap	0	20	SCL	N	0	7.5YR3/2	N	FR	SST	5	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHR_017	2	A	20	60	SC	N	0	7.5YR3/2	N	FR	SST	5	N	Y	-
HMUHR_017	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHR_018	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Mollic
HMUHR_018	2	B	20	70	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_018	3	Bt	70	100	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Argic
HMUHR_019	1	Ap	0	30	C	N	0	10YR3/2	N	FR	ST	4	N	Y	-
HMUHR_019	2	A1	30	70	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_019	3	A2	70	100	C	N	0	10YR2/2	N	FR	VST	4	N	Y	Vertic
HMUHR_020	1	Ap	0	40	SL	N	0	7.5YR3/2	N	LO	NST	5	N	Y	-
HMUHR_020	2	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHR_021	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	4	N	Y	-
HMUHR_021	2	A1	30	70	C	N	0	10YR2/1	N	FR	VST	4	N	Y	Vertic
HMUHR_021	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	4	N	N	Vertic
HMUHR_022	1	Ap	0	10	SCL	A	60	7.5YR3/2	N	VFR	NST	5	N	Y	Mollic
HMUHR_022	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHR_023	1	Ap	0	10	SCL	A	60	7.5YR3/2	N	VFR	NST	5	N	Y	Mollic
HMUHR_023	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHR_024	1	Ap	0	30	SCL	M	27	10YR4/3	N	VFR	NST	5	N	Y	-
HMUHR_024	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUHR_025	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
HMUHR_025	2	B	30	80	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_025	3	Bt	80	100	C	N	0	2.5YR2/2	N	FR	ST	3	N	N	Argic
HMUHR_026	1	Ap	0	15	C	N	0	10YR2/2	N	FR	ST	4	N	Y	-
HMUHR_026	2	A1	15	65	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHR_026	3	A2	65	100	C	N	0	10YR3/3	N	FR	VST	3	N	N	Vertic
HMUHR_027	1	Ap	0	30	SCL	N	0	5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_027	2	A	30	60	SL	N	0	2.5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_027	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHR_028	1	Ap	0	30	SCL	N	0	5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_028	2	A	30	60	SL	N	0	2.5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_028	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUHR_029	1	Ap	0	15	C	N	0	10YR2/2	N	FR	ST	4	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHR_029	2	A1	15	65	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHR_029	3	A2	65	100	C	N	0	10YR3/3	N	FR	VST	3	N	N	Vertic
HMUHR_030	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
HMUHR_030	2	B	30	80	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_030	3	Bt	80	100	C	N	0	2.5YR2/2	N	FR	ST	3	N	N	Argic
HMUHR_031	1	Ap	0	15	C	N	0	10YR2/2	N	FR	ST	4	N	Y	-
HMUHR_031	2	A1	15	65	C	N	0	10YR2/1	N	FR	VST	3	N	Y	Vertic
HMUHR_031	3	A2	65	100	C	N	0	10YR3/3	N	FR	VST	3	N	N	Vertic
HMUHR_032	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
HMUHR_032	2	B	30	80	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_032	3	Bt	80	100	C	N	0	2.5YR2/2	N	FR	ST	3	N	N	Argic
HMUHR_033	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
HMUHR_033	2	B	30	80	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Nitic
HMUHR_033	3	Bt	80	100	C	N	0	2.5YR2/2	N	FR	ST	3	N	N	Argic
HMUHR_034	1	Ap	0	30	LS	M	27	10YR3/4	N	LO	NST	5	N	Y	-
HMUHR_034	2	A	30	75	LS	C	10	10YR3/6	N	LO	NST	5	N	Y	-
HMUHR_034	3	R	75	80	-	D	95	-	-	-	-	-	-	N	-
HMUHR_035	1	Ap	0	30	LS	M	27	10YR3/4	N	LO	NST	5	N	Y	-
HMUHR_035	2	A	30	75	LS	C	10	10YR3/6	N	LO	NST	5	N	Y	-
HMUHR_035	3	R	75	80	-	D	95	-	-	-	-	-	-	N	-
HMUHR_036	1	Ap	0	20	LS	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_036	2	A	20	50	SCL	D	90	10YR3/4	N	LO	NST	5	N	N	-
HMUHR_036	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUHR_037	1	Ap	0	10	SL	D	90	10YR4/3	N	LO	NST	5	N	Y	-
HMUHR_037	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHR_038	1	Ap	0	10	SL	D	90	10YR4/3	N	LO	NST	5	N	Y	-
HMUHR_038	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHR_039	1	Ap	0	10	SL	D	90	10YR4/3	N	LO	NST	5	N	Y	-
HMUHR_039	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUHR_040	1	Ap	0	20	SL	V	1	7.5YR4/4	N	VFR	NST	5	N	Y	-
HMUHR_040	2	AC	20	90	SCL	V	1	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUHR_041	1	Ap	0	20	SL	M	27	7.5YR3/4	N	VFR	NST	5	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHR_041	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUHR_042	1	Ap	0	20	SL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_042	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUHR_043	1	Ap	0	20	LS	A	60	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_043	2	B	20	100	SC	M	27	5YR3/4	N	VFR	SST	5	N	Y	Cambic
HMUHR_044	1	Ap	0	20	LS	C	10	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_044	2	A	20	70	SL	V	1	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_044	3	AC	70	100	SL	A	60	10YR3/4	N	LO	NST	5	N	N	-
HMUHR_045	1	Ap	0	20	LS	V	1	7.5YR4/4	N	VFR	NST	5	N	Y	-
HMUHR_045	2	AC	20	90	LS	V	1	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUHR_046	1	Ap	0	30	C	N	0	10YR3/2	N	FI	VST	4	N	Y	Vertic
HMUHR_046	2	A	30	100	C	N	0	10YR2/1	N	FI	VST	4	N	Y	Vertic
HMUHR_047	1	Ap	0	30	C	N	0	10YR3/2	N	FI	VST	4	N	Y	Vertic
HMUHR_047	2	A	30	100	C	N	0	10YR2/1	N	FI	VST	4	N	Y	Vertic
HMUHR_048	1	Ap	0	20	LS	F	3	5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_048	2	A	20	80	SCL	F	3	5YR3/2	N	VFR	SST	5	N	Y	-
HMUHR_048	3	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUHR_049	1	Ap	0	20	SC	N	0	10YR3/3	N	FR	ST	4	N	Y	Fluvic
HMUHR_049	2	1A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Fluvic
HMUHR_049	3	2A	60	100	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Vertic
HMUHR_050	1	Ap	0	30	SC	N	0	10YR3/3	N	FR	ST	4	N	Y	Vertic
HMUHR_050	2	1A	30	100	C	N	0	7.5YR3/2	N	FI	ST	4	N	Y	Vertic
HMUHR_051	1	Ap	0	20	SCL	N	0	10YR3/3	N	FR	ST	4	N	Y	-
HMUHR_051	2	A1	20	70	C	N	0	10YR3/2	N	FI	VST	4	N	Y	Vertic
HMUHR_051	3	A2	70	100	C	N	0	10YR2/2	N	FI	VST	4	N	N	Vertic
HMUHR_052	1	Ap	0	20	SL	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_052	2	A	20	40	LS	N	0	7.5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_052	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HMUHR_053	1	Ap	0	20	SL	N	0	7.5YR3/3	N	LO	NST	5	N	Y	-
HMUHR_053	2	A	20	70	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUHR_054	1	Ap	0	20	SCL	N	0	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUHR_054	2	B	20	60	C	N	0	10YR3/4	N	FI	ST	3	N	Y	Cambic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUHR_054	3	BC	60	90	SC	N	0	10YR4/4	N	FR	SST	5	N	N	-
HMUHR_055	1	Ap	0	30	C	N	0	10YR3/3	N	FI	ST	4	N	Y	Vertic
HMUHR_055	2	A	30	100	C	N	0	10YR3/2	N	FI	VST	4	N	Y	Vertic
HMUK_001	1	Ap	0	35	SL	F	3	10YR4/3	N	VFR	NST	4	N	Y	-
HMUK_001	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
HMUK_002	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Mollic
HMUK_002	2	A	20	40	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	Mollic
HMUK_002	3	Bt	40	90	C	N	0	7.5YR2.5/1	N	FR	ST	4	N	Y	Argic
HMUK_002	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
HMUK_003	1	Ap	0	10	CL	M	27	7.5YR2.5/2	N	FR	NST	4	N	Y	-
HMUK_003	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_004	1	Ap	0	10	CL	M	27	7.5YR2.5/2	N	FR	NST	4	N	Y	-
HMUK_004	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_005	1	Ap	0	10	CL	M	27	7.5YR2.5/2	N	FR	NST	4	N	Y	-
HMUK_005	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_006	1	Ap	0	10	CL	M	27	7.5YR3/1	N	FR	NST	4	N	Y	-
HMUK_007	1	Ap	0	10	CL	M	27	7.5YR3/2	N	FR	NST	4	N	Y	-
HMUK_006	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_007	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_008	1	Ap	0	20	C	C	10	7.5YR2.5/2	N	FR	SST	4	N	Y	Mollic
HMUK_008	2	Bt	20	55	C	N	0	5YR2.5/2	N	FR	ST	4	N	Y	Argic
HMUK_008	3	R	55	60	-	D	95	-	-	-	-	-	-	N	-
HMUK_009	1	Ap	0	20	C	C	10	7.5YR2.5/2	N	FR	SST	4	N	Y	Mollic
HMUK_009	2	Bt	20	55	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Argic
HMUK_009	3	R	55	60	-	D	95	-	-	-	-	-	-	N	-
HMUK_010	1	Ap	0	20	C	C	10	7.5YR2.5/2	N	FR	SST	4	N	Y	Mollic
HMUK_010	2	Bt	20	55	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Argic
HMUK_010	3	R	55	60	-	D	95	-	-	-	-	-	-	N	-
HMUK_011	1	Ap	0	10	CL	M	27	7.YR2.5/2	N	FR	SST	4	N	Y	-
HMUK_011	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_012	1	Ap	0	10	CL	M	27	7.YR3/2	N	FR	SST	4	N	Y	-
HMUK_012	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUK_013	1	Ap	0	30	SCL	C	10	10YR4/3	N	VFR	NST	5	N	Y	-
HMUK_013	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUK_014	1	Ap	0	30	SCL	C	10	10YR4/3	N	VFR	NST	5	N	Y	-
HMUK_014	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUK_015	1	Ap	0	10	CL	M	27	7.YR3/2	N	FR	SST	4	N	Y	-
HMUK_015	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_016	1	Ap	0	10	CL	M	27	7.YR3/2	N	FR	SST	4	N	Y	-
HMUK_016	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_017	1	Ap	0	20	C	M	27	10YR2/2	N	FR	ST	3	N	Y	-
HMUK_017	2	A	20	45	C	C	10	10YR2/1	N	FR	ST	3	N	Y	Vertic
HMUK_017	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
HMUK_018	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUK_018	2	A1	30	70	C	N	0	10YR3/1	N	FR	VST	3	N	Y	Vertic
HMUK_018	3	A2	70	100	C	N	0	10YR3/3	N	FR	VST	3	N	N	Vertic
HMUK_019	1	Ap	0	20	SC	N	0	2.5YR3/3	N	FR	SST	4	N	Y	Mollic
HMUK_019	2	B1	20	70	CL	N	0	2.5YR2.5/2	N	VFR	SST	4	N	Y	Nitic
HMUK_019	3	B2	70	100	SCL	N	0	10R3/3	N	FR	SST	4	N	N	Nitic
HMUK_020	1	Ap	0	30	C	N	0	10YR2/2	N	FR	ST	3	N	Y	-
HMUK_020	2	A1	30	70	C	N	0	10YR3/1	N	FR	VST	3	N	Y	Vertic
HMUK_020	3	A2	70	100	C	N	0	10YR3/3	N	FR	VST	3	N	N	Vertic
HMUK_021	1	Ap	0	35	LS	N	0	10YR4/3	N	LO	NST	5	N	Y	-
HMUK_021	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
HMUK_022	1	Ap	0	30	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUK_022	2	A1	30	80	LS	N	0	10YR3/3	N	LO	NST	5	N	Y	-
HMUK_022	3	A2	80	100	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUK_023	1	Ap	0	30	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUK_023	2	A1	30	80	LS	N	0	10YR3/3	N	LO	NST	5	N	Y	-
HMUK_023	3	A2	80	100	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUK_024	1	Ap	0	10	CL	M	27	7.YR3/2	N	FR	SST	4	N	Y	-
HMUK_024	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_025	1	Ap	0	30	LS	N	0	7.5YR3/4	N	FR	ST	3	N	Y	-
HMUK_025	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUK_026	1	Ap	0	10	CL	M	27	7.YR3/2	N	FR	SST	4	N	Y	-
HMUK_026	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUK_027	1	Ap	0	20	SCL	F	3	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUK_027	2	A	20	60	CL	F	3	7.5YR3/3	N	FR	SST	4	N	Y	-
HMUK_027	3	Bt	60	100	SC	C	10	7.5YR4/4	N	FR	SST	4	N	Y	Argic
HMUK_028	1	Ap	0	20	SCL	F	3	7.5YR3/4	N	FR	SST	4	N	Y	Mollic
HMUK_028	2	A	20	60	CL	F	3	7.5YR3/3	N	FR	SST	4	N	Y	-
HMUK_028	3	Bt	60	100	SC	C	10	7.5YR4/4	N	FR	SST	4	N	Y	Argic
HMUK_029	1	Ap	0	20	SCL	F	3	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUK_029	2	A	20	60	CL	F	3	7.5YR3/3	N	FR	SST	4	N	Y	-
HMUK_029	3	Bt	60	100	SC	C	10	7.5YR4/4	N	FR	SST	4	N	Y	-
HMUK_030	1	Ap	0	30	CL	F	3	7.5YR3/4	N	FR	SST	4	N	Y	Mollic
HMUK_030	2	A	30	60	CL	F	3	7.5YR3/3	N	FR	ST	3	N	Y	-
HMUK_030	3	Bt	60	100	CL	C	10	7.5YR4/4	N	FR	ST	4	N	Y	Argic
HMUK_031	1	Ap	0	30	CL	F	3	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUK_031	2	A	30	60	CL	F	3	7.5YR3/3	N	FR	ST	3	N	Y	-
HMUK_031	3	Bt	60	100	CL	C	10	7.5YR4/4	N	FR	ST	4	N	Y	-
HMUK_032	1	Ap	0	30	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUK_032	2	A1	30	80	LS	N	0	10YR3/3	N	LO	NST	5	N	Y	-
HMUK_032	3	A2	80	100	LS	N	0	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUK_032	4	R	100	105	-	D	95	-	-	-	-	-	-	N	-
HMUK_033	1	Ap	0	25	LS	N	0	10YR4/3	N	LO	NST	5	N	Y	-
HMUK_033	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HMUK_034	1	Ap	0	15	CL	N	0	5YR3/4	N	FR	SST	4	N	Y	Mollic
HMUK_034	2	A	15	40	C	N	0	5YR3/3	N	FR	ST	3	N	Y	-
HMUK_034	3	Bt	40	100	C	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Argic
HMUK_035	1	Ap	0	15	CL	N	0	5YR3/4	N	FR	SST	4	N	Y	Mollic
HMUK_035	2	A	15	40	C	N	0	5YR3/3	N	FR	ST	3	N	Y	-
HMUK_035	3	Bt	40	100	C	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Argic
HMUK_036	1	Ap	0	30	SCL	N	0	10YR3/4	N	VFR	NST	5	N	Y	-
HMUK_036	2	A	30	70	SCL	N	0	10YR3/3	N	FR	NST	4	N	Y	-
HMUK_036	3	B	70	100	SCL	N	0	7.5YR3/4	N	FR	SST	4	N	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUK_037	1	Ap	0	30	SL	N	0	10YR3/4	N	VFR	NST	5	N	Y	-
HMUK_037	2	A	30	70	SL	N	0	10YR3/3	N	FR	NST	4	N	Y	-
HMUK_037	3	B	70	100	SCL	N	0	7.5YR3/4	N	FR	SST	4	N	N	-
HMUK_038	1	Ap	0	30	SCL	N	0	10YR3/4	N	VFR	NST	5	N	Y	-
HMUK_038	2	A	30	70	SL	N	0	10YR3/3	N	FR	NST	4	N	Y	-
HMUK_038	3	B	70	100	SCL	N	0	7.5YR3/4	N	FR	SST	4	N	N	-
HMUK_039	1	Ap	0	30	SL	N	0	10YR3/4	N	VFR	NST	5	N	Y	-
HMUK_039	2	A	30	70	SCL	N	0	10YR3/3	N	FR	NST	4	N	Y	-
HMUK_039	3	B	70	100	SCL	N	0	7.5YR3/4	N	FR	SST	4	N	N	-
HMUK_040	1	Ap	0	20		N	0	10YR3/3	N	VFR	SST	4	N	Y	-
HMUK_040	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUK_041	1	Ap	0	30	SCL	N	0	10YR3/4	N	VFR	NST	5	N	Y	-
HMUK_041	2	A	30	70	SCL	N	0	10YR3/3	N	VFR	NST	4	N	Y	-
HMUK_041	3	B	70	100	SCL	N	0	7.5YR3/4	N	VFR	SST	4	N	N	-
HMUK_042	1	Ap	0	20		N	0	10YR3/3	N	VFR	SST	4	N	Y	-
HMUK_043	1	Ap	0	30	SCL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_043	2	A	30	70	SL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_043	3	B	70	100	SCL	N	0	5YR3/4	N	VFR	SST	5	N	N	-
HMUK_044	1	Ap	0	30	SL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_044	2	A	30	70	SCL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_044	3	B	70	100	SCL	N	0	5YR3/4	N	VFR	SST	5	N	N	-
HMUK_045	1	Ap	0	30	SL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_045	2	A	30	70	SCL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_045	3	B	70	100	SCL	N	0	5YR3/4	N	VFR	SST	5	N	N	-
HMUK_046	1	Ap	0	30	SL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_046	2	A	30	70	SCL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_046	3	B	70	100	SCL	N	0	5YR3/4	N	VFR	SST	5	N	N	-
HMUK_047	1	Ap	0	30	SL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_047	2	A	30	70	SCL	N	0	7.5YR3/4	N	VFR	NST	5	N	Y	-
HMUK_047	3	B	70	100	SCL	N	0	5YR3/4	N	VFR	SST	5	N	Y	-
HMUM_001	1	Ap	0	10	SL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUM_001	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUM_002	1	Ap	0	30	SCL	A	60	10YR3/3	N	FR	NST	4	N	Y	-
HMUM_002	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUM_003	1	Ap	0	15	CL	A	60	10YR3/3	N	VFR	SST	4	N	Y	-
HMUM_003	2	B	15	35	CL	C	10	7.5YR3/3	N	FR	SST	4	N	Y	Vertic
HMUM_003	3	BC	35	100	SCL	D	90	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUM_004	1	Ap	0	15	CL	A	60	10YR3/3	N	VFR	SST	4	N	Y	-
HMUM_004	2	B	15	35	CL	C	10	7.5YR3/3	N	FR	SST	4	N	Y	Vertic
HMUM_004	3	BC	35	100	SCL	D	90	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUM_005	1	Ap	0	9	SL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUM_005	2	R	9	14	-	D	95	-	-	-	-	-	-	N	-
HMUM_006	1	Ap	0	30	SCL	A	60	10YR3/3	N	FR	NST	4	N	Y	-
HMUM_006	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUM_007	1	Ap	0	15	CL	A	60	10YR3/3	N	VFR	SST	4	N	Y	-
HMUM_007	2	B	15	35	CL	C	10	7.5YR3/3	N	FR	SST	4	N	Y	Vertic
HMUM_007	3	BC	35	100	SCL	D	90	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUM_008	1	Ap	0	20	SL	F	3	5YR3/3	N	VFR	NST	5	N	Y	-
HMUM_008	2	A	20	60	SL	F	3	5YR3/4	N	VFR	NST	5	N	Y	-
HMUM_008	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HMUM_009	1	Ap	0	10	SL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUM_009	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_010	1	Ap	0	10	SL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUM_010	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_011	1	Ap	0	10	SCL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUM_011	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_012	1	Ap	0	20	SL	N	0	7.5YR3/2	N	VFR	NST	5	N	Y	-
HMUM_012	2	1A	20	60	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	-
HMUM_012	3	2A	60	100	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	N	-
HMUM_013	1	Ap	0	10	SCL	D	90	7.5YR3/4	N	LO	NST	5	N	Y	-
HMUM_013	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_014	1	Ap	0	30	SCL	A	60	7.5YR3/2	N	VFR	NST	5	N	Y	-
HMUM_014	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUM_015	1	Ap	0	20	SL	N	0	7.5YR3/2	N	VFR	SST	4	N	Y	Fluvic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUM_015	2	1A	20	50	CL	N	0	7.5YR4/2	N	VFR	SST	4	N	Y	Fluvic
HMUM_015	3	2A	50	70	LS	N	0	7.5YR2.5/2	V	VFR	SST	4	N	N	Fluvic
HMUM_015	4	3A	70	100	S	N	0	7.5YR3/3	N	LO	NST	5	N	N	Fluvic
HMUM_016	1	Ap	0	30	SL	N	0	7.5YR3/4	N	LO	NST	4	N	N	-
HMUM_016	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUM_017	1	Ap	0	10	SCL	D	90	7.5YR3/4	N	LO	NST	4	N	Y	-
HMUM_017	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_018	1	Ap	0	20	SL	N	0	7.5YR3/2	N	VFR	SST	4	N	Y	Fluvic
HMUM_018	2	1A	20	40	CL	N	0	7.5YR4/2	N	VFR	SST	4	N	Y	Fluvic
HMUM_018	3	2A	40	75	LS	N	0	7.5YR3/3	V	VFR	SST	4	N	N	Fluvic
HMUM_018	4	3A	75	100	S	N	0	7.5YR3/2	N	LO	NST	5	N	N	Fluvic
HMUM_019	1	Ap	0	20	C	M.	M.	10YR3/3	N	FR	ST	4	N	Y	-
HMUM_019	2	A1	20	50	C	F	3	10YR3/2	N	FR	ST	4	N	Y	-
HMUM_019	3	A2	50	85	C	F	3	10YR3/1	N	FR	ST	4	N	N	-
HMUM_019	4	R	85	90	-	D	95	-	-	-	-	-	-	N	-
HMUM_020	1	Ap	0	20	CL	N	0	7.5YR3/1	N	FR	SST	4	N	Y	Mollic
HMUM_020	2	Bt	20	65	C	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Argic
HMUM_020	3	R	65	70	-	D	95	-	-	-	-	-	-	N	-
HMUM_021	1	Ap	0	10	CL	A	60	7.5YR3/4	N	VFR	SST	4	N	Y	-
HMUM_021	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_022	1	Ap	0	25	CL	N	0	7.5YR3/1	N	FR	SST	4	N	Y	Mollic
HMUM_022	2	Bt	25	75	C	N	0	7.5YR3/2	N	FR	ST	4	N	Y	Argic
HMUM_022	3	R	75	80	-	D	95	-	-	-	-	-	-	N	-
HMUM_023	1	Ap	0	10	CL	N	0	10YR3/2	N	FR	SST	4	N	Y	-
HMUM_023	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_024	1	Ap	0	20		F	3	10YR2/2	F	FR	ST	4	N	Y	Mollic
HMUM_024	2	A1	20	70		N	0	10YR2/1	N	FR	ST	4	N	Y	Vertic
HMUM_024	3	A2	70	90		N	0	10YR3/2	N	FR	ST	4	N	Y	Vertic
HMUM_024	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
HMUM_025	1	Ap	0	20	C	F	3	10YR2/1	N	FR	ST	4	N	Y	Vertic
HMUM_025	2	A1	20	40	C	F	3	10YR2/2	N	FR	ST	4	N	Y	Vertic
HMUM_025	3	A2	40	80	C	N	0	10YR3/3	N	FR	ST	4	N	Y	Vertic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUM_025	4	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUM_026	1	Ap	0	10	CL	M	27	7.5YR3/2	N	VFR	SST	4	N	Y	-
HMUM_026	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_027	1	Ap	0	20	CL	F	3	10YR3/2	N	FR	SST	4	N	Y	-
HMUM_027	2	B	20	55	C	F	3	10YR2/2	N	FR	ST	4	N	Y	Cambic
HMUM_027	3	R	55	60	-	D	95	-	-	-	-	-	-	N	-
HMUM_028	1	Ap	0	30	CL	M	27	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUM_028	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUM_029	1	Ap	0	30	CL	M	27	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUM_029	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
HMUM_030	1	Ap	0	20	C	F	3	10YR2/1	N	FR	ST	4	N	Y	Vertic
HMUM_030	2	A1	20	40	C	F	3	10YR2/2	N	FR	ST	4	N	Y	Vertic
HMUM_030	3	A2	40	80	C	N	0	10YR3/3	N	FR	ST	4	N	Y	Vertic
HMUM_030	4	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUM_031	1	Ap	0	10	CL	M	27	7.5YR3/4	N	FR	SST	4	N	Y	-
HMUM_031	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_032	1	Ap	0	20	C	F	3	10YR2/1	N	FR	ST	4	N	Y	Vertic
HMUM_032	2	A1	20	40	C	F	3	10YR2/2	N	FR	ST	4	N	Y	Vertic
HMUM_032	3	A2	40	80	C	N	0	10YR3/3	N	FR	ST	4	N	Y	Vertic
HMUM_032	4	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HMUM_033	1	Ap	0	10	CL	-	-	7.5YR3/2	N	FR	SST	4	N	Y	-
HMUM_033	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_034	1	Ap	0	20	CL	F	3	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
HMUM_034	2	B	20	70	C	F	3	10YR3/2	N	FR	ST	4	N	Y	Cambic
HMUM_034	3	BC	70	100	CL	C	10	10YR3/3	N	FR	ST	4	N	Y	-
HMUM_035	1	Ap	0	20	CL	F	3	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
HMUM_035	2	B	20	70	C	F	3	10YR3/2	N	FR	ST	4	N	Y	Cambic
HMUM_035	3	BC	70	100	CL	C	10	10YR3/3	N	FR	ST	4	N	Y	-
HMUM_036	1	Ap	0	20	CL	F	3	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
HMUM_036	2	B	20	80	C	F	3	10YR3/2	N	FR	ST	4	N	Y	Cambic
HMUM_036	3	BC	80	100	CL	C	10	10YR3/3	N	FR	ST	4	N	N	-
HMUM_037	1	Ap	0	25	CL	F	3	7.5YR3/3	N	FR	ST	4	N	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HMUM_037	2	B	25	80	C	F	3	10YR3/2	N	FR	ST	4	N	Y	Cambic
HMUM_037	3	BC	80	100	CL	C	10	10YR3/3	N	FR	ST	4	N	N	-
HMUM_038	1	Ap	0	10	SCL	D	90	7.5YR3/4	N	VFR	SST	5	N	Y	-
HMUM_038	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HMUM_039	1	Ap	0	20	CL	M	27	10YR3/3	N	FR	SST	4	N	Y	Mollic
HMUM_039	2	B	20	50	C	C	10	10YR2/2	N	FR	ST	4	N	Y	Cambic
HMUM_039	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUM_040	1	Ap	0	25	CL	M	27	10YR3/2	N	FR	SST	4	N	Y	Mollic
HMUM_040	2	B	25	50	C	C	10	10YR2/2	N	FR	ST	4	N	Y	Cambic
HMUM_040	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HMUM_041	1	Ap	0	20	CL	C	10	10YR3/2	N	FR	ST	4	N	Y	-
HMUM_041	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HMUM_042	1	Ap	0	25	CL	C	10	10YR2/2	N	FR	SST	4	N	Y	-
HMUM_042	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HWUBU_001	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_001	2	A	20	60	L	N	0	7.5YR3/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_001	3	Bt	60	90	C	N	0	7.5YR2.5/1.5	N	FR	ST	4	N	Y	Argic
HWUBU_001	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
HWUBU_002	1	Ap	0	20	CL	N	0	7.5YR2.5/1.5	N	VFR	SST	4	N	Y	Umbric
HWUBU_002	2	A	20	70	SiL	N	0	7.5YR3/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_002	3	Bt	70	80	C	N	0	7.5YR2.5/2	N	FR	ST	4	N	Y	Argic
HWUBU_002	4	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HWUBU_003	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_003	2	A	20	60	L	N	0	7.5YR3/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_003	3	Bt	60	90	C	N	0	7.5YR2.5/1.5	N	FR	ST	4	N	Y	Argic
HWUBU_003	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
HWUBU_004	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Umbric
HWUBU_004	2	Bt1	20	70	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
HWUBU_004	3	Bt2	70	100	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Argic
HWUBU_005	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Argic
HWUBU_005	2	B	20	70	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
HWUBU_005	3	Bt	70	100	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUBU_006	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Argic
HWUBU_006	2	B	20	60	C	N	0	7.5YR2.5/3	N	FR	ST	4	N	Y	Argic
HWUBU_006	3	Bt	60	100	C	N	0	2.5YR3/3	N	FR	ST	4	N	Y	Argic
HWUBU_007	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Umbric
HWUBU_007	2	A	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Umbric
HWUBU_007	3	Bt	60	100	C	N	0	2.5YR3/4	N	FR	ST	4	N	Y	Argic
HWUBU_008	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	N	Y	Umbric
HWUBU_008	2	A	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Umbric
HWUBU_008	3	Bt	60	100	C	N	0	2.5YR3/4	N	FR	ST	4	N	Y	Argic
HWUBU_009	1	Ap	0	20	CL	N	0	7.5YR2.5/1	N	FR	SST	4	N	Y	Umbric
HWUBU_009	2	A	20	65	C	N	0	7.5YR3/3	N	FR	SST	4	N	Y	Umbric
HWUBU_009	3	Bt	65	100	C	N	0	5YR3/3	N	FR	ST	4	N	Y	Argic
HWUBU_010	1	Ap	0	25	CL	F	3	7.5YR3/3	N	VFR	SST	4	N	N	Umbric
HWUBU_010	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HWUBU_011	1	A	0	20	CL	N	0	7.5YR2.5/1	N	FR	SST	4	N	Y	Umbric
HWUBU_011	2	Bt	20	65	C	N	0	7.5YR3/3	N	FR	SST	4	N	Y	Argic
HWUBU_011	3	-	65	100	-	-	-	-	-	-	-	-	-	-	-
HWUBU_012	1	Ap	0	20	CL	F	3	7.5YR3/2	N	VFR	SST	4	N	N	Umbric
HWUBU_012	2	A	20	60	CL	N	0	7.5YR3/3	N	FR	SST	4	N	Y	Umbric
HWUBU_012	3	Bt	60	100	C	N	0	7.5YR3/4	N	FR	SST	4	N	Y	Argic
HWUBU_013	1	Ap	0	20	CL	F	3	7.5YR3/2	N	VFR	SST	4	N	N	Umbric
HWUBU_013	2	A	20	65	CL	N	0	7.5YR3/3	N	FR	SST	4	N	Y	Umbric
HWUBU_013	3	Bt	65	100	C	N	0	5YR3/3	N	FR	SST	4	N	Y	Argic
HWUBU_014	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	SST	4	N	Y	Argic
HWUBU_014	2	A	20	65	C	N	0	7.5YR3/3	N	FR	SST	4	N	Y	Umbric
HWUBU_014	3	Bt	65	100	C	N	0	5YR3/3	N	FR	ST	4	N	Y	Umbric
HWUBU_015	1	Ap	0	20	CL	N	0	5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_015	2	A	20	80	SiCL	N	0	7.5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_015	3	Bt	80	100	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Argic
HWUBU_016	1	Ap	0	20	CL	N	0	5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_016	2	A	20	70	SiCL	N	0	7.5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_016	3	Bt	70	90	C	N	0	5YR3/2	N	FR	ST	4	N	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUBU_016	4	R	90	95	-	D	95	-	-	-	-	-	-	N	-
HWUBU_017	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	VFR	SST	4	N	Y	Umbric
HWUBU_017	2	Bt	20	60	C	N	0	5YR3/2	N	VFR	SST	4	N	Y	Argic
HWUBU_017	3	R	60	65	-	D	95	-	-	-	-	-	-	N	-
HWUBU_018	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	SST	4	-	Y	Umbric
HWUBU_018	2	A	30	70	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_018	3	Bt	70	100	C	N	0	2.5YR2.5/3	N	FR	ST	4	-	Y	Argic
HWUBU_019	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	SST	4	-	Y	Umbric
HWUBU_019	2	A	30	70	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_019	3	Bt	70	100	C	N	0	2.5YR2.5/3	N	FR	ST	4	-	Y	Argic
HWUBU_020	1	Ap	0	20	CL	N	0	5YR3/4	N	VFR	SST	4	-	Y	Umbric
HWUBU_020	2	A	20	50	CL	N	0	5YR3/3	N	VFR	SST	4	-	Y	Fluvic
HWUBU_020	3	Bt1	50	80	C	N	0	5YR3/3	F	FR	ST	3	-	Y	Argic
HWUBU_020	4	Bt2	80	100	C	N	0	5YR3/2	F	FR	ST	3	-	N	Argic
HWUBU_021	1	A	0	30	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_021	2	B	30	70	C	N	0	5YR2.5/2	N	FR	ST	4	-	Y	-
HWUBU_021	3	Bt	70	100	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUBU_022	1	A	0	30	CL	N	0	7.5YR2.5/3	N	FR	ST	4	-	Y	Umbric
HWUBU_022	2	B	30	70	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	-
HWUBU_022	3	Bt	70	100	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUBU_023	1	A	0	30	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_023	2	B	30	70	C	N	0	5YR2.5/2	N	FR	ST	4	-	Y	-
HWUBU_023	3	Bt	70	100	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUBU_024	1	Ap	0	20	CL	N	0	10YR3/6	N	FR	ST	4	-	Y	Umbric
HWUBU_024	2	AB	20	70	CL	N	0	10YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_024	3	Bt	70	100	C	N	0	7.5YR4/4	N	FR	ST	3	-	Y	Argic
HWUBU_025	1	A	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_025	2	B	20	80	C	N	0	5YR3/3	N	FR	ST	4	-	Y	-
HWUBU_025	3	Bt	80	100	C	N	0	7.5YR4/4	N	FR	VST	3	-	Y	Argic
HWUBU_026	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	-
HWUBU_026	2	Bt	20	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUBU_026	3	BC	70	100	SC	A	60	5YR4/2	N	VFR	ST	4	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUBU_027	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_027	2	A	20	70	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_027	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_028	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_028	2	A	20	70	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_028	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_029	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_029	2	A	20	70	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_029	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_030	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_030	2	A	20	70	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_030	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_031	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_031	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_031	3	Bt	50	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_032	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_032	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_032	3	Bt	50	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_033	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_033	2	AB	20	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	-
HWUBU_033	3	Bt1	60	100	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_033	4	Bt2	100	150	C	N	0	5YR3/4	N	FR	ST	4	-	N	Argic
HWUBU_034	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_034	2	A	20	50	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_034	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUBU_035	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_035	2	A	20	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_035	3	B	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUBU_036	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_036	2	AB	20	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	-
HWUBU_036	3	Bt1	60	100	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_036	4	Bt2	100	150	C	N	0	5YR3/4	N	FR	ST	4	-	N	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUBU_037	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_037	2	AB	20	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	-
HWUBU_037	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_038	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_038	2	A	20	60	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_038	3	Bt	60	100	C	N	0	2.5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_039	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_039	2	A	20	60	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_039	3	Bt	60	100	C	N	0	2.5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_040	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_040	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_040	3	Bt	50	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_041	1	Ap	0	30	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_041	2	A	30	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_041	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_042	1	Ap	0	30	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_042	2	A	30	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUBU_042	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_043	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_043	2	Bt	20	80	C	N	0	5YR3/4	N	FR	ST	4	-	Y	Argic
HWUBU_043	3	R	80	85	-	D	95	-	-	-	-	-	-	N	-
HWUBU_044	1	Ap	0	30	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_044	2	A	30	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_044	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_045	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUBU_045	2	A	20	60	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_045	3	B	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUBU_046	1	Ap	0	20	CL	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Umbric
HWUBU_046	2	Bt1	20	80	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUBU_046	3	Bt2	80	100	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
HWUBU_047	1	Ap	0	20	CL	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Umbric
HWUBU_047	2	Bt1	20	80	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUBU_047	3	Bt2	80	100	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
HWUBU_048	1	Ap	0	10	CL	N	0	7.5YR3/2	N	VFR	NST	4	-	Y	-
HWUBU_048	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUBU_049	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_049	2	Bt1	20	70	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_049	3	Bt2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUBU_050	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_050	2	Bt1	20	80	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUBU_050	3	Bt2	80	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUBU_051	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_051	2	Bt1	20	80	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUBU_051	3	Bt2	80	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUBU_052	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_052	2	Bt1	20	80	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUBU_052	3	BC	80	100	C	N	0	7.5YR4/4	N	FR	ST	3	-	Y	-
HWUBU_053	1	Ap	0	20	CL	N	0	5YR3/1	N	FR	ST	4	-	Y	Umbric
HWUBU_053	2	AB	20	50	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_053	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUBU_054	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_054	2	Bt1	20	50	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_054	3	Bt2	50	100	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
HWUBU_055	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUBU_055	2	Bt1	20	50	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Argic
HWUBU_055	3	Bt2	50	100	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
HWUBU_056	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUBU_056	2	B	20	80	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUBU_056	3	B	80	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUBU_057	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUBU_057	2	Bt	20	60	C	N	0	5YR3/4	N	FR	ST	4	-	Y	Argic
HWUBU_057	3	BC	60	100	C	N	0	5YR4/6	N	FR	ST	4	-	Y	-
HWUBU_058	1	Ap	0	20	CL	N	0	7.5YR4/4	N	FR	ST	4	-	Y	Umbric
HWUBU_058	2	Bt	20	45	C	N	0	5YR4/6	N	FR	ST	4	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUBU_058	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
HWUBU_059	1	Ap	0	20	CL	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Umbric
HWUBU_059	2	AB	20	60	C	N	0	2.5YR3/3	N	FR	ST	4	-	Y	Nitic
HWUBU_059	3	Bt	60	100	C	N	0	2.5YR3/2	N	FR	ST	4	-	Y	Nitic
HWUCH_001	1	Ap	0	20	C	N	0	7.5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUCH_001	2	B	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	-
HWUCH_001	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUCH_002	1	Ap	0	20	C	N	0	7.5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUCH_002	2	B	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	-
HWUCH_002	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUCH_003	1	Ap	0	20	C	N	0	7.5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUCH_003	2	B	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	-
HWUCH_003	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUCH_004	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUCH_004	2	A	20	55	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUCH_004	3	B	55	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Nitic
HWUCH_005	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUCH_005	2	A	20	55	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUCH_005	3	B	55	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Nitic
HWUCH_006	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUCH_006	2	B	20	70	C	N	0	5YR3/1	N	FR	ST	4	-	Y	-
HWUCH_006	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUCH_007	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUCH_007	2	B	20	70	C	N	0	5YR3/1	N	FR	ST	4	-	Y	-
HWUCH_007	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUCH_008	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUCH_008	2	B	20	70	C	N	0	5YR3/1	N	FR	ST	4	-	Y	-
HWUCH_008	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUCH_009	1	Ap	0	15	CL	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUCH_009	2	A	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUCH_009	3	B	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_010	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUCH_010	2	A	20	40	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUCH_010	3	B	40	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUCH_011	1	Ap	0	20	CL	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Mollic
HWUCH_011	2	A	20	65	C	N	0	2.5YR2.5/3	N	FR	ST	3	-	Y	-
HWUCH_011	3	B	65	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUCH_012	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUCH_012	2	B	20	70	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	-
HWUCH_012	3	Bt	70	100	C	N	0	2.5YR2.5/3	N	FR	ST	3	-	Y	Argic
HWUCH_013	1	Ap	0	20	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUCH_013	2	A	20	60	C	N	0	2.5YR2.5/4	N	FR	ST	3	-	Y	-
HWUCH_013	3	B	60	100	C	N	0	2.5YR3/6	N	FR	ST	3	-	Y	Nitic
HWUCH_014	1	Ap	0	30	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUCH_014	2	A	30	70	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
HWUCH_014	3	B	70	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_015	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUCH_015	2	A	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUCH_015	3	B	60	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_016	1	Ap	0	15	C	N	0	2.5YR2.5/1	N	FR	ST	3	-	Y	Mollic
HWUCH_016	2	A	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Mollic
HWUCH_016	3	B	70	100	C	N	0	10R3/1	N	FR	ST	3	-	Y	Nitic
HWUCH_017	1	Ap	0	15	C	N	0	2.5YR2.5/1	N	FR	ST	3	-	Y	Mollic
HWUCH_017	2	A	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Mollic
HWUCH_017	3	B2	70	100	C	N	0	10R3/1	N	FR	ST	3	-	Y	Nitic
HWUCH_018	1	A	0	20	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUCH_018	2	B1	20	60	C	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Mollic
HWUCH_018	3	B2	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Nitic
HWUCH_019	1	Ap	0	15	C	N	0	2.5YR2.5/1	N	FR	ST	3	-	Y	Mollic
HWUCH_019	2	A	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Mollic
HWUCH_019	3	B	70	100	C	N	0	10R3/1	N	FR	ST	3	-	Y	Nitic
HWUCH_020	1	Ap	0	20	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUCH_020	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_020	3	B2	60	100	C	N	0	10R3/1	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUCH_021	1	Ap	0	15	C	N	0	2.5YR2.5/1	N	FR	ST	3	-	Y	Mollic
HWUCH_021	2	A	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Mollic
HWUCH_021	3	B2	70	100	C	N	0	10R3/1	N	FR	ST	3	-	Y	Nitic
HWUCH_022	1	Ap	0	10	CL	D	90	10YR3/3	N	FR	SST	4	-	Y	-
HWUCH_022	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUCH_023	1	Ap	0	20	C	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic
HWUCH_023	2	A	20	75	C	N	0	10YR3/2	N	FR	ST	3	-	Y	Vertic
HWUCH_024	1	Ap	0	25	C	N	0	10YR2/1	N	FR	ST	3	-	Y	Mollic
HWUCH_024	2	A1	25	75	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
HWUCH_024	3	A2	75	100	C	N	0	10YR3/2	N	FR	VST	2	-	Y	Vertic
HWUCH_025	1	Ap	0	25	C	N	0	10YR2/1	N	FR	ST	3	-	Y	Mollic
HWUCH_025	2	A1	25	75	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
HWUCH_025	3	A2	75	100	C	N	0	10YR3/2	N	FR	VST	2	-	Y	Vertic
HWUCH_026	1	Ap	0	25	C	N	0	10YR2/1	N	FR	ST	3	-	Y	Mollic
HWUCH_026	2	A1	25	75	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
HWUCH_026	3	A2	75	100	C	N	0	10YR3/2	N	FR	VST	2	-	Y	Vertic
HWUCH_027	1	Ep	0	25	SiC	N	0	10YR2/1	N	FR	ST	3	-	Y	Albic
HWUCH_027	2	A1	25	75	C	N	0	10YR2/2	N	FR	VST	2	-	Y	Vertic
HWUCH_027	3	A2	75	100	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
HWUCH_028	1	Ap	0	20	C	C	10	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUCH_028	2	Bt	20	60	C	F	3	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUCH_029	1	Ep	0	30	C	N	0	710YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUCH_029	2	A	30	80	C	N	0	10YR2/2	N	FR	ST	3	-	Y	Vertic
HWUCH_030	1	Ap	0	20	C	N	0	10YR2/2	N	FR	ST	3	-	Y	Mollic
HWUCH_030	2	A1	20	50	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
HWUCH_030	3	A2	50	100	C	N	0	10YR4/1	N	FR	VST	2	-	Y	Vertic
HWUCH_031	1	Ap	0	20	C	N	0	10YR2/2	N	FR	ST	3	-	Y	Mollic
HWUCH_031	2	A1	20	50	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
HWUCH_031	3	A2	50	100	C	N	0	10YR4/1	N	FR	VST	2	-	Y	Vertic
HWUCH_032	1	Ep	0	20	C	N	0	10YR3/1	N	FR	ST	3	-	Y	Albic
HWUCH_032	2	A	20	60	C	N	0	10YR3/2	N	FR	VST	2	-	Y	Vertic
HWUCH_032	3	AC	60	100	C	N	0	10YR5/4	N	FR	ST	2	-	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUCH_033	1	Ep	0	20	C	N	0	10YR3/1	N	FR	ST	3	-	Y	Albic
HWUCH_033	2	A1	20	60	C	N	0	10YR2/2	N	FR	VST	2	-	Y	Vertic
HWUCH_033	3	A2	60	80	C	N	0	10YR2/1	N	FR	VST	2	-	Y	-
HWUCH_034	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
HWUCH_034	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_034	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_035	1	Ep	0	20	C	N	0	10YR3/1	N	FR	ST	3	-	Y	Albic
HWUCH_035	2	A1	20	60	C	N	0	10YR2/2	N	FR	VST	2	-	Y	Vertic
HWUCH_035	3	A2	60	100	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Mollic
HWUCH_036	1	Ap	0	25	C	N	0	10YR3/1	N	FR	ST	3	-	Y	Vertic
HWUCH_036	2	A1	25	75	C	N	0	10YR2/2	N	FR	VST	2	-	Y	Vertic
HWUCH_036	3	A2	75	100	C	N	0	10YR2/1	N	FR	VST	2	-	Y	-
HWUCH_037	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUCH_037	2	B	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUCH_037	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUCH_038	1	Ep	0	30	C	N	0	710YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUCH_038	2	A	30	80	C	N	0	10YR2/2	N	FR	ST	3	-	Y	Vertic
HWUCH_039	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUCH_039	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_039	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_040	1	Ep	0	20	C	N	0	10YR3/3	N	FR	ST	3	-	Y	Albic
HWUCH_040	2	A1	20	55	C	N	0	10YR3/1	N	FR	VST	2	-	Y	Vertic
HWUCH_040	3	A2	55	100	C	N	0	10YR3/2	N	FR	VST	2	-	Y	Mollic
HWUCH_041	1	Ep	0	20	C	N	0	10YR3/3	N	FR	ST	3	-	Y	Albic
HWUCH_041	2	A1	20	55	C	N	0	10YR3/1	N	FR	VST	2	-	Y	Vertic
HWUCH_041	3	A2	55	100	C	N	0	10YR3/2	N	FR	VST	2	-	Y	Mollic
HWUCH_042	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUCH_042	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUCH_042	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUEN_001	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUEN_001	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUEN_001	3	B2	60	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm		Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUEN_002	1	Ap	0	20	C	N		0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUEN_002	2	B1	20	60	C	N		0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUEN_002	3	B2	60	100	C	N		0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUEN_003	1	Ap	0	20	C	N		0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUEN_003	2	B1	20	70	C	N		0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUEN_003	3	B2	70	100	C	N		0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUEN_004	1	Ap	0	20	C	N		0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUEN_004	2	B1	20	60	C	N		0	2.5YR2.5/4	N	FR	ST	3	-	Y	Nitic
HWUEN_004	3	B2	60	100	C	N		0	2.5YR2.5/3	N	FR	ST	3	-	Y	Nitic
HWUEN_005	1	Ap	0	20	C	N		0	5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUEN_005	2	B1	20	60	C	N		0	2.5YR2.5/4	N	FR	ST	3	-	Y	Nitic
HWUEN_005	3	B2	60	100	C	N		0	2.5YR2.5/3	N	FR	ST	3	-	Y	Nitic
HWUEN_006	1	Ap	0	20	C	N		0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUEN_006	2	B1	20	60	C	N		0	5YR3/2	N	FR	ST	3	-	Y	-
HWUEN_006	3	B2	60	100	C	N		0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUEN_007	1	Ap	0	20	C	N		0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUEN_007	2	B1	20	60	C	N		0	5YR3/2	N	FR	ST	3	-	Y	-
HWUEN_007	3	B2	60	100	C	N		0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUEN_008	1	Ap	0	25	C	N		0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUEN_008	2	B1	25	70	C	N		0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUEN_008	3	B2	70	100	C	N		0	2.5YR3/4	N	FR	ST	3	-	Y	Nitic
HWUEN_009	1	Ap	0	20	C	N		0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUEN_009	2	B	20	60	C	N		0	5YR3/2	N	FR	ST	3	-	Y	-
HWUEN_009	3	Bt	60	100	C	N		0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUEN_010	1	Ap	0	20	C	N		0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUEN_010	2	B	20	60	C	N		0	5YR3/3	N	FR	ST	3	-	Y	-
HWUEN_010	3	Bt	60	100	C	N		0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUEN_011	1	Ap	0	20	C	N		0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUEN_011	2	B1	20	60	C	N		0	5YR3/3	N	FR	ST	3	-	Y	nitic
HWUEN_011	3	B2	60	100	C	N		0	2.5YR3/2	N	FR	ST	3	-	Y	nitic
HWUEN_012	1	Ap	0	20	C	N		0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUEN_012	2	B1	20	60	C	N		0	5YR3/3	N	FR	ST	3	-	Y	nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUEN_012	3	B2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	nitic
HWUEN_013	1	Ap	0	10	C	A	60	5YR3/2	N	FR	ST	4	-	Y	-
HWUEN_013	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUEN_014	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUEN_014	2	B1	20	60	C	N	0	5YR3/3	N	FR	ST	3	-	Y	nitic
HWUEN_014	3	B2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	nitic
HWUEN_015	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUEN_015	2	B1	20	60	C	N	0	5YR3/3	N	FR	ST	3	-	Y	nitic
HWUEN_015	3	B2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	nitic
HWUEN_016	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
HWUEN_016	2	B1	20	60	C	N	0	5YR3/3	N	FR	ST	3	-	Y	nitic
HWUEN_016	3	B2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	nitic
HWUEN_017	1	Ep	0	20	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_017	2	A1	20	60	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_017	3	A2	60	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_018	1	Ap	0	30	SIC	N	0	10YR3/1	N	FR	ST	3	-	Y	-
HWUEN_018	2	A	30	80	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_019	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUEN_019	2	B	20	60	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUEN_019	3	Bt	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUEN_020	1	Ep	0	15	C	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_020	2	A1	15	60	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_020	3	A2	60	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_021	1	Ep	0	15	Sic	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_021	2	A1	15	60	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_021	3	A2	60	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_022	1	Ap	0	10	CL	D	90	10YR3/3	N	FR	SST	4	-	Y	-
HWUEN_022	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUEN_023	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_023	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_023	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_024	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUEN_024	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_024	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_025	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_025	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_025	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_026	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_026	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_026	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_027	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_027	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_027	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_028	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_028	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_028	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_029	1	Ep	0	30	SiC	N	0	10YR3/1	N	FR	ST	4	-	Y	Mollic-Albic
HWUEN_029	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_029	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_030	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_030	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_030	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_031	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_031	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_031	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_032	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_032	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_032	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_033	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_033	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_033	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_034	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_034	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_034	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUEN_035	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUEN_035	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	NItic
HWUEN_035	3	B2	60	100	C	N	0	2.5YR2.54	N	FR	ST	3	-	Y	Nitic
HWUEN_036	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUEN_036	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	NItic
HWUEN_036	3	B2	60	100	C	N	0	2.5YR2.54	N	FR	ST	3	-	Y	Nitic
HWUEN_037	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUEN_037	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	NItic
HWUEN_037	3	B2	60	100	C	N	0	2.5YR2.54	N	FR	ST	3	-	Y	Nitic
HWUEN_038	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUEN_038	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	NItic
HWUEN_038	3	B2	60	100	C	N	0	2.5YR2.54	N	FR	ST	3	-	Y	Nitic
HWUEN_039	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUEN_039	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	NItic
HWUEN_039	3	B2	60	100	C	N	0	2.5YR2.54	N	FR	ST	3	-	Y	Nitic
HWUEN_040	1	Ap	0	20	CL	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Mollic
HWUEN_040	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	NItic
HWUEN_040	3	B2	60	100	C	N	0	2.5YR2.54	N	FR	ST	3	-	Y	Nitic
HWUEN_041	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_041	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_041	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUEN_042	1	Ep	0	30	SiC	N	0	10YR3/2	N	FR	ST	3	-	Y	Mollic-Albic
HWUEN_042	2	A1	30	70	C	N	0	10YR2/1	N	FR	ST	2	-	Y	Vertic
HWUEN_042	3	A2	70	100	C	N	0	10YR3/1	N	FR	ST	2	-	Y	Vertic
HWUMA_001	1	Ap	0	20	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	-
HWUMA_001	2	AC	20	40	C	C	10	7.5YR3/3	N	FR	SST	4	-	Y	-
HWUMA_001	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HWUMA_002	1	Ap	0	25	CL	C	10	7.5YR3/2	N	FR	SST	4	-	Y	-
HWUMA_002	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HWUMA_003	1	Ap	0	25	CL	C	10	7.5YR3/2	N	FR	SST	4	-	Y	-
HWUMA_003	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HWUMA_004	1	Ap	0	25	CL	C	10	7.5YR3/2	N	FR	SST	4	-	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMA_004	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
HWUMA_005	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
HWUMA_005	2	Bt	20	50	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_005	3	R	50	55	-	D	95	-	-	-	-	-	-	N	-
HWUMA_006	1	Ap	0	10	SCL	A	60	7.5YR3/2	N	VFR	NST	4	-	Y	-
HWUMA_006	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUMA_007	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMA_007	2	B	20	90	C	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Nitic
HWUMA_008	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMA_008	2	B	20	90	C	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Nitic
HWUMA_009	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_009	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HWUMA_010	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMA_010	2	B	20	90	C	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Nitic
HWUMA_011	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_011	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
HWUMA_012	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_012	2	AB	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_012	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_013	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_013	2	AB	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_013	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_014	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMA_014	2	B	20	90	C	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Nitic
HWUMA_015	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_015	2	AB	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_015	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_016	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_016	2	AB	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_016	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_017	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMA_017	2	B	25	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMA_017	3	B	70	100	C	N	0	2.5YR2.5/4	N	FR	ST	3	-	Y	Nitic
HWUMA_018	1	Ap	0	10	CL	A	60	7.5YR3/2	N	FR	SST	4	-	Y	-
HWUMA_018	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUMA_019	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMA_019	2	B	25	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMA_019	3	B	70	100	C	N	0	2.5YR2.5/4	N	FR	ST	3	-	Y	Nitic
HWUMA_020	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	SST	4	-	Y	-
HWUMA_020	2	AC	20	40	SiCL	N	0	7.53/3	C	FR	SST	4	-	Y	-
HWUMA_020	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HWUMA_021	1	Ap	0	25	CL	N	0	7.5YR3/4	N	FR	SST	4	-	Y	Mollic
HWUMA_021	2	E	25	60	SiCL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Albic
HWUMA_021	3	B	60	100	SiC	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Argic
HWUMA_022	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMA_022	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	-
HWUMA_022	3	Bt	60	100	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Argic
HWUMA_023	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMA_023	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	-
HWUMA_023	3	Bt	60	100	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Argic
HWUMA_024	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	SST	4	-	Y	-
HWUMA_024	2	AC	20	40	SiCL	N	0	7.5YR3/3	C	FR	SST	4	-	Y	-
HWUMA_024	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
HWUMA_025	1	Ap	0	25	SiCL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Mollic
HWUMA_025	2	B1	25	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Nitic
HWUMA_025	3	B2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_026	1	Ap	0	25	SiCL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Mollic
HWUMA_026	2	B1	25	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Nitic
HWUMA_026	3	B2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_027	1	Ap	0	25	C	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Mollic
HWUMA_027	2	B1	25	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Nitic
HWUMA_027	3	B2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_028	1	Ap	0	10	CL	A	60	7.5YR3/2	N	FR	SST	4	-	Y	-
HWUMA_028	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMA_029	1	Ap	0	25	C	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Mollic
HWUMA_029	2	B1	25	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Nitic
HWUMA_029	3	B2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_030	1	Ap	0	25	C	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Mollic
HWUMA_030	2	B1	25	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Nitic
HWUMA_030	3	B2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_031	1	Ap	0	20	C	N	0	5YR3/3	N	FR	SST	4	-	Y	Mollic
HWUMA_031	2	B1	20	60	C	N	0	5YR2.5/3	N	FR	ST	4	-	Y	Nitic
HWUMA_031	3	B2	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Nitic
HWUMA_032	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_032	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_032	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_033	1	Ap	0	10	CL	D	90	5YR3/2	N	FR	ST	3	-	Y	-
HWUMA_033	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUMA_034	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_034	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_034	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_035	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_035	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_035	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_036	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_036	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_036	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_037	1	Ap	0	10	CL	C	10	7.5YR3/2	N	FR	SST	4	-	Y	-
HWUMA_037	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUMA_038	1	Ap	0	15	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_038	2	B1	15	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_038	3	B2	60	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMA_039	1	Ap	0	15	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_039	2	B1	15	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMA_039	3	B2	60	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMA_040	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMA_040	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_040	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_041	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_041	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_041	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_042	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_042	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_042	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_043	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMA_043	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMA_043	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_044	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUMA_044	2	AB	20	40	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMA_044	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_045	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUMA_045	2	AB	20	40	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMA_045	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_046	1	Ap	0	20	C	N	0	10YR3/2	N	FR	ST	1	-	Y	-
HWUMA_046	2	A	20	60	C	N	0	10YR3/1	N	FR	ST	1	-	Y	Vertic
HWUMA_047	1	Ap	0	20	C	N	0	10YR3/2	N	FR	ST	1	-	Y	-
HWUMA_047	2	A	20	60	C	N	0	10YR3/1	N	FR	ST	1	-	Y	Vertic
HWUMA_048	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
HWUMA_048	2	AB	20	40	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMA_048	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMA_049	1	Ap	0	10	SCL	N	0	10YR3/3	N	FR	SST	3	-	Y	-
HWUMA_049	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
HWUMA_050	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMA_050	2	AB	20	70	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMA_050	3	Bt	70	100	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_001	1	Ap	0	15	SiCL	N	0	10YR3/3	F	FR	SST	4	-	Y	Umbric
HWUMAL_001	2	AB	15	50	CL	N	0	10YR3/2	C	FR	ST	3	-	Y	-
HWUMAL_001	3	B	50	90	C	N	0	10YR4/2	C	FR	VST	2	-	Y	Gleyic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_001	4	BC	90	100	C	C	10	10YR3/2	C	FR	ST	3	-	N	-
HWUMAL_002	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Umbric
HWUMAL_002	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUMAL_002	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_003	1	Ap	0	30	SiCL	N	0	10YR3/3	F	FR	SST	4	-	Y	Umbric
HWUMAL_003	2	B	30	80	C	N	0	10YR4/2	M	FR	ST	3	-	Y	Gleyic
HWUMAL_003	3	BC	80	100	C	N	0	10YR4/2	C	FR	SST	4	-	N	-
HWUMAL_004	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Umbric
HWUMAL_004	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUMAL_004	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_005	1	Ap	0	20	SC	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_005	2	Bt	20	70	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Argic
HWUMAL_005	3	BC	70	85	C	N	0	5YR4/4	N	FR	ST	3	-	Y	-
HWUMAL_006	1	Ap	0	20	SC	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_006	2	Bt	20	70	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Argic
HWUMAL_006	3	BC	70	85	C	N	0	5YR4/4	N	FR	ST	3	-	Y	-
HWUMAL_007	1	Ap	0	25	CL	N	0	7.5YR2.5/1	N	FR	SST	4	-	Y	Umbric
HWUMAL_007	2	Bt1	25	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUMAL_007	3	Bt2	70	100	C	N	0	5YR2.5/2	N	FR	ST	4	-	N	Argic
HWUMAL_008	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_008	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_008	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	N	Argic
HWUMAL_009	1	Ap	0	20	SiCL	N	0	10YR3/1	F	FR	SST	4	-	Y	Umbric
HWUMAL_009	2	A	20	40	C	N	0	10YR3/2	F	FR	ST	3	-	Y	Umbric
HWUMAL_009	3	B	40	100	C	N	0	10YR4/3	F	FR	ST	4	-	N	Gleyic
HWUMAL_010	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_010	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_010	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	N	Argic
HWUMAL_011	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_011	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_011	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	N	Argic
HWUMAL_012	1	Ap	0	20	CL	N	0	7.5YR3/4	N	LO	SST	4	-	Y	Umbric

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_012	2	A	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUMAL_012	3	Bt1	60	80	C	N	0	5YR3/4	N	FR	ST	4	-	Y	Argic
HWUMAL_012	4	Bt2	80	100	C	N	0	5YR3/3	N	FR	ST	4	-	N	Argic
HWUMAL_013	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_013	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_013	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	N	Argic
HWUMAL_014	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_014	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_014	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	N	Argic
HWUMAL_015	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_015	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_015	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	N	Argic
HWUMAL_016	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Umbric
HWUMAL_016	2	AB	20	70	C	N	0	5YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_016	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	N	Argic
HWUMAL_017	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Umbric
HWUMAL_017	2	AB	20	70	C	N	0	5YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_017	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	N	Argic
HWUMAL_018	1	Ap	0	15	CL	N	0	7.5YR2.5/1	N	FR	SST	4	-	Y	Umbric
HWUMAL_018	2	AB	15	40	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	-
HWUMAL_018	3	Bt	40	80	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_018	4	BC	80	90	SC	N	0	7.5YR4/3	N	FR	ST	4	-	N	-
HWUMAL_019	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_019	2	AB	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMAL_019	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	N	Argic
HWUMAL_020	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_020	2	AB	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMAL_020	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	N	Argic
HWUMAL_021	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_021	2	AB	20	40	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_021	3	B1	40	70	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_021	4	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_022	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_022	2	AB	20	40	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_022	3	B1	40	70	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_022	4	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_023	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_023	2	AB	20	40	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_023	3	B1	40	70	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_023	4	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_024	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_024	2	A	20	60	C	N	0	7.5YR2.5/1	N	FR	ST	4	-	Y	Umbric
HWUMAL_024	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_025	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_025	2	Bt1	20	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUMAL_025	3	Bt2	70	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_026	1	Ap	0	20	C	N	0	7.5YR3/2	N	FR	SST	3	-	Y	Umbric
HWUMAL_026	2	B	20	60	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_026	3	Bt	60	100	C	N	0	2.5YR2.5/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_027	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric
HWUMAL_027	2	Bt1	20	70	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Argic
HWUMAL_027	3	Bt2	70	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_028	1	Ap	0	20	SiCL	N	0	10YR4/3	N	FR	SST	4	-	Y	Umbric
HWUMAL_028	2	A	20	60	C	N	0	10YR3/3	N	FR	ST	4	-	Y	Umbric
HWUMAL_028	3	Bt	60	100	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_029	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	SST	4	-	Y	Umbric
HWUMAL_029	2	A	20	60	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Umbric
HWUMAL_029	3	Bt	60	100	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_030	1	Ap	0	20	SiCL	N	0	7.5YR4/4	N	FR	SST	4	-	Y	Umbric
HWUMAL_030	2	AB	20	50	C	N	0	5YR3/3	N	FR	ST	4	-	Y	-
HWUMAL_030	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_031	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_031	2	B	20	80	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_031	3	Bt	80	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_032	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_032	2	B	20	80	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_032	3	Bt	80	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_033	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_033	2	B	20	80	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
HWUMAL_033	3	Bt	80	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_034	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMAL_034	2	AB	20	60	C	N	0	5YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_034	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_035	1	Ap	0	20	CL	N	0	5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMAL_035	2	B	20	50	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMAL_035	3	Bt	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_036	1	Ap	0	20	SiCL	N	0	10YR3/2	N	VFR	SST	4	-	Y	Mollic
HWUMAL_036	2	A	20	50	SC	N	0	10YR3/2	F	FR	ST	3	-	Y	Mollic
HWUMAL_036	3	AC	50	100	SC	N	0	10YR4/2	C	FR	ST	3	-	Y	Gleyic
HWUMAL_037	1	Ap	0	20	SiCL	N	0	7.5YR3/4	N	VFR	SST	4	-	Y	Umbric
HWUMAL_037	2	A	20	60	CL	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Umbric
HWUMAL_037	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_038	1	Ap	0	20	SiCL	N	0	7.5YR3/4	N	VFR	SST	4	-	Y	Umbric
HWUMAL_038	2	A	20	60	CL	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Umbric
HWUMAL_038	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_039	1	Ap	0	20	SiCL	N	0	7.5YR3/4	N	VFR	SST	4	-	Y	Umbric
HWUMAL_039	2	A	20	60	CL	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Umbric
HWUMAL_039	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_040	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMAL_040	2	B	20	70	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_040	3	Bt	70	100	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_041	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_041	2	B	20	70	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	-
HWUMAL_041	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_042	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_042	2	B	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_042	3	Bt	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic,Argic
HWUMAL_043	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_043	2	B	20	70	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	-
HWUMAL_043	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_044	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_044	2	B	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_044	3	Bt	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic,Argic
HWUMAL_045	1	Ap	0	15	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_045	2	B	15	50	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	-
HWUMAL_045	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_046	1	Ap	0	15	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_046	2	B	15	50	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	-
HWUMAL_046	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_047	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
HWUMAL_047	2	B	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
HWUMAL_047	3	Bt	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic,Argic
HWUMAL_048	1	Ap	0	15	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_048	2	B	15	50	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	-
HWUMAL_048	3	Bt	50	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_049	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_049	2	B	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMAL_049	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_050	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_050	2	B	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMAL_050	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_051	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
HWUMAL_051	2	B	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
HWUMAL_051	3	Bt	70	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_052	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUMAL_052	2	B	20	80	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_052	3	Bt	80	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_053	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_053	2	B	20	80	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_053	3	Bt	80	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_054	1	Ap	0	20	CL	N	0	7.5YR4/4	N	FR	ST	4	-	Y	Umbric
HWUMAL_054	2	B	20	60	C	N	0	10YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_054	3	Bt	60	100	C	N	0	10YR4/4	N	FR	ST	3	-	Y	Argic
HWUMAL_055	1	Ap	0	20	CL	N	0	10YR3/3	N	FR	ST	4	-	Y	Umbric
HWUMAL_055	2	B	20	65	C	N	0	10YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_055	3	Bt	65	100	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_056	1	Ap	0	20	CL	N	0	10YR3/3	N	FR	ST	4	-	Y	Umbric
HWUMAL_056	2	B	20	65	C	N	0	10YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_056	3	Bt	65	100	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_057	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUMAL_057	2	B	20	80	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_057	3	Bt	80	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_058	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Umbric
HWUMAL_058	2	B	20	80	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_058	3	Bt	80	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
HWUMAL_059	1	Ap	0	20	CL	N	0	10YR3/2	N	FR	ST	4	-	Y	Umbric
HWUMAL_059	2	B	20	70	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_059	3	Bt	70	100	C	N	0	7.5YR4/3	N	FR	ST	3	-	Y	Argic
HWUMAL_060	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUMAL_060	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_060	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_061	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUMAL_061	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_061	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_062	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Umbric
HWUMAL_062	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_062	3	Bt	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
HWUMAL_063	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMAL_063	2	B	20	70	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_063	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
HWUMAL_064	1	Ap	0	20	CL	N	0	7.YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMAL_064	2	B	20	60	C	N	0	5YR3/4	N	FR	ST	3	-	Y	-
HWUMAL_064	3	Bt	60	100	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
HWUMAL_065	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	4	-	Y	Mollic
HWUMAL_065	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
HWUMAL_065	3	Bt	60	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	Argic
JMUBD_001	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUBD_001	2	BC	20	45	SC	N	0	5YR3/4	N	FR	ST	4	-	Y	-
JMUBD_002	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_002	2	B1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUBD_002	3	B2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_003	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	-
JMUBD_003	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
JMUBD_004	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUBD_004	2	BC	20	45	SC	N	0	5YR3/4	N	FR	ST	4	-	Y	Mollic
JMUBD_004	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
JMUBD_005	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_005	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_005	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_006	1	Ap	0	20	C	N	0	10YR3/1	N	FR	VST	3	-	Y	Vertic
JMUBD_006	2	A1	20	70	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
JMUBD_006	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	2	-	N	-
JMUBD_007	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_007	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_007	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_008	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_008	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_008	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_009	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_009	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_009	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_010	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUBD_010	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_010	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_011	1	Ap	0	20	C	N	0	10YR3/1	N	FR	VST	3	-	Y	Vertic
JMUBD_011	2	A1	20	70	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Vertic
JMUBD_011	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	2	-	N	-
JMUBD_012	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_012	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_012	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_013	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	-
JMUBD_013	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
JMUBD_014	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_014	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_014	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_015	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	-
JMUBD_015	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
JMUBD_016	1	Ap	0	25	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	-
JMUBD_016	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
JMUBD_017	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Argic
JMUBD_017	2	Bt1	20	45	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_017	3	Bt2	45	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	-
JMUBD_018	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_018	2	B1	20	70	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_018	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_019	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_019	2	B1	20	70	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_019	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_020	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_020	2	B1	20	70	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_020	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_021	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_021	2	B1	20	70	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_021	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUBD_022	1	Ap	0	15	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_022	2	AB	15	30	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
JMUBD_022	3	B	30	60	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_023	1	Ap	0	15	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_023	2	AB	15	30	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	-
JMUBD_023	3	B	30	60	C	N	0	2.5YR3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_024	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_024	2	B1	20	70	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_024	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_025	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_025	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_025	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_026	1	Ap	0	20	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_026	2	B1	20	70	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_026	3	B2	70	100	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_027	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_027	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_027	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_028	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMUBD_028	2	Bt1	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
JMUBD_028	3	Bt2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_029	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMUBD_029	2	Bt1	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
JMUBD_029	3	Bt2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_030	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMUBD_030	2	Bt1	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
JMUBD_030	3	Bt2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_031	1	Ap	0	20	CL	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMUBD_031	2	Bt1	20	60	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Argic
JMUBD_031	3	Bt2	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUBD_032	1	Ap	0	20	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_032	2	B1	20	70	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUBD_032	3	B2	70	100	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_033	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_033	2	B1	20	50	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_033	3	B2	50	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_034	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_034	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_034	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_035	1	Ap	0	20	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_035	2	B1	20	70	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_035	3	B2	70	100	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUBD_036	1	Ap	0	20	C	N	0	5YR2.5/2	N	FR	ST	3	-	Y	Mollic
JMUBD_036	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_036	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_037	1	Ap	0	20	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUBD_037	2	B1	20	70	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUBD_037	3	B2	70	100	C	N	0	10R3/4	N	FR	ST	3	-	Y	Nitic
JMUDD_001	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_001	2	B1	20	50	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_001	3	B2	50	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_002	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_002	2	B1	20	50	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_002	3	B2	50	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_003	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_003	2	Bt1	20	70	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_003	3	Bt2	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_004	1	Ap	0	25	C	N	0	7.5YR3/3	N	FR	SST	4	-	Y	-
JMUDD_004	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
JMUDD_005	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_005	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_005	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_006	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_006	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUDD_006	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_007	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_007	2	Bt1	20	40	C	N	0	5YR3/1	N	FR	ST	3	-	Y	Argic
JMUDD_007	3	Bt2	40	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_008	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_008	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_008	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_009	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_009	2	B1	20	50	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_009	3	B2	50	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_010	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_010	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_010	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_011	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_011	2	B1	20	50	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_011	3	B2	50	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_012	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_012	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_012	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_013	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_013	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_013	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_014	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_014	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_014	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_015	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_015	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_015	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_016	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_016	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_016	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_017	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUDD_017	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_017	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_018	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_018	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_018	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_019	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_019	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_019	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_020	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_020	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_020	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_021	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_021	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_021	3	Bt2	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_022	1	Ap	0	20	CL	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_022	2	Bt1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_022	3	Bt2	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_023	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_023	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_023	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_024	1	Ap	0	15	CL	N	0	5YR2.5/2	N	FR	ST	4	-	Y	Mollic
JMUDD_024	2	Bt	15	40	C	N	0	7.5YR2.5/2	N	FR	ST	3	-	Y	Argic
JMUDD_024	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
JMUDD_025	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_025	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_025	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_026	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_026	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_026	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_027	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_027	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_027	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUDD_028	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	-
JMUDD_028	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
JMUDD_029	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_029	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_029	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_030	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_030	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_030	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_031	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_031	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_031	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_032	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUDD_032	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUDD_032	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUDD_033	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_033	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_033	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_034	1	Ap	0	20	CL	N	0	7.5YR2/2	N	FR	ST	4	-	Y	Mollic
JMUDD_034	2	A	20	60	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUDD_034	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_001	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	ST	4	-	Y	Mollic
JMUGR_001	2	Bt	20	45	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_002	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
JMUGR_002	2	Bt	20	50	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_003	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_003	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_003	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_004	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_004	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_005	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_005	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_005	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUGR_006	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_006	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_006	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_007	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_007	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_007	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_008	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_008	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_008	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_009	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_009	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_009	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_010	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_010	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_010	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_011	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_011	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_011	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_012	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_012	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_012	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_013	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_013	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_013	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_014	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_014	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_014	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_015	1	Ap	0	25	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_015	2	B1	25	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_015	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_016	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Umbric
JMUGR_016	2	Bt	20	50	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUGR_017	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Umbric
JMUGR_017	2	Bt	20	50	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Argic
JMUGR_018	1	Ap	0	15	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
JMUGR_018	2	Bt	15	55	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_019	1	Ap	0	15	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_019	2	AB	15	55	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
JMUGR_019	3	Bt	55	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_020	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_020	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUGR_020	3	B2	60	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_021	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUGR_021	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMUGR_021	3	B2	60	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_022	1	Ap	0	20	CL	N	0	10YR3/2	N	FR	SST	4	-	Y	Umbric
JMUGR_022	2	AB	20	60	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	-
JMUGR_022	3	Bt	60	100	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	Argic
JMUGR_023	1	Ap	0	20	CL	N	0	10YR3/2	N	FR	SST	4	-	Y	Umbric
JMUGR_023	2	AB	20	60	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	-
JMUGR_023	3	Bt	60	100	C	N	0	7.5YR2.5/3	N	FR	ST	3	-	Y	Argic
JMUGR_024	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
JMUGR_024	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_024	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_025	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
JMUGR_025	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_025	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_026	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
JMUGR_026	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_026	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_027	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
JMUGR_027	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_027	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_028	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Fleld Texture	Coarse Fragments, v% (class)	Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUGR_028	2	B1	20	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_028	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_029	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_029	2	AB	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	-
JMUGR_029	3	Bt	40	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_030	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_030	2	Bt	20	65	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_031	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMUGR_031	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_031	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUGR_032	1	Ap	0	20	CL	N	0	10YR3/3	N	FR	ST	4	-	Y	Mollic
JMUGR_032	2	B	20	60	CL	N	0	10YR3/4	N	FR	ST	3	-	Y	-
JMUGR_032	3	Bt	60	100	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_033	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_033	2	Bt	20	65	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_034	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_034	2	Bt	20	75	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_034	3	BC	75	90	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_035	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_035	2	Bt	20	75	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_035	3	BC	75	90	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_036	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_036	2	Bt	20	75	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_036	3	BC	75	90	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_037	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_037	2	Bt	20	75	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_037	3	BC	75	90	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_038	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_038	2	Bt	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_038	3	Bt2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_039	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_039	2	Bt	20	75	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUGR_039	3	BC	75	90	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_040	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_040	2	Bt	20	75	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_040	3	BC	75	90	C	N	0	5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_041	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUGR_041	2	AB	20	40	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMUGR_041	3	Bt	40	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
JMUGR_042	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMUGR_042	2	Bt	20	70	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_043	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMUGR_043	2	Bt	20	90	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_044	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMUGR_044	2	Bt	20	80	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUGR_045	1	Ap	0	20	C	N	0	5YR3/3	N	FR	SST	4	-	Y	Mollic
JMUGR_045	2	B	20	85	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_001	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
JMULS_001	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_001	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_002	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Mollic
JMULS_002	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_002	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_003	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_003	2	Bt	20	55	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMULS_004	1	Ap	0	15	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMULS_004	2	B1	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_004	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_005	1	Ap	0	15	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMULS_005	2	B1	15	70	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_005	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_006	1	Ap	0	20	C	N	0	7.5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_006	2	AB	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	-
JMULS_006	3	Bt	60	100	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMULS_007	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMULS_007	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_007	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_008	1	Ap	0	20	C	N	0	10YR3/1	N	FI	VST	3	-	Y	Vertic
JMULS_008	2	A1	20	70	C	N	0	10YR3/2	N	FI	VST	2	-	Y	Vertic
JMULS_008	3	A2	70	100	C	N	0	10YR4/1	N	FI	VST	2	-	N	Vertic
JMULS_009	1	Ap	0	20	C	N	0	10YR3/1	N	FI	ST	3	-	Y	Mollic
JMULS_009	2	A	20	30	C	N	0	10YR3/2	N	FI	VST	3	-	Y	Vertic
JMULS_009	3	R	30	35	-	D	95	-	-	-	-	-	-	N	-
JMULS_010	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMULS_010	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_010	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_011	1	Ap	0	30	C	N	0	10YR2/2	N	FI	VST	3	-	Y	Vertic
JMULS_011	2	A1	30	70	C	N	0	10YR2/1	N	FI	VST	2	-	Y	Vertic
JMULS_011	3	A2	70	100	C	N	0	10YR2/2	N	FI	VST	2	-	N	Vertic
JMULS_012	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMULS_012	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_012	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_013	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	-	Y	Mollic
JMULS_013	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_013	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_014	1	Ap	0	30	C	N	0	10YR2/2	N	FI	VST	3	-	Y	Vertic
JMULS_014	2	A1	30	70	C	N	0	10YR2/1	N	FI	VST	2	-	Y	Vertic
JMULS_014	3	A2	70	100	C	N	0	10YR2/2	N	FI	VST	2	-	N	Vertic
JMULS_015	1	Ap	0	20	SiCL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_015	2	Bt	20	50	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMULS_016	1	Ap	0	20	SiCL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_016	2	Bt	20	50	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMULS_017	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_017	2	AB	20	50	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMULS_017	3	Bt	50	100	C	N	0	7.5YR4/1	N	FR	ST	3	-	Y	Argic
JMULS_018	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMULS_018	2	B1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_018	3	B2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_019	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	SST	4	-	Y	-
JMULS_019	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
JMULS_020	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	SST	4	-	Y	-
JMULS_020	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
JMULS_021	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
JMULS_021	2	B1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_021	3	B2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_022	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	-	Y	Mollic
JMULS_022	2	B1	20	60	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_022	3	B2	60	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Nitic
JMULS_023	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_023	2	AB	20	50	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMULS_023	3	Bt	50	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_024	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	-
JMULS_024	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_024	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_025	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_025	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_025	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_026	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_026	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_026	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_027	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_027	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMULS_027	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_028	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_028	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMULS_028	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_029	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_029	2	B	20	40	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMULS_029	3	Bt	40	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_030	1	Ap	0	20	CL	N	0	7.5YR3/2	N	VFR	SST	4	-	Y	Mollic
JMULS_030	2	B	20	40	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Cambic
JMULS_030	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
JMULS_031	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_031	2	B1	20	70	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_031	3	B2	70	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_032	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_032	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_032	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_033	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_033	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_033	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_034	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_034	2	B	20	70	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMULS_034	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_035	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_035	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_035	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_036	1	Ap	0	30	C	N	0	10YR2/2	N	FI	VST	3	-	Y	Vertic
JMULS_036	2	A1	30	70	C	N	0	10YR2/1	N	FI	VST	2	-	Y	Vertic
JMULS_036	3	A2	70	100	C	N	0	10YR2/2	N	FI	VST	2	-	N	Vertic
JMULS_037	1	Ap	0	30	C	N	0	10YR2/2	N	FI	VST	3	-	Y	Vertic
JMULS_037	2	A1	30	70	C	N	0	10YR2/1	N	FI	VST	2	-	Y	Vertic
JMULS_037	3	A2	70	100	C	N	0	10YR2/2	N	FI	VST	2	-	N	Vertic
JMULS_038	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_038	2	AB	20	40	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_038	3	B2	40	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_039	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_039	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_039	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_040	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMULS_040	2	B	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	-
JMULS_040	3	Bt	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_041	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_041	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_041	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_042	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_042	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_042	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_043	1	Ap	0	10	CL	D	90	7.5YR3/2	N	FR	SST	4	-	Y	-
JMULS_043	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
JMULS_044	1	Ap	0	20	CL	F	3	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_044	2	Bt	20	65	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_045	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_045	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_045	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_046	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_046	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_046	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_047	1	Ap	0	30	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMULS_047	2	AB	30	70	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	-
JMULS_047	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_048	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMULS_048	2	Bt1	20	60	C	N	0	7.5YR3/3	N	FR	ST	3	-	Y	Argic
JMULS_048	3	Bt2	60	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMULS_049	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_049	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_049	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMULS_050	1	Ap	0	20	C	N	0	5YR3/2	N	FR	ST	4	-	Y	Mollic
JMULS_050	2	B1	20	60	C	N	0	2.5YR3/2	N	FR	ST	3	-	Y	Nitic
JMULS_050	3	B2	60	100	C	N	0	10R3/3	N	FR	ST	3	-	Y	Nitic
JMUON_001	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
JMUON_001	2	A	20	40	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Mollic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUON_001	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
JMUON_002	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
JMUON_002	2	A	20	40	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Mollic
JMUON_002	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
JMUON_003	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
JMUON_003	2	A	20	40	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Mollic
JMUON_003	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
JMUON_004	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Mollic
JMUON_004	2	A	20	70	C	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Mollic
JMUON_004	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
JMUON_005	1	Ap	0	20	SiCL	N	0	10YR3/2	N	FR	SST	4	N	Y	Mollic
JMUON_005	2	E	20	60	siC	N	0	10YR4/1	F	FR	SST	4	N	Y	Albic
JMUON_005	3	A	60	100	C	N	0	10YR2/1	N	FR	VST	2	N	Y	Vertic
JMUON_006	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Mollic
JMUON_006	2	A	20	70	C	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Argic
JMUON_006	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
JMUON_007	1	Ap	0	20	C	N	0	7.5YR3/3	N	FR	ST	4	N	Y	Mollic
JMUON_007	2	A	20	40	C	N	0	7.5YR2.5/2	N	FR	ST	3	N	Y	Mollic
JMUON_007	3	Bt	40	100	C	N	0	7.5YR3/3	N	FR	ST	3	N	Y	Argic
JMUON_008	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	N	Y	Mollic
JMUON_008	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
JMUON_008	3	B2	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
JMUON_009	1	Ep	0	20	SiC	N	0	10YR4/1	F	FR	SST	4	N	Y	Mollic-Albic
JMUON_009	2	A1	20	70	C	N	0	10YR2/1	N	FR	VST	2	N	Y	Vertic
JMUON_009	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	2	N	Y	Vertic
JMUON_010	1	Ap	0	20	C	N	0	5YR3/3	N	FR	ST	4	N	Y	Mollic
JMUON_010	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	ST	3	N	Y	Nitic
JMUON_010	3	B2	60	100	C	N	0	2.5YR3/4	N	FR	ST	3	N	Y	Nitic
JMUON_011	1	Ap	0	20	CL	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Mollic
JMUON_011	2	A	20	70	C	N	0	7.5YR3/4	N	FR	ST	3	N	Y	Argic
JMUON_011	3	Bt	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
JMUON_012	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUON_012	2	A	20	70	SiC	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_013	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_013	2	A	20	70	SiC	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_014	1	Ap	0	15	SiCL	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_014	2	A	15	45	SiC	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_014	3	AC	45	65	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
JMUON_015	1	Ap	0	15	SiCL	N	0	10YR2/1	N	FR	ST	3	N	Y	Mollic-Andic
JMUON_015	2	A	15	45	SiC	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_015	3	AC	45	65	C	N	0	10YR3/3	N	FR	ST	3	N	Y	-
JMUON_016	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	ST	3	N	Y	Mollic
JMUON_016	2	Bt	20	70	C	N	0	5YR2.5/2	N	FR	ST	3	N	Y	Argic
JMUON_017	1	Ap	0	25	CL	N	0	7.5YR3/1	N	FR	ST	3	N	Y	Umbric
JMUON_017	2	Bt1	25	70	C	N	0	7.5YR2/1	N	FR	ST	3	N	Y	Argic
JMUON_017	3	Bt2	70	100	C	N	0	5YR3/4	N	FR	ST	3	N	Y	Argic
JMUON_018	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_018	2	A	20	60	CL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_018	3	B	60	100	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Argic
JMUON_019	1	Ap	0	15	SiCL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_019	2	A	15	45	SiC	N	0	10YR2/1	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_019	3	AC	45	70	SiC	N	0	10YR3/2	N	FR	ST	3	N	Y	-
JMUON_020	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric
JMUON_020	2	A	20	60	CL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric
JMUON_020	3	B	60	100	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Argic
JMUON_021	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_021	2	A	20	60	CL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_021	3	B	60	100	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Argic
JMUON_022	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_022	2	A	20	60	CL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_022	3	B	60	100	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Argic
JMUON_023	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_023	2	A	20	60	CL	N	0	10YR2/2	N	FR	ST	3	N	Y	Umbric-Andic
JMUON_023	3	B	60	100	C	N	0	10YR2/2	N	FR	ST	3	N	Y	Argic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUON_024	1	Ep	0	20	SiC	N	0	10YR4/1	F	FR	SST	4	N	Y	Mollic-Albic
JMUON_024	2	A1	20	70	C	N	0	10YR2/1	N	FR	VST	2	N	Y	-
JMUON_024	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	2	N	Y	Vertic
JMUON_025	1	Ap	0	20	SiC	N	0	10YR2/2	F	FR	SST	4	N	Y	Mollic
JMUON_025	2	E	20	60	C	N	0	10YR4/1	N	FR	VST	2	N	Y	Albic
JMUON_025	3	A	60	100	C	N	0	10YR2/2	N	FR	VST	2	N	Y	Vertic
JMUON_026	1	Ap	0	15	C	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
JMUON_026	2	B1	15	60	C	N	0	2.5YR3/3	N	FR	VST	2	N	Y	Nitic
JMUON_026	3	B2	60	100	C	N	0	10R3/3	N	FR	VST	2	N	Y	Nitic
JMUON_027	1	Ap	0	15	C	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
JMUON_027	2	B1	15	60	C	N	0	2.5YR3/3	N	FR	VST	2	N	Y	Nitic
JMUON_027	3	B2	60	100	C	N	0	10R3/3	N	FR	VST	2	N	Y	Nitic
JMUON_028	1	Ap	0	15	C	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
JMUON_028	2	B1	15	60	C	N	0	2.5YR3/3	N	FR	VST	2	N	Y	Nitic
JMUON_028	3	B2	60	100	C	N	0	10R3/3	N	FR	VST	2	N	Y	Nitic
JMUON_029	1	Ep	0	30	SiC	N	0	10YR4/1	F	FR	SST	4	-	Y	Mollic
JMUON_029	2	A1	30	70	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Nitic
JMUON_029	3	A2	70	100	C	N	0	10YR2/1	N	FR	VST	2	-	Y	Nitic
JMUON_030	1	Ap	0	20	CL	N	0	5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUON_030	2	B	20	70	C	N	0	5YR3/1	N	FR	ST	3	-	Y	-
JMUON_030	3	Bt	70	100	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Argic
JMUON_031	1	Ap	0	20	CL	N	0	7.5YR3/3	N	FR	SST	4	-	Y	Mollic
JMUON_031	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
JMUON_032	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMUON_032	2	A	20	40	C	N	0	5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUON_032	3	Bt	40	100	C	N	0	5YR3/3	N	FR	ST	3	-	Y	Argic
JMUON_033	1	Ap	0	20	C	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
JMUON_033	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	VST	2	N	Y	Nitic
JMUON_033	3	B2	60	100	C	N	0	10R3/3	N	FR	VST	2	N	Y	Nitic
JMUON_034	1	Ap	0	20	C	N	0	5YR3/3	N	FR	SST	4	N	Y	Mollic
JMUON_034	2	B1	20	60	C	N	0	2.5YR3/3	N	FR	VST	2	N	Y	Nitic
JMUON_034	3	B2	60	100	C	N	0	10R3/3	N	FR	VST	2	N	Y	Nitic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUON_035	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUON_035	2	AB	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUON_035	3	Bt	40	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUON_036	1	Ap	0	20	CL	N	0	7.5YR2.5/2	N	FR	SST	4	-	Y	Mollic
JMUON_036	2	AB	20	40	C	N	0	7.5YR3/2	N	FR	ST	3	-	Y	Mollic
JMUON_036	3	Bt	40	100	C	N	0	2.5YR3/3	N	FR	ST	3	-	Y	Argic
JMUON_037	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMUON_037	2	Bt	20	50	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
JMUON_037	3	BC	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	-
JMUON_038	1	Ap	0	20	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Mollic
JMUON_038	2	Bt	20	50	C	N	0	7.5YR3/4	N	FR	ST	3	-	Y	Argic
JMUON_038	3	BC	50	100	C	N	0	5YR3/4	N	FR	ST	3	-	Y	-
JMUON_039	1	Ap	0	10	CL	C	10	10YR2/1	N	FR	SST	4	-	Y	-
JMUON_039	2	R	10	15	-	D	95	-	-	-	-	-	-	N	-
JMUON_040	1	Ap	0	30	SiCL	N	0	10YR2/2	N	FR	SST	4	-	Y	-
JMUON_040	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
JMUON_041	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_041	2	A	20	60	CL	N	0	7.5YR3/2	N	FR	SST	4	-	Y	Umbric-Andic
JMUON_042	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_042	2	A	20	65	SiC	N	0	10YR2/2	N	FR	ST	3	-	Y	Umbric-Andic
JMUON_043	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_043	2	A	20	60	SiC	N	0	10YR2/1	N	FR	ST	3	-	Y	Umbric-Andic
JMUON_043	3	AC	60	100	C	N	0	10YR3/2	N	FR	ST	3	-	Y	-
JMUON_044	1	Ap	0	20	SiCL	N	0	10YR2/2	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_044	2	A	20	60	SiC	N	0	10YR2/1	N	FR	ST	3	-	Y	Umbric-Andic
JMUON_044	3	AC	60	100	C	N	0	10YR3/2	N	FR	ST	3	-	Y	-
JMUON_045	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_045	2	A	20	55	SiC	N	0	10YR2/2	N	FR	ST	3	-	Y	Umbric-Andic
JMUON_046	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_046	2	A	20	65	SiC	N	0	10YR2/2	N	FR	ST	3	-	Y	Umbric-Andic
JMUON_047	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_047	2	A	20	65	SiC	N	0	10YR2/2	N	FR	ST	3	-	Y	Umbric-Andic

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
JMUON_048	1	Ap	0	20	SiCL	N	0	10YR2/1	N	FR	NST	4	-	Y	Umbric-Andic
JMUON_048	2	A	20	65	SiC	N	0	10YR2/2	N	FR	ST	3	-	Y	Umbric-Andic
MKU_001	1	Ap	0	20	SCL	C	10	10YR4/6	N	FR	SST	-	Y	Y	-
MKU_001	2	B2	20	40	SCL	C	10	10YR4/3	N	FI	ST	-	Y	Y	-
MKU_001	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
MKU_002	1	Ap	0	25	SCL	C	10	10YR4/2	N	FR	ST	-	Y	Y	-
MKU_002	2	B1	25	50	CL	C	10	10YR3/2	N	FR	ST	-	Y	Y	-
MKU_002	3	B2	50	100	C	C	10	10YR3/3	N	FR	ST	-	Y	Y	-
MKU_003	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_003	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_004	1	Ap	0	25	C	F	3	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_004	2	B1	25	100	C	F	3	10YR2/1	N	VFI	VST	-	Y	Y	-
MKU_005	1	Ap	0	25	SC	F	3	10YR3/1	N	-	ST	-	Y	Y	-
MKU_005	2	B1	25	100	C	C	10	10YR2/1	N	-	ST	-	Y	Y	-
MKU_006	1	Ah	0	20	SC	N	0	10YR3/1	N	FI	ST	-	Y	Y	-
MKU_006	2	-	20	50	-	-	-	-	-	-	-	-	-	-	-
MKU_006	3	B1	50	100	C	N	0	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_007	1	Ap	0	30	SC	M	27	7.5YR3/3	N	-	ST	-	Y	Y	-
MKU_007	2	C	30	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_008	1	Ap	0	20	C	F	3	2.5YR6/4	N	FR	VST	-	Y	Y	-
MKU_008	2	B1	20	65	C	M	27	2.5YR2/2	N	FR	VST	-	Y	Y	-
MKU_008	3	B2	65	91	C	M	27	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_008	4	C	91	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_009	1	Ah	0	30	C	M	27	7.5YR5/3	N	FR	SST	-	Y	Y	-
MKU_009	2	Bw	30	65	C	M	27	7.5YR2.5/3	N	FR	ST	-	Y	Y	-
MKU_009	3	C	65	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_010	1	Ap	0	30	C	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-
MKU_010	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_011	1	Ap	0	17	C	F	3	10YR3/2	N	-	VST	-	Y	Y	-
MKU_011	2	ACi	17	100	C	C	10	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_012	1	Ap	0	20	C	C	10	10YR2/1	N	FR	VST	-	Y	Y	-
MKU_012	2	Bi1	20	57	C	C	10	10YR2/1	N	FR	VST	-	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_012	3	Bi2	57	100	C	C	10	!0YR3/2	N	FR	VST	-	Y	Y	-
MKU_013	1	Ap	0	30	C	V	1	10YR2/2	N	VFR	VST	-	N	Y	-
MKU_013	2	B	30	100	C	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_014	1	Ah	0	30	SC	C	10	10YR2/2	N	FR	ST	-	N	Y	Saprolite
MKU_014	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_015	1	Ap	0	40	C	C	10	10YR3/2	N	FR	VST	-	N	Y	-
MKU_015	2	B1	40	100	C	C	10	10YR2/2	N	FR	VST	-	N	Y	-
MKU_016	1	Ap	0	40	C	C	10	10YR3/2	N	FR	VST	-	N	Y	-
MKU_016	2	B1	40	100	C	C	10	10YR2/2	N	FR	VST	-	N	Y	-
MKU_017	1	Ap	0	25	C	V	1	10YR2/2	N	FR	VST	-	N	Y	-
MKU_017	2	B1	25	70	C	C	10	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_017	3	B2	70	100	C	C	10	10YR2/2	N	VFI	VST	-	Y	Y	-
MKU_018	1	Ap	0	25	C	C	10	10YR2/2	N	FR	VST	-	N	Y	-
MKU_018	2	B1	25	60	C	C	10	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_018	3	B2	60	100	-	V	1	10YR2/1	N	FR	VST	-	Y	Y	-
MKU_019	1	Ap	0	25	C	V	1	10YR2/2	N	FR	VST	-	N	Y	-
MKU_019	2	B1	25	75	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_019	3	B2	75	100	-	V	1	10YR2/2	N	VFI	VST	-	Y	Y	-
MKU_020	1	Ap	0	25	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_020	2	B1	25	70	C	V	1	10YR3/2	N	FI	VST	-	W	Y	-
MKU_020	3	B2	70	100	C	V	1	10YR2/3	N	FI	VST	-	W	Y	-
MKU_021	1	Ap	0	30	C	V	1	10YR2/2	N	VFR	VST	-	N	Y	-
MKU_021	2	B	30	100	C	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_022	1	Ap	0	18	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_022	2	B1	18	30	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_022	3	B2	30	60	C	C	10	10YR3/2	N	FI	VST	-	N	Y	-
MKU_023	1	Ap	0	18	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_023	2	B1	18	30	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_023	3	B2	30	60	C	C	10	10R3/2	N	FI	VST	-	N	Y	-
MKU_024	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_024	2	B1	25	75	C	F	3	10YR3/1	N	FR	VST	-	Y	Y	-
MKU_025	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_025	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_025	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_026	1	Ap	0	25	C	V	1	10YR2/1	N	FI	VST	-	N	Y	-
MKU_026	2	B1	25	100	C	V	1	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_027	1	Ap	0	15	SC	M	27	10YR3/3	N	FI	VST	-	N	Y	-
MKU_027	2	B	15	100	C	F	3	10YR3/3	N	FI	VST	-	N	Y	-
MKU_028	1	Ap	0	30	C	V	1	10YR2/2	N	FI	VST	-	Y	Y	-
MKU_028	2	B1	30	65	C	F	3	10YR4/2	N	FR	VST	-	Y	Y	-
MKU_028	3	B2	65	100	C	F	3	10YR3/2	N	FR	VST	-	Y	Y	-
MKU_029	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_029	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_030	1	Ap	0	25	SC	C	10	10YR2/2	N	VFR	ST	-	N	Y	-
MKU_030	2	B1	25	65	SC	M	27	10YR2/2	N	FR	ST	-	N	Y	-
MKU_030	3	B2	65	100	SC	M	27	10YR2/2	N	FR	ST	-	N	Y	-
MKU_031	1	Ah	0	30	SC	M	27	10YR22/1	N	FR	-	-	N	Y	-
MKU_031	2	C	30	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_032	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-
MKU_032	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-
MKU_032	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-
MKU_033	1	Ap	0	25	C	F	3	10YR2/2	N	FR	VST	-	N	Y	-
MKU_033	2	B1	25	65	C	F	3	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_033	3	B2	65	125	C	F	3	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_034	1	Ap	0	25	SC	C	10	10YR2/2	N	FR	ST	-	N	Y	-
MKU_034	2	Bw	25	100	C	C	10	10YR2/2	N	FR	VST	-	N	Y	-
MKU_035	1	Ap	0	25	C	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_035	2	B1	25	40	C	N	0	10YR3/2	N	FR	VST	-	N	Y	-
MKU_035	3	B2	40	100	C	F	3	10YR2/2	N	FR	VST	-	N	Y	-
MKU_036	1	Ah	0	40	SCL	D	90	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_036	2	R	40	45	-	D	95	-	-	-	-	-	-	N	-
MKU_037	1	Ap	0	20	SC	M	27	10YR3/2	N	FR	SST	-	Y	Y	-
MKU_037	2	B1	20	120	SC	A	60	10YR3/2	N	FR	SST	-	Y	Y	-
MKU_038	1	Ap	0	25	C	C	10	10YR2/2	N	-	VST	-	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_038	2	B1	25	100	C	C	10	10YR2/2	N	-	ST	-	Y	Y	-
MKU_039	1	Ap	0	15	SL	C	10	10YR3/2	N	VFR	SST	-	Y	Y	-
MKU_039	2	R	15	20	-	D	95	-	-	-	-	-	-	N	-
MKU_040	1	Ap	0	15	C	C	10	10YR3/2	N	F	ST	-	Y	Y	-
MKU_040	2	R	15	20	-	D	95	-	-	-	-	-	-	N	-
MKU_041	1	Ap	0	15	SL	C	10	10YR3/2	N	F	ST	-	Y	Y	-
MKU_042	1	Ap	0	15	SL	M	27	10YR3/2	N	F	SST	-	Y	Y	-
MKU_042	2	R	15	20	-	D	95	-	-	-	-	-	-	N	-
MKU_043	1	Ap	0	25	SL	M	27	10YR3/2	N	F	SST	-	Y	Y	-
MKU_043	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_044	1	Ap	0	25	SL	M	27	7.5YR4/3	N	F	SST	-	Y	Y	-
MKU_045	1	Ap	0	25	SIL	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-
MKU_046	1	Ap	0	25	C	C	10	7.5YR5/3	N	FR	VST	-	Y	Y	-
MKU_046	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_047	1	Ah	0	25	LS	C	10	7.5YR5/3	N	FR	VST	-	Y	Y	-
MKU_047	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_048	1	Ah	0	20	C	F	3	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_048	2	B1	20	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_049	1	Ap	0	25	C	V	1	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_049	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_050	1	Ap	0	25	SC	C	10	7.5YR3/2	N	VFR	ST	-	Y	Y	-
MKU_050	2	B1	25	100	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_051	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_051	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_052	1	Ap	0	25	SC	A	60	7.5YR4/3	N	FR	ST	-	N	Y	-
MKU_052	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_053	1	Ap	0	30	SIC	A	60	7.5YR4/3	N	VFR	SST	-	N	Y	-
MKU_053	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_054	1	Ap	0	35	SL	-	-	10YR5/4	N	VFR	SST	-	N	Y	-
MKU_054	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_055	1	Ap	0	30	SCL	M	27	10YR3/2	N	FR	SST	-	N	Y	-
MKU_055	2	B1	30	100	C	C	10	10YR2/2	N	FR	VST	-	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_056	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	ST	-	Y	Y	-
MKU_056	2	Bw1	20	65	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_056	3	Bw2	65	95	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_057	1	Ap	0	30	C	C	10	10YR2/2	N	FR	VST	-	N	Y	-
MKU_057	2	Bw	30	70	C	M	27	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_058	1	Ap	0	25	C	F	3	10YR2/2	N	FR	VST	-	Y	N	-
MKU_058	2	Bi	25	120	C	F	3	10YR2/2	N	FR	VST	-	N	Y	-
MKU_059	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_059	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_060	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_060	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_061	1	Ap	0	30	SC	M	27	7.5YR3/3	N	VS	ST	-	Y	Y	-
MKU_061	2	C	30	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_062	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_062	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_063	1	Ap	0	18	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_063	2	B1	18	30	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_063	3	B2	30	60	C	C	10	10YR3/2	N	FI	VST	-	N	Y	-
MKU_064	1	Ap	0	18	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_064	2	B1	18	30	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_064	3	B2	30	60	C	C	10	10YR3/2	N	FI	VST	-	N	Y	-
MKU_065	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_065	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_066	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_066	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_067	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_067	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_068	1	Ap	0	30	SC	M	27	7.5YR3/3	N	VS	ST	-	Y	Y	-
MKU_068	2	C	30	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_069	1	Ap	0	30	SC	M	27	7.5YR3/3	N	VS	ST	-	Y	Y	-
MKU_069	2	C	30	100		-	-	-	-	-	-	-	-	-	Saprolite
MKU_070	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm		Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_070	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_071	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_071	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_072	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_072	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_073	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_073	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_074	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_074	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_075	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_075	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_076	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_076	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_077	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_077	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_078	1	Ap	0	25	C	V		1	10YR2/2	V	FR	VST	-	N	Y	-
MKU_078	2	B1	25	70	C	V		1	10YR2/1	V	FR	VST	-	N	Y	-
MKU_078	3	B2	70	120	C	V		1	10YR2/1	V	FR	VST	-	N	-	-
MKU_079	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_079	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_080	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_080	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_081	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_081	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_082	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_082	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_083	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_083	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_084	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_084	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-
MKU_085	1	Ah	0	45	S	C		10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_085	2	R	45	50	-	D		95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm		Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_086	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-	
MKU_086	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-	
MKU_087	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-	
MKU_087	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-	
MKU_088	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-	
MKU_088	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-	
MKU_089	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-	
MKU_089	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-	
MKU_090	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-	
MKU_090	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-	
MKU_091	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_091	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_091	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-	
MKU_092	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_092	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_092	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-	
MKU_093	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_093	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_094	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_094	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_094	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-	
MKU_095	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_095	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_095	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-	
MKU_096	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_096	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_096	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-	
MKU_097	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_097	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	
MKU_097	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-	
MKU_098	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-	
MKU_098	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-	

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_098	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-
MKU_099	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-
MKU_099	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-
MKU_099	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-
MKU_100	1	Ap	0	25	C	V	1	10YR2/2	V	FR	VST	-	N	Y	-
MKU_100	2	B1	25	70	C	V	1	10YR2/1	V	FR	VST	-	N	Y	-
MKU_100	3	B2	70	120	C	V	1	10YR2/1	V	FR	VST	-	N	-	-
MKU_101	1	Ap	0	25	C	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_101	2	B1	25	40	C	N	0	10YR3/2	N	FR	VST	-	N	Y	-
MKU_101	3	B2	40	100	C	F	3	10YR2/2	N	FR	VST	-	N	Y	-
MKU_102	1	Ap	0	25	SC	C	10	10YR2/2	N	FR	ST	-	N	Y	-
MKU_102	2	Bw	25	100	C	C	10	10YR2/2	N	FR	VST	-	N	Y	-
MKU_103	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_103	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_104	1	Ap	0	25	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_104	2	B1	25	70	C	V	1	10YR3/2	N	FI	VST	-	W	Y	-
MKU_104	3	B2	70	100	C	V	1	10YR2/3	N	FI	VST	-	W	Y	-
MKU_105	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_105	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_106	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_106	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_107	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_107	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_107	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_108	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_108	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_109	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_109	2	B1	25	75	C	F	3	10YR3/1	N	FR	VST	-	Y	Y	-
MKU_110	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_110	2	B1	25	75	C	F	3	10YR3/1	N	FR	VST	-	Y	Y	-
MKU_111	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_111	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_112	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_112	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_113	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_113	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_114	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_114	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_114	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_115	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_115	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_115	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_116	1	Ap	0	18	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_116	2	B1	18	30	SIL	V	1	10YR3/2	N	FR	VST	-	N	Y	-
MKU_116	3	B2	30	60	C	C	10	10R3/2	N	FI	VST	-	N	Y	-
MKU_117	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_117	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_117	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_118	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_118	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_119	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_119	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_120	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_120	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_120	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_121	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_121	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_122	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_122	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_122	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_123	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_123	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_124	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_124	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_124	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_125	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_125	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_126	1	Ap	0	25	C	V	1	10YR2/1	N	FI	VST	-	N	Y	-
MKU_126	2	B1	25	100	C	V	1	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_127	1	Ap	0	25	C	V	1	10YR2/1	N	FI	VST	-	N	Y	-
MKU_127	2	B1	25	100	C	V	1	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_128	1	Ap	0	25	C	V	1	10YR2/1	N	FI	VST	-	N	Y	-
MKU_128	2	B1	25	100	C	V	1	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_129	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_129	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_129	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_130	1	Ap	0	15	SC	M	27	10YR3/3	N	FI	VST	-	N	Y	-
MKU_130	2	B	15	100	C	F	3	10YR3/3	N	FI	VST	-	N	Y	-
MKU_131	1	Ap	0	15	SC	M	27	10YR3/3	N	FI	VST	-	N	Y	-
MKU_131	2	B	15	100	C	F	3	10YR3/3	N	FI	VST	-	N	Y	-
MKU_132	1	Ap	0	25	SC	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_132	2	B1	25	60	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_132	3	B2	60	100	C	F	3	10R3/2	N	FR	VST	-	N	Y	-
MKU_133	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_133	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_134	1	Ap	0	30	C	V	1	10YR2/2	N	FI	VST	-	Y	Y	-
MKU_134	2	B1	30	65	C	F	3	10YR4/2	N	FR	VST	-	Y	Y	-
MKU_134	3	B2	65	100	C	F	3	10YR3/2	N	FR	VST	-	Y	Y	-
MKU_135	1	Ap	0	30	C	V	1	10YR2/2	N	FI	VST	-	Y	Y	-
MKU_135	2	B1	30	65	C	F	3	10YR4/2	N	FR	VST	-	Y	Y	-
MKU_135	3	B2	65	100	C	F	3	10YR3/2	N	FR	VST	-	Y	Y	-
MKU_136	1	Ap	0	30	C	V	1	10YR2/2	N	FI	VST	-	Y	Y	-
MKU_136	2	B1	30	65	C	F	3	10YR4/2	N	FR	VST	-	Y	Y	-
MKU_136	3	B2	65	100	C	F	3	10YR3/2	N	FR	VST	-	Y	Y	-
MKU_137	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_137	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_138	1	Ah	0	45	S	C	10	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_138	2	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_139	1	Ah	0	30	SC	C	10	10YR2/2	N	FR	ST	-	N	Y	Saprolite
MKU_139	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_140	1	Ah	0	40	SCL	D	90	10YR2/2	N	VFR	SST	-	N	Y	-
MKU_140	2	R	40	45	-	D	95	-	-	-	-	-	-	N	-
MKU_141	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	ST	-	Y	Y	-
MKU_141	2	Bw1	20	65	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_141	3	Bw2	65	95	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_142	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	ST	-	Y	Y	-
MKU_142	2	Bw1	20	65	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_142	3	Bw2	65	95	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_143	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_143	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_144	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_144	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_145	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_145	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_146	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_146	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_147	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_147	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_148	1	Ah	0	20	C	F	3	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_148	2	B1	20	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_149	1	Ah	0	20	C	F	3	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_149	2	B1	20	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_150	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_150	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_151	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_151	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_152	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_152	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_153	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_153	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_154	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_154	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_155	1	Ah	0	20	C	F	3	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_155	2	B1	20	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_156	1	Ah	0	20	C	F	3	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_156	2	B1	20	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_157	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_157	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_158	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_158	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_159	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_159	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_160	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_160	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_161	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_161	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_162	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_162	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_163	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_163	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_164	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_164	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_165	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_165	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_166	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_166	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_167	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_167	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_168	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_168	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_169	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_169	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_170	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	ST	-	Y	Y	-
MKU_170	2	Bw1	20	65	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_170	3	Bw2	65	95	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_171	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	ST	-	Y	Y	-
MKU_171	2	Bw1	20	65	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_171	3	Bw2	65	95	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_172	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_172	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_173	1	Ap	0	20	CL	C	10	7.5YR3/2	N	FR	ST	-	Y	Y	-
MKU_173	2	Bw1	20	65	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_173	3	Bw2	65	95	C	C	10	7.5YR3/2	N	FR	VST	-	Y	Y	-
MKU_174	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	-	-	-
MKU_174	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_175	1	Ap	0	25	SL	A	60	10YR3/3	N	FR	SST	-	N	Y	-
MKU_175	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_176	1	Ap	0	30	SIC	A	60	7.5YR4/3	N	VFR	SST	-	N	Y	-
MKU_176	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_177	1	Ap	0	30	SIC	A	60	7.5YR4/3	N	VFR	SST	-	N	Y	-
MKU_177	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_178	1	Ap	0	30	SIC	A	60	7.5YR4/3	N	VFR	SST	-	N	Y	-
MKU_178	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_179	1	Ap	0	30	SIC	A	60	7.5YR4/3	N	VFR	SST	-	N	Y	-
MKU_179	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_180	1	Ah	0	20	C	F	3	10YR2/2	N	FR	ST	-	Y	Y	-
MKU_180	2	B1	20	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_181	1	Ap	0	30	SIC	A	60	7.5YR4/3	N	VFR	SST	-	N	Y	-
MKU_181	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_182	1	Ap	0	20	SC	M	27	10YR3/2	N	FR	SST	-	Y	Y	-
MKU_182	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
MKU_183	1	Ap	0	15	SL	C	10	10YR3/2	N	VFR	SST	-	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_183	2	R	15	20	-	D	95	-	-	-	-	-	N	-	
MKU_184	1	Ap	0	15	SL	C	10	10YR3/2	N	F	ST	-	Y	Y	-
MKU_184	2	Bw	15	80	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_185	1	Ap	0	15	SL	C	10	10YR3/2	N	F	ST	-	Y	Y	-
MKU_185	2	Bw	15	80	C	F	3	10YR3/2	N	FR	VST	-	N	Y	-
MKU_186	1	Ap	0	25	SL	M	27	10YR3/2	N	F	SST	-	Y	Y	-
MKU_186	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_187	1	Ap	0	25	SL	M	27	10YR3/2	N	F	SST	-	Y	Y	-
MKU_187	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_188	1	Ap	0	25	SL	M	27	7.5YR4/3	N	F	SST	-	Y	Y	-
MKU_188	2	B1	25	100	C	V	1	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_189	1	Ap	0	20	SC	M	27	10YR3/2	N	FR	SST	-	Y	Y	-
MKU_189	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
MKU_190	1	Ap	0	20	SCL	C	10	10YR4/6	N	FR	SST	-	Y	Y	-
MKU_190	2	B2	20	40	SCL	C	10	10YR4/3	N	FI	ST	-	Y	Y	-
MKU_190	3	R	40	45	-	D	95	-	-	-	-	-	-	N	-
MKU_191	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_191	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_192	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_192	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_193	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_193	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_194	1	Ap	0	25	C	F	3	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_194	2	B1	25	100	C	F	3	10YR2/1	N	VFI	VST	-	Y	Y	-
MKU_195	1	Ap	0	25	C	F	3	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_195	2	B1	25	100	C	F	3	10YR2/1	N	VFI	VST	-	Y	Y	-
MKU_196	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_196	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_197	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_197	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_198	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_198	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_199	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_199	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_200	1	Ap	0	25	SCL	C	10	10YR4/2	N	FR	ST	-	Y	Y	-
MKU_200	2	B1	25	50	CL	C	10	10YR3/2	N	FR	ST	-	Y	Y	-
MKU_200	3	B2	50	100	C	C	10	10YR3/3	N	FR	ST	-	Y	Y	-
MKU_201	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_201	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_202	1	Ah	0	20	SC	N	0	10YR3/1	N	FI	ST	-	Y	Y	-
MKU_202	2	B1	20	100	C	N	0	10YR2/1	N	FI	VST	-	Y	Y	-
MKU_203	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_203	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_204	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_204	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_205	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_205	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_206	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_206	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_207	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_207	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_208	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_208	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_209	1	Ap	0	20	C	C	10	10YR2/1	N	FR	VST	-	Y	Y	-
MKU_209	2	Bi1	20	57	C	C	10	10YR2/1	N	FR	VST	-	Y	Y	-
MKU_209	3	Bi2	57	100	C	C	10	!0YR3/2	N	FR	VST	-	Y	Y	-
MKU_210	1	Ap	0	20	C	C	10	10YR2/1	N	FR	VST	-	Y	Y	-
MKU_210	2	Bi1	20	57	C	C	10	10YR2/1	N	FR	VST	-	Y	Y	-
MKU_210	3	Bi2	57	100	C	C	10	!0YR3/2	N	FR	VST	-	Y	Y	-
MKU_211	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_211	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_212	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_212	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_213	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_213	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_214	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	N	Y	-
MKU_214	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_215	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	N	Y	-
MKU_215	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_216	1	Ap	0	35	SL	V	1	10YR5/4	N	VFR	SST	-	N	Y	-
MKU_216	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_217	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_217	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_218	1	Ap	0	25	SiC	M	27	7.5YR3/2	N	FR	NST	-	Y	Y	-
MKU_218	2	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_219	1	Ap	0	30	SC	M	27	7.5YR3/3	N	VS	ST	-	Y	Y	-
MKU_219	2	C	30	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_220	1	Ap	0	30	SC	M	27	7.5YR3/3	N	VS	ST	-	Y	Y	-
MKU_220	2	C	30	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_221	1	Ap	0	30	C	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-
MKU_221	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_222	1	Ap	0	30	C	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-
MKU_222	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_223	1	Ap	0	20	C	F	3	2.5YR6/4	N	FR	VST	-	Y	Y	-
MKU_223	2	B1	20	65	C	M	27	2.5YR2/2	N	FR	VST	-	Y	Y	-
MKU_223	3	B2	65	91	C	M	27	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_223	4	C	91	100	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_224	1	Ah	0	30	C	M	27	7.5YR5/3	N	FR	SST	-	Y	Y	-
MKU_224	2	Bw	30	65	C	M	27	7.5YR2.5/3	N	FR	ST	-	Y	Y	-
MKU_224	3	C	65	75	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_224	4	R	75	80	-	D	95	-	-	-	-	-	-	N	-
MKU_225	1	Ah	0	30	C	M	27	7.5YR5/3	N	FR	SST	-	Y	Y	-
MKU_225	2	Bw	30	65	C	M	27	7.5YR2.5/3	N	FR	ST	-	Y	Y	-
MKU_225	3	C	65	75	-	-	-	-	-	-	-	-	-	-	Saprolite
MKU_225	4	R	75	80	-	D	95	-	-	-	-	-	-	N	-
MKU_226	1	Ap	0	30	C	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_226	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_227	1	Ap	0	30	C	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-
MKU_227	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_228	1	Ap	0	17	C	F	3	10YR3/2	N	VFR	VST	-	Y	Y	-
MKU_228	2	ACi	17	100	C	C	10	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_229	1	Ap	0	30	C	M	27	7.5YR4/4	N	FR	SST	-	Y	Y	-
MKU_229	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_230	1	Ap	0	30	SCL	M	27	10YR3/2	N	FR	SST	-	N	Y	-
MKU_230	2	B1	30	100	C	C	10	10YR2/2	N	FR	VST	-	Y	Y	-
MKU_231	1	-	0	20	SL	-	-	-	-	-	-	-	-	-	-
MKU_231	2	R	20	25	-	D	95	-	-	-	-	-	-	N	-
MKU_232	1	-	0	35	SiL	-	-	-	-	-	-	-	-	-	-
MKU_232	2	R	35	40	-	D	95	-	-	-	-	-	-	N	-
MKU_233	1	-	0	50	SL	-	-	-	-	-	-	-	-	-	-
MKU_233	2	-	50	105	L	-	-	-	-	-	-	-	-	-	-
MKU_234	1	-	0	40	SC	-	-	-	-	-	-	-	-	-	-
MKU_234	2	R	40	45	-	D	95	-	-	-	-	-	-	N	-
MKU_235	1	-	0	30	LS	-	-	-	-	-	-	-	-	-	-
MKU_235	2	R	30	35	-	D	95	-	-	-	-	-	-	N	-
MKU_236	1	-	0	44	SL	-	-	-	-	-	-	-	-	-	-
MKU_236	2	-	44	120	SiCL	-	-	-	-	-	-	-	-	-	-
MKU_237	1	-	0	55	SL	-	-	-	-	-	-	-	-	-	-
MKU_237	2	-	55	90	L	-	-	-	-	-	-	-	-	-	-
MKU_238	1	-	0	32	SC	-	-	-	-	-	-	-	-	-	-
MKU_238	2	-	32	53	SC	-	-	-	-	-	-	-	-	-	-
MKU_238	3	R	53	58	-	D	95	-	-	-	-	-	-	-	-
MKU_238	4	R	58	63	-	D	95	-	-	-	-	-	-	N	-
MKU_239	1	-	0	18	SC	-	-	-	-	-	-	-	-	-	-
MKU_239	2	-	18	45	SC	-	-	-	-	-	-	-	-	-	-
MKU_239	3	R	45	50	-	D	95	-	-	-	-	-	-	-	-
MKU_239	4	R	50	55	-	D	95	-	-	-	-	-	-	N	-
MKU_240	1	-	0	70	CL	-	-	-	-	-	-	-	-	-	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_240	2	R	70	75	-	D	95	-	-	-	-	-	-	N	-
MKU_241	1	-	0	15	SC	-	-	-	-	-	-	-	-	-	-
MKU_241	2	-	15	56	SiC	-	-	-	-	-	-	-	-	-	-
MKU_242	1	-	0	25	SCL	-	-	-	-	-	-	-	-	-	-
MKU_242	2	-	25	160	L	-	-	-	-	-	-	-	-	-	-
MKU_243	1	-	0	15	CL	-	-	-	-	-	-	-	-	-	-
MKU_243	2	R	15	20	-	D	95	-	-	-	-	-	-	N	-
MKU_244	1	-	0	80	SiL	-	-	-	-	-	-	-	-	-	-
MKU_244	2	-	80	105	L	-	-	-	-	-	-	-	-	-	-
MKU_245	1	-	0	35	SiC	-	-	-	-	-	-	-	-	-	-
MKU_245	2	-	35	130	SiC	-	-	-	-	-	-	-	-	-	-
MKU_246	1	-	0	53	L	-	-	-	-	-	-	-	-	-	-
MKU_246	2	-	53	84	SiL	-	-	-	-	-	-	-	-	-	-
MKU_246	3	R	84	89	-	D	95	-	-	-	-	-	-	-	-
MKU_246	4	R	89	94	-	D	95	-	-	-	-	-	-	N	-
MKU_247	1	-	0	20	-	-	-	-	-	-	-	-	-	-	-
MKU_247	2	R	20	25	-	D	95	-	-	-	-	-	-	-	-
MKU_247	3	R	25	30	-	D	95	-	-	-	-	-	-	N	-
MKU_248	1	-	0	15	SC	-	-	-	-	-	-	-	-	-	-
MKU_248	2	-	15	56	SC	-	-	-	-	-	-	-	-	-	-
MKU_248	3	R	56	71	-	D	95	-	-	-	-	-	-	-	-
MKU_248	4	R	71	76	-	D	95	-	-	-	-	-	-	N	-
MKU_249	1	-	0	40	SL	-	-	-	-	-	-	-	-	-	-
MKU_249	2	R	40	45	-	D	95	-	-	-	-	-	-	-	-
MKU_249	3	R	45	50	-	D	95	-	-	-	-	-	-	N	-
MKU_250	1	-	0	28	L	-	-	-	-	-	-	-	-	-	-
MKU_250	2	R	28	33	SC	D	95	-	-	-	-	-	-	-	-
MKU_250	3	R	33	38	-	D	95	-	-	-	-	-	-	N	-
MKU_251	1	-	0	68	L	-	-	-	-	-	-	-	-	-	-
MKU_251	2	-	68	78	SC	-	-	-	-	-	-	-	-	-	-
MKU_251	3	R	78	83	-	D	95	-	-	-	-	-	-	N	-
MKU_252	1	-	0	20	SiC	-	-	-	-	-	-	-	-	-	-

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_252	2	-	20	65	SiL	-	-	-	-	-	-	-	-	-	
MKU_252	3	R	65	70	-	D	95	-	-	-	-	-	N	-	
MKU_253	1	-	0	40	SiCL	-	-	-	-	-	-	-	-	-	
MKU_253	2	-	40	140	C	-	-	-	-	-	-	-	-	-	
MKU_254	1	-	0	40	SiL	-	-	-	-	-	-	-	-	-	
MKU_254	2	R	40	45	-	D	95	-	-	-	-	-	N	-	
MKU_255	1	-	0	50	SC	-	-	-	-	-	-	-	-	-	
MKU_256	1	-	0	20	LfS	-	-	-	-	-	-	-	-	-	
MKU_256	2	R	20	25	-	D	95	-	-	-	-	-	N	-	
MKU_257	1	-	0	25	SiCL	-	-	-	-	-	-	-	-	-	
MKU_257	2	R	25	30	-	D	95	-	-	-	-	-	N	-	
MKU_258	1	-	0	10	SC	-	-	-	-	-	-	-	-	-	
MKU_258	2	R	10	15	-	D	95	-	-	-	-	-	N	-	
MKU_259	1	-	0	10	SC	-	-	-	-	-	-	-	-	-	
MKU_259	2	R	10	15	-	D	95	-	-	-	-	-	N	-	
MKU_260	1	-	0	10	SC	-	-	-	-	-	-	-	-	-	
MKU_260	2	R	10	15	-	D	95	-	-	-	-	-	N	-	
MKU_261	1	-	0	20	CL	-	-	-	-	-	-	-	-	-	
MKU_261	2	-	20	55	CL	-	-	-	-	-	-	-	-	-	
MKU_261	3	R	55	60	-	D	95	-	-	-	-	-	N	-	
MKU_262	1	-	0	10	CL	-	-	-	-	-	-	-	-	-	
MKU_262	2	-	10	35	C	-	-	-	-	-	-	-	-	-	
MKU_262	3	-	35	60	CL	-	-	-	-	-	-	-	-	-	
MKU_262	4	-	60	85	C	-	-	-	-	-	-	-	-	-	
MKU_262	5	-	85	130	C	-	-	-	-	-	-	-	-	-	
MKU_263	1	-	0	20	SiC	-	-	-	-	-	-	-	-	-	
MKU_263	2	-	20	135	C	-	-	-	-	-	-	-	-	-	
MKU_263	3	-	135	210	SiCL	-	-	-	-	-	-	-	-	-	
MKU_264	1	-	0	20	SiC	-	-	-	-	-	-	-	-	-	
MKU_264	2	-	20	95	C	-	-	-	-	-	-	-	-	-	
MKU_264	3	-	95	200	L	-	-	-	-	-	-	-	-	-	
MKU_265	1	-	0	8	C	-	-	-	-	-	-	-	-	-	

ProfileID	Layer Nr	Horizon	Up Depth, cm	Low Depth, cm	Field Texture	Coarse Fragments, v% (class)	Coarse Fragments Abundance, v%	Color Moist	Mottles Abundance	Consistency Moist	Stickyness (Consistency Wet)	Porosity, v% (class)	Compaction-Cementation, degree	Roots presence	Diagnostic
MKU_265	2	-	8	145	C	-	-	-	-	-	-	-	-	-	
MKU_266	1	-	0	20	L	-	-	-	-	-	-	-	-	-	
MKU_266	2	-	20	104	SiCL	-	-	-	-	-	-	-	-	-	
MKU_266	3	-	104	193	SiCL	-	-	-	-	-	-	-	-	-	
MKU_267	1	-	0	40	C	-	-	-	-	-	-	-	-	-	
MKU_267	2	-	40	90	C	-	-	-	-	-	-	-	-	-	
MKU_267	3	-	90	120	C	-	-	-	-	-	-	-	-	-	
MKU_268	1	-	0	27	SiC	-	-	-	-	-	-	-	-	-	
MKU_268	2	-	27	83	L	-	-	-	-	-	-	-	-	-	
MKU_268	3	-	83	115	L	-	-	-	-	-	-	-	-	-	
MKU_269	1	-	0	20	L	-	-	-	-	-	-	-	-	-	
MKU_269	2	-	20	40	L	-	-	-	-	-	-	-	-	-	
MKU_269	3	-	40	60	SL	-	-	-	-	-	-	-	-	-	
MKU_269	4	-	60	120	-	-	-	-	-	-	-	-	-	-	
MKU_269	5	-	120	165	C	-	-	-	-	-	-	-	-	-	
MKU_270	1	-	0	20	CL	-	-	-	-	-	-	-	-	-	
MKU_270	2	-	20	65	CL	-	-	-	-	-	-	-	-	-	
MKU_270	3	-	65	150	SiCL	-	-	-	-	-	-	-	-	-	
MKU_271	1	-	0	20	L	-	-	-	-	-	-	-	-	-	
MKU_271	2	-	20	70	SiCL	-	-	-	-	-	-	-	-	-	
MKU_271	3	-	70	130	SiCL	-	-	-	-	-	-	-	-	-	
MKU_271	4	-	130	200	L	-	-	-	-	-	-	-	-	-	

Annex 5a Geomorphology map legend

This map legend is also available as terrain data standardised according to as described by FAO, 1997.

Geomorphology	Description
A	ALLUVIAL LANDFORM GENESIS
Ab1	Basins and depressions with seasonal drainage deficiencies - Central highlands and Sidamo
Ab2	Basins and depressions with seasonal drainage deficiencies - Western highlands
Ac7	Alluvial /colluvial slopes and outwash fans - Welo
Af4c/v	Complexes of eroded residual landforms of low to moderate relief and interspersed fan deposits - Eastern highlands
Al1	Lacustrine and fluvio-lacustrine plains - Lake Tana & Abaya
Al3	Lacustrine and fluvio-lacustrine plains - Lake Awassa
As3	Seasonal swamps and marshes - Highlands and Gambela
Lake	Lake
R	RESIDUAL LANDFORM GENESIS
Rb2c	Dissected lowland plains and low plateaux - Cherher highlands
Rd2c	Undulating to rolling lowland plains and low plateaux - Negele and Jijiga
Rd4c	Undulating to rolling lowland plains and low plateaux - Eastern highlands
Rf1v	Undulating sideslopes and piedmont zones strongly influenced by culluvial processes but retaining distinct residual characteristics
Rf6v	Undulating sideslopes and piedmont zones strongly influenced by culluvial processes but retaining distinct residual characteristics
Rgc	Major river gorges, canyons and escarpments (may include Rmc etc.)
Rgg	Major river gorges, canyons and escarpments (may include Rmg, Rhg etc.)
Rgs	Major river gorges, canyons and escarpments (may include Rms etc.)
Rgv	Major river gorges, canyons and escarpments (may include Rmv, Rhv etc.)
Rh1v	High to mountainous relief hills - Central highlands
Rh2v	High to mountainous relief hills - Western highlands
Rh3v	High to mountainous relief hills - Northeastern escarpment
Rh4v	High to mountainous relief hills - Northern highlands
Rhv/s	High to mountainous relief hills - Chercher highlands
Rjv	Minor river gorges and ravines
Rk2v	High plateaux with scattered moderate relief hills and substantial areas of seasonal marshland interspersed throughout

Geomorphology	Description
Rl1v	Low to moderate relief hills - Central highlands
Rl2m	Low to moderate relief hills - Northern highlands
Rl3v	Low to moderate relief hills - Northern highlands
Rl4v	Low to moderate relief hills - Northern escarpment
Rm1s	Moderate to high relief hills - Tigray
Rm1v	Moderate to high relief hills - Central highlands
Rm2c	Moderate to high relief hills - Eastern high lands and tigray
Rm2g	Moderate to high relief hills - Harer
Rm2v	Moderate to high relief hills - Western highlands
Rm3v	Moderate to high relief hills - Northern highlands
Rm7v	Moderate to high relief hills - Northern escarpment
Rmv/s	Moderate to high relief hills - Chercher highlands
Rn2g	Hilly plains comprised of undulating plains and low plateaux with a substantial proportion of low to moderate relief hills
Rp3v	Undulating high plateaux - Lake Tana
Rp4v	Undulating to rolling high plateaux - Jima and Ambo
Rpg	Undulating to rolling high plateaux - Harer
Rq2v	Hilly terrain of moderate to high relief with a substantial proportion of moderately sloping valleys interspersed throughout
Rs1v	Severly dissected sideslopes and piedmont zones - Central highlands
Rt1v	Moderately dissected sideslopes and piedmont zones - Central highlands
Rt2v	Moderately dissected sideslopes and piedmont zones - Western highlands
Ru2c	Flat to undulating lowland plains and low plateaux - Eastern highlands
Rw1g	Rolling to hilly plateaux - Harer
Rw1v	Rolling to hilly plateaux - Welega and Ilubabor
Rw2v	Rolling to hilly plateaux - Lake Tana
Rw3v	Rolling to hilly plateaux - Central highlands
Rw4v	Rolling to hilly plateaux - Northeastern escarpment
Rxc	Severely dissected plateaux with moderate relief hills- Welo
Ry1v	Undulating high plateaux with a substantial proportion of hills interspersed throughout - Western highlands
Ry5v	Undulating high plateaux with a substantial proportion of hills interspersed throughout - Central highlands
Ryv/s	Undulating high plateaux with a substantial proportion of hills interspersed throughout - Eastern highlands
S	STRUCTURAL LANDFORM GENESIS

Geomorphology	Description
Sh1v	High to mountainous relief parallel ridge and valley topography associated with extensive fault sets
Sh4v	High to mountainous relief parallel ridge and valley topography associated with extensive fault sets
Shc/g	High to mountainous relief parallel ridge and valley topography associated with extensive fault sets
Sm1v	Moderate to high relief parallel ridge and valley topography associated with extensive fault sets
Sm2v	Moderate to high relief parallel ridge and valley topography associated with extensive fault sets - Northern highlands
Sp1v	Steep faulted plateaux of the Ethiopian rift margin - Addis Ababa
Ssv	Steep faulted plain and low plateau complexes of the rift with numerous fault scraps, sags and associated vents, craters and other volcanic remnants
V	VOLCANIC LANDFORM GENESIS
Va2	Afro-alpine plateau summits - Fiche
Vh1	Degraded extinct central volcanoes, caldera remnants and associated forms of high to mountainous relief
Vj1	Moderately dissected sideslopes of extinct central volcanoes and other relic volcanic forms, often with small cone and vent remnants
Vp1	Undulating high plateaux formed predominantly on pyroclastic deposits - Central highlands
Vq1	High volcanic piedmonts and lava plateaux - Central highlands
Vq3	High volcanic piedmonts and lava plateaux - Debre Marcos
Vs1	Slightly dissected sideslopes and piedmonts of extinct central volcanoes and other related forms wi
Vx1	Steep severely dissected sideslopes if extinct central volcanoes and other relic volcanic forms, often with small vent and cone remnants
Vz3	Very large degraded extinct central volcanoes and volcanic complexes of dramatic mountainous relief

Annex 5b Soil – landscape map legend

The map legend code consists of a code for geomorphology (see annex 5a for the dictionary), slope class (1-9) and the most probable soil type classified according to WRB (2006) including both the RSG (Reference Soil Group) and prefix qualifier. Also presented are the soil types predicted as second and third most probable as well as three qualifiers predicted separately as the most probable (including diagnostic qualifiers, prefixes and suffixes).

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Ab1_1NTha	Ab1	0 - 0.5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Vertic	Haplic	Nitic
Ab1_1VRgl	Ab1	0 - 0.5 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Nitisols	Vertic	Haplic	Gleyic
Ab1_1VRha	Ab1	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Nitic
Ab1_2FLgl.cc	Ab1	0.5 - 2 %	FLgl.cc	Gleyic Calcic Fluvisols	Haplic Vertisols	Haplic Cambisols	Eutric	Fluvic	Gleyic
Ab1_2FLha	Ab1	0.5 - 2 %	FLha	Haplic Fluvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Fluvic	Vertic
Ab1_2NTha	Ab1	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Vertic	Nitic
Ab1_2NTlv	Ab1	0.5 - 2 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Vertic	Nitic	Haplic
Ab1_2VRha	Ab1	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Haplic	Vertic	Luvic
Ab1_3FLgl.cc	Ab1	2 - 5 %	FLgl.cc	Gleyic Calcic Fluvisols	Haplic Vertisols	Haplic Cambisols	Eutric	Fluvic	Calcic
Ab1_3LPha	Ab1	2 - 5 %	LPha	Haplic Leptosols	Haplic Nitisols	Luvic Nitisols	Haplic	Luvic	Nitic
Ab1_3NTha	Ab1	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Nitic	Vertic
Ab1_3NTlv	Ab1	2 - 5 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Nitic	Luvic	Haplic
Ab1_3VRgl	Ab1	2 - 5 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Luvic Nitisols	Vertic	Haplic	Nitic
Ab1_3VRha	Ab1	2 - 5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Cambisols	Eutric	Vertic	Haplic
Ab1_4CMha	Ab1	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Eutric	Haplic	Cambic
Ab1_4LPha	Ab1	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Eutric	Haplic	Leptic
Ab1_4NTha	Ab1	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Nitic	Vertic
Ab1_4VRha	Ab1	5 - 10 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Eutric	Haplic	Vertic
Ab1_5CMha	Ab1	10 - 15 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Haplic	Cambic
Ab1_5LPha	Ab1	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Eutric	Haplic	Leptic
Ab1_5VRha	Ab1	10 - 15 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Eutric	Haplic	Vertic
Ab1_6LPha	Ab1	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Ab1_6LPli	Ab1	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Lithic	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Ab1_6VRha	Ab1	15 - 30 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Cambisols	Eutric	Haplic	Vertic
Ab1_7LPha	Ab1	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Cambisols	Leptic	Haplic	Eutric
Ab2_1VRha	Ab2	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Nitic
Ab2_2LVvr	Ab2	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Nitisols	Vertic	Haplic	Luvic
Ab2_2VRha	Ab2	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Nitic
Ab2_3LVvr	Ab2	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Vertic	Haplic	Luvic
Ab2_3NTha	Ab2	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Ab2_3VRha	Ab2	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Nitic
Ab2_4LVvr	Ab2	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Haplic	Vertic	Luvic
Ab2_4NTha	Ab2	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Ab2_4VRha	Ab2	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Ab2_5LVvr	Ab2	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Haplic	Vertic	Nitic
Ab2_5NTha	Ab2	10 - 15 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Ab2_5NTha	Ab2	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Ab2_5RGha	Ab2	10 - 15 %	RGha	Haplic Regosols	Vertic Luvisols	Haplic Vertisols	Haplic	Leptic	Eutric
Ab2_6LVvr	Ab2	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Vertic
Ab2_6NTha	Ab2	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Ab2_6RGha	Ab2	15 - 30 %	RGha	Haplic Regosols	Vertic Luvisols	Haplic Nitisols	Haplic	Leptic	Eutric
Ab2_7NTha	Ab2	30 - 45 %	NTha	Haplic Nitisols	Haplic Regosols	Vertic Luvisols	Haplic	Leptic	Nitic
Ac7_1FLgl.cc	Ac7	0 - 0.5 %	FLgl.cc	Gleyic Calcic Fluvisols	Haplic Vertisols	Haplic Fluvisols	Fluvic	Eutric	Calcic
Ac7_1FLha	Ac7	0 - 0.5 %	FLha	Haplic Fluvisols	Haplic Vertisols	Calcic Vertisols	Fluvic	Haplic	Eutric
Ac7_1VRha	Ac7	0 - 0.5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Fluvisols	Eutric	Vertic	Haplic
Ac7_2CMha	Ac7	0.5 - 2 %	CMha	Haplic Cambisols	Haplic Vertisols	Calcic Vertisols	Haplic	Vertic	Calcaric
Ac7_2VRcc	Ac7	0.5 - 2 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Fluvisols	Vertic	Eutric	Calcic
Ac7_2VRha	Ac7	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Cambisols	Vertic	Eutric	Haplic
Ac7_3CMha	Ac7	2 - 5 %	CMha	Haplic Cambisols	Haplic Vertisols	Calcic Vertisols	Haplic	Vertic	Eutric
Ac7_3LPha	Ac7	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Vertic	Eutric
Ac7_3VRcc	Ac7	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Cambisols	Vertic	Eutric	Calcic
Ac7_3VRha	Ac7	2 - 5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Cambisols	Vertic	Eutric	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Ac7_4CMha	Ac7	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Haplic	Vertic	Eutric
Ac7_4LPha	Ac7	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Eutric	Leptic
Ac7_4VRcc	Ac7	5 - 10 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Cambisols	Vertic	Eutric	Haplic
Ac7_4VRha	Ac7	5 - 10 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Haplic	Vertic	Eutric
Ac7_5CMha	Ac7	10 - 15 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Haplic	Eutric	Vertic
Ac7_5LPha	Ac7	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Ac7_6CMha	Ac7	15 - 30 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Leptic	Vertic	Eutric
Ac7_6LPha	Ac7	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Ac7_7LPha	Ac7	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Af4c/v_3CMha	Af4c/v	2 - 5 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Cambic	Vertic	Eutric
Af4c/v_4CMha	Af4c/v	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Leptic	Vertic	Cambic
Al1_1VRha	Al1	0 - 0.5 %	VRha	Haplic Vertisols	Gleyic Vertisols	Haplic Fluvisols	Vertic	Haplic	Eutric
Al1_4LPli	Al1	5 - 10 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Haplic	Leptic	Vertic
Al1_4LVha	Al1	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Vertic	Argic
Al1_4VRha	Al1	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Eutric
Al1_6LPha	Al1	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Cambisols	Leptic	Haplic	Vertic
Al3_6NTha	Al3	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Vertic	Nitic
Al3_7NTha	Al3	30 - 45 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Argic	Rhodic
As3_1VRha	As3	0 - 0.5 %	VRha	Haplic Vertisols	Gleyic Vertisols	Calcic Vertisols	Vertic	Haplic	Eutric
As3_2NTha	As3	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Vertic	Haplic	Nitic
As3_2VRha	As3	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Luvic
As3_3NTha	As3	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Nitic	Luvic
As3_3NTlv	As3	2 - 5 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Haplic	Nitic	Vertic
As3_3VRha	As3	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Luvic
As3_4NTha	As3	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Luvic	Nitic
As3_4NTlv	As3	5 - 10 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Nitic
As3_4VRha	As3	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Haplic	Vertic	Luvic
As3_5LPli	As3	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Luvic
Lake	Lake	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rb2c_3LPli	Rb2c	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Vertic
Rb2c_3VRha	Rb2c	2 - 5 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Vertic	Haplic	Eutric
Rb2c_4LPli	Rb2c	5 - 10 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rb2c_4RGha	Rb2c	5 - 10 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Eutric	Haplic	Vertic
Rb2c_4VRha	Rb2c	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Cambisols	Haplic	Vertic	Eutric
Rb2c_5LPli	Rb2c	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Leptic	Lithic
Rb2c_5LVvr	Rb2c	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rb2c_5VRha	Rb2c	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rb2c_6LPli	Rb2c	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Leptic	Haplic	Lithic
Rb2c_6LVvr	Rb2c	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rb2c_6VRha	Rb2c	15 - 30 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Vertic	Haplic	Leptic
Rb2c_7LPli	Rb2c	30 - 45 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Leptic	Haplic	Lithic
Rb2c_7LVvr	Rb2c	30 - 45 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Leptic	Vertic	Haplic
Rb2c_7VRha	Rb2c	30 - 45 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Leptic	Vertic	Haplic
Rd2c_3LPli	Rd2c	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Leptic
Rd2c_3VRha	Rd2c	2 - 5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Regosols	Haplic	Vertic	Eutric
Rd2c_4LPli	Rd2c	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Leptic
Rd2c_4VRha	Rd2c	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Haplic	Vertic	Eutric
Rd2c_5LPli	Rd2c	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Leptic
Rd2c_6LPli	Rd2c	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Lithic	Haplic
Rd2c_7LPli	Rd2c	30 - 45 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Lithic	Haplic
Rd4c_3LPli	Rd4c	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Vertic	Haplic	Eutric
Rd4c_5LPli	Rd4c	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Leptic	Vertic	Haplic
Rf1v_1NTha	Rf1v	0 - 0.5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Nitic	Vertic	Haplic
Rf1v_1VRha	Rf1v	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Nitic
Rf1v_2NTha	Rf1v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Nitic	Vertic	Haplic
Rf1v_2NTlv	Rf1v	0.5 - 2 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Nitic	Vertic	Luvic
Rf1v_2VRgl	Rf1v	0.5 - 2 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Nitisols	Vertic	Nitic	Gleyic
Rf1v_2VRha	Rf1v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Nitic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rf1v_3LPli	Rf1v	2 - 5 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Luvic	Argic	Haplic
Rf1v_3LVha	Rf1v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Haplic	Argic
Rf1v_3LVni	Rf1v	2 - 5 %	LVni	Nitic Luvisols	Haplic Luvisols	Haplic Vertisols	Argic	Luvic	Haplic
Rf1v_3NTha	Rf1v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Nitic	Haplic	Vertic
Rf1v_3NTlv	Rf1v	2 - 5 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Luvic	Nitic	Vertic
Rf1v_3VRha	Rf1v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Vertic	Haplic	Luvic
Rf1v_4LPli	Rf1v	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Vertic
Rf1v_4LVha	Rf1v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Luvic	Haplic	Argic
Rf1v_4NTha	Rf1v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Lithic Leptosols	Haplic	Nitic	Vertic
Rf1v_4NTlv	Rf1v	5 - 10 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Luvic	Nitic	Haplic
Rf1v_4VRha	Rf1v	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rf1v_5LPli	Rf1v	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Luvic
Rf1v_5LVha	Rf1v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Luvic	Haplic	Argic
Rf1v_5NTha	Rf1v	10 - 15 %	NTha	Haplic Nitisols	Haplic Vertisols	Lithic Leptosols	Haplic	Leptic	Nitic
Rf1v_5VRha	Rf1v	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Nitisols	Vertic	Haplic	Luvic
Rf1v_6LPha	Rf1v	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Luvic
Rf1v_6LPli	Rf1v	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Luvic
Rf1v_6LVha	Rf1v	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Luvic	Argic
Rf1v_6NTha	Rf1v	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rf1v_7LPli	Rf1v	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Nitisols	Leptic	Haplic	Argic
Rf6v_1VRha	Rf6v	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Cutanic Luvisols	Vertic	Haplic	Eutric
Rf6v_2VRha	Rf6v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Alic Nitisols	Vertic	Haplic	Nitic
Rf6v_3NTal	Rf6v	2 - 5 %	NTal	Alic Nitisols	Haplic Vertisols	Haplic Nitisols	Nitic	Haplic	Dystric
Rf6v_3NTha	Rf6v	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Vertic	Haplic	Nitic
Rf6v_3NTlv	Rf6v	2 - 5 %	NTlv	Luvic Nitisols	Alic Nitisols	Haplic Vertisols	Nitic	Eutric	Luvic
Rf6v_3VRha	Rf6v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Alic Nitisols	Haplic	Vertic	Nitic
Rf6v_4LVct	Rf6v	5 - 10 %	LVct	Cutanic Luvisols	Haplic Vertisols	Haplic Nitisols	Eutric	Haplic	Vertic
Rf6v_4NTal	Rf6v	5 - 10 %	NTal	Alic Nitisols	Haplic Nitisols	Haplic Vertisols	Nitic	Dystric	Haplic
Rf6v_4NTha	Rf6v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Alic Nitisols	Haplic	Nitic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rf6v_4VRha	Rf6v	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Alic Nitisols	Haplic	Vertic	Nitic
Rf6v_5LVct	Rf6v	10 - 15 %	LVct	Cutanic Luvisols	Alic Nitisols	Haplic Nitisols	Dystric	Haplic	Luvic
Rf6v_5NTal	Rf6v	10 - 15 %	NTal	Alic Nitisols	Haplic Nitisols	Haplic Vertisols	Dystric	Nitic	Haplic
Rf6v_5NTha	Rf6v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rf6v_6LVle	Rf6v	15 - 30 %	LVle	Leptic Luvisols	Haplic Nitisols	Alic Nitisols	Dystric	Haplic	Nitic
Rf6v_6NTal	Rf6v	15 - 30 %	NTal	Alic Nitisols	Haplic Nitisols	Haplic Regosols	Dystric	Nitic	Haplic
Rf6v_6NTha	Rf6v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rf6v_7NTal	Rf6v	30 - 45 %	NTal	Alic Nitisols	Haplic Nitisols	Lithic Leptosols	Leptic	Dystric	Nitic
Rgc_2RGha	Rgc	0.5 - 2 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rgc_2VRha	Rgc	0.5 - 2 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Haplic	Vertic	Eutric
Rgc_3CMha	Rgc	2 - 5 %	CMha	Haplic Cambisols	Lithic Leptosols	Haplic Vertisols	Leptic	Eutric	Vertic
Rgc_3LPli	Rgc	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Leptic	Eutric
Rgc_3NTha	Rgc	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rgc_3RGha	Rgc	2 - 5 %	RGha	Haplic Regosols	Haplic Vertisols	Lithic Leptosols	Haplic	Eutric	Vertic
Rgc_3VRha	Rgc	2 - 5 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Haplic	Vertic	Eutric
Rgc_3VRha	Rgc	2 - 5 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Vertic	Haplic	Eutric
Rgc_4CMha	Rgc	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Lithic Leptosols	Eutric	Vertic	Haplic
Rgc_4LPha	Rgc	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Vertic
Rgc_4LPli	Rgc	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Leptic
Rgc_4LVct	Rgc	5 - 10 %	LVct	Cutanic Luvisols	Lithic Leptosols	Haplic Vertisols	Eutric	Luvic	Argic
Rgc_4NTha	Rgc	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Leptic
Rgc_4RGha	Rgc	5 - 10 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rgc_4VRha	Rgc	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Vertic	Haplic	Eutric
Rgc_5ARha	Rgc	10 - 15 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Arenic
Rgc_5LPha	Rgc	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgc_5LPli	Rgc	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Leptic	Lithic
Rgc_5LVvr	Rgc	10 - 15 %	LVvr	Vertic Luvisols	Lithic Leptosols	Haplic Vertisols	Vertic	Haplic	Luvic
Rgc_5NTha	Rgc	10 - 15 %	NTha	Haplic Nitisols	Haplic Vertisols	Lithic Leptosols	Haplic	Vertic	Leptic
Rgc_5NTlv	Rgc	10 - 15 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Leptosols	Haplic	Vertic	Luvic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rgc_5RGha	Rgc	10 - 15 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rgc_5VRha	Rgc	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Vertic	Haplic	Leptic
Rgc_6CLvr	Rgc	15 - 30 %	CLvr	Vertic Calcisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Leptic
Rgc_6CMvr	Rgc	15 - 30 %	CMvr	Vertic Cambisols	Lithic Leptosols	Haplic Regosols	Vertic	Haplic	Leptic
Rgc_6LPha	Rgc	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Eutric	Haplic
Rgc_6LPha	Rgc	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgc_6LPli	Rgc	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Leptic	Haplic	Lithic
Rgc_6LVvr	Rgc	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rgc_6NTha	Rgc	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Vertic
Rgc_6NTlv	Rgc	15 - 30 %	NTlv	Luvic Nitisols	Lithic Leptosols	Haplic Vertisols	Vertic	Haplic	Luvic
Rgc_6RGha	Rgc	15 - 30 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Cambisols	Haplic	Eutric	Leptic
Rgc_6VRha	Rgc	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Vertic	Haplic	Leptic
Rgc_7LPha	Rgc	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgc_7LPli	Rgc	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgc_7VRha	Rgc	30 - 45 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Leptic	Haplic	Vertic
Rgc_8LPha	Rgc	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgc_8LPli	Rgc	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgc_8VRha	Rgc	45 - 60 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Leptic	Vertic	Haplic
Rgc_9LPli	Rgc	> 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgg_2LPli	Rgg	0.5 - 2 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Nitisols	Leptic	Lithic	Argic
Rgg_3LPli	Rgg	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Nitisols	Leptic	Lithic	Nitic
Rgg_4LPli	Rgg	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Nitisols	Leptic	Lithic	Haplic
Rgg_4NTha	Rgg	5 - 10 %	NTha	Haplic Nitisols	Luvic Nitisols	Lithic Leptosols	Leptic	Nitic	Haplic
Rgg_4VRha	Rgg	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Haplic	Vertic	Argic
Rgg_5LPli	Rgg	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Nitisols	Leptic	Lithic	Argic
Rgg_5NTha	Rgg	10 - 15 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Nitic
Rgg_5VRha	Rgg	10 - 15 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Haplic	Vertic	Leptic
Rgg_6LPli	Rgg	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Lithic	Argic
Rgg_6NTha	Rgg	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Nitic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rgg_7LPli	Rgg	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Lithic	Argic
Rgg_8LPli	Rgg	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Lithic	Argic
Rgs_3CMha	Rgs	2 - 5 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Regosols	Eutric	Haplic	Leptic
Rgs_3LPli	Rgs	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Leptic
Rgs_3VRha	Rgs	2 - 5 %	VRha	Haplic Vertisols	Haplic Cambisols	Lithic Leptosols	Eutric	Haplic	Vertic
Rgs_4CMha	Rgs	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Regosols	Eutric	Haplic	Cambic
Rgs_4LPha	Rgs	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Eutric	Haplic	Leptic
Rgs_4LPli	Rgs	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Eutric	Haplic	Leptic
Rgs_4LVct	Rgs	5 - 10 %	LVct	Cutanic Luvisols	Haplic Nitisols	Lithic Leptosols	Eutric	Haplic	Leptic
Rgs_4VRha	Rgs	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Cambisols	Eutric	Haplic	Vertic
Rgs_5CMha	Rgs	10 - 15 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Haplic	Leptic
Rgs_5LPha	Rgs	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Eutric	Leptic	Haplic
Rgs_5LPli	Rgs	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Cambisols	Eutric	Haplic	Leptic
Rgs_5NTha	Rgs	10 - 15 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Regosols	Haplic	Eutric	Leptic
Rgs_5VRha	Rgs	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Eutric	Haplic	Leptic
Rgs_6CMha	Rgs	15 - 30 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Haplic	Leptic
Rgs_6LPha	Rgs	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rgs_6LPli	Rgs	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Regosols	Leptic	Eutric	Haplic
Rgs_6LVct	Rgs	15 - 30 %	LVct	Cutanic Luvisols	Lithic Leptosols	Haplic Nitisols	Eutric	Haplic	Argic
Rgs_6NTha	Rgs	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Cutanic Luvisols	Haplic	Eutric	Leptic
Rgs_6VRha	Rgs	15 - 30 %	VRha	Haplic Vertisols	Haplic Cambisols	Lithic Leptosols	Eutric	Haplic	Leptic
Rgs_7LPha	Rgs	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rgs_7LPli	Rgs	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Eutric	Haplic
Rgs_8LPha	Rgs	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rgv_2LVha	Rgv	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rgv_2VRha	Rgv	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Eutric
Rgv_3CMha	Rgv	2 - 5 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Haplic	Eutric	Vertic
Rgv_3LVha	Rgv	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rgv_3LVvr	Rgv	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rgv_3NTha	Rgv	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Argic
Rgv_3VRha	Rgv	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Luvic
Rgv_4LPha	Rgv	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Eutric	Leptic
Rgv_4LPli	Rgv	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Vertic
Rgv_4LVha	Rgv	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rgv_4LVvr	Rgv	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Vertic	Haplic	Argic
Rgv_4NTha	Rgv	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Luvic
Rgv_4VRha	Rgv	5 - 10 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Nitisols	Vertic	Haplic	Argic
Rgv_5CMha	Rgv	10 - 15 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Haplic	Cambic	Eutric
Rgv_5LPha	Rgv	10 - 15 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Leptic	Haplic	Vertic
Rgv_5LPli	Rgv	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Vertic
Rgv_5LVha	Rgv	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rgv_5LVvr	Rgv	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Vertic	Luvic	Argic
Rgv_5NTha	Rgv	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Rgv_5VRha	Rgv	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Nitisols	Leptic	Vertic	Haplic
Rgv_6CMha	Rgv	15 - 30 %	CMha	Haplic Cambisols	Haplic Luvisols	Haplic Nitisols	Vertic	Argic	Luvic
Rgv_6LPha	Rgv	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rgv_6LPli	Rgv	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgv_6LPskh	Rgv	15 - 30 %	LPskh	Hyperskeletic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Vertic
Rgv_6LVha	Rgv	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Rgv_6LVvr	Rgv	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Leptosols	Vertic	Luvic	Argic
Rgv_6NTha	Rgv	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Leptosols	Leptic	Haplic	Vertic
Rgv_6VRha	Rgv	15 - 30 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Leptosols	Leptic	Vertic	Haplic
Rgv_7LPha	Rgv	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rgv_7LPli	Rgv	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Argic
Rgv_7LVha	Rgv	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Leptic
Rgv_7LVvr	Rgv	30 - 45 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Leptosols	Argic	Luvic	Leptic
Rgv_7NTha	Rgv	30 - 45 %	NTha	Haplic Nitisols	Haplic Leptosols	Vertic Luvisols	Leptic	Haplic	Vertic
Rgv_8LPha	Rgv	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rgv_8LPli	Rgv	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Lithic
Rgv_8NTha	Rgv	45 - 60 %	NTha	Haplic Nitisols	Haplic Leptosols	Vertic Luvisols	Leptic	Haplic	Vertic
Rgv_9LPha	Rgv	> 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Lithic
Rh1v_3NTal	Rh1v	2 - 5 %	NTal	Alic Nitisols	Haplic Vertisols	Haplic Nitisols	Nitic	Haplic	Dystric
Rh1v_4LVvr	Rh1v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rh1v_4NTal	Rh1v	5 - 10 %	NTal	Alic Nitisols	Haplic Nitisols	Haplic Vertisols	Nitic	Dystric	Haplic
Rh1v_4NTha	Rh1v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Alic Nitisols	Nitic	Haplic	Argic
Rh1v_5LVct	Rh1v	10 - 15 %	LVct	Cutanic Luvisols	Haplic Nitisols	Haplic Luvisols	Luvic	Argic	Dystric
Rh1v_5LVni	Rh1v	10 - 15 %	LVni	Nitic Luvisols	Haplic Nitisols	Haplic Luvisols	Luvic	Argic	Dystric
Rh1v_5NTal	Rh1v	10 - 15 %	NTal	Alic Nitisols	Haplic Nitisols	Haplic Regosols	Nitic	Dystric	Haplic
Rh1v_5NTha	Rh1v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Alic Nitisols	Nitic	Luvic	Argic
Rh1v_5RGha	Rh1v	10 - 15 %	RGha	Haplic Regosols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Nitic
Rh1v_6LPli	Rh1v	15 - 30 %	LPli	Lithic Leptosols	Alic Nitisols	Haplic Nitisols	Nitic	Leptic	Luvic
Rh1v_6LVha	Rh1v	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rh1v_6LVni	Rh1v	15 - 30 %	LVni	Nitic Luvisols	Haplic Luvisols	Vertic Luvisols	Luvic	Argic	Dystric
Rh1v_6LVvr	Rh1v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Luvic	Argic	Haplic
Rh1v_6NTal	Rh1v	15 - 30 %	NTal	Alic Nitisols	Haplic Nitisols	Haplic Luvisols	Nitic	Luvic	Argic
Rh1v_6NTha	Rh1v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Nitic	Argic
Rh1v_7LVha	Rh1v	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Leptic
Rh1v_7LVni	Rh1v	30 - 45 %	LVni	Nitic Luvisols	Haplic Luvisols	Vertic Luvisols	Luvic	Argic	Dystric
Rh1v_7LVvr	Rh1v	30 - 45 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Luvic	Argic	Leptic
Rh1v_7NTal	Rh1v	30 - 45 %	NTal	Alic Nitisols	Haplic Nitisols	Vertic Luvisols	Luvic	Leptic	Argic
Rh1v_7NTha	Rh1v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Argic	Leptic
Rh1v_8LVha	Rh1v	45 - 60 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Leptic	Luvic	Argic
Rh1v_8LVvr	Rh1v	45 - 60 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Leptic	Luvic	Argic
Rh2v_2ALha	Rh2v	0.5 - 2 %	ALha	Haplic Alisols	Vertic Luvisols	Haplic Luvisols	Argic	Haplic	Luvic
Rh2v_2ANum	Rh2v	0.5 - 2 %	ANum	Umbric Andosols	Haplic Luvisols	Vertic Luvisols	Argic	Luvic	Andic
Rh2v_2LVha	Rh2v	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Rh2v_2LVvr	Rh2v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Haplic	Luvic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rh2v_2NTha	Rh2v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Leptic	Vertic	Haplic
Rh2v_2NTha	Rh2v	0.5 - 2 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Nitic	Haplic	Rhodic
Rh2v_3ALha	Rh2v	2 - 5 %	ALha	Haplic Alisols	Vertic Luvisols	Haplic Luvisols	Argic	Haplic	Luvic
Rh2v_3ANum	Rh2v	2 - 5 %	ANum	Umbric Andosols	Haplic Luvisols	Vertic Luvisols	Argic	Luvic	Andic
Rh2v_3LPha	Rh2v	2 - 5 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Haplic	Nitic	Rhodic
Rh2v_3LVha	Rh2v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Rh2v_3LVvr	Rh2v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Rh2v_3NTha	Rh2v	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Nitic	Haplic	Vertic
Rh2v_4ALha	Rh2v	5 - 10 %	ALha	Haplic Alisols	Vertic Luvisols	Haplic Luvisols	Argic	Haplic	Luvic
Rh2v_4ANum	Rh2v	5 - 10 %	ANum	Umbric Andosols	Haplic Luvisols	Vertic Luvisols	Argic	Luvic	Andic
Rh2v_4LPha	Rh2v	5 - 10 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Haplic	Nitic	Vertic
Rh2v_4LVha	Rh2v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rh2v_4LVvr	Rh2v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Rh2v_4NTha	Rh2v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Nitic	Haplic	Vertic
Rh2v_5ALha	Rh2v	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Rh2v_5ANum	Rh2v	10 - 15 %	ANum	Umbric Andosols	Haplic Luvisols	Vertic Luvisols	Argic	Luvic	Andic
Rh2v_5LPha	Rh2v	10 - 15 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Leptic
Rh2v_5LVha	Rh2v	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rh2v_5LVvr	Rh2v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Rh2v_5NTha	Rh2v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Nitic	Haplic	Vertic
Rh2v_6ALha	Rh2v	15 - 30 %	ALha	Haplic Alisols	Umbric Andosols	Haplic Luvisols	Argic	Haplic	Andic
Rh2v_6ANum	Rh2v	15 - 30 %	ANum	Umbric Andosols	Haplic Luvisols	Vertic Luvisols	Argic	Luvic	Andic
Rh2v_6LPha	Rh2v	15 - 30 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Leptic	Haplic	Vertic
Rh2v_6LPli	Rh2v	15 - 30 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Leptosols	Leptic	Haplic	Nitic
Rh2v_6LVha	Rh2v	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rh2v_6LVvr	Rh2v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Rh2v_6NTha	Rh2v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Nitic	Vertic
Rh2v_7ANum	Rh2v	30 - 45 %	ANum	Umbric Andosols	Vertic Luvisols	Haplic Luvisols	Argic	Luvic	Andic
Rh2v_7LPha	Rh2v	30 - 45 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Leptic	Haplic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rh2v_7LPli	Rh2v	30 - 45 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Leptosols	Leptic	Haplic	Nitic
Rh2v_7LVha	Rh2v	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Leptic
Rh2v_7LVvr	Rh2v	30 - 45 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Leptic	Argic	Haplic
Rh2v_7NTha	Rh2v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Leptosols	Leptic	Haplic	Nitic
Rh2v_8ANum	Rh2v	45 - 60 %	ANum	Umbric Andosols	Vertic Luvisols	Haplic Luvisols	Leptic	Argic	Luvic
Rh2v_8LPha	Rh2v	45 - 60 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Leptic	Haplic	Vertic
Rh2v_8LVha	Rh2v	45 - 60 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Leptosols	Leptic	Argic	Luvic
Rh2v_8LVvr	Rh2v	45 - 60 %	LVvr	Vertic Luvisols	Haplic Leptosols	Haplic Luvisols	Leptic	Luvic	Argic
Rh2v_8NTha	Rh2v	45 - 60 %	NTha	Haplic Nitisols	Haplic Leptosols	Vertic Luvisols	Leptic	Haplic	Nitic
Rh2v_9LPha	Rh2v	> 60 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Leptic	Haplic	Luvic
Rh2v_9NTha	Rh2v	> 60 %	NTha	Haplic Nitisols	Haplic Leptosols	Vertic Luvisols	Leptic	Haplic	Argic
Rh3v_2CMgln	Rh3v	0.5 - 2 %	CMgln	Endogleyic Cambisols	Haplic Vertisols	Vertic Cambisols	Eutric	Cambic	Vertic
Rh3v_2VRha	Rh3v	0.5 - 2 %	VRha	Haplic Vertisols	Vertic Cambisols	Haplic Cambisols	Eutric	Vertic	Haplic
Rh3v_3CMvr	Rh3v	2 - 5 %	CMvr	Vertic Cambisols	Haplic Vertisols	Calcic Vertisols	Vertic	Cambic	Eutric
Rh3v_3LPha	Rh3v	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Leptic	Eutric
Rh3v_3LPha	Rh3v	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Vertic	Eutric
Rh3v_3VRcc	Rh3v	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Leptosols	Vertic	Eutric	Haplic
Rh3v_3VRha	Rh3v	2 - 5 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Cambisols	Eutric	Vertic	Haplic
Rh3v_4CMha	Rh3v	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Eutric	Haplic	Cambic
Rh3v_4CMvr	Rh3v	5 - 10 %	CMvr	Vertic Cambisols	Haplic Leptosols	Calcic Vertisols	Vertic	Cambic	Eutric
Rh3v_4LPha	Rh3v	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Leptic	Eutric
Rh3v_4VRcc	Rh3v	5 - 10 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Leptosols	Vertic	Eutric	Calcic
Rh3v_4VRha	Rh3v	5 - 10 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Cambisols	Eutric	Vertic	Haplic
Rh3v_5CMha	Rh3v	10 - 15 %	CMha	Haplic Cambisols	Haplic Leptosols	Leptic Cambisols	Eutric	Cambic	Haplic
Rh3v_5CMle	Rh3v	10 - 15 %	CMle	Leptic Cambisols	Haplic Leptosols	Vertic Cambisols	Leptic	Eutric	Cambic
Rh3v_5CMvr	Rh3v	10 - 15 %	CMvr	Vertic Cambisols	Haplic Vertisols	Haplic Cambisols	Eutric	Cambic	Vertic
Rh3v_5LPha	Rh3v	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rh3v_5VRha	Rh3v	10 - 15 %	VRha	Haplic Vertisols	Haplic Leptosols	Vertic Cambisols	Eutric	Vertic	Haplic
Rh3v_6CMha	Rh3v	15 - 30 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Haplic	Cambic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rh3v_6CMvr	Rh3v	15 - 30 %	CMvr	Vertic Cambisols	Haplic Vertisols	Haplic Cambisols	Eutric	Vertic	Cambic
Rh3v_6LPha	Rh3v	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rh3v_6VRcc	Rh3v	15 - 30 %	VRcc	Calcic Vertisols	Haplic Leptosols	Haplic Vertisols	Eutric	Vertic	Calcic
Rh3v_6VRha	Rh3v	15 - 30 %	VRha	Haplic Vertisols	Haplic Leptosols	Vertic Cambisols	Eutric	Vertic	Haplic
Rh3v_7LPha	Rh3v	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rh3v_8LPha	Rh3v	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rh3v_9LPha	Rh3v	> 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rh4v_2NTha	Rh4v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Vertic
Rh4v_2VRha	Rh4v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Luvic	Argic
Rh4v_3LPli	Rh4v	2 - 5 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Haplic	Leptic	Luvic
Rh4v_3LVha	Rh4v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Argic	Luvic
Rh4v_3NTha	Rh4v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Luvic
Rh4v_3VRha	Rh4v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rh4v_4LPha	Rh4v	5 - 10 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rh4v_4LPli	Rh4v	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Nitisols	Haplic	Leptic	Luvic
Rh4v_4LVha	Rh4v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Argic	Luvic
Rh4v_4NTha	Rh4v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Leptic
Rh4v_4VRha	Rh4v	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rh4v_5LPha	Rh4v	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rh4v_5LPli	Rh4v	10 - 15 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Luvic
Rh4v_5LPskh	Rh4v	10 - 15 %	LPskh	Hyperskeletic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Vertic
Rh4v_5LVha	Rh4v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Argic	Luvic
Rh4v_5NTha	Rh4v	10 - 15 %	NTha	Haplic Nitisols	Haplic Vertisols	Lithic Leptosols	Haplic	Leptic	Vertic
Rh4v_5VRha	Rh4v	10 - 15 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Haplic	Leptic	Vertic
Rh4v_6LPha	Rh4v	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rh4v_6LPli	Rh4v	15 - 30 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Luvic
Rh4v_6LPskh	Rh4v	15 - 30 %	LPskh	Hyperskeletic Leptosols	Haplic Nitisols	Lithic Leptosols	Leptic	Haplic	Nitic
Rh4v_6LVha	Rh4v	15 - 30 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Argic	Luvic
Rh4v_6NTha	Rh4v	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rh4v_6VRha	Rh4v	15 - 30 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Leptic	Haplic	Vertic
Rh4v_7LPha	Rh4v	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Vertic
Rh4v_7LPli	Rh4v	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Nitisols	Leptic	Haplic	Argic
Rh4v_7NTha	Rh4v	30 - 45 %	NTha	Haplic Nitisols	Haplic Leptosols	Lithic Leptosols	Leptic	Haplic	Vertic
Rh4v_8LPha	Rh4v	45 - 60 %	LPha	Haplic Leptosols	Haplic Nitisols	Lithic Leptosols	Leptic	Haplic	Vertic
Rh4v_8LPha	Rh4v	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Luvic
Rh4v_9LPha	Rh4v	> 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Vertic
Rhv/s_3LVha	Rhv/s	2 - 5 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Haplic	Eutric	Argic
Rhv/s_3VRha	Rhv/s	2 - 5 %	VRha	Haplic Vertisols	Vertic Luvisols	Calcic Vertisols	Vertic	Haplic	Luvic
Rhv/s_4LVvr	Rhv/s	5 - 10 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Regosols	Vertic	Haplic	Luvic
Rhv/s_4VRha	Rhv/s	5 - 10 %	VRha	Haplic Vertisols	Vertic Luvisols	Vertic Cambisols	Vertic	Haplic	Luvic
Rhv/s_5LPli	Rhv/s	10 - 15 %	LPli	Lithic Leptosols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Luvic
Rhv/s_5LVha	Rhv/s	10 - 15 %	LVha	Haplic Luvisols	Haplic Regosols	Haplic Vertisols	Haplic	Luvic	Vertic
Rhv/s_5LVvr	Rhv/s	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Regosols	Vertic	Haplic	Luvic
Rhv/s_5RGha	Rhv/s	10 - 15 %	RGha	Haplic Regosols	Haplic Vertisols	Lithic Leptosols	Haplic	Vertic	Luvic
Rhv/s_5VRcc	Rhv/s	10 - 15 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Calcic	Eutric
Rhv/s_5VRha	Rhv/s	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Haplic Regosols	Vertic	Haplic	Luvic
Rhv/s_6CMha	Rhv/s	15 - 30 %	CMha	Haplic Cambisols	Vertic Luvisols	Haplic Vertisols	Vertic	Haplic	Eutric
Rhv/s_6CMvr	Rhv/s	15 - 30 %	CMvr	Vertic Cambisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Cambic
Rhv/s_6LPha	Rhv/s	15 - 30 %	LPha	Haplic Leptosols	Vertic Luvisols	Lithic Leptosols	Leptic	Luvic	Haplic
Rhv/s_6LPli	Rhv/s	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Leptic	Vertic
Rhv/s_6LVha	Rhv/s	15 - 30 %	LVha	Haplic Luvisols	Haplic Regosols	Lithic Leptosols	Haplic	Luvic	Argic
Rhv/s_6LVvr	Rhv/s	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Regosols	Vertic	Haplic	Luvic
Rhv/s_6RGha	Rhv/s	15 - 30 %	RGha	Haplic Regosols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Luvic
Rhv/s_6VRcc	Rhv/s	15 - 30 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Luvic
Rhv/s_6VRha	Rhv/s	15 - 30 %	VRha	Haplic Vertisols	Vertic Luvisols	Vertic Cambisols	Vertic	Haplic	Luvic
Rhv/s_7LPha	Rhv/s	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Vertic Luvisols	Leptic	Haplic	Luvic
Rhv/s_7LPli	Rhv/s	30 - 45 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Leptic	Haplic	Eutric
Rhv/s_7LVvr	Rhv/s	30 - 45 %	LVvr	Vertic Luvisols	Haplic Regosols	Haplic Vertisols	Haplic	Vertic	Leptic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rhv/s_7RGha	Rhv/s	30 - 45 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Eutric
Rhv/s_7VRha	Rhv/s	30 - 45 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Vertic	Haplic	Leptic
Rhv/s_8LPha	Rhv/s	45 - 60 %	LPha	Haplic Leptosols	Vertic Luvisols	Lithic Leptosols	Leptic	Haplic	Luvic
Rhv/s_8LPli	Rhv/s	45 - 60 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Leptic	Haplic	Eutric
Rhv/s_8VRha	Rhv/s	45 - 60 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Leptic	Haplic	Vertic
Rhv/s_9LPha	Rhv/s	> 60 %	LPha	Haplic Leptosols	Vertic Luvisols	Lithic Leptosols	Leptic	Haplic	Luvic
Rjv_1NTha	Rjv	0 - 0.5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Rjv_2LVha	Rjv	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rjv_2LVvr	Rjv	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Vertisols	Luvic	Argic	Vertic
Rjv_2VRha	Rjv	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Luvic	Haplic
Rjv_3LVha	Rjv	2 - 5 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Luvic	Argic	Haplic
Rjv_3LVvr	Rjv	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rjv_3NTha	Rjv	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Rjv_3RGha	Rjv	2 - 5 %	RGha	Haplic Regosols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Argic
Rjv_3VRha	Rjv	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Haplic	Luvic
Rjv_4LVha	Rjv	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rjv_4LVvr	Rjv	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Haplic
Rjv_4NTha	Rjv	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rjv_4RGha	Rjv	5 - 10 %	RGha	Haplic Regosols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Argic
Rjv_4VRha	Rjv	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Haplic	Vertic	Luvic
Rjv_5LPli	Rjv	10 - 15 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rjv_5LVha	Rjv	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rjv_5NTha	Rjv	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rjv_5VRha	Rjv	10 - 15 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Luvic	Vertic
Rjv_6LPli	Rjv	15 - 30 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Leptic
Rjv_6LVha	Rjv	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rjv_6NTha	Rjv	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Rjv_6VRha	Rjv	15 - 30 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Luvic	Argic
Rjv_7LVha	Rjv	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Leptic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rjv_7NTha	Rjv	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Leptic	Argic	Luvic
Rjv_8LVha	Rjv	45 - 60 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rk2v_1LVha	Rk2v	0 - 0.5 %	LVha	Haplic Luvisols	Haplic Vertisols	Gleyic Vertisols	Haplic	Argic	Luvic
Rk2v_1NTha	Rk2v	0 - 0.5 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Luvisols	Vertic	Haplic	Luvic
Rk2v_1NTlv	Rk2v	0 - 0.5 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Vertic	Luvic	Nitic
Rk2v_1VRha	Rk2v	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Luvic
Rk2v_2LVha	Rk2v	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Vertic	Haplic
Rk2v_2NTha	Rk2v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Vertic	Haplic	Luvic
Rk2v_2NTlv	Rk2v	0.5 - 2 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Luvic	Vertic	Nitic
Rk2v_2VRgl	Rk2v	0.5 - 2 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Haplic	Gleyic
Rk2v_2VRha	Rk2v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Luvic
Rk2v_3LVha	Rk2v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Argic	Haplic
Rk2v_3LVni	Rk2v	2 - 5 %	LVni	Nitic Luvisols	Haplic Luvisols	Haplic Vertisols	Luvic	Argic	Nitic
Rk2v_3NTha	Rk2v	2 - 5 %	NTha	Haplic Nitisols	Luvic Nitisols	Haplic Vertisols	Luvic	Nitic	Haplic
Rk2v_3NTlv	Rk2v	2 - 5 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Luvic	Nitic	Vertic
Rk2v_3VRgl	Rk2v	2 - 5 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Luvic	Haplic
Rk2v_3VRha	Rk2v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Haplic	Luvic
Rk2v_4LPli	Rk2v	5 - 10 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Argic	Luvic	Haplic
Rk2v_4LVha	Rk2v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Argic	Haplic
Rk2v_4LVle	Rk2v	5 - 10 %	LVle	Leptic Luvisols	Haplic Luvisols	Haplic Vertisols	Argic	Luvic	Leptic
Rk2v_4NTha	Rk2v	5 - 10 %	NTha	Haplic Nitisols	Luvic Nitisols	Haplic Luvisols	Luvic	Nitic	Haplic
Rk2v_4NTlv	Rk2v	5 - 10 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Luvic	Nitic	Haplic
Rk2v_4VRha	Rk2v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Luvic
Rk2v_5LPli	Rk2v	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Haplic	Leptic	Luvic
Rk2v_5LVha	Rk2v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Luvic	Haplic	Argic
Rk2v_5NTha	Rk2v	10 - 15 %	NTha	Haplic Nitisols	Haplic Luvisols	Lithic Leptosols	Luvic	Nitic	Haplic
Rk2v_5VRha	Rk2v	10 - 15 %	VRha	Haplic Vertisols	Haplic Leptosols	Lithic Leptosols	Haplic	Leptic	Vertic
Rl1v_1VRha	Rl1v	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rl1v_2VRha	Rl1v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Nitic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rl1v_3NTha	Rl1v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Vertic	Nitic
Rl1v_3VRha	Rl1v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Nitic
Rl1v_4NTha	Rl1v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Leptosols	Haplic	Vertic	Nitic
Rl2m_1VRha	Rl2m	0 - 0.5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Cambisols	Vertic	Eutric	Haplic
Rl2m_2VRha	Rl2m	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Cambisols	Calcic Vertisols	Eutric	Vertic	Haplic
Rl2m_3LPha	Rl2m	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Vertic	Leptic
Rl2m_3VRha	Rl2m	2 - 5 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Haplic	Vertic	Eutric
Rl2m_4CMha	Rl2m	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Haplic	Vertic	Leptic
Rl2m_4LPha	Rl2m	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Leptic	Vertic
Rl2m_4VRha	Rl2m	5 - 10 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Haplic	Vertic	Eutric
Rl2m_5LPha	Rl2m	10 - 15 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Leptic	Vertic
Rl2m_6LPha	Rl2m	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Vertic
Rl3v_2VRha	Rl3v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Argic
Rl3v_3LVha	Rl3v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Luvic
Rl3v_3VRha	Rl3v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Luvic
Rl3v_3VRha	Rl3v	2 - 5 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Luvic
Rl3v_4LPha	Rl3v	5 - 10 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Luvic
Rl3v_4LPli	Rl3v	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Luvic
Rl3v_4LVha	Rl3v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Rl3v_4VRha	Rl3v	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Luvic
Rl3v_5LPha	Rl3v	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rl3v_5LPli	Rl3v	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Luvic
Rl3v_5LVha	Rl3v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Argic	Luvic
Rl3v_5VRha	Rl3v	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Luvic	Argic
Rl3v_6LPha	Rl3v	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rl3v_6LPli	Rl3v	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rl4v_2VRha	Rl4v	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Cambisols	Haplic	Vertic	Eutric
Rl4v_3CMha	Rl4v	2 - 5 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Haplic	Eutric	Vertic
Rl4v_3LPha	Rl4v	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Vertic	Leptic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rl4v_3VRha	Rl4v	2 - 5 %	VRha	Haplic Vertisols	Haplic Cambisols	Calcic Vertisols	Haplic	Vertic	Eutric
Rl4v_4CMha	Rl4v	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Haplic	Eutric	Cambic
Rl4v_4LPha	Rl4v	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rl4v_4VRha	Rl4v	5 - 10 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Haplic	Eutric	Vertic
Rl4v_5LPha	Rl4v	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rl4v_6LPha	Rl4v	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rl4v_6LPha	Rl4v	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm1s_3LPha	Rm1s	2 - 5 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Eutric	Leptic
Rm1s_4CMha	Rm1s	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Leptic	Cambic
Rm1s_4LPha	Rm1s	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Eutric	Haplic
Rm1s_5CMha	Rm1s	10 - 15 %	CMha	Haplic Cambisols	Haplic Leptosols	Lithic Leptosols	Leptic	Eutric	Cambic
Rm1s_5LPha	Rm1s	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm1s_6CMha	Rm1s	15 - 30 %	CMha	Haplic Cambisols	Haplic Leptosols	Lithic Leptosols	Leptic	Eutric	Cambic
Rm1s_6LPha	Rm1s	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rm1s_7LPha	Rm1s	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rm1s_8LPha	Rm1s	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rm1s_9LPha	Rm1s	> 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rm1v_1LVha	Rm1v	0 - 0.5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Vertisols	Luvic	Argic	Vertic
Rm1v_2LVha	Rm1v	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Rm1v_2LVvr	Rm1v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Vertic
Rm1v_2VRha	Rm1v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Luvic
Rm1v_3ALha	Rm1v	2 - 5 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Rm1v_3LVha	Rm1v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rm1v_3LVvr	Rm1v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Rm1v_3NTha	Rm1v	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Luvic	Argic
Rm1v_3VRha	Rm1v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Luvic
Rm1v_4LPli	Rm1v	5 - 10 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Argic
Rm1v_4LVha	Rm1v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Rm1v_4LVvr	Rm1v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rm1v_4NTha	Rm1v	5 - 10 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Luvic	Vertic
Rm1v_4VRha	Rm1v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Eutric
Rm1v_5ALha	Rm1v	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Rm1v_5LPli	Rm1v	10 - 15 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Eutric
Rm1v_5LVha	Rm1v	10 - 15 %	LVha	Haplic Luvisols	Haplic Alisols	Vertic Luvisols	Argic	Luvic	Haplic
Rm1v_5LVvr	Rm1v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Vertic
Rm1v_5NTha	Rm1v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Haplic	Argic
Rm1v_5VRha	Rm1v	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Vertic	Haplic	Eutric
Rm1v_6ALha	Rm1v	15 - 30 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Rm1v_6LPha	Rm1v	15 - 30 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Vertisols	Leptic	Haplic	Luvic
Rm1v_6LPli	Rm1v	15 - 30 %	LPli	Lithic Leptosols	Haplic Luvisols	Vertic Luvisols	Haplic	Leptic	Luvic
Rm1v_6LVha	Rm1v	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Rm1v_6LVvr	Rm1v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rm1v_6NTha	Rm1v	15 - 30 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Luvic	Argic
Rm1v_7LVha	Rm1v	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Leptic
Rm2c_2VRcc	Rm2c	0.5 - 2 %	VRcc	Calcic Vertisols	Haplic Vertisols	Calcic Fluvisols	Vertic	Calcic	Eutric
Rm2c_2VRha	Rm2c	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Calcic Vertisols	Vertic	Haplic	Eutric
Rm2c_3LVha	Rm2c	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Cambisols	Haplic	Eutric	Vertic
Rm2c_3VRcc	Rm2c	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Calcic	Pellic
Rm2c_3VRha	Rm2c	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Cambisols	Vertic	Haplic	Eutric
Rm2c_4ARha	Rm2c	5 - 10 %	ARha	Haplic Arenosols	Haplic Regosols	Haplic Luvisols	Haplic	Eutric	Luvic
Rm2c_4CMha	Rm2c	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Cambic
Rm2c_4LVha	Rm2c	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Vertic
Rm2c_4LVvr	Rm2c	5 - 10 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Cambisols	Vertic	Haplic	Eutric
Rm2c_4RGha	Rm2c	5 - 10 %	RGha	Haplic Regosols	Haplic Cambisols	Haplic Vertisols	Eutric	Haplic	Vertic
Rm2c_4VRha	Rm2c	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Regosols	Vertic	Haplic	Eutric
Rm2c_5ARha	Rm2c	10 - 15 %	ARha	Haplic Arenosols	Haplic Regosols	Haplic Luvisols	Haplic	Eutric	Luvic
Rm2c_5CMha	Rm2c	10 - 15 %	CMha	Haplic Cambisols	Lithic Leptosols	Haplic Regosols	Eutric	Haplic	Vertic
Rm2c_5LPli	Rm2c	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rm2c_5LVha	Rm2c	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Eutric	Luvic
Rm2c_5LVvr	Rm2c	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Cambisols	Vertic	Haplic	Eutric
Rm2c_5VRha	Rm2c	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Vertic	Haplic	Eutric
Rm2c_6CMha	Rm2c	15 - 30 %	CMha	Haplic Cambisols	Lithic Leptosols	Haplic Regosols	Haplic	Vertic	Eutric
Rm2c_6LPli	Rm2c	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Vertic Luvisols	Haplic	Leptic	Eutric
Rm2c_6LVvr	Rm2c	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Leptic
Rm2c_6VRha	Rm2c	15 - 30 %	VRha	Haplic Vertisols	Vertic Luvisols	Haplic Cambisols	Vertic	Haplic	Eutric
Rm2g_1VRcc	Rm2g	0 - 0.5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Gleyic Vertisols	Vertic	Calcic	Haplic
Rm2g_2ARha	Rm2g	0.5 - 2 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Arenic
Rm2g_2VRcc	Rm2g	0.5 - 2 %	VRcc	Calcic Vertisols	Haplic Vertisols	Gleyic Vertisols	Vertic	Calcic	Eutric
Rm2g_2VRha	Rm2g	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Grumic Vertisols	Vertic	Haplic	Eutric
Rm2g_3ARha	Rm2g	2 - 5 %	ARha	Haplic Arenosols	Haplic Regosols	Haplic Luvisols	Haplic	Eutric	Arenic
Rm2g_3NTlv	Rm2g	2 - 5 %	NTlv	Luvic Nitisols	Haplic Luvisols	Haplic Vertisols	Luvic	Haplic	Eutric
Rm2g_3RGha	Rm2g	2 - 5 %	RGha	Haplic Regosols	Vertic Luvisols	Lithic Leptosols	Haplic	Vertic	Luvic
Rm2g_3VRcc	Rm2g	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Calcic
Rm2g_3VRgm	Rm2g	2 - 5 %	VRgm	Grumic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Eutric	Haplic
Rm2g_3VRha	Rm2g	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Calcic Vertisols	Vertic	Haplic	Eutric
Rm2g_3VRha	Rm2g	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Regosols	Haplic	Eutric	Vertic
Rm2g_4ARha	Rm2g	5 - 10 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Arenic
Rm2g_4FLha	Rm2g	5 - 10 %	FLha	Haplic Fluvisols	Haplic Vertisols	Haplic Arenosols	Haplic	Eutric	Vertic
Rm2g_4LPli	Rm2g	5 - 10 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rm2g_4LVha	Rm2g	5 - 10 %	LVha	Haplic Luvisols	Haplic Regosols	Vertic Luvisols	Haplic	Eutric	Luvic
Rm2g_4LVvr	Rm2g	5 - 10 %	LVvr	Vertic Luvisols	Haplic Regosols	Lithic Leptosols	Haplic	Vertic	Luvic
Rm2g_4NTha	Rm2g	5 - 10 %	NTha	Haplic Nitisols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rm2g_4NTlv	Rm2g	5 - 10 %	NTlv	Luvic Nitisols	Haplic Luvisols	Haplic Arenosols	Luvic	Haplic	Eutric
Rm2g_4RGha	Rm2g	5 - 10 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Arenosols	Haplic	Eutric	Luvic
Rm2g_4VRcc	Rm2g	5 - 10 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Eutric
Rm2g_4VRgm	Rm2g	5 - 10 %	VRgm	Grumic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Eutric	Haplic
Rm2g_4VRha	Rm2g	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Regosols	Haplic	Vertic	Eutric

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rm2g_5ARha	Rm2g	10 - 15 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Arenic
Rm2g_5LPli	Rm2g	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rm2g_5LVcc.vr	Rm2g	10 - 15 %	LVcc.vr	Calcic Vertic Luvisols	Haplic Arenosols	Haplic Luvisols	Luvic	Argic	Haplic
Rm2g_5LVvr	Rm2g	10 - 15 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Cambisols	Vertic	Haplic	Eutric
Rm2g_5LVvr	Rm2g	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Eutric
Rm2g_5RGha	Rm2g	10 - 15 %	RGha	Haplic Regosols	Lithic Leptosols	Vertic Luvisols	Haplic	Eutric	Vertic
Rm2g_6ARha	Rm2g	15 - 30 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Leptic
Rm2g_6LPli	Rm2g	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rm2g_6LVha	Rm2g	15 - 30 %	LVha	Haplic Luvisols	Haplic Regosols	Lithic Leptosols	Haplic	Luvic	Eutric
Rm2g_6LVvr	Rm2g	15 - 30 %	LVvr	Vertic Luvisols	Lithic Leptosols	Haplic Vertisols	Vertic	Haplic	Eutric
Rm2g_6RGha	Rm2g	15 - 30 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rm2g_7LPli	Rm2g	30 - 45 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Haplic	Eutric
Rm2g_8LPli	Rm2g	45 - 60 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Haplic	Lithic
Rm2v_1NTha	Rm2v	0 - 0.5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Haplic	Vertic
Rm2v_2ACha	Rm2v	0.5 - 2 %	ACha	Haplic Acrisols	Haplic Nitisols	Haplic Cambisols	Argic	Haplic	Vertic
Rm2v_2LVvr	Rm2v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Cambisols	Luvic	Vertic	Argic
Rm2v_2NTha	Rm2v	0.5 - 2 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Haplic	Vertic
Rm2v_3CMha	Rm2v	2 - 5 %	CMha	Haplic Cambisols	Vertic Luvisols	Haplic Nitisols	Vertic	Luvic	Argic
Rm2v_3LVha	Rm2v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rm2v_3LVvr	Rm2v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rm2v_3NTha	Rm2v	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Haplic	Nitic	Vertic
Rm2v_3VRha	Rm2v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rm2v_4CMha	Rm2v	5 - 10 %	CMha	Haplic Cambisols	Haplic Acrisols	Haplic Nitisols	Haplic	Argic	Vertic
Rm2v_4LPha	Rm2v	5 - 10 %	LPha	Haplic Leptosols	Haplic Nitisols	Haplic Gleysols	Haplic	Nitic	Leptic
Rm2v_4LVha	Rm2v	5 - 10 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Luvic	Argic	Haplic
Rm2v_4LVvr	Rm2v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rm2v_4NTha	Rm2v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Haplic	Vertic
Rm2v_4VRha	Rm2v	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rm2v_5CMha	Rm2v	10 - 15 %	CMha	Haplic Cambisols	Haplic Nitisols	Haplic Acrisols	Cambic	Haplic	Nitic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rm2v_5LPha	Rm2v	10 - 15 %	LPha	Haplic Leptosols	Haplic Nitisols	Haplic Cambisols	Haplic	Leptic	Nitic
Rm2v_5LVha	Rm2v	10 - 15 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Argic	Luvic	Haplic
Rm2v_5LVvr	Rm2v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rm2v_5NTha	Rm2v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Haplic	Rhodic
Rm2v_5VRha	Rm2v	10 - 15 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Haplic	Vertic	Nitic
Rm2v_6CMha	Rm2v	15 - 30 %	CMha	Haplic Cambisols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Cambic
Rm2v_6LVvr	Rm2v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Vertic	Luvic
Rm2v_6NTha	Rm2v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Haplic	Rhodic
Rm2v_7LVvr	Rm2v	30 - 45 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Vertic	Argic	Luvic
Rm2v_7NTha	Rm2v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Leptosols	Haplic	Nitic	Rhodic
Rm2v_8NTha	Rm2v	45 - 60 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Leptosols	Nitic	Haplic	Vertic
Rm3v_2LVha	Rm3v	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Haplic	Argic
Rm3v_2VRha	Rm3v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Luvic
Rm3v_3LPli	Rm3v	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Leptic	Haplic	Luvic
Rm3v_3LVha	Rm3v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Luvic	Haplic	Argic
Rm3v_3VRha	Rm3v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Haplic	Luvic
Rm3v_4LPha	Rm3v	5 - 10 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Rm3v_4LPli	Rm3v	5 - 10 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Leptic	Luvic
Rm3v_4LVha	Rm3v	5 - 10 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Luvic	Argic
Rm3v_4NTha	Rm3v	5 - 10 %	NTha	Haplic Nitisols	Haplic Leptosols	Lithic Leptosols	Leptic	Haplic	Vertic
Rm3v_4VRha	Rm3v	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Argic
Rm3v_5LPha	Rm3v	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm3v_5LPli	Rm3v	10 - 15 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rm3v_5LVha	Rm3v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Luvic	Argic
Rm3v_5VRha	Rm3v	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Argic	Vertic
Rm3v_6LPha	Rm3v	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm3v_6LPli	Rm3v	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rm3v_6LVha	Rm3v	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Luvic
Rm3v_7LPha	Rm3v	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rm3v_7LPli	Rm3v	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rm3v_8LPha	Rm3v	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm3v_8LPli	Rm3v	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Rm7v_3LPha	Rm7v	2 - 5 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rm7v_3VRha	Rm7v	2 - 5 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Cambisols	Haplic	Eutric	Vertic
Rm7v_4CMha	Rm7v	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Haplic	Eutric	Cambic
Rm7v_4LPha	Rm7v	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rm7v_5LPha	Rm7v	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rm7v_6LPha	Rm7v	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm7v_7LPha	Rm7v	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm7v_8LPha	Rm7v	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rm7v_9LPha	Rm7v	> 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Rmv/s_3VRha	Rmv/s	2 - 5 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rmv/s_4CMha	Rmv/s	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Lithic Leptosols	Haplic	Vertic	Luvic
Rmv/s_4CMvr	Rmv/s	5 - 10 %	CMvr	Vertic Cambisols	Haplic Vertisols	Vertic Luvisols	Vertic	Cambic	Haplic
Rmv/s_4LPli	Rmv/s	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Vertic	Eutric
Rmv/s_4LVgl	Rmv/s	5 - 10 %	LVgl	Gleyic Luvisols	Vertic Luvisols	Haplic Vertisols	Luvic	Argic	Haplic
Rmv/s_4LVvr	Rmv/s	5 - 10 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Leptosols	Luvic	Haplic	Argic
Rmv/s_4NTlv	Rmv/s	5 - 10 %	NTlv	Luvic Nitisols	Haplic Vertisols	Vertic Cambisols	Vertic	Luvic	Haplic
Rmv/s_4VRha	Rmv/s	5 - 10 %	VRha	Haplic Vertisols	Vertic Luvisols	Vertic Cambisols	Vertic	Haplic	Luvic
Rmv/s_5ARha	Rmv/s	10 - 15 %	ARha	Haplic Arenosols	Lithic Leptosols	Haplic Regosols	Haplic	Eutric	Vertic
Rmv/s_5CMvr	Rmv/s	10 - 15 %	CMvr	Vertic Cambisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Luvic
Rmv/s_5LPha	Rmv/s	10 - 15 %	LPha	Haplic Leptosols	Haplic Vertisols	Vertic Luvisols	Vertic	Luvic	Haplic
Rmv/s_5LPli	Rmv/s	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Vertic Luvisols	Haplic	Eutric	Vertic
Rmv/s_5LPli	Rmv/s	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Vertic	Eutric
Rmv/s_5LVvr	Rmv/s	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rmv/s_5NTlv	Rmv/s	10 - 15 %	NTlv	Luvic Nitisols	Haplic Cambisols	Vertic Luvisols	Luvic	Haplic	Vertic
Rmv/s_5VRha	Rmv/s	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Vertic Cambisols	Vertic	Haplic	Luvic
Rmv/s_6ARha	Rmv/s	15 - 30 %	ARha	Haplic Arenosols	Lithic Leptosols	Haplic Regosols	Haplic	Eutric	Luvic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rmv/s_6CMha	Rmv/s	15 - 30 %	CMha	Haplic Cambisols	Vertic Luvisols	Haplic Vertisols	Haplic	Luvic	Eutric
Rmv/s_6CMvr	Rmv/s	15 - 30 %	CMvr	Vertic Cambisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Luvic
Rmv/s_6LPha	Rmv/s	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Vertic Luvisols	Leptic	Vertic	Haplic
Rmv/s_6LPli	Rmv/s	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Leptic
Rmv/s_6LVha	Rmv/s	15 - 30 %	LVha	Haplic Luvisols	Haplic Vertisols	Vertic Luvisols	Haplic	Luvic	Argic
Rmv/s_6LVvr	Rmv/s	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Rmv/s_6LVvr	Rmv/s	15 - 30 %	LVvr	Vertic Luvisols	Luvic Nitisols	Haplic Cambisols	Vertic	Luvic	Leptic
Rmv/s_6RGha	Rmv/s	15 - 30 %	RGha	Haplic Regosols	Haplic Vertisols	Vertic Luvisols	Haplic	Eutric	Vertic
Rmv/s_6VRha	Rmv/s	15 - 30 %	VRha	Haplic Vertisols	Vertic Luvisols	Vertic Cambisols	Vertic	Haplic	Luvic
Rmv/s_7LPha	Rmv/s	30 - 45 %	LPha	Haplic Leptosols	Haplic Vertisols	Vertic Luvisols	Leptic	Vertic	Haplic
Rmv/s_7LPli	Rmv/s	30 - 45 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Leptic	Haplic	Eutric
Rmv/s_7VRha	Rmv/s	30 - 45 %	VRha	Haplic Vertisols	Haplic Leptosols	Lithic Leptosols	Leptic	Vertic	Haplic
Rmv/s_8LPha	Rmv/s	45 - 60 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Vertic	Haplic
Rmv/s_8LPli	Rmv/s	45 - 60 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Vertic
Rmv/s_8RGha	Rmv/s	45 - 60 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Leptosols	Haplic	Leptic	Eutric
Rmv/s_9LPha	Rmv/s	> 60 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Vertic	Haplic
Rn2g_2LVha	Rn2g	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Luvic Nitisols	Haplic	Luvic	Vertic
Rn2g_2VRha	Rn2g	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Vertic	Haplic	Argic
Rn2g_3LPli	Rn2g	2 - 5 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Lithic
Rn2g_3LVha	Rn2g	2 - 5 %	LVha	Haplic Luvisols	Haplic Nitisols	Haplic Vertisols	Argic	Haplic	Luvic
Rn2g_3NTha	Rn2g	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Argic	Vertic
Rn2g_3VRha	Rn2g	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Vertic	Haplic	Luvic
Rn2g_4LPli	Rn2g	5 - 10 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Argic
Rn2g_4LVha	Rn2g	5 - 10 %	LVha	Haplic Luvisols	Haplic Nitisols	Haplic Vertisols	Haplic	Argic	Luvic
Rn2g_4NTha	Rn2g	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Lithic Leptosols	Haplic	Nitic	Vertic
Rn2g_4NTlv	Rn2g	5 - 10 %	NTlv	Luvic Nitisols	Haplic Nitisols	Lithic Leptosols	Nitic	Haplic	Luvic
Rn2g_4VRha	Rn2g	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Vertic	Haplic	Argic
Rn2g_5LPli	Rn2g	10 - 15 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Lithic
Rn2g_5NTha	Rn2g	10 - 15 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Nitic	Leptic	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rn2g_5VRha	Rn2g	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Vertic	Leptic
Rn2g_6LPli	Rn2g	15 - 30 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Vertisols	Leptic	Haplic	Lithic
Rn2g_6LPli	Rn2g	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Nitic
Rn2g_6NTha	Rn2g	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Nitic
Rn2g_7LPli	Rn2g	30 - 45 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Leptosols	Leptic	Lithic	Haplic
Rn2g_8LPli	Rn2g	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Lithic	Haplic
Rp3v_1LVha	Rp3v	0 - 0.5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Haplic	Vertic
Rp3v_1NTha	Rp3v	0 - 0.5 %	NTha	Haplic Nitisols	Luvic Nitisols	Haplic Luvisols	Vertic	Luvic	Haplic
Rp3v_1NTlv	Rp3v	0 - 0.5 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Luvisols	Luvic	Nitic	Vertic
Rp3v_1VRha	Rp3v	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Vertic	Haplic	Luvic
Rp3v_2LVha	Rp3v	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Vertic	Haplic
Rp3v_2LVvr	Rp3v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Vertisols	Luvic	Vertic	Argic
Rp3v_2NTha	Rp3v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Vertic	Luvic	Haplic
Rp3v_2NTlv	Rp3v	0.5 - 2 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Luvic	Vertic	Nitic
Rp3v_2VRgl	Rp3v	0.5 - 2 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Haplic	Luvic
Rp3v_2VRha	Rp3v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Haplic	Luvic
Rp3v_3LVha	Rp3v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Argic	Haplic
Rp3v_3NTha	Rp3v	2 - 5 %	NTha	Haplic Nitisols	Luvic Nitisols	Haplic Luvisols	Vertic	Luvic	Haplic
Rp3v_3NTlv	Rp3v	2 - 5 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Luvic	Nitic	Vertic
Rp3v_3VRha	Rp3v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Haplic	Luvic
Rp3v_4LPli	Rp3v	5 - 10 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Luvic	Argic
Rp3v_4LVha	Rp3v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Luvic	Argic	Haplic
Rp3v_4NTha	Rp3v	5 - 10 %	NTha	Haplic Nitisols	Haplic Luvisols	Luvic Nitisols	Haplic	Luvic	Nitic
Rp3v_4VRha	Rp3v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Luvic	Vertic
Rp3v_5LPli	Rp3v	10 - 15 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Luvic	Argic
Rp3v_5LVha	Rp3v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Luvic	Argic	Haplic
Rp4v_1VRha	Rp4v	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Planosols	Vertic	Haplic	Nitic
Rp4v_2NTha	Rp4v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Planosols	Haplic	Vertic	Nitic
Rp4v_2PLha	Rp4v	0.5 - 2 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Albic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rp4v_2VRha	Rp4v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Planosols	Haplic Nitisols	Haplic	Vertic	Nitic
Rp4v_3LVvr	Rp4v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Vertic	Haplic	Luvic
Rp4v_3NTha	Rp4v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Planosols	Haplic	Vertic	Nitic
Rp4v_3PLha	Rp4v	2 - 5 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Albic
Rp4v_3VRha	Rp4v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Planosols	Haplic	Vertic	Nitic
Rp4v_4LVvr	Rp4v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Nitisols	Vertic	Haplic	Luvic
Rp4v_4NTha	Rp4v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Nitic	Vertic
Rp4v_4PLha	Rp4v	5 - 10 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Albic
Rp4v_4VRha	Rp4v	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rp4v_5LPli	Rp4v	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Nitisols	Haplic	Leptic	Nitic
Rp4v_5LVha	Rp4v	10 - 15 %	LVha	Haplic Luvisols	Haplic Nitisols	Haplic Vertisols	Nitic	Haplic	Luvic
Rp4v_5LVvr	Rp4v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Nitisols	Vertic	Haplic	Nitic
Rp4v_5NTha	Rp4v	10 - 15 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Nitic	Haplic	Vertic
Rp4v_5PLha	Rp4v	10 - 15 %	PLha	Haplic Planosols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Argic
Rp4v_6LPha	Rp4v	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Nitic
Rp4v_6NTha	Rp4v	15 - 30 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Nitic	Vertic
Rp4v_6VRha	Rp4v	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Nitisols	Haplic	Leptic	Vertic
Rpg_1VRha	Rpg	0 - 0.5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Fluvisols	Vertic	Eutric	Haplic
Rpg_2FLha	Rpg	0.5 - 2 %	FLha	Haplic Fluvisols	Haplic Vertisols	Calcic Vertisols	Vertic	Eutric	Calcic
Rpg_2VRcc	Rpg	0.5 - 2 %	VRcc	Calcic Vertisols	Haplic Vertisols	Gleyic Vertisols	Vertic	Calcic	Eutric
Rpg_2VRha	Rpg	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Luvisols	Vertic	Eutric	Haplic
Rpg_3LVha	Rpg	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Luvic	Argic	Eutric
Rpg_3VRcc	Rpg	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Nitisols	Vertic	Calcic	Haplic
Rpg_3VRha	Rpg	2 - 5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Luvisols	Vertic	Haplic	Eutric
Rpg_4ARha	Rpg	5 - 10 %	ARha	Haplic Arenosols	Haplic Regosols	Haplic Luvisols	Haplic	Eutric	Luvic
Rpg_4LPli	Rpg	5 - 10 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rpg_4LVha	Rpg	5 - 10 %	LVha	Haplic Luvisols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Luvic
Rpg_4RGha	Rpg	5 - 10 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rpg_4VRcc	Rpg	5 - 10 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Nitisols	Vertic	Calcic	Eutric

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rpg_4VRha	Rpg	5 - 10 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Luvisols	Vertic	Haplic	Eutric
Rpg_5ARha	Rpg	10 - 15 %	ARha	Haplic Arenosols	Haplic Regosols	Haplic Luvisols	Haplic	Eutric	Luvic
Rpg_5LPli	Rpg	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Luvisols	Haplic	Eutric	Vertic
Rpg_5RGha	Rpg	10 - 15 %	RGha	Haplic Regosols	Haplic Arenosols	Lithic Leptosols	Haplic	Eutric	Vertic
Rpg_5VRcc	Rpg	10 - 15 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Eutric
Rpg_5VRha	Rpg	10 - 15 %	VRha	Haplic Vertisols	Calcic Vertisols	Lithic Leptosols	Vertic	Haplic	Eutric
Rpg_6LPli	Rpg	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Haplic	Eutric
Rq2v_4LVvr	Rq2v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Vertic	Argic	Haplic
Rq2v_4NTha	Rq2v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rq2v_5LVvr	Rq2v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Cambisols	Vertic	Haplic	Argic
Rq2v_5NTha	Rq2v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Rq2v_6LVvr	Rq2v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Vertic	Haplic	Nitic
Rq2v_6NTha	Rq2v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Vertic	Nitic
Rq2v_7NTha	Rq2v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Rhodic	Haplic
Rs1v_2LVvr	Rs1v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Luvic	Vertic
Rs1v_3LPha	Rs1v	2 - 5 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Vertic	Luvic	Argic
Rs1v_3LVha	Rs1v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Rs1v_3LVvr	Rs1v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Luvic	Vertic
Rs1v_4LPha	Rs1v	5 - 10 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Vertic	Nitic	Luvic
Rs1v_4LVha	Rs1v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Rs1v_4LVvr	Rs1v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Rs1v_5LPha	Rs1v	10 - 15 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Vertic	Nitic	Leptic
Rs1v_5LVha	Rs1v	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Rs1v_5LVvr	Rs1v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Leptosols	Argic	Luvic	Vertic
Rs1v_6LPha	Rs1v	15 - 30 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Leptic	Vertic	Nitic
Rs1v_6LVvr	Rs1v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Leptosols	Haplic Luvisols	Vertic	Argic	Luvic
Rs1v_7LPha	Rs1v	30 - 45 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Leptic	Nitic	Vertic
Rs1v_7NTha	Rs1v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Leptosols	Leptic	Luvic	Argic
Rt1v_2LVha	Rt1v	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Planosols	Haplic Vertisols	Haplic	Argic	Luvic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rt1v_2LVha	Rt1v	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Vertisols	Haplic	Argic	Luvic
Rt1v_3LVha	Rt1v	2 - 5 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Luvic
Rt1v_3LVvr	Rt1v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rt1v_3NTha	Rt1v	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Vertic	Luvic
Rt1v_3PLha	Rt1v	2 - 5 %	PLha	Haplic Planosols	Haplic Luvisols	Haplic Vertisols	Haplic	Argic	Luvic
Rt1v_3VRha	Rt1v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Luvic
Rt1v_4LPha	Rt1v	5 - 10 %	LPha	Haplic Leptosols	Haplic Nitisols	Haplic Luvisols	Haplic	Vertic	Nitic
Rt1v_4LVha	Rt1v	5 - 10 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Luvic
Rt1v_4NTha	Rt1v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Luvic	Vertic
Rt1v_4VRha	Rt1v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Luvic
Rt1v_5LPha	Rt1v	10 - 15 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Nitic	Vertic	Haplic
Rt1v_5LVha	Rt1v	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rt1v_5LVvr	Rt1v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Luvic	Vertic	Haplic
Rt1v_5NTha	Rt1v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Haplic	Argic
Rt1v_6LPha	Rt1v	15 - 30 %	LPha	Haplic Leptosols	Haplic Nitisols	Vertic Luvisols	Vertic	Leptic	Nitic
Rt1v_6LPli	Rt1v	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Vertic Luvisols	Haplic	Leptic	Vertic
Rt1v_6LVha	Rt1v	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rt1v_6NTha	Rt1v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Haplic	Vertic
Rt1v_6VRha	Rt1v	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Luvic
Rt1v_7LPha	Rt1v	30 - 45 %	LPha	Haplic Leptosols	Vertic Luvisols	Haplic Nitisols	Leptic	Haplic	Luvic
Rt1v_7LVha	Rt1v	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Leptic	Luvic	Haplic
Rt2v_2NTha	Rt2v	0.5 - 2 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Vertic	Nitic	Haplic
Rt2v_2VRha	Rt2v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Nitic
Rt2v_3LVha	Rt2v	2 - 5 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Argic	Luvic	Nitic
Rt2v_3LVvr	Rt2v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Vertic	Argic	Luvic
Rt2v_3NTha	Rt2v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rt2v_3VRha	Rt2v	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Planosols	Haplic	Vertic	Nitic
Rt2v_4LVha	Rt2v	5 - 10 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Luvic
Rt2v_4LVvr	Rt2v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Haplic	Vertic	Argic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rt2v_4NTha	Rt2v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rt2v_4RGha	Rt2v	5 - 10 %	RGha	Haplic Regosols	Haplic Nitisols	Vertic Luvisols	Haplic	Eutric	Vertic
Rt2v_4VRha	Rt2v	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rt2v_5CMha	Rt2v	10 - 15 %	CMha	Haplic Cambisols	Haplic Nitisols	Vertic Luvisols	Cambic	Haplic	Vertic
Rt2v_5LVha	Rt2v	10 - 15 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Luvic
Rt2v_5LVvr	Rt2v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Vertic	Argic	Haplic
Rt2v_5NTha	Rt2v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rt2v_5RGha	Rt2v	10 - 15 %	RGha	Haplic Regosols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Eutric
Rt2v_5VRha	Rt2v	10 - 15 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rt2v_6CMha	Rt2v	15 - 30 %	CMha	Haplic Cambisols	Vertic Luvisols	Haplic Nitisols	Haplic	Vertic	Argic
Rt2v_6LVvr	Rt2v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Vertisols	Haplic	Vertic	Argic
Rt2v_6NTha	Rt2v	15 - 30 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Rt2v_6NTha	Rt2v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Vertisols	Haplic	Nitic	Vertic
Rt2v_6RGha	Rt2v	15 - 30 %	RGha	Haplic Regosols	Haplic Nitisols	Haplic Vertisols	Haplic	Eutric	Vertic
Rt2v_7NTha	Rt2v	30 - 45 %	NTha	Haplic Nitisols	Haplic Cambisols	Haplic Leptosols	Haplic	Leptic	Argic
Rt2v_7NTha	Rt2v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Leptosols	Haplic	Leptic	Nitic
Rt2v_7RGha	Rt2v	30 - 45 %	RGha	Haplic Regosols	Haplic Nitisols	Haplic Cambisols	Leptic	Haplic	Argic
Ru2c_3LPha	Ru2c	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Calcic Vertisols	Haplic	Vertic	Leptic
Ru2c_3VRha	Ru2c	2 - 5 %	VRha	Haplic Vertisols	Haplic Leptosols	Calcic Vertisols	Haplic	Vertic	Eutric
Ru2c_4LPli	Ru2c	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Leptic
Ru2c_4VRha	Ru2c	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Cambisols	Haplic	Vertic	Eutric
Ru2c_5LPli	Ru2c	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Leptic	Haplic	Eutric
Ru2c_6LPli	Ru2c	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Cambisols	Leptic	Lithic	Eutric
Rw1g_1VRha	Rw1g	0 - 0.5 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Nitisols	Vertic	Haplic	Eutric
Rw1g_2RGha	Rw1g	0.5 - 2 %	RGha	Haplic Regosols	Haplic Vertisols	Haplic Arenosols	Haplic	Eutric	Vertic
Rw1g_2VRha	Rw1g	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Regosols	Vertic	Haplic	Eutric
Rw1g_3ARha	Rw1g	2 - 5 %	ARha	Haplic Arenosols	Haplic Vertisols	Haplic Regosols	Haplic	Eutric	Vertic
Rw1g_3NTha	Rw1g	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Regosols	Haplic	Vertic	Eutric
Rw1g_3RGha	Rw1g	2 - 5 %	RGha	Haplic Regosols	Haplic Vertisols	Haplic Arenosols	Haplic	Eutric	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rw1g_3VRcc	Rw1g	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Calcic
Rw1g_3VRha	Rw1g	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Regosols	Haplic	Vertic	Eutric
Rw1g_4ARha	Rw1g	5 - 10 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Arenic
Rw1g_4CMha	Rw1g	5 - 10 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Arenosols	Haplic	Eutric	Cambic
Rw1g_4LPli	Rw1g	5 - 10 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Eutric	Haplic	Leptic
Rw1g_4LVha	Rw1g	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Regosols	Haplic	Luvic	Vertic
Rw1g_4NTha	Rw1g	5 - 10 %	NTha	Haplic Nitisols	Haplic Regosols	Haplic Arenosols	Haplic	Eutric	Argic
Rw1g_4RGha	Rw1g	5 - 10 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Arenosols	Haplic	Eutric	Vertic
Rw1g_4VRcc	Rw1g	5 - 10 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Calcic
Rw1g_4VRha	Rw1g	5 - 10 %	VRha	Haplic Vertisols	Calcic Vertisols	Haplic Regosols	Haplic	Vertic	Eutric
Rw1g_5ARha	Rw1g	10 - 15 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Argic
Rw1g_5LPli	Rw1g	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Vertic
Rw1g_5LVvr	Rw1g	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Regosols	Haplic	Vertic	Luvic
Rw1g_5RGha	Rw1g	10 - 15 %	RGha	Haplic Regosols	Haplic Luvisols	Haplic Arenosols	Eutric	Haplic	Luvic
Rw1g_5RGha	Rw1g	10 - 15 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rw1g_5VRha	Rw1g	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Haplic	Vertic	Eutric
Rw1g_6LPli	Rw1g	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Leptic
Rw1g_6RGha	Rw1g	15 - 30 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Arenosols	Haplic	Eutric	Leptic
Rw1g_6VRha	Rw1g	15 - 30 %	VRha	Haplic Vertisols	Vertic Luvisols	Haplic Regosols	Haplic	Eutric	Vertic
Rw1g_7LPli	Rw1g	30 - 45 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Haplic	Eutric
Rw1v_1LVha	Rw1v	0 - 0.5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Rw1v_1LVvr	Rw1v	0 - 0.5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Rw1v_1NTha	Rw1v	0 - 0.5 %	NTha	Haplic Nitisols	Haplic Planosols	Haplic Fluvisols	Nitic	Vertic	Haplic
Rw1v_1PLha	Rw1v	0 - 0.5 %	PLha	Haplic Planosols	Haplic Nitisols	Haplic Vertisols	Vertic	Nitic	Haplic
Rw1v_2GLha	Rw1v	0.5 - 2 %	GLha	Haplic Gleysols	Haplic Nitisols	Haplic Planosols	Gleyic	Vertic	Nitic
Rw1v_2LVha	Rw1v	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Rw1v_2LVvr	Rw1v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rw1v_2NTha	Rw1v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Planosols	Vertic Luvisols	Nitic	Vertic	Haplic
Rw1v_2PLha	Rw1v	0.5 - 2 %	PLha	Haplic Planosols	Haplic Nitisols	Haplic Luvisols	Vertic	Albic	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rw1v_3ACha	Rw1v	2 - 5 %	ACha	Haplic Acrisols	Haplic Nitisols	Vertic Luvisols	Argic	Vertic	Luvic
Rw1v_3ALha	Rw1v	2 - 5 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Haplic	Argic	Alic
Rw1v_3CMha	Rw1v	2 - 5 %	CMha	Haplic Cambisols	Haplic Nitisols	Haplic Acrisols	Haplic	Cambic	Vertic
Rw1v_3LVha	Rw1v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Rw1v_3LVvr	Rw1v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rw1v_3NTha	Rw1v	2 - 5 %	NTha	Haplic Nitisols	Haplic Fluvisols	Haplic Luvisols	Nitic	Vertic	Haplic
Rw1v_3NTha	Rw1v	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Nitic	Haplic	Vertic
Rw1v_4ACha	Rw1v	5 - 10 %	ACha	Haplic Acrisols	Haplic Cambisols	Haplic Nitisols	Argic	Vertic	Luvic
Rw1v_4ALha	Rw1v	5 - 10 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Rw1v_4CMha	Rw1v	5 - 10 %	CMha	Haplic Cambisols	Haplic Nitisols	Haplic Acrisols	Haplic	Vertic	Cambic
Rw1v_4LVha	Rw1v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Rw1v_4LVvr	Rw1v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rw1v_4NTha	Rw1v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Haplic	Nitic	Rhodic
Rw1v_5ALha	Rw1v	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Rw1v_5LVha	Rw1v	10 - 15 %	LVha	Haplic Luvisols	Haplic Alisols	Vertic Luvisols	Argic	Haplic	Luvic
Rw1v_5LVvr	Rw1v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Rw1v_5NTha	Rw1v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Haplic	Nitic	Rhodic
Rw1v_6ALha	Rw1v	15 - 30 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Rw1v_6LVha	Rw1v	15 - 30 %	LVha	Haplic Luvisols	Haplic Alisols	Vertic Luvisols	Argic	Haplic	Luvic
Rw1v_6LVvr	Rw1v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Haplic
Rw1v_6NTha	Rw1v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Haplic	Rhodic	Nitic
Rw1v_7NTha	Rw1v	30 - 45 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Cambisols	Haplic	Rhodic	Nitic
Rw2v_1FLha	Rw2v	0 - 0.5 %	FLha	Haplic Fluvisols	Haplic Vertisols	Haplic Nitisols	Fluvic	Gleyic	Vertic
Rw2v_2LVha	Rw2v	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Luvic Nitisols	Luvic	Vertic	Haplic
Rw2v_2VRha	Rw2v	0.5 - 2 %	VRha	Haplic Vertisols	Gleyic Vertisols	Haplic Luvisols	Vertic	Haplic	Eutric
Rw2v_3LPli	Rw2v	2 - 5 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Leptic	Argic
Rw2v_3LVha	Rw2v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Argic
Rw2v_3NTha	Rw2v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Luvisols	Haplic	Vertic	Nitic
Rw2v_3VRgl	Rw2v	2 - 5 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Haplic	Eutric

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rw2v_3VRha	Rw2v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Argic
Rw2v_4LPha	Rw2v	5 - 10 %	LPha	Haplic Leptosols	Haplic Nitisols	Haplic Luvisols	Leptic	Haplic	Argic
Rw2v_4LPli	Rw2v	5 - 10 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Leptic	Argic
Rw2v_4LVha	Rw2v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Rw2v_4NTha	Rw2v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Luvisols	Haplic	Vertic	Luvic
Rw2v_4VRha	Rw2v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Argic
Rw2v_5LPha	Rw2v	10 - 15 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Leptic	Eutric
Rw2v_5LPli	Rw2v	10 - 15 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Leptosols	Leptic	Haplic	Luvic
Rw2v_5LVha	Rw2v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Luvic	Argic	Haplic
Rw2v_6LPha	Rw2v	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Rw2v_6LPli	Rw2v	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Luvisols	Leptic	Haplic	Argic
Rw2v_6LVha	Rw2v	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Luvic
Rw3v_2LVha	Rw3v	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Haplic	Argic
Rw3v_4LVha	Rw3v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rw3v_4LVvr	Rw3v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Luvic	Haplic	Argic
Rw3v_5LVha	Rw3v	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rw3v_5NTha	Rw3v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Argic	Haplic
Rw3v_6LVha	Rw3v	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rw3v_6LVvr	Rw3v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rw3v_6NTha	Rw3v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Argic	Haplic
Rw3v_7LVha	Rw3v	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Haplic
Rw3v_8LVha	Rw3v	45 - 60 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Luvic	Argic	Leptic
Rw4v_3VRha	Rw4v	2 - 5 %	VRha	Haplic Vertisols	Vertic Cambisols	Calcic Vertisols	Eutric	Vertic	Haplic
Rw4v_4CMvr	Rw4v	5 - 10 %	CMvr	Vertic Cambisols	Haplic Vertisols	Haplic Leptosols	Eutric	Vertic	Cambic
Rw4v_4LPha	Rw4v	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Eutric	Haplic	Vertic
Rw4v_4VRha	Rw4v	5 - 10 %	VRha	Haplic Vertisols	Vertic Cambisols	Haplic Leptosols	Eutric	Vertic	Haplic
Rw4v_5LPha	Rw4v	10 - 15 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Eutric	Haplic	Vertic
Rw4v_5VRha	Rw4v	10 - 15 %	VRha	Haplic Vertisols	Vertic Cambisols	Haplic Leptosols	Eutric	Vertic	Haplic
Rw4v_6LPha	Rw4v	15 - 30 %	LPha	Haplic Leptosols	Vertic Cambisols	Haplic Vertisols	Eutric	Leptic	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Rw4v_7LPha	Rw4v	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Vertic Cambisols	Leptic	Eutric	Haplic
Rxc_3CMha	Rxc	2 - 5 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Cambic	Eutric	Haplic
Rxc_4CMha	Rxc	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Haplic	Cambic	Eutric
Rxc_4LPha	Rxc	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rxc_5CMha	Rxc	10 - 15 %	CMha	Haplic Cambisols	Haplic Leptosols	Lithic Leptosols	Haplic	Cambic	Eutric
Rxc_5CMha	Rxc	10 - 15 %	CMha	Haplic Cambisols	Lithic Leptosols	Haplic Leptosols	Leptic	Haplic	Eutric
Rxc_5LPha	Rxc	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Rxc_6CMha	Rxc	15 - 30 %	CMha	Haplic Cambisols	Haplic Leptosols	Lithic Leptosols	Haplic	Cambic	Leptic
Rxc_6LPha	Rxc	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rxc_6LPli	Rxc	15 - 30 %	LPli	Lithic Leptosols	Haplic Cambisols	Haplic Regosols	Leptic	Haplic	Eutric
Rxc_7LPha	Rxc	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rxc_8LPha	Rxc	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Rxc_9LPha	Rxc	> 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Eutric
Ry1v_2LVha	Ry1v	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Argic
Ry1v_2NTha	Ry1v	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Nitic	Haplic	Vertic
Ry1v_2VRha	Ry1v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Argic
Ry1v_3LVha	Ry1v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Argic
Ry1v_3LVha	Ry1v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Argic
Ry1v_3NTha	Ry1v	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Nitic
Ry1v_4LPha	Ry1v	5 - 10 %	LPha	Haplic Leptosols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Leptic
Ry1v_4LPli	Ry1v	5 - 10 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Nitisols	Haplic	Luvic	Leptic
Ry1v_4LVha	Ry1v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Argic
Ry1v_4NTha	Ry1v	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Luvisols	Haplic	Nitic	Luvic
Ry1v_4VRha	Ry1v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Luvic	Vertic
Ry1v_5LPli	Ry1v	10 - 15 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Luvisols	Haplic	Leptic	Luvic
Ry1v_5LVha	Ry1v	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Luvic	Argic
Ry1v_5NTha	Ry1v	10 - 15 %	NTha	Haplic Nitisols	Haplic Luvisols	Lithic Leptosols	Haplic	Luvic	Argic
Ry1v_6LVha	Ry1v	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Hyperskeletic Leptosols	Haplic	Luvic	Leptic
Ry1v_6NTha	Ry1v	15 - 30 %	NTha	Haplic Nitisols	Haplic Luvisols	Lithic Leptosols	Haplic	Luvic	Argic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Ry5v_2ALha	Ry5v	0.5 - 2 %	ALha	Haplic Alisols	Vertic Luvisols	Haplic Luvisols	Argic	Haplic	Alic
Ry5v_2LVha	Ry5v	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Ry5v_2LVvr	Ry5v	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Ry5v_3ALha	Ry5v	2 - 5 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Ry5v_3LVha	Ry5v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Haplic	Luvic
Ry5v_3LVvr	Ry5v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Ry5v_4ALha	Ry5v	5 - 10 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Ry5v_4LVha	Ry5v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Ry5v_4LVvr	Ry5v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Ry5v_5ALha	Ry5v	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Ry5v_6ALha	Ry5v	15 - 30 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Ryv/s_2NTha	Ryv/s	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Ryv/s_2RGha	Ryv/s	0.5 - 2 %	RGha	Haplic Regosols	Haplic Nitisols	Haplic Vertisols	Haplic	Eutric	Vertic
Ryv/s_2VRha	Ryv/s	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Calcic Vertisols	Vertic	Haplic	Eutric
Ryv/s_3LVha	Ryv/s	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Luvic
Ryv/s_3LVvr	Ryv/s	2 - 5 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Nitisols	Vertic	Haplic	Luvic
Ryv/s_3NTha	Ryv/s	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Regosols	Haplic	Vertic	Nitic
Ryv/s_3RGha	Ryv/s	2 - 5 %	RGha	Haplic Regosols	Haplic Vertisols	Haplic Nitisols	Haplic	Eutric	Vertic
Ryv/s_3VRha	Ryv/s	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Vertic Luvisols	Vertic	Haplic	Eutric
Ryv/s_4LPli	Ryv/s	5 - 10 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Nitisols	Haplic	Eutric	Vertic
Ryv/s_4LVvr	Ryv/s	5 - 10 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Luvic
Ryv/s_4NTha	Ryv/s	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Regosols	Haplic	Vertic	Nitic
Ryv/s_4RGha	Ryv/s	5 - 10 %	RGha	Haplic Regosols	Haplic Nitisols	Haplic Vertisols	Haplic	Eutric	Vertic
Ryv/s_4VRha	Ryv/s	5 - 10 %	VRha	Haplic Vertisols	Vertic Luvisols	Haplic Nitisols	Haplic	Vertic	Eutric
Ryv/s_5CMha	Ryv/s	10 - 15 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Nitisols	Haplic	Eutric	Vertic
Ryv/s_5LPli	Ryv/s	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Nitisols	Haplic	Leptic	Eutric
Ryv/s_5LVvr	Ryv/s	10 - 15 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Ryv/s_5NTha	Ryv/s	10 - 15 %	NTha	Haplic Nitisols	Haplic Regosols	Haplic Vertisols	Haplic	Nitic	Eutric
Ryv/s_5RGha	Ryv/s	10 - 15 %	RGha	Haplic Regosols	Haplic Nitisols	Lithic Leptosols	Haplic	Eutric	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Ryv/s_5VRha	Ryv/s	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Haplic	Vertic	Leptic
Ryv/s_6LPha	Ryv/s	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Vertic
Ryv/s_6LPli	Ryv/s	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Nitisols	Haplic	Leptic	Eutric
Ryv/s_6LVha	Ryv/s	15 - 30 %	LVha	Haplic Luvisols	Haplic Regosols	Lithic Leptosols	Haplic	Luvic	Argic
Ryv/s_6LVvr	Ryv/s	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Luvic
Ryv/s_6NTha	Ryv/s	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Nitic
Ryv/s_6RGha	Ryv/s	15 - 30 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Nitisols	Haplic	Leptic	Eutric
Ryv/s_6VRha	Ryv/s	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Haplic	Vertic	Leptic
Ryv/s_7LPha	Ryv/s	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Ryv/s_8LPha	Ryv/s	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Sh1v_3LVha	Sh1v	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Sh1v_3LVvr	Sh1v	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Sh1v_3NTha	Sh1v	2 - 5 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Vertic	Luvic	Argic
Sh1v_4LPli	Sh1v	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Leptic
Sh1v_4LVha	Sh1v	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Sh1v_4LVvr	Sh1v	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Sh1v_4NTha	Sh1v	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Vertic	Argic
Sh1v_4VRha	Sh1v	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Leptic	Vertic
Sh1v_5LPli	Sh1v	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Haplic	Leptic	Luvic
Sh1v_5LVha	Sh1v	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Sh1v_5LVvr	Sh1v	10 - 15 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Sh1v_5NTha	Sh1v	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Argic	Vertic
Sh1v_5VRha	Sh1v	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Haplic	Vertic	Leptic
Sh1v_6LPha	Sh1v	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Vertic
Sh1v_6LPli	Sh1v	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Vertic
Sh1v_6LVha	Sh1v	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Luvic	Haplic
Sh1v_6LVvr	Sh1v	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Sh1v_6NTha	Sh1v	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Vertic	Argic
Sh1v_6VRha	Sh1v	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Leptic	Haplic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Sh1v_7LPha	Sh1v	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Sh1v_7LVvr	Sh1v	30 - 45 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Vertic
Sh1v_8LPha	Sh1v	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Sh4v_3LPha	Sh4v	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Eutric	Leptic
Sh4v_4CMha	Sh4v	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Haplic	Eutric	Vertic
Sh4v_4LPha	Sh4v	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Sh4v_5LPha	Sh4v	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Sh4v_6LPha	Sh4v	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Sh4v_7LPha	Sh4v	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Sh4v_8LPha	Sh4v	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Sh4v_9LPha	Sh4v	> 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Shc/g_2VRha	Shc/g	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Vertic Luvisols	Vertic	Eutric	Haplic
Shc/g_3CMha	Shc/g	2 - 5 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Vertic	Eutric	Haplic
Shc/g_3CMvr	Shc/g	2 - 5 %	CMvr	Vertic Cambisols	Haplic Vertisols	Calcic Vertisols	Vertic	Cambic	Eutric
Shc/g_3LPli	Shc/g	2 - 5 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Haplic	Eutric	Leptic
Shc/g_3NTha	Shc/g	2 - 5 %	NTha	Haplic Nitisols	Haplic Luvisols	Haplic Vertisols	Haplic	Eutric	Vertic
Shc/g_3RGha	Shc/g	2 - 5 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Haplic	Eutric	Vertic
Shc/g_3VRcc	Shc/g	2 - 5 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Eutric	Haplic
Shc/g_3VRha	Shc/g	2 - 5 %	VRha	Haplic Vertisols	Calcic Vertisols	Vertic Luvisols	Vertic	Eutric	Haplic
Shc/g_4ARha	Shc/g	5 - 10 %	ARha	Haplic Arenosols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Leptic
Shc/g_4CMha	Shc/g	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Leptic	Vertic
Shc/g_4CMvr	Shc/g	5 - 10 %	CMvr	Vertic Cambisols	Haplic Vertisols	Calcic Vertisols	Vertic	Cambic	Eutric
Shc/g_4LPha	Shc/g	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Eutric	Haplic
Shc/g_4LPli	Shc/g	5 - 10 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Vertisols	Eutric	Haplic	Leptic
Shc/g_4LVha	Shc/g	5 - 10 %	LVha	Haplic Luvisols	Haplic Regosols	Lithic Leptosols	Haplic	Eutric	Luvic
Shc/g_4LVvr	Shc/g	5 - 10 %	LVvr	Vertic Luvisols	Haplic Vertisols	Lithic Leptosols	Vertic	Haplic	Eutric
Shc/g_4RGha	Shc/g	5 - 10 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Cambisols	Haplic	Eutric	Leptic
Shc/g_4VRcc	Shc/g	5 - 10 %	VRcc	Calcic Vertisols	Haplic Vertisols	Vertic Luvisols	Vertic	Haplic	Eutric
Shc/g_4VRgl	Shc/g	5 - 10 %	VRgl	Gleyic Vertisols	Calcic Vertisols	Haplic Vertisols	Vertic	Eutric	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Shc/g_4VRha	Shc/g	5 - 10 %	VRha	Haplic Vertisols	Vertic Luvisols	Calcic Vertisols	Vertic	Haplic	Eutric
Shc/g_5CMha	Shc/g	10 - 15 %	CMha	Haplic Cambisols	Haplic Vertisols	Lithic Leptosols	Haplic	Eutric	Vertic
Shc/g_5CMvr	Shc/g	10 - 15 %	CMvr	Vertic Cambisols	Haplic Vertisols	Lithic Leptosols	Vertic	Cambic	Eutric
Shc/g_5LPha	Shc/g	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Eutric	Haplic
Shc/g_5LPli	Shc/g	10 - 15 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Cambisols	Haplic	Eutric	Leptic
Shc/g_5LVha	Shc/g	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Regosols	Haplic	Eutric	Luvic
Shc/g_5LVvr	Shc/g	10 - 15 %	LVvr	Vertic Luvisols	Haplic Cambisols	Haplic Vertisols	Vertic	Haplic	Eutric
Shc/g_5RGha	Shc/g	10 - 15 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Cambisols	Haplic	Eutric	Leptic
Shc/g_5VRcc	Shc/g	10 - 15 %	VRcc	Calcic Vertisols	Haplic Vertisols	Haplic Cambisols	Vertic	Eutric	Haplic
Shc/g_5VRha	Shc/g	10 - 15 %	VRha	Haplic Vertisols	Vertic Cambisols	Vertic Luvisols	Vertic	Haplic	Eutric
Shc/g_6CMha	Shc/g	15 - 30 %	CMha	Haplic Cambisols	Lithic Leptosols	Vertic Luvisols	Haplic	Eutric	Vertic
Shc/g_6LPha	Shc/g	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Vertic	Haplic
Shc/g_6LPli	Shc/g	15 - 30 %	LPli	Lithic Leptosols	Haplic Regosols	Haplic Leptosols	Leptic	Haplic	Eutric
Shc/g_6LVha	Shc/g	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Cambisols	Haplic	Eutric	Luvic
Shc/g_6LVni	Shc/g	15 - 30 %	LVni	Nitic Luvisols	Haplic Regosols	Haplic Vertisols	Luvic	Argic	Haplic
Shc/g_6LVvr	Shc/g	15 - 30 %	LVvr	Vertic Luvisols	Haplic Vertisols	Haplic Cambisols	Vertic	Eutric	Haplic
Shc/g_6RGha	Shc/g	15 - 30 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Cambisols	Haplic	Eutric	Leptic
Shc/g_6VRcc	Shc/g	15 - 30 %	VRcc	Calcic Vertisols	Vertic Luvisols	Haplic Vertisols	Vertic	Haplic	Luvic
Shc/g_6VRha	Shc/g	15 - 30 %	VRha	Haplic Vertisols	Vertic Cambisols	Haplic Cambisols	Vertic	Cambic	Eutric
Shc/g_6VRha	Shc/g	15 - 30 %	VRha	Haplic Vertisols	Vertic Luvisols	Haplic Cambisols	Vertic	Haplic	Eutric
Shc/g_7CMha	Shc/g	30 - 45 %	CMha	Haplic Cambisols	Haplic Leptosols	Lithic Leptosols	Leptic	Haplic	Eutric
Shc/g_7LPha	Shc/g	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Vertic Luvisols	Leptic	Haplic	Vertic
Shc/g_7LPli	Shc/g	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Regosols	Leptic	Haplic	Eutric
Shc/g_7RGha	Shc/g	30 - 45 %	RGha	Haplic Regosols	Haplic Vertisols	Vertic Luvisols	Vertic	Leptic	Haplic
Shc/g_8LPli	Shc/g	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Regosols	Leptic	Haplic	Eutric
Sm1v_3VRha	Sm1v	2 - 5 %	VRha	Haplic Vertisols	Calcic Vertisols	Vertic Luvisols	Vertic	Haplic	Eutric
Sm1v_4VRha	Sm1v	5 - 10 %	VRha	Haplic Vertisols	Haplic Regosols	Vertic Luvisols	Haplic	Vertic	Eutric
Sm1v_5LPha	Sm1v	10 - 15 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Haplic	Leptic	Eutric
Sm1v_5LPli	Sm1v	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Leptic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Sm1v_5RGha	Sm1v	10 - 15 %	RGha	Haplic Regosols	Haplic Vertisols	Vertic Luvisols	Haplic	Eutric	Vertic
Sm1v_5VRha	Sm1v	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Haplic	Vertic	Eutric
Sm1v_6LPha	Sm1v	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Eutric
Sm1v_6LPli	Sm1v	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Eutric
Sm1v_6RGha	Sm1v	15 - 30 %	RGha	Haplic Regosols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Eutric
Sm1v_6VRha	Sm1v	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Leptic	Vertic
Sm1v_7LPha	Sm1v	30 - 45 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Vertic
Sm1v_7LPli	Sm1v	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Regosols	Leptic	Haplic	Eutric
Sm2v_2VRha	Sm2v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Cambisols	Haplic	Eutric	Vertic
Sm2v_3CMha	Sm2v	2 - 5 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Haplic	Eutric	Leptic
Sm2v_3LPha	Sm2v	2 - 5 %	LPha	Haplic Leptosols	Haplic Vertisols	Haplic Cambisols	Haplic	Vertic	Eutric
Sm2v_3VRha	Sm2v	2 - 5 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Cambisols	Haplic	Vertic	Eutric
Sm2v_4CMha	Sm2v	5 - 10 %	CMha	Haplic Cambisols	Haplic Leptosols	Haplic Vertisols	Eutric	Haplic	Cambic
Sm2v_4LPha	Sm2v	5 - 10 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Haplic	Leptic	Eutric
Sm2v_4VRha	Sm2v	5 - 10 %	VRha	Haplic Vertisols	Haplic Cambisols	Haplic Leptosols	Haplic	Vertic	Eutric
Sm2v_5CMha	Sm2v	10 - 15 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Leptosols	Eutric	Vertic	Leptic
Sm2v_5LPha	Sm2v	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Sm2v_6LPha	Sm2v	15 - 30 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Cambic
Sm2v_6LPli	Sm2v	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Sm2v_7LPha	Sm2v	30 - 45 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Cambic
Sm2v_8LPha	Sm2v	45 - 60 %	LPha	Haplic Leptosols	Haplic Cambisols	Lithic Leptosols	Leptic	Haplic	Vertic
Sp1v_1VRha	Sp1v	0 - 0.5 %	VRha	Haplic Vertisols	Gleyic Vertisols	Calcic Vertisols	Vertic	Eutric	Haplic
Sp1v_2PHha	Sp1v	0.5 - 2 %	PHha	Haplic Phaeozems	Haplic Vertisols	Calcic Vertisols	Haplic	Vertic	Mollic
Sp1v_2VRha	Sp1v	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Phaeozems	Vertic	Eutric	Haplic
Sp1v_3LVha	Sp1v	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Phaeozems	Haplic	Luvic	Vertic
Sp1v_3VRha	Sp1v	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Phaeozems	Vertic	Haplic	Eutric
Sp1v_4LVha	Sp1v	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Sp1v_4VRha	Sp1v	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Leptosols	Haplic	Vertic	Eutric
Sp1v_5LPli	Sp1v	10 - 15 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Luvic	Eutric

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Sp1v_5LVha	Sp1v	10 - 15 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Sp1v_5VRha	Sp1v	10 - 15 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Eutric	Vertic
Sp1v_6LPha	Sp1v	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Vertic
Sp1v_6LPli	Sp1v	15 - 30 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Vertisols	Haplic	Leptic	Luvic
Sp1v_6LVha	Sp1v	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Vertisols	Haplic	Luvic	Argic
Sp1v_6VRha	Sp1v	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Eutric	Vertic
Ssv_2PLha	Ssv	0.5 - 2 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Argic
Ssv_2VRha	Ssv	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Eutric
Ssv_3LVha	Ssv	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Cambisols	Haplic	Argic	Luvic
Ssv_3PLha	Ssv	2 - 5 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Vertic
Ssv_3VRha	Ssv	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Eutric
Ssv_4LVha	Ssv	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Argic	Luvic
Ssv_4LVvr	Ssv	5 - 10 %	LVvr	Vertic Luvisols	Haplic Leptosols	Haplic Vertisols	Haplic	Luvic	Vertic
Ssv_4PLha	Ssv	5 - 10 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Luvisols	Haplic	Vertic	Argic
Ssv_4VRha	Ssv	5 - 10 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Eutric
Ssv_5LPha	Ssv	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Vertic Luvisols	Leptic	Haplic	Luvic
Ssv_5LPli	Ssv	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Vertic	Eutric
Ssv_5LVha	Ssv	10 - 15 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Ssv_5VRha	Ssv	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Regosols	Haplic	Eutric	Vertic
Ssv_6LPha	Ssv	15 - 30 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Haplic	Leptic	Eutric
Ssv_6LPli	Ssv	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Regosols	Haplic	Leptic	Eutric
Ssv_6VRha	Ssv	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Vertic Luvisols	Haplic	Vertic	Leptic
Ssv_7LPha	Ssv	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Vertic Luvisols	Leptic	Haplic	Argic
Ssv_7LPli	Ssv	30 - 45 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Argic
Ssv_8LPha	Ssv	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Vertic Luvisols	Leptic	Haplic	Argic
Ssv_8LPli	Ssv	45 - 60 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Haplic	Leptic	Luvic
Va2_3LPli	Va2	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Cutanic Luvisols	Argic	Luvic	Eutric
Va2_3VRha	Va2	2 - 5 %	VRha	Haplic Vertisols	Cutanic Luvisols	Haplic Luvisols	Eutric	Haplic	Argic
Va2_4VRha	Va2	5 - 10 %	VRha	Haplic Vertisols	Cutanic Luvisols	Haplic Luvisols	Eutric	Haplic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Va2_5VRha	Va2	10 - 15 %	VRha	Haplic Vertisols	Cutanic Luvisols	Lithic Leptosols	Eutric	Haplic	Luvic
Va2_6VRha	Va2	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Cutanic Luvisols	Eutric	Haplic	Vertic
Vh1_2ALha	Vh1	0.5 - 2 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Vh1_2LVha	Vh1	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Haplic	Argic	Luvic
Vh1_2LVvr	Vh1	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Alisols	Haplic Luvisols	Argic	Haplic	Luvic
Vh1_2VRha	Vh1	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Haplic	Vertic	Luvic
Vh1_3ALha	Vh1	2 - 5 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vh1_3LVha	Vh1	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Vertisols	Haplic	Argic	Luvic
Vh1_3LVvr	Vh1	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Haplic	Argic	Luvic
Vh1_3NTha	Vh1	2 - 5 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Argic	Luvic	Haplic
Vh1_4ALha	Vh1	5 - 10 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vh1_4LPha	Vh1	5 - 10 %	LPha	Haplic Leptosols	Haplic Alisols	Haplic Luvisols	Leptic	Haplic	Argic
Vh1_4LPli	Vh1	5 - 10 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Luvisols	Leptic	Haplic	Lithic
Vh1_4LVha	Vh1	5 - 10 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Haplic	Argic	Luvic
Vh1_4LVvr	Vh1	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vh1_4NTha	Vh1	5 - 10 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Nitic	Luvic
Vh1_4VRha	Vh1	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Haplic	Vertic	Luvic
Vh1_5ALha	Vh1	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vh1_5LPha	Vh1	10 - 15 %	LPha	Haplic Leptosols	Haplic Alisols	Lithic Leptosols	Leptic	Haplic	Argic
Vh1_5LPli	Vh1	10 - 15 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Luvisols	Leptic	Haplic	Lithic
Vh1_5LVha	Vh1	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Haplic	Argic	Luvic
Vh1_5LVvr	Vh1	10 - 15 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vh1_5NTha	Vh1	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Nitic	Argic
Vh1_5VRha	Vh1	10 - 15 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Vertic	Eutric	Haplic
Vh1_6ALha	Vh1	15 - 30 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vh1_6LPha	Vh1	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Lithic
Vh1_6LPli	Vh1	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Luvisols	Leptic	Haplic	Lithic
Vh1_6LVha	Vh1	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Vh1_6LVvr	Vh1	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Argic	Haplic	Luvic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vh1_6NTha	Vh1	15 - 30 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Argic	Nitic
Vh1_6VRha	Vh1	15 - 30 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Eutric	Luvic
Vh1_7ALha	Vh1	30 - 45 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Leptic	Haplic	Argic
Vh1_7FLha	Vh1	30 - 45 %	FLha	Haplic Fluvisols	Haplic Luvisols	Vertic Luvisols	Haplic	Eutric	Argic
Vh1_7LPli	Vh1	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Luvisols	Leptic	Haplic	Lithic
Vh1_7LVha	Vh1	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Leptic	Luvic
Vh1_7LVvr	Vh1	30 - 45 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Leptic	Argic	Haplic
Vh1_7NTha	Vh1	30 - 45 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Nitic	Rhodic
Vh1_8LVha	Vh1	45 - 60 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Argic	Leptic	Luvic
Vj1_2LVha	Vj1	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Argic	Luvic	Haplic
Vj1_2NTha	Vj1	0.5 - 2 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Nitic	Rhodic
Vj1_2VRha	Vj1	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Luvic
Vj1_3LVha	Vj1	2 - 5 %	LVha	Haplic Luvisols	Haplic Nitisols	Vertic Luvisols	Argic	Luvic	Haplic
Vj1_3LVvr	Vj1	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Haplic
Vj1_3NTha	Vj1	2 - 5 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Nitic	Luvic
Vj1_3NTlv	Vj1	2 - 5 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Haplic	Nitic	Luvic
Vj1_3VRha	Vj1	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Haplic	Vertic	Luvic
Vj1_4LPli	Vj1	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Leptic
Vj1_4LVha	Vj1	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vj1_4LVvr	Vj1	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Haplic
Vj1_4NTha	Vj1	5 - 10 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Haplic	Luvic	Argic
Vj1_4NTlv	Vj1	5 - 10 %	NTlv	Luvic Nitisols	Haplic Vertisols	Haplic Nitisols	Luvic	Haplic	Nitic
Vj1_4VRha	Vj1	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Vertic
Vj1_5LPli	Vj1	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Haplic	Leptic	Luvic
Vj1_5LPskh	Vj1	10 - 15 %	LPskh	Hyperskeletic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vj1_5LVha	Vj1	10 - 15 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vj1_5LVvr	Vj1	10 - 15 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vj1_5NTha	Vj1	10 - 15 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Haplic	Argic
Vj1_5VRha	Vj1	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Luvic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vj1_6LPha	Vj1	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Vertic
Vj1_6LPli	Vj1	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vj1_6LVha	Vj1	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vj1_6LVvr	Vj1	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vj1_6NTha	Vj1	15 - 30 %	NTha	Haplic Nitisols	Vertic Luvisols	Haplic Luvisols	Luvic	Argic	Haplic
Vj1_6VRha	Vj1	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Luvic	Vertic
Vj1_7LPli	Vj1	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Nitisols	Leptic	Haplic	Luvic
Vp1_1PLha	Vp1	0 - 0.5 %	PLha	Haplic Planosols	Haplic Luvisols	Haplic Vertisols	Haplic	Albic	Luvic
Vp1_1VRha	Vp1	0 - 0.5 %	VRha	Haplic Vertisols	Calcic Vertisols	Gleyic Vertisols	Vertic	Haplic	Eutric
Vp1_2LVha	Vp1	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Planosols	Haplic	Luvic	Argic
Vp1_2PHlv	Vp1	0.5 - 2 %	PHlv	Luvic Phaeozems	Haplic Planosols	Haplic Luvisols	Luvic	Mollic	Haplic
Vp1_2PLha	Vp1	0.5 - 2 %	PLha	Haplic Planosols	Haplic Luvisols	Haplic Vertisols	Haplic	Albic	Luvic
Vp1_2VRha	Vp1	0.5 - 2 %	VRha	Haplic Vertisols	Calcic Vertisols	Gleyic Vertisols	Vertic	Haplic	Eutric
Vp1_3ALha	Vp1	2 - 5 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Vp1_3LVha	Vp1	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Haplic	Argic	Luvic
Vp1_3NTha	Vp1	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Vp1_3PLgl	Vp1	2 - 5 %	PLgl	Gleyic Planosols	Haplic Luvisols	Haplic Alisols	Haplic	Argic	Albic
Vp1_3PLha	Vp1	2 - 5 %	PLha	Haplic Planosols	Haplic Luvisols	Haplic Vertisols	Haplic	Albic	Luvic
Vp1_3VRha	Vp1	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Calcic Vertisols	Vertic	Haplic	Eutric
Vp1_4ALha	Vp1	5 - 10 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Vp1_4LVha	Vp1	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Vertic Luvisols	Haplic	Argic	Luvic
Vp1_4PLha	Vp1	5 - 10 %	PLha	Haplic Planosols	Haplic Luvisols	Haplic Vertisols	Haplic	Luvic	Argic
Vp1_4VRha	Vp1	5 - 10 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Eutric
Vp1_5ALha	Vp1	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vp1_5LPli	Vp1	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Vertic
Vp1_5PLha	Vp1	10 - 15 %	PLha	Haplic Planosols	Haplic Luvisols	Lithic Leptosols	Haplic	Argic	Luvic
Vp1_5VRha	Vp1	10 - 15 %	VRha	Haplic Vertisols	Haplic Luvisols	Lithic Leptosols	Haplic	Vertic	Eutric
Vp1_5VRha	Vp1	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Eutric
Vp1_6LPli	Vp1	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Luvic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vp1_6LVha	Vp1	15 - 30 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Alisols	Haplic	Argic	Luvic
Vp1_6LVvr	Vp1	15 - 30 %	LVvr	Vertic Luvisols	Haplic Leptosols	Haplic Vertisols	Haplic	Leptic	Vertic
Vp1_6VRha	Vp1	15 - 30 %	VRha	Haplic Vertisols	Haplic Leptosols	Haplic Luvisols	Haplic	Eutric	Vertic
Vp1_6VRha	Vp1	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Luvisols	Haplic	Vertic	Eutric
Vp1_7ALha	Vp1	30 - 45 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Leptic	Haplic
Vq1_2VRha	Vq1	0.5 - 2 %	VRha	Haplic Vertisols	Cutanic Luvisols	Calcic Vertisols	Vertic	Eutric	Haplic
Vq1_3VRha	Vq1	2 - 5 %	VRha	Haplic Vertisols	Cutanic Luvisols	Calcic Vertisols	Vertic	Eutric	Haplic
Vq1_4VRha	Vq1	5 - 10 %	VRha	Haplic Vertisols	Cutanic Luvisols	Haplic Luvisols	Eutric	Haplic	Vertic
Vq1_5VRha	Vq1	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Eutric	Haplic	Vertic
Vq3_1LVha	Vq3	0 - 0.5 %	LVha	Haplic Luvisols	Haplic Vertisols	Gleyic Vertisols	Haplic	Vertic	Luvic
Vq3_1NTha	Vq3	0 - 0.5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Vertic	Nitic
Vq3_1VRha	Vq3	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Nitic
Vq3_2LVvr	Vq3	0.5 - 2 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Haplic	Luvic	Argic
Vq3_2NTha	Vq3	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Vertic	Nitic
Vq3_2NTmo	Vq3	0.5 - 2 %	NTmo	Mollic Nitisols	Haplic Vertisols	Haplic Nitisols	Nitic	Vertic	Haplic
Vq3_2VRgl	Vq3	0.5 - 2 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Nitisols	Vertic	Gleyic	Eutric
Vq3_2VRha	Vq3	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Nitic
Vq3_3LVha	Vq3	2 - 5 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Vq3_3LVvr	Vq3	2 - 5 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Vq3_3NTha	Vq3	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Nitic	Vertic
Vq3_3NTlv	Vq3	2 - 5 %	NTlv	Luvic Nitisols	Haplic Nitisols	Haplic Vertisols	Nitic	Haplic	Luvic
Vq3_3NTmo	Vq3	2 - 5 %	NTmo	Mollic Nitisols	Haplic Vertisols	Haplic Nitisols	Nitic	Haplic	Vertic
Vq3_3VRgl	Vq3	2 - 5 %	VRgl	Gleyic Vertisols	Haplic Vertisols	Haplic Luvisols	Vertic	Haplic	Luvic
Vq3_3VRha	Vq3	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Gleyic Vertisols	Vertic	Haplic	Luvic
Vq3_4LPha	Vq3	5 - 10 %	LPha	Haplic Leptosols	Haplic Vertisols	Lithic Leptosols	Leptic	Haplic	Luvic
Vq3_4LPli	Vq3	5 - 10 %	LPli	Lithic Leptosols	Haplic Leptosols	Hyperskeletic Leptosols	Haplic	Leptic	Luvic
Vq3_4LVha	Vq3	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Haplic Nitisols	Haplic	Luvic	Argic
Vq3_4LVvr	Vq3	5 - 10 %	LVvr	Vertic Luvisols	Haplic Nitisols	Haplic Luvisols	Argic	Luvic	Vertic
Vq3_4NTha	Vq3	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Nitic	Vertic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vq3_4VRha	Vq3	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Haplic	Vertic	Luvic
Vq3_5LPha	Vq3	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vq3_5LPli	Vq3	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Luvic
Vq3_5LVha	Vq3	10 - 15 %	LVha	Haplic Luvisols	Haplic Nitisols	Lithic Leptosols	Haplic	Luvic	Argic
Vq3_5NTha	Vq3	10 - 15 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Haplic	Nitic	Luvic
Vq3_5VRha	Vq3	10 - 15 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Vertic	Luvic
Vq3_6LPha	Vq3	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Hyperskeletic Leptosols	Leptic	Haplic	Luvic
Vq3_6LPli	Vq3	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vq3_6LPskh	Vq3	15 - 30 %	LPskh	Hyperskeletic Leptosols	Lithic Leptosols	Haplic Leptosols	Leptic	Haplic	Luvic
Vq3_6NTha	Vq3	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Luvisols	Haplic	Luvic	Argic
Vq3_6NTha	Vq3	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Haplic	Leptic	Nitic
Vq3_6VRha	Vq3	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Leptic	Vertic
Vq3_7LPli	Vq3	30 - 45 %	LPli	Lithic Leptosols	Haplic Nitisols	Haplic Leptosols	Leptic	Haplic	Luvic
Vs1_2LVha	Vs1	0.5 - 2 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vs1_2NTha	Vs1	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Haplic Planosols	Haplic	Vertic	Nitic
Vs1_2PLha	Vs1	0.5 - 2 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Albic
Vs1_2VRha	Vs1	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Planosols	Haplic Nitisols	Vertic	Haplic	Luvic
Vs1_3LVct	Vs1	2 - 5 %	LVct	Cutanic Luvisols	Haplic Vertisols	Haplic Luvisols	Eutric	Luvic	Argic
Vs1_3LVha	Vs1	2 - 5 %	LVha	Haplic Luvisols	Vertic Luvisols	Haplic Nitisols	Argic	Luvic	Haplic
Vs1_3LVvr	Vs1	2 - 5 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Alisols	Haplic	Argic	Luvic
Vs1_3NTha	Vs1	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Vs1_3PLha	Vs1	2 - 5 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Albic
Vs1_3VRha	Vs1	2 - 5 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Haplic	Vertic	Luvic
Vs1_4LPli	Vs1	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Haplic	Eutric	Leptic
Vs1_4LVct	Vs1	5 - 10 %	LVct	Cutanic Luvisols	Haplic Vertisols	Haplic Luvisols	Eutric	Luvic	Argic
Vs1_4LVha	Vs1	5 - 10 %	LVha	Haplic Luvisols	Vertic Luvisols	Cutanic Luvisols	Argic	Luvic	Haplic
Vs1_4LVvr	Vs1	5 - 10 %	LVvr	Vertic Luvisols	Haplic Luvisols	Haplic Nitisols	Argic	Haplic	Luvic
Vs1_4NTha	Vs1	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Vs1_4PLha	Vs1	5 - 10 %	PLha	Haplic Planosols	Haplic Vertisols	Haplic Nitisols	Haplic	Vertic	Nitic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vs1_4VRha	Vs1	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Cutanic Luvisols	Haplic	Vertic	Eutric
Vs1_5CMha	Vs1	10 - 15 %	CMha	Haplic Cambisols	Haplic Vertisols	Haplic Luvisols	Eutric	Haplic	Luvic
Vs1_5LPli	Vs1	10 - 15 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Cambisols	Eutric	Haplic	Leptic
Vs1_5LVct	Vs1	10 - 15 %	LVct	Cutanic Luvisols	Haplic Vertisols	Haplic Luvisols	Eutric	Luvic	Argic
Vs1_5LVha	Vs1	10 - 15 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Luvic	Argic	Haplic
Vs1_5NTha	Vs1	10 - 15 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Nitic
Vs1_5VRha	Vs1	10 - 15 %	VRha	Haplic Vertisols	Cutanic Luvisols	Haplic Luvisols	Eutric	Haplic	Vertic
Vs1_5VRha	Vs1	10 - 15 %	VRha	Haplic Vertisols	Vertic Luvisols	Lithic Leptosols	Haplic	Eutric	Luvic
Vs1_6LPli	Vs1	15 - 30 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Eutric	Argic
Vs1_6LVct	Vs1	15 - 30 %	LVct	Cutanic Luvisols	Haplic Vertisols	Lithic Leptosols	Eutric	Luvic	Argic
Vs1_6LVha	Vs1	15 - 30 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Vs1_6NTha	Vs1	15 - 30 %	NTha	Haplic Nitisols	Haplic Vertisols	Vertic Luvisols	Haplic	Vertic	Leptic
Vs1_6VRha	Vs1	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Cambisols	Eutric	Haplic	Luvic
Vs1_7LPli	Vs1	30 - 45 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Leptic	Haplic	Eutric
Vs1_7LVha	Vs1	30 - 45 %	LVha	Haplic Luvisols	Vertic Luvisols	Cutanic Luvisols	Argic	Luvic	Haplic
Vs1_8LPha	Vs1	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vs1_8LPli	Vs1	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vs1_9LPli	Vs1	> 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_2ALha	Vx1	0.5 - 2 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vx1_2LVha	Vx1	0.5 - 2 %	LVha	Haplic Luvisols	Haplic Alisols	Vertic Luvisols	Argic	Luvic	Haplic
Vx1_3ALha	Vx1	2 - 5 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vx1_3LVha	Vx1	2 - 5 %	LVha	Haplic Luvisols	Haplic Alisols	Vertic Luvisols	Argic	Haplic	Luvic
Vx1_4ALha	Vx1	5 - 10 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Alic
Vx1_4LPli	Vx1	5 - 10 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Leptosols	Haplic	Leptic	Argic
Vx1_4LVha	Vx1	5 - 10 %	LVha	Haplic Luvisols	Haplic Nitisols	Haplic Alisols	Argic	Haplic	Luvic
Vx1_4NTha	Vx1	5 - 10 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Argic	Luvic
Vx1_4VRha	Vx1	5 - 10 %	VRha	Haplic Vertisols	Cutanic Luvisols	Haplic Luvisols	Eutric	Haplic	Vertic
Vx1_5ALha	Vx1	10 - 15 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Vx1_5LPli	Vx1	10 - 15 %	LPli	Lithic Leptosols	Haplic Luvisols	Haplic Leptosols	Leptic	Haplic	Argic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vx1_5LVha	Vx1	10 - 15 %	LVha	Haplic Luvisols	Haplic Alisols	Haplic Nitisols	Argic	Haplic	Luvic
Vx1_5NTha	Vx1	10 - 15 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Nitic	Luvic
Vx1_5VRha	Vx1	10 - 15 %	VRha	Haplic Vertisols	Haplic Leptosols	Lithic Leptosols	Eutric	Haplic	Leptic
Vx1_6ALha	Vx1	15 - 30 %	ALha	Haplic Alisols	Haplic Luvisols	Vertic Luvisols	Argic	Haplic	Luvic
Vx1_6CMha	Vx1	15 - 30 %	CMha	Haplic Cambisols	Haplic Leptosols	Lithic Leptosols	Eutric	Haplic	Leptic
Vx1_6LPha	Vx1	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Eutric	Haplic
Vx1_6LPli	Vx1	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_6LVha	Vx1	15 - 30 %	LVha	Haplic Luvisols	Haplic Alisols	Haplic Nitisols	Argic	Haplic	Luvic
Vx1_6NTha	Vx1	15 - 30 %	NTha	Haplic Nitisols	Haplic Luvisols	Vertic Luvisols	Haplic	Nitic	Luvic
Vx1_6VRha	Vx1	15 - 30 %	VRha	Haplic Vertisols	Haplic Leptosols	Lithic Leptosols	Eutric	Haplic	Leptic
Vx1_7LPha	Vx1	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_7LPli	Vx1	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_7VRha	Vx1	30 - 45 %	VRha	Haplic Vertisols	Haplic Leptosols	Lithic Leptosols	Leptic	Haplic	Eutric
Vx1_8LPha	Vx1	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_8LPli	Vx1	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_9LPha	Vx1	> 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vx1_9LPli	Vx1	> 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Eutric
Vz2_3LPha	Vz2	2 - 5 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Vz2_5LPha	Vz2	10 - 15 %	LPha	Haplic Leptosols	Haplic Cambisols	Haplic Vertisols	Leptic	Haplic	Eutric
Vz3_1NTha	Vz3	0 - 0.5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Vertic	Haplic	Luvic
Vz3_1VRha	Vz3	0 - 0.5 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Luvic
Vz3_2NTha	Vz3	0.5 - 2 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Vertic	Haplic	Luvic
Vz3_2VRha	Vz3	0.5 - 2 %	VRha	Haplic Vertisols	Haplic Nitisols	Luvic Nitisols	Vertic	Haplic	Luvic
Vz3_3LPli	Vz3	2 - 5 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Luvisols	Haplic	Leptic	Luvic
Vz3_3LPskh	Vz3	2 - 5 %	LPskh	Hyperskeletic Leptosols	Lithic Leptosols	Haplic Leptosols	Leptic	Haplic	Luvic
Vz3_3NTha	Vz3	2 - 5 %	NTha	Haplic Nitisols	Haplic Vertisols	Luvic Nitisols	Haplic	Vertic	Nitic
Vz3_3VRha	Vz3	2 - 5 %	VRha	Haplic Vertisols	Haplic Luvisols	Haplic Nitisols	Vertic	Haplic	Luvic
Vz3_4LPli	Vz3	5 - 10 %	LPli	Lithic Leptosols	Haplic Vertisols	Haplic Leptosols	Haplic	Leptic	Luvic
Vz3_4LPli	Vz3	5 - 10 %	LPli	Lithic Leptosols	Vertic Luvisols	Haplic Luvisols	Luvic	Argic	Haplic

MapLegend	GeoMorph	SlopeClss	SoilWRB	Soil1	Soil2	Soil3	QLF1	QLF2	QLF3
Vz3_4LVha	Vz3	5 - 10 %	LVha	Haplic Luvisols	Haplic Vertisols	Lithic Leptosols	Haplic	Luvic	Argic
Vz3_4NTha	Vz3	5 - 10 %	NTha	Haplic Nitisols	Haplic Vertisols	Lithic Leptosols	Haplic	Vertic	Luvic
Vz3_4VRha	Vz3	5 - 10 %	VRha	Haplic Vertisols	Haplic Nitisols	Lithic Leptosols	Haplic	Vertic	Luvic
Vz3_5LPha	Vz3	10 - 15 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Luvisols	Leptic	Haplic	Luvic
Vz3_5LPli	Vz3	10 - 15 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vz3_5LPli	Vz3	10 - 15 %	LPli	Lithic Leptosols	Hyperskeletic Leptosols	Haplic Vertisols	Haplic	Leptic	Luvic
Vz3_5LVha	Vz3	10 - 15 %	LVha	Haplic Luvisols	Lithic Leptosols	Vertic Luvisols	Luvic	Leptic	Haplic
Vz3_5NTha	Vz3	10 - 15 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Vertisols	Haplic	Luvic	Vertic
Vz3_5VRha	Vz3	10 - 15 %	VRha	Haplic Vertisols	Haplic Nitisols	Haplic Luvisols	Vertic	Haplic	Luvic
Vz3_6LPha	Vz3	15 - 30 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Luvic
Vz3_6LPli	Vz3	15 - 30 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vz3_6LPskh	Vz3	15 - 30 %	LPskh	Hyperskeletic Leptosols	Lithic Leptosols	Haplic Leptosols	Leptic	Luvic	Haplic
Vz3_6LVha	Vz3	15 - 30 %	LVha	Haplic Luvisols	Lithic Leptosols	Vertic Luvisols	Luvic	Leptic	Haplic
Vz3_6LVvr	Vz3	15 - 30 %	LVvr	Vertic Luvisols	Haplic Luvisols	Lithic Leptosols	Leptic	Luvic	Haplic
Vz3_6NTha	Vz3	15 - 30 %	NTha	Haplic Nitisols	Lithic Leptosols	Haplic Leptosols	Haplic	Leptic	Luvic
Vz3_6VRha	Vz3	15 - 30 %	VRha	Haplic Vertisols	Lithic Leptosols	Haplic Leptosols	Haplic	Vertic	Leptic
Vz3_7LPha	Vz3	30 - 45 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Luvic
Vz3_7LPli	Vz3	30 - 45 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vz3_7LVha	Vz3	30 - 45 %	LVha	Haplic Luvisols	Lithic Leptosols	Haplic Leptosols	Leptic	Haplic	Luvic
Vz3_7NTha	Vz3	30 - 45 %	NTha	Haplic Nitisols	Haplic Leptosols	Vertic Luvisols	Leptic	Argic	Luvic
Vz3_8LPha	Vz3	45 - 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Vertic Luvisols	Leptic	Haplic	Luvic
Vz3_8LPli	Vz3	45 - 60 %	LPli	Lithic Leptosols	Haplic Leptosols	Haplic Vertisols	Leptic	Haplic	Luvic
Vz3_9LPha	Vz3	> 60 %	LPha	Haplic Leptosols	Lithic Leptosols	Haplic Nitisols	Leptic	Haplic	Nitic

Annex 6a Soil – landscape resources summarised for the 30 CASCAPE intervention woredas

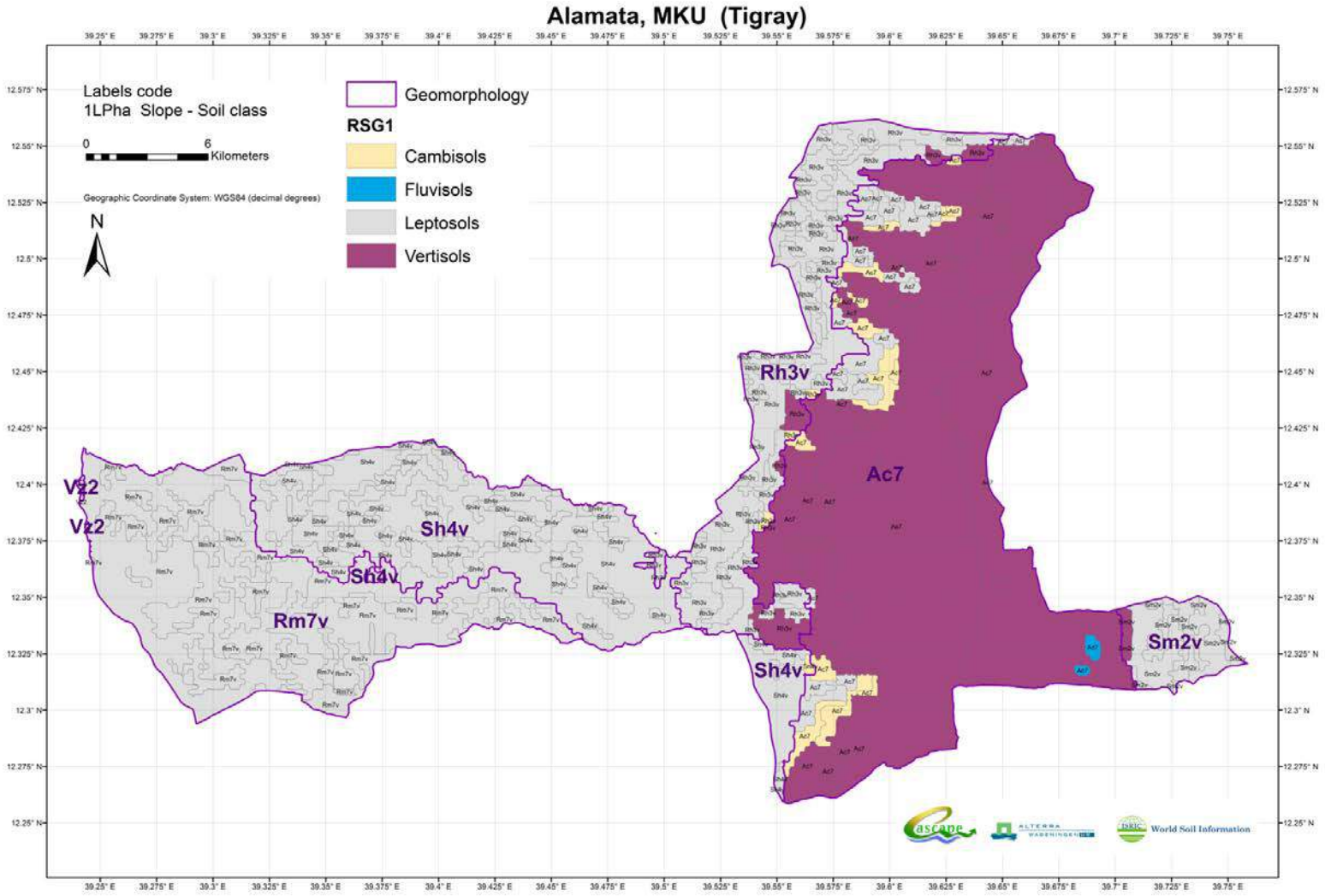
Summary overview of the frequencies of occurrence of reference soil groups as mapped per woreda.

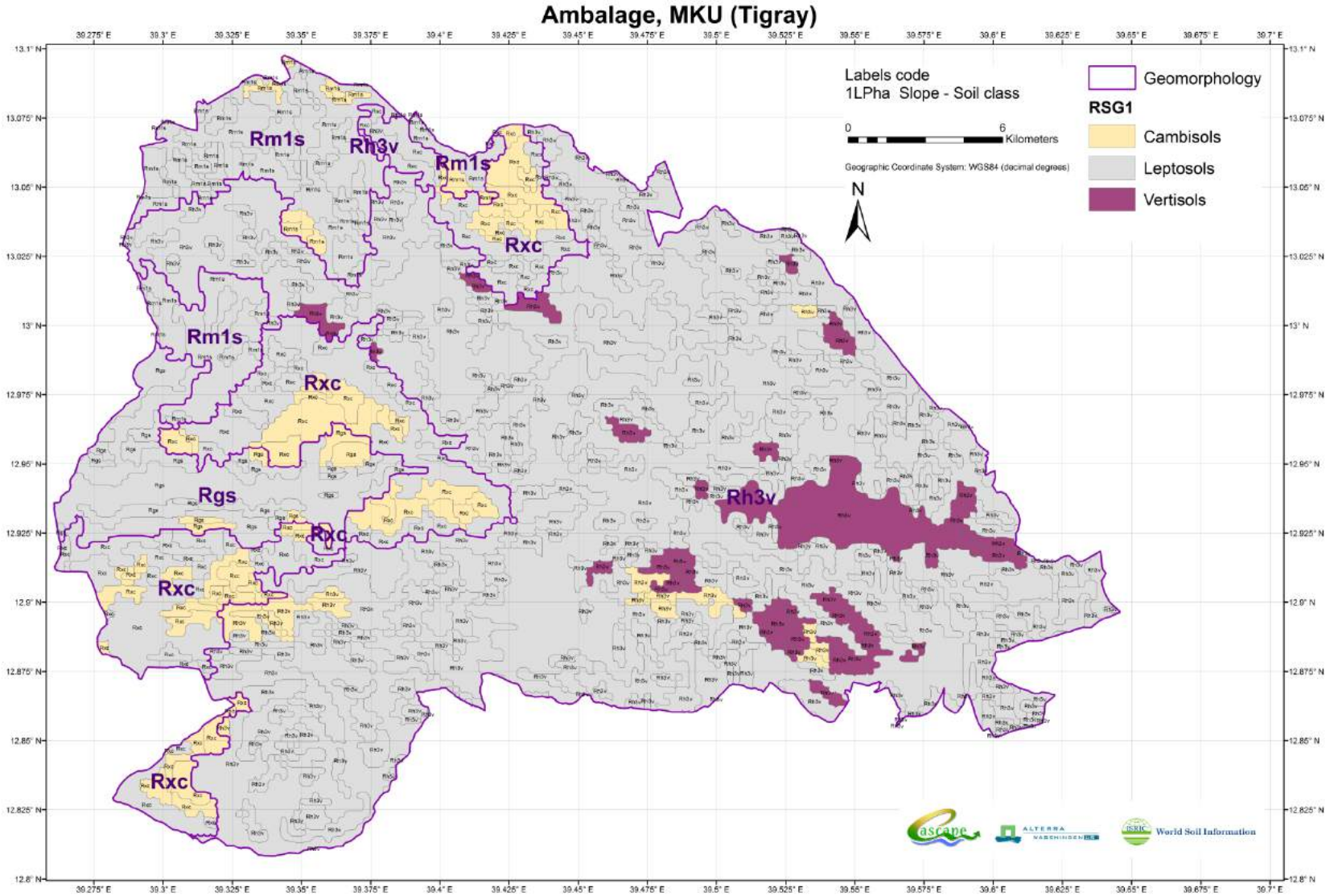
University	Woreda	RSG	Area %	University	Woreda	RSG	Area %
AAU	Bako Tibe	Nitisols	56.8	HWU	Bule	Luvisols	87.9
AAU	Bako Tibe	Vertisols	34.9	HWU	Bule	Alisols	8.2
AAU	Bako Tibe	Luvisols	8	HWU	Bule	Nitisols	2.9
AAU	Bako Tibe	Leptosols	0.2	HWU	Bule	Leptosols	0.5
AAU	Bako Tibe	Regosols	0.1	HWU	Bule	Cambisols	0.4
AAU	Becho	Vertisols	91.8	HWU	Cheha	Nitisols	40.1
AAU	Becho	Luvisols	7.9	HWU	Cheha	Vertisols	35.2
AAU	Becho	Nitisols	0.3	HWU	Cheha	Luvisols	11
AAU	Becho	Leptosols	0.1	HWU	Cheha	Leptosols	9.6
AAU	Gimbichu	Vertisols	77.1	HWU	Cheha	Planosols	4
AAU	Gimbichu	Leptosols	18.5	HWU	ENEMOR ENER	Nitisols	44.9
AAU	Gimbichu	Luvisols	4.4	HWU	ENEMOR ENER	Vertisols	30.7
AAU	Gimbichu	Phaeozems	0	HWU	ENEMOR ENER	Leptosols	10
AAU	Girar Jarso	Vertisols	46.6	HWU	ENEMOR ENER	Luvisols	9.9
AAU	Girar Jarso	Leptosols	37.5	HWU	ENEMOR ENER	Planosols	4.6
AAU	Girar Jarso	Luvisols	12.9	HWU	Malga	Luvisols	45.7
AAU	Girar Jarso	Cambisols	2.9	HWU	Malga	Alisols	42.9
AAU	Girar Jarso	Nitisols	0.2	HWU	Malga	Nitisols	11.1
AAU	Munesa	Planosols	33.1	HWU	Misirak Azerenet Berbere	Luvisols	66.1
AAU	Munesa	Alisols	23.5	HWU	Misirak Azerenet Berbere	Nitisols	18.2
AAU	Munesa	Luvisols	23.4	HWU	Misirak Azerenet Berbere	Vertisols	11.2
AAU	Munesa	Leptosols	9.3	HWU	Misirak Azerenet Berbere	Regosols	2.6
AAU	Munesa	Vertisols	7	HWU	Misirak Azerenet Berbere	Leptosols	1.9
AAU	Munesa	Nitisols	3.7	JMU	Bedele Zuriya	Nitisols	75.6
AAU	Munesa	Phaeozems	0.1	JMU	Bedele Zuriya	Vertisols	15
AAU	Munesa	Fluvisols	0	JMU	Bedele Zuriya	Luvisols	8
BDU	Bure	Nitisols	44.7	JMU	Bedele Zuriya	Cambisols	0.9
BDU	Bure	Leptosols	30.3	JMU	Bedele Zuriya	Regosols	0.5
BDU	Bure	Vertisols	21.6	JMU	Bedele Zuriya	Acrisols	0.1
BDU	Bure	Luvisols	3.5	JMU	Bedele Zuriya	Leptosols	0.1
BDU	Dera	Leptosols	45.4	JMU	DEDESA	Nitisols	72.7
BDU	Dera	Vertisols	30.6	JMU	DEDESA	Luvisols	18.7

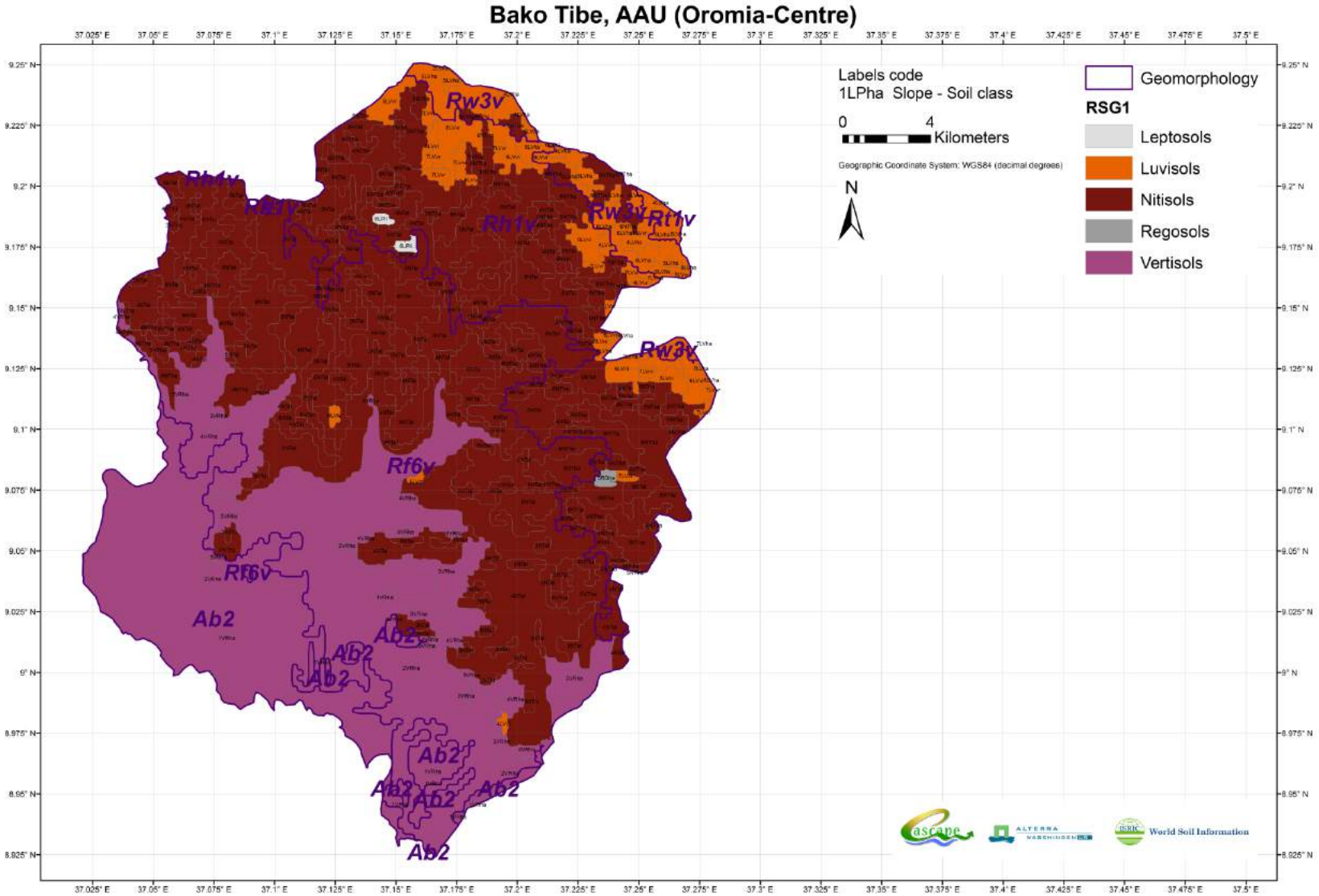
University	Woreda	RSG	Area %	University	Woreda	RSG	Area %
BDU	Dera	Luvisols	23	JMU	DEDESA	Vertisols	8.5
BDU	Dera	Nitisols	0.8	JMU	DEDESA	Cambisols	0.1
BDU	Dera	Lake	0.3	JMU	DEDESA	Regosols	0
BDU	Dera	Fluvisols	0.1	JMU	Gera	Nitisols	66.6
BDU	Dera	Cambisols	0	JMU	Gera	Luvisols	29.3
BDU	Jebitenan	Vertisols	41.1	JMU	Gera	Alisols	3.2
BDU	Jebitenan	Nitisols	39.6	JMU	Gera	Leptosols	0.5
BDU	Jebitenan	Leptosols	19.2	JMU	Gera	Planosols	0.5
BDU	Jebitenan	Luvisols	0.2	JMU	Gera	Gleysols	0
BDU	Mecha	Vertisols	39.8	JMU	Gera	Cambisols	0
BDU	Mecha	Nitisols	39.2	JMU	Limu Seka	Nitisols	89.4
BDU	Mecha	Leptosols	15	JMU	Limu Seka	Vertisols	7.1
BDU	Mecha	Luvisols	6.3	JMU	Limu Seka	Leptosols	2.6
BDU	South Achefer	Vertisols	29.8	JMU	Limu Seka	Luvisols	1
BDU	South Achefer	Luvisols	29	JMU	Limu Seka	Cambisols	0
BDU	South Achefer	Nitisols	26.4	JMU	Omonada	Nitisols	50
BDU	South Achefer	Leptosols	15	JMU	Omonada	Vertisols	16.8
HMU	Girawa	Leptosols	65.2	JMU	Omonada	Luvisols	13.5
HMU	Girawa	Vertisols	28.8	JMU	Omonada	Leptosols	8.3
HMU	Girawa	Luvisols	4.3	JMU	Omonada	Andosols	8.2
HMU	Girawa	Cambisols	0.8	JMU	Omonada	Planosols	3.1
HMU	Girawa	Regosols	0.6	JMU	Omonada	Alisols	0.2
HMU	Girawa	Nitisols	0.2	MKU	Alamata	Leptosols	55.8
HMU	Girawa	Arenosols	0.1	MKU	Alamata	Vertisols	42
HMU	Girawa	Calcisols	0.1	MKU	Alamata	Cambisols	2.3
HMU	Habro	Vertisols	39.3	MKU	Alamata	Fluvisols	0.2
HMU	Habro	Leptosols	27.8	MKU	Ambalage	Leptosols	86.4
HMU	Habro	Nitisols	20	MKU	Ambalage	Cambisols	8.4
HMU	Habro	Regosols	10.6	MKU	Ambalage	Vertisols	5.4
HMU	Habro	Lake	1.3	MKU	Endamehone	Leptosols	93.4
HMU	Habro	Luvisols	1.2	MKU	Endamehone	Vertisols	6.5
HMU	Habro	Cambisols	0.1	MKU	Endamehone	Cambisols	0.3
HMU	Haromaya	Vertisols	45.9	MKU	Ofla	Leptosols	93.7
HMU	Haromaya	Regosols	28.1	MKU	Ofla	Vertisols	5.6
HMU	Haromaya	Leptosols	14.5	MKU	Ofla	Cambisols	0.5
HMU	Haromaya	Arenosols	7	MKU	Ofla	Lake	0.2
HMU	Haromaya	Luvisols	2.3	MKU	Ofla	Fluvisols	0.2

University	Woreda	RSG	Area %	University	Woreda	RSG	Area %
HMU	Haromaya	Lake	1.2	MKU	Rya Azebo	Vertisols	60.3
HMU	Haromaya	Cambisols	0.9	MKU	Rya Azebo	Leptosols	36
HMU	Haromaya	Nitisols	0.2	MKU	Rya Azebo	Cambisols	3.8
HMU	Haromaya	Fluvisols	0	MKU	Rya Azebo	Fluvisols	0
HMU	Kombolicha	Leptosols	43.9				
HMU	Kombolicha	Arenosols	23.3				
HMU	Kombolicha	Vertisols	15.3				
HMU	Kombolicha	Luvisols	10.5				
HMU	Kombolicha	Regosols	5.1				
HMU	Kombolicha	Cambisols	1				
HMU	Kombolicha	Nitisols	0.7				
HMU	Kombolicha	Fluvisols	0.1				
HMU	Meta	Leptosols	50.9				
HMU	Meta	Vertisols	34.3				
HMU	Meta	Cambisols	7.7				
HMU	Meta	Regosols	4.2				
HMU	Meta	Luvisols	2.9				
HMU	Meta	Nitisols	0				

Annex 6b Soil – landscape resource maps for the 30 CASCAPE intervention woredas




Ambalage, MKU (Tigray)
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Leptosols
Vertisols
Rm1s
Rh3v
Rm1s
Rxc
Rm1s
Rxc
Rgs
Rxc
Rxc
Rh3v
Rxc
World Soil Information


Bako Tibe, AAU (Oromia-Centre)
Labels code
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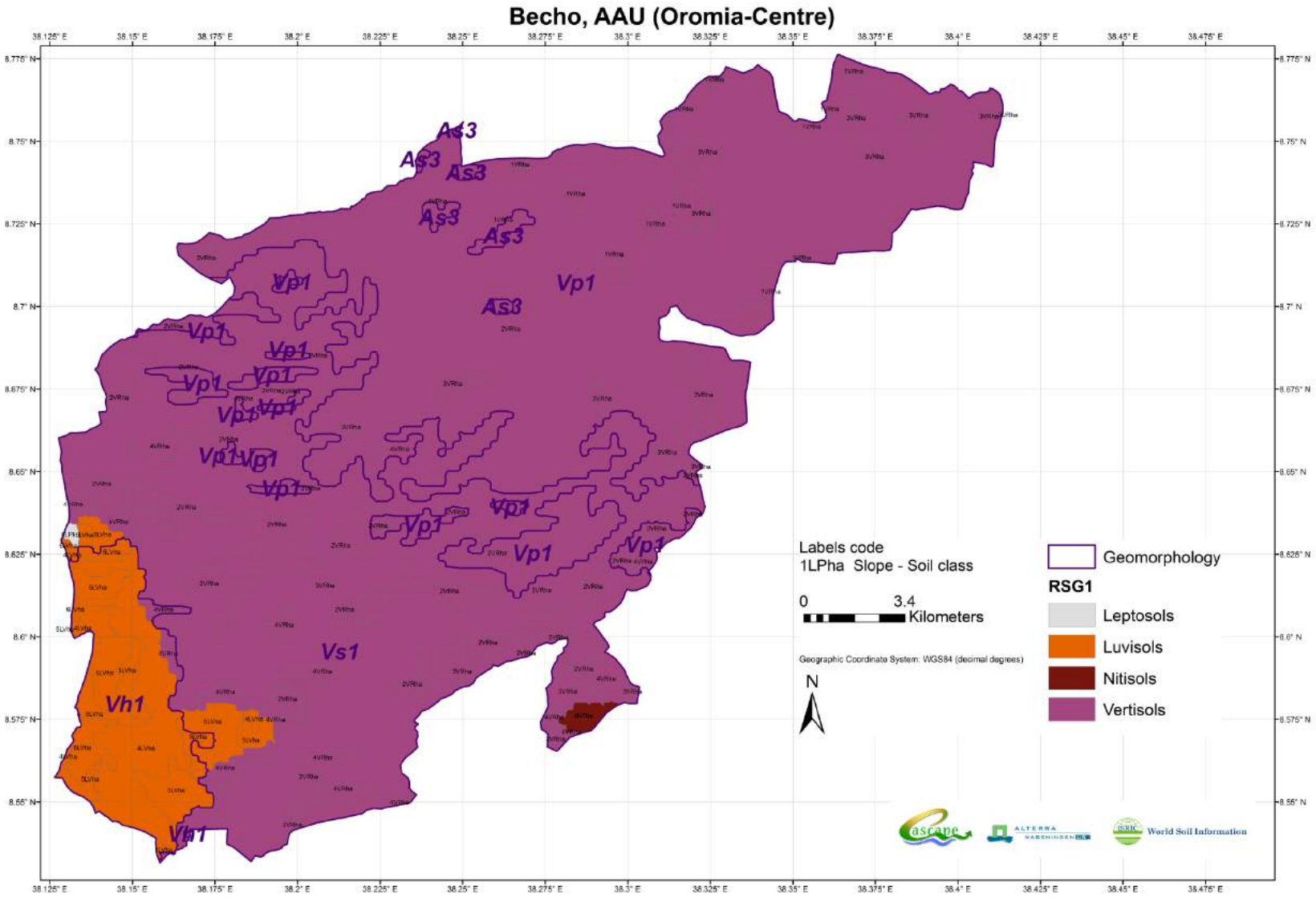
0
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
Rw3v
Rh1v
Rf6v
Ab2
World Soil Information


Becho, AAU (Oromia-Centre)
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1LPha Slope - Soil class
0
3.4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
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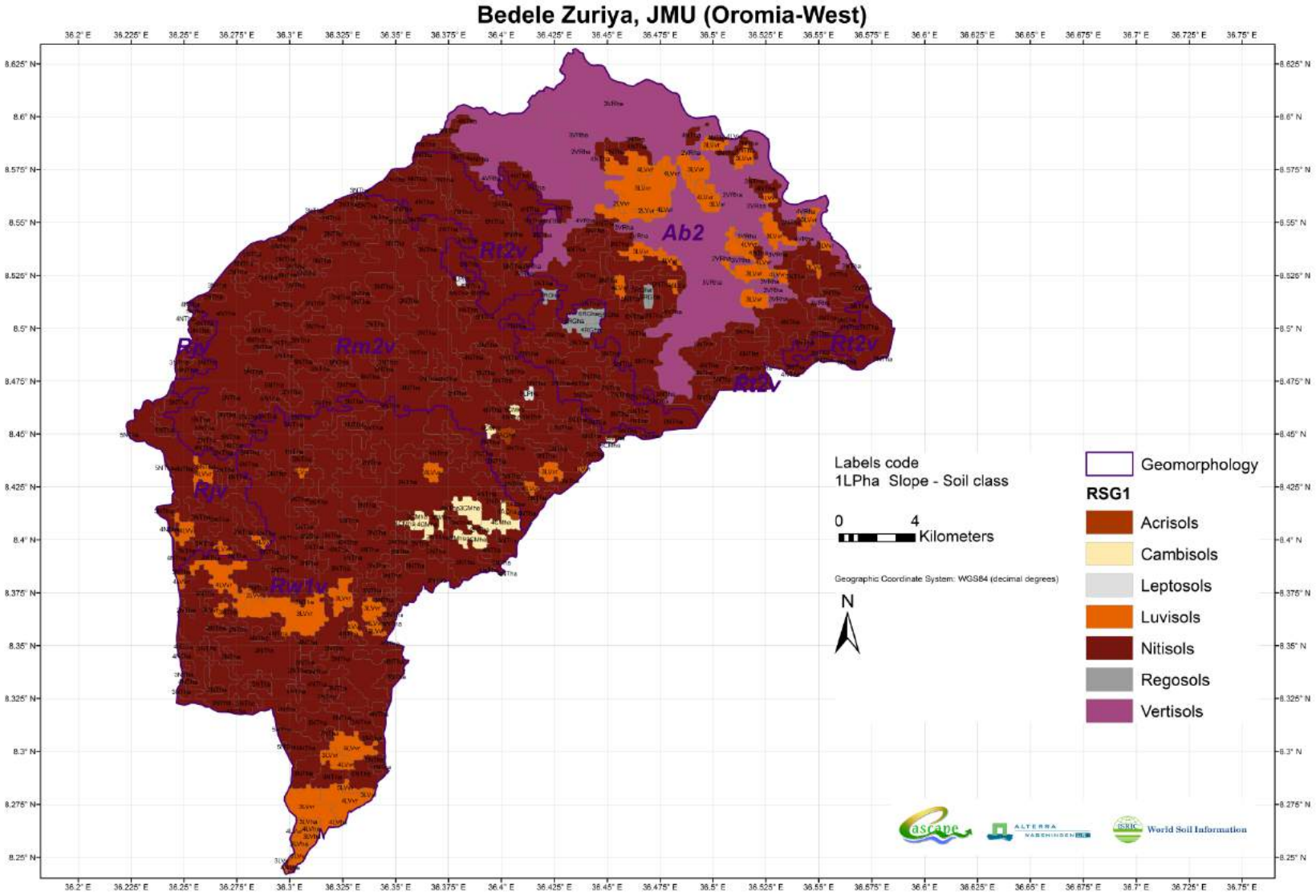
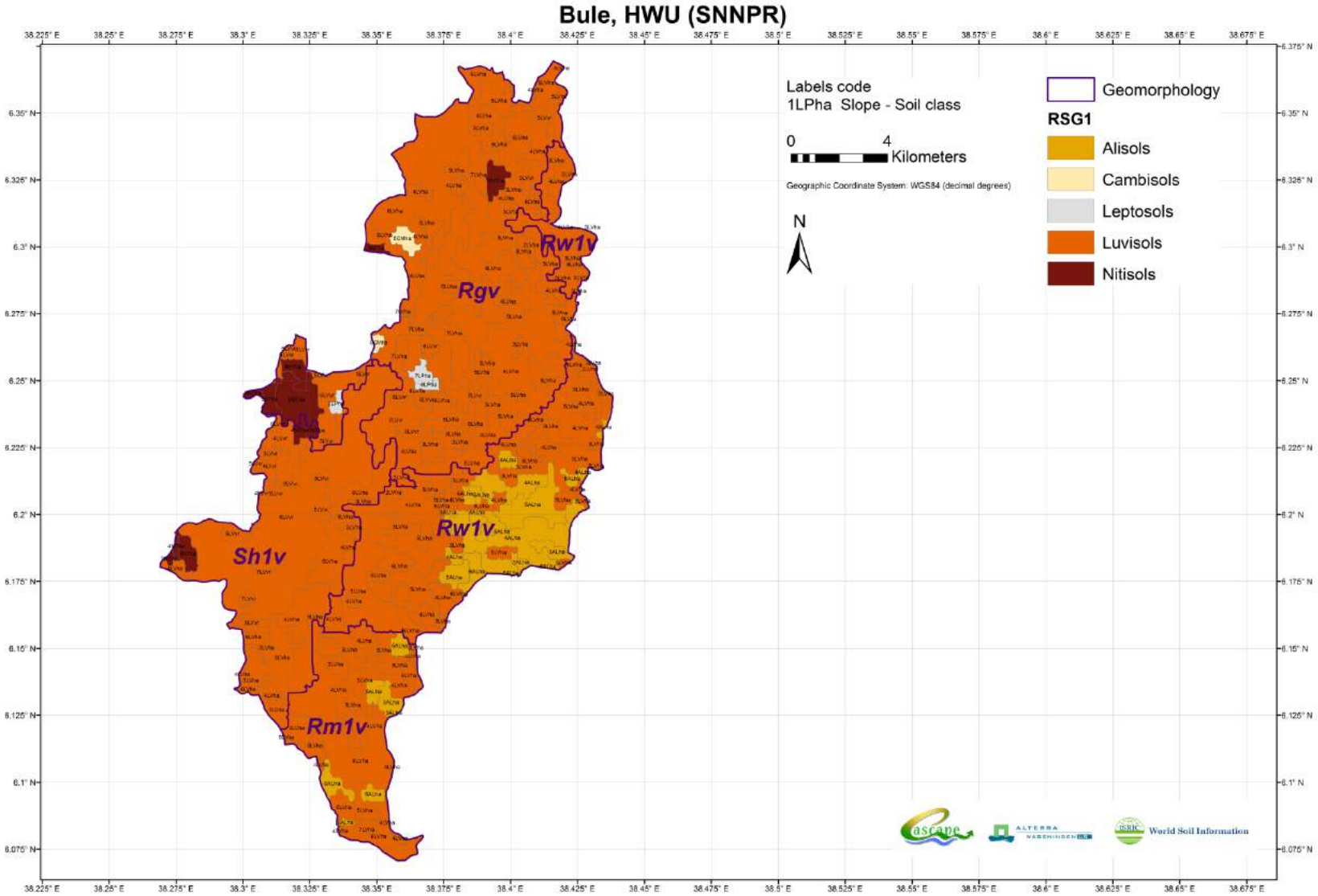
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Vertisols
As3
Vp1
Vs1
Vh1
World Soil Information


Bedele Zuriya, JMU (Oromia-West)
Ab2
Rt2v
Rm2v
Rw1v
Rv
Labels code
1LPha Slope - Soil class
0 4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Acrisols
Cambisols
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
World Soil Information


Bule, HWU (SNNPR)
Labels code
1LPha Slope - Soil class
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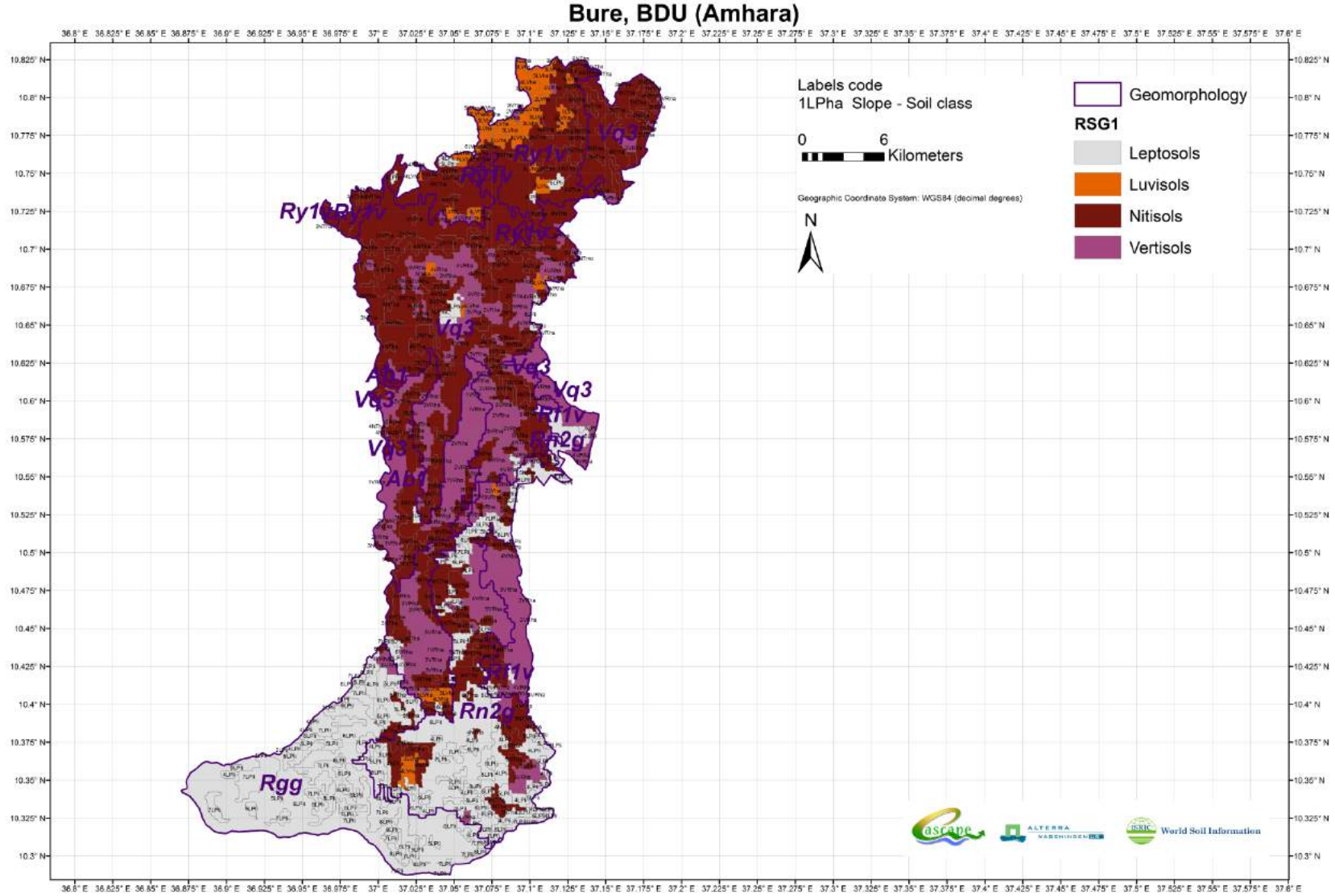
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Alisols
Cambisols
Leptosols
Luvisols
Nitisols
Rw1v
Rgv
Sh1v
Rw1v
Rm1v
World Soil Information


Bure, BDU (Amhara)
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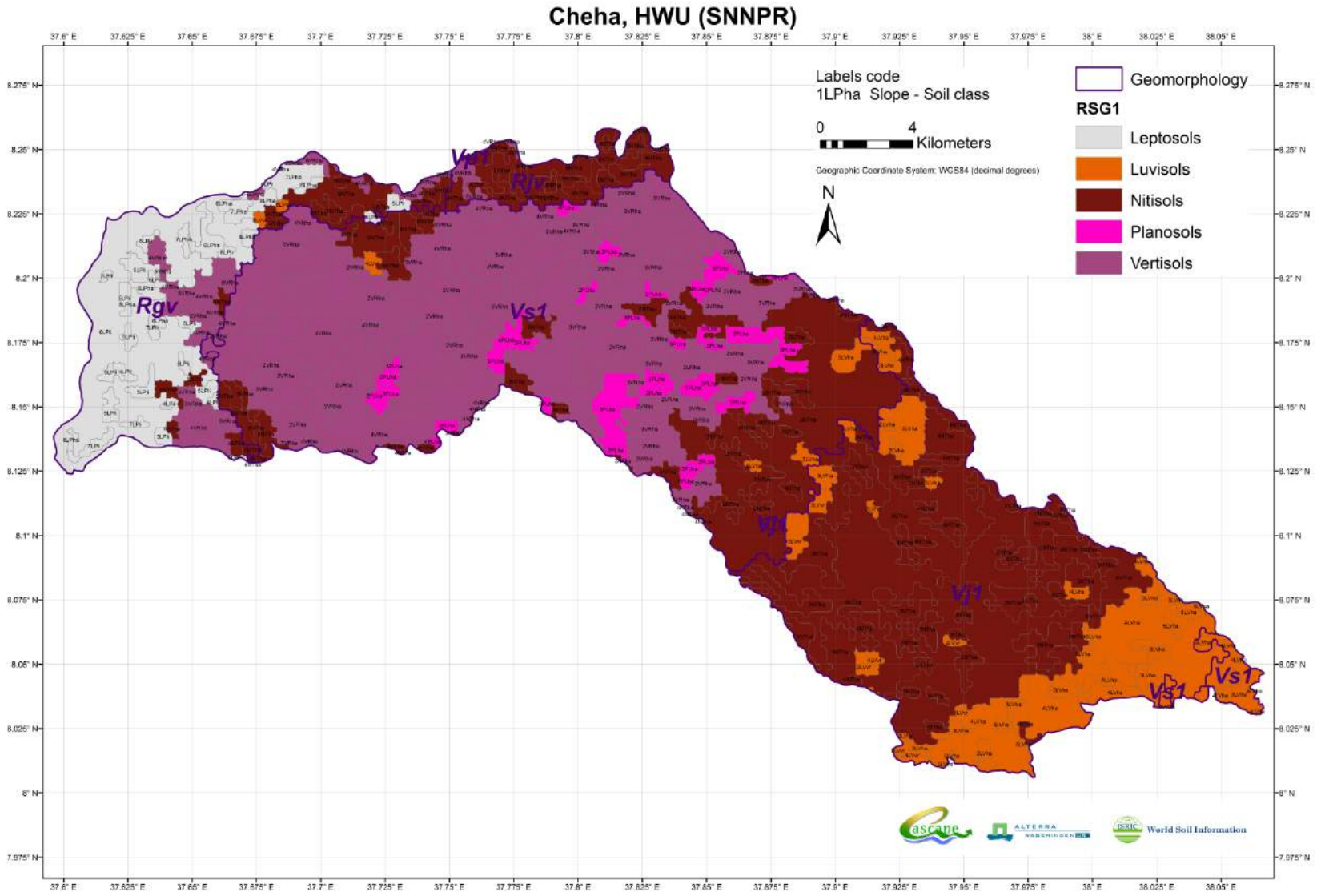
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Vertisols
Ry1v
Vq3
Ab1
Rn2g
Rgg
World Soil Information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4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
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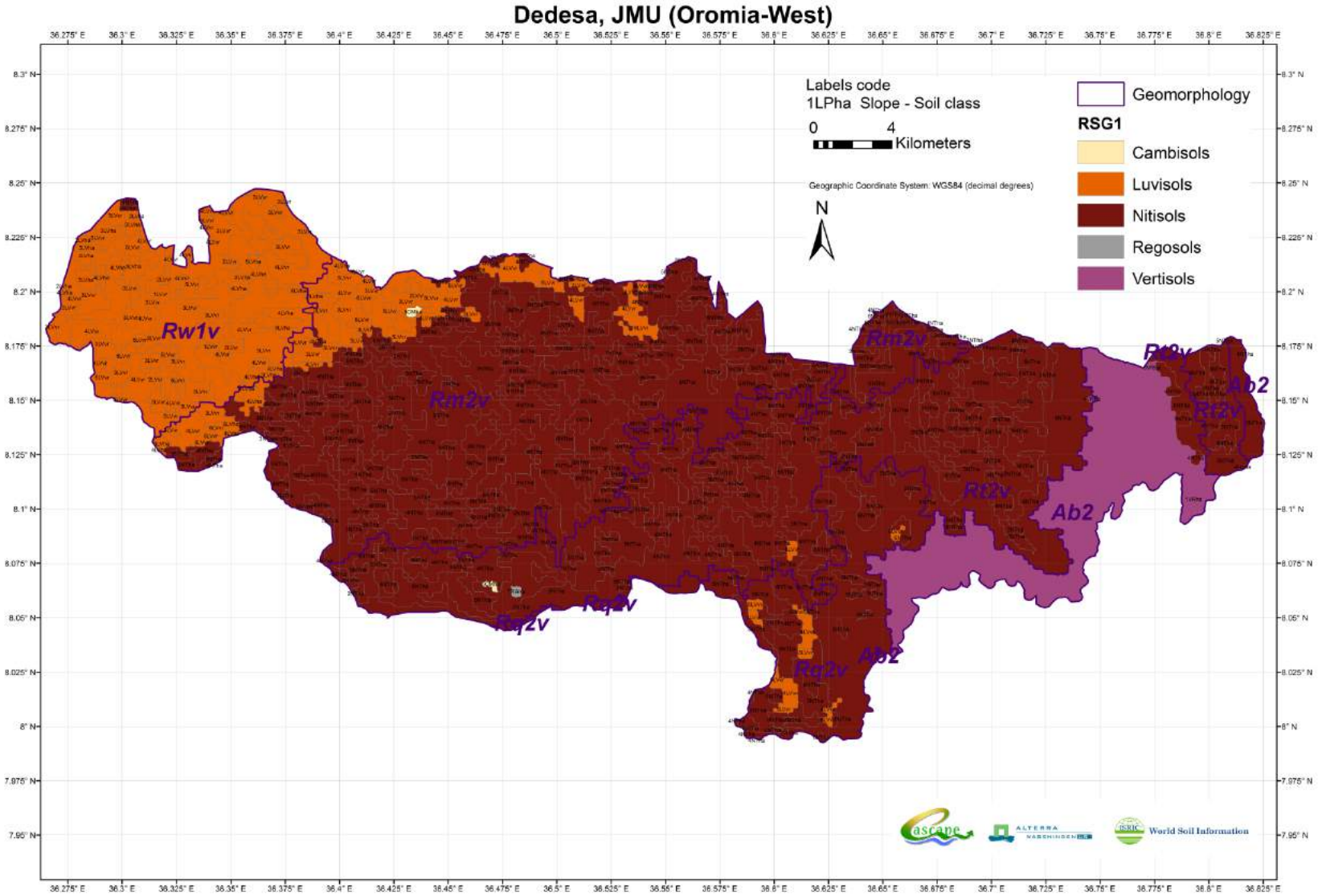
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Planosols
Vertisols
Rgv
Vs1
Vf1
World Soil Information


Dedesa, JMU (Oromia-West)
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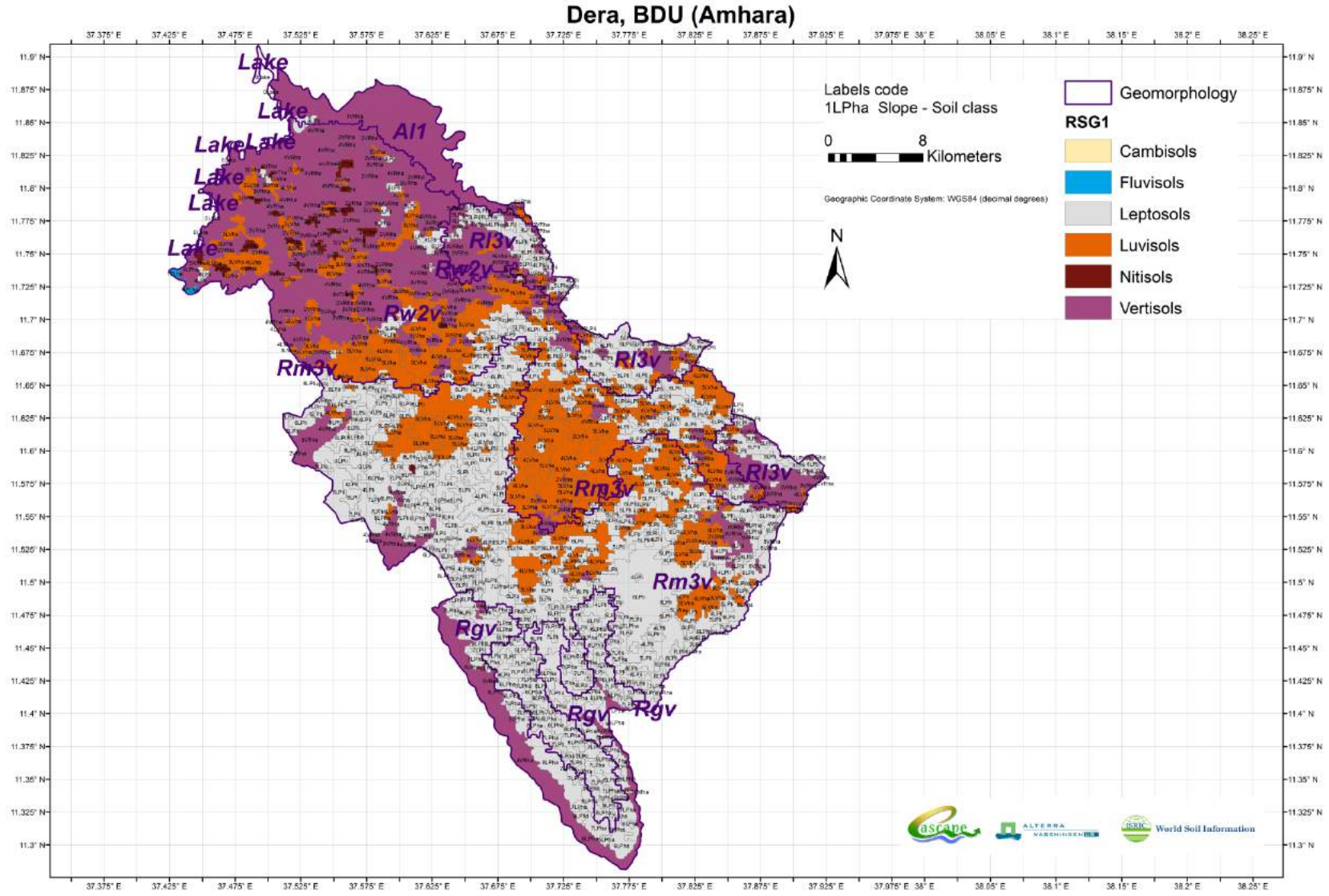
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Luvisols
Nitisols
Regosols
Vertisols
Rw1v
Rm2v
Rq2v
Rt2v
Ab2
World Soil Information


Dera, BDU (Amhara)
Labels code
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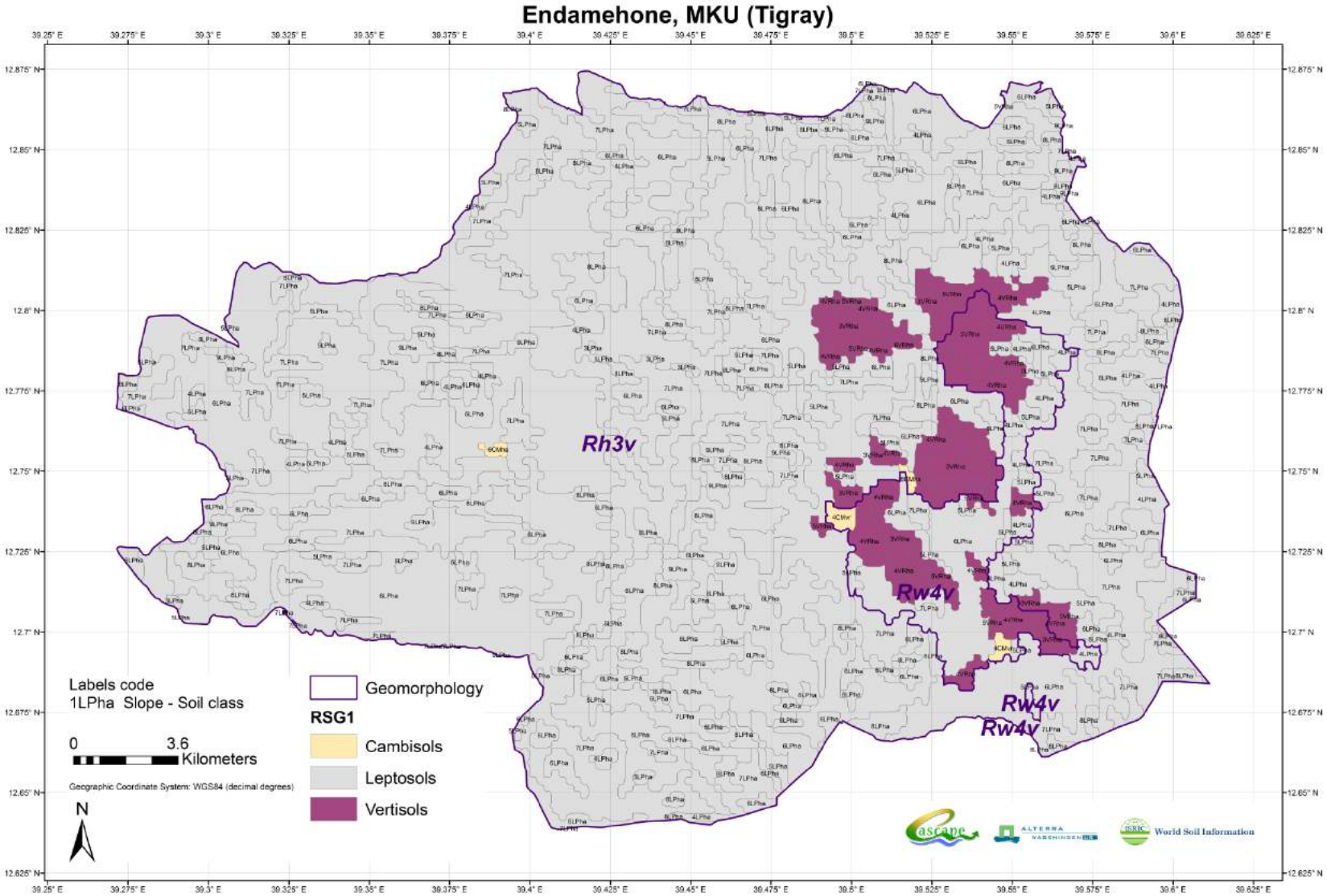
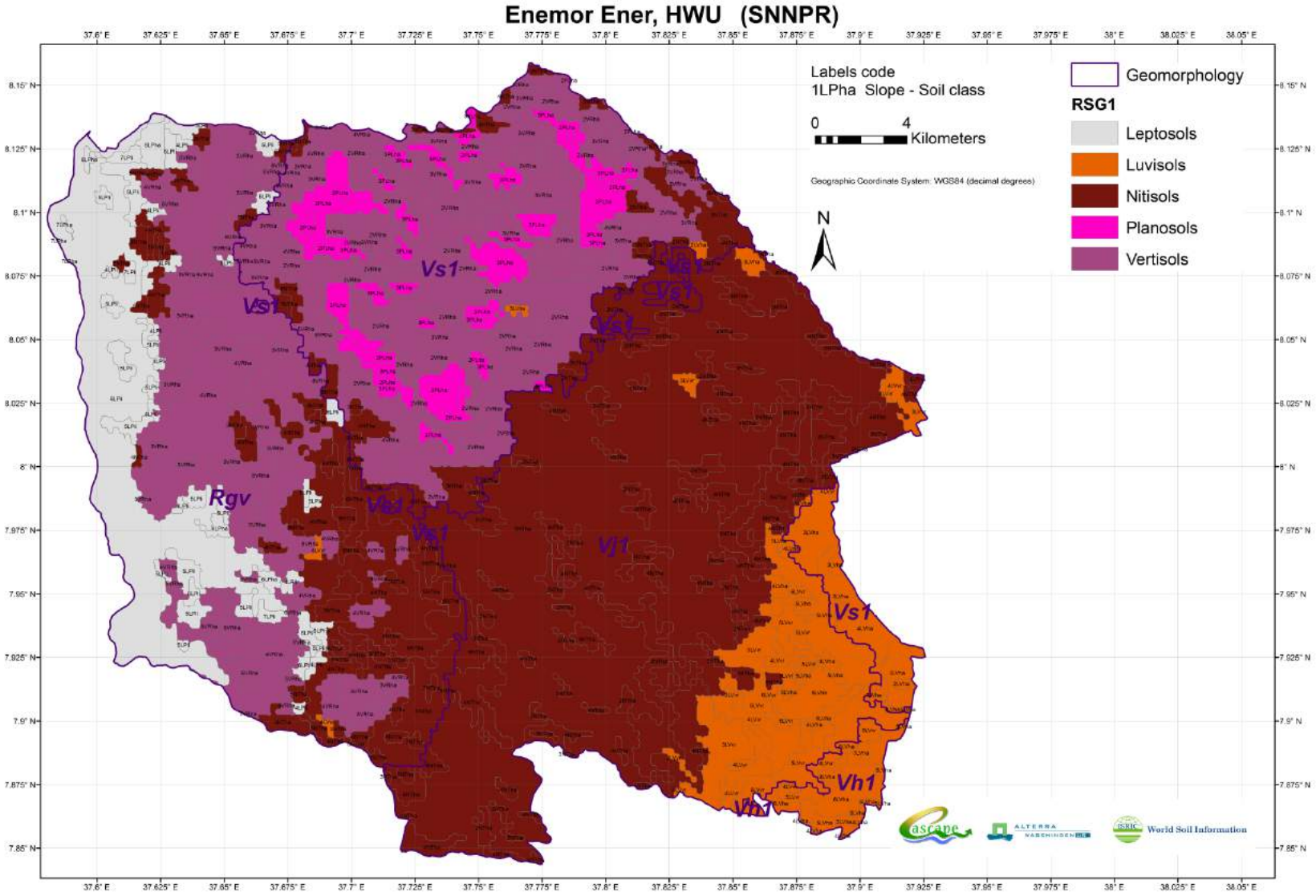
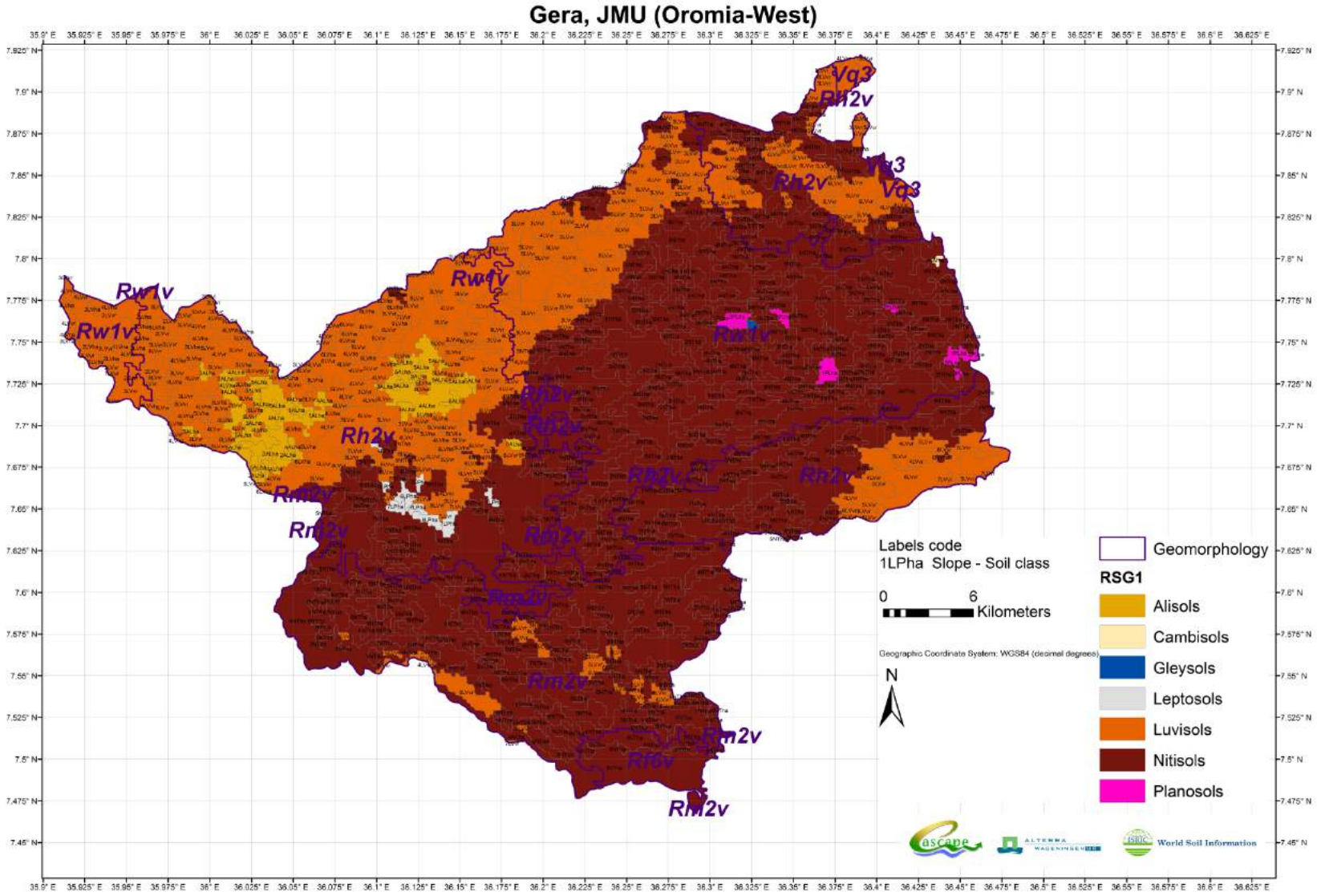
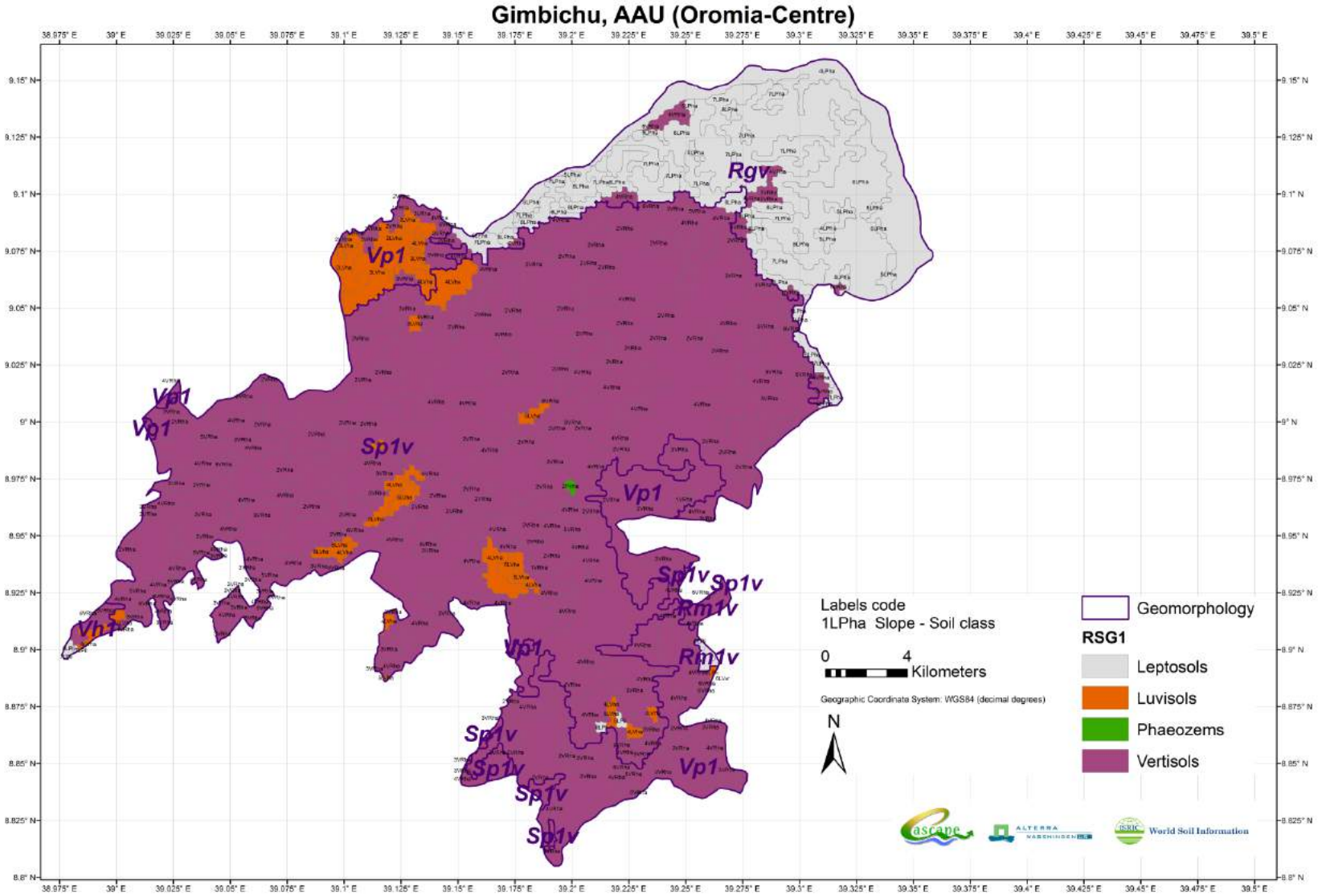
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Fluvisols
Leptosols
Luvisols
Nitisols
Vertisols
Lake
Al1
Rl3v
Rw2v
Rm3v
Rgv
World Soil Information


Endamehone, MKU (Tigray)
Rh3v
Rw4v
Rw4v
Rw4v
Labels code
1LPha Slope - Soil class
0
3.6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Leptosols
Vertisols
World Soil Information


Enemor Ener, HWU (SNNPR)
Labels code
1LPha Slope - Soil class
0
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Planosols
Vertisols
Vs1
Rgv
Vh1
Vl1
World Soil Information


Gera, JMU (Oromia-West)
Vq3
Rh2v
Rw1v
Rm2v
Rf6v
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Alisols
Cambisols
Gleysols
Leptosols
Luvisols
Nitisols
Planosols
World Soil Information


Gimbichu, AAU (Oromia-Centre)
Rgv
Vp1
Vp1
Vp1
Sp1v
Vp1
Sp1v
Sp1v
Rm1v
Vh1
Vp1
Rm1v
Sp1v
Sp1v
Vp1
Sp1v
Sp1v
Labels code
1LPha Slope - Soil class
0
4
Kilometers
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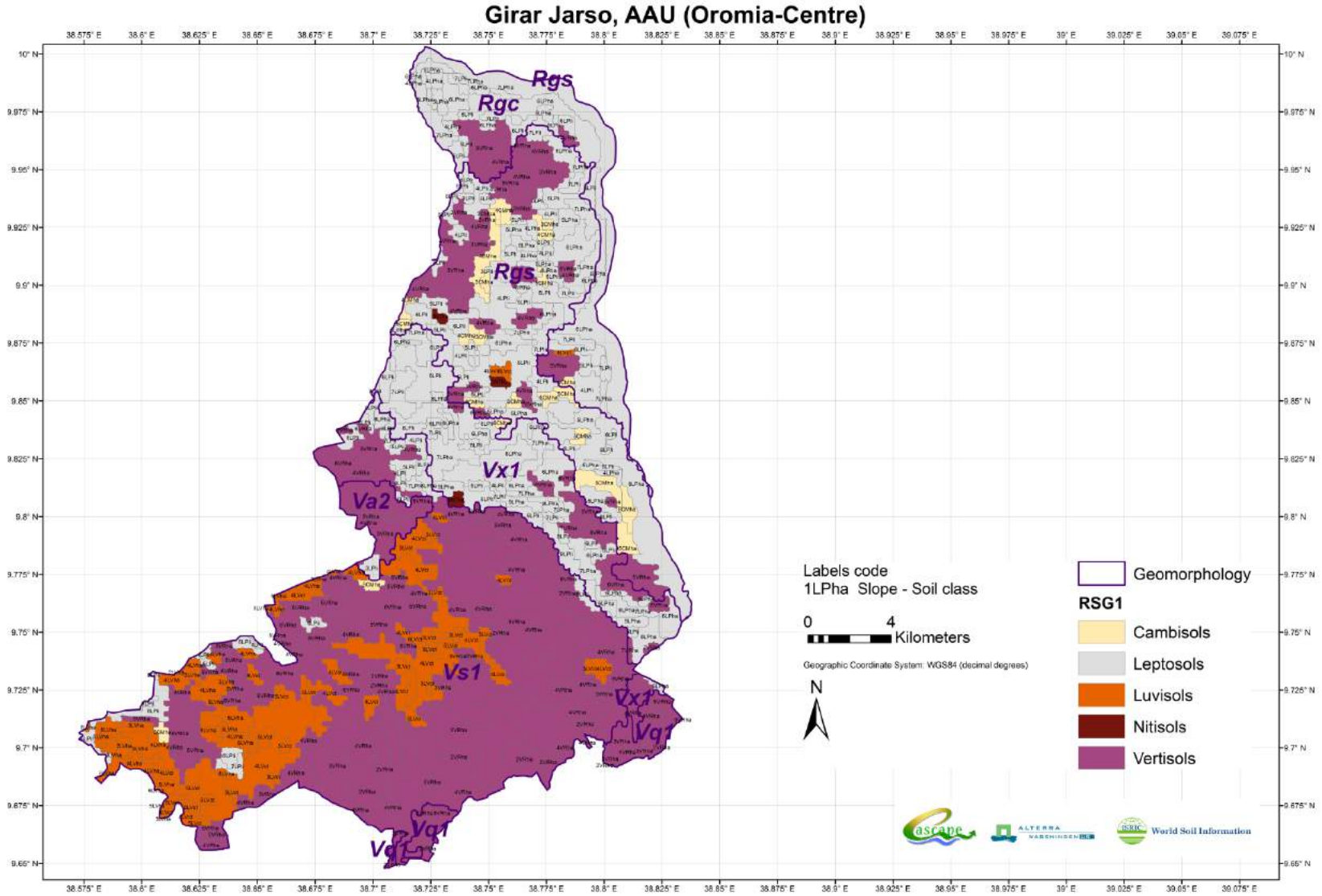
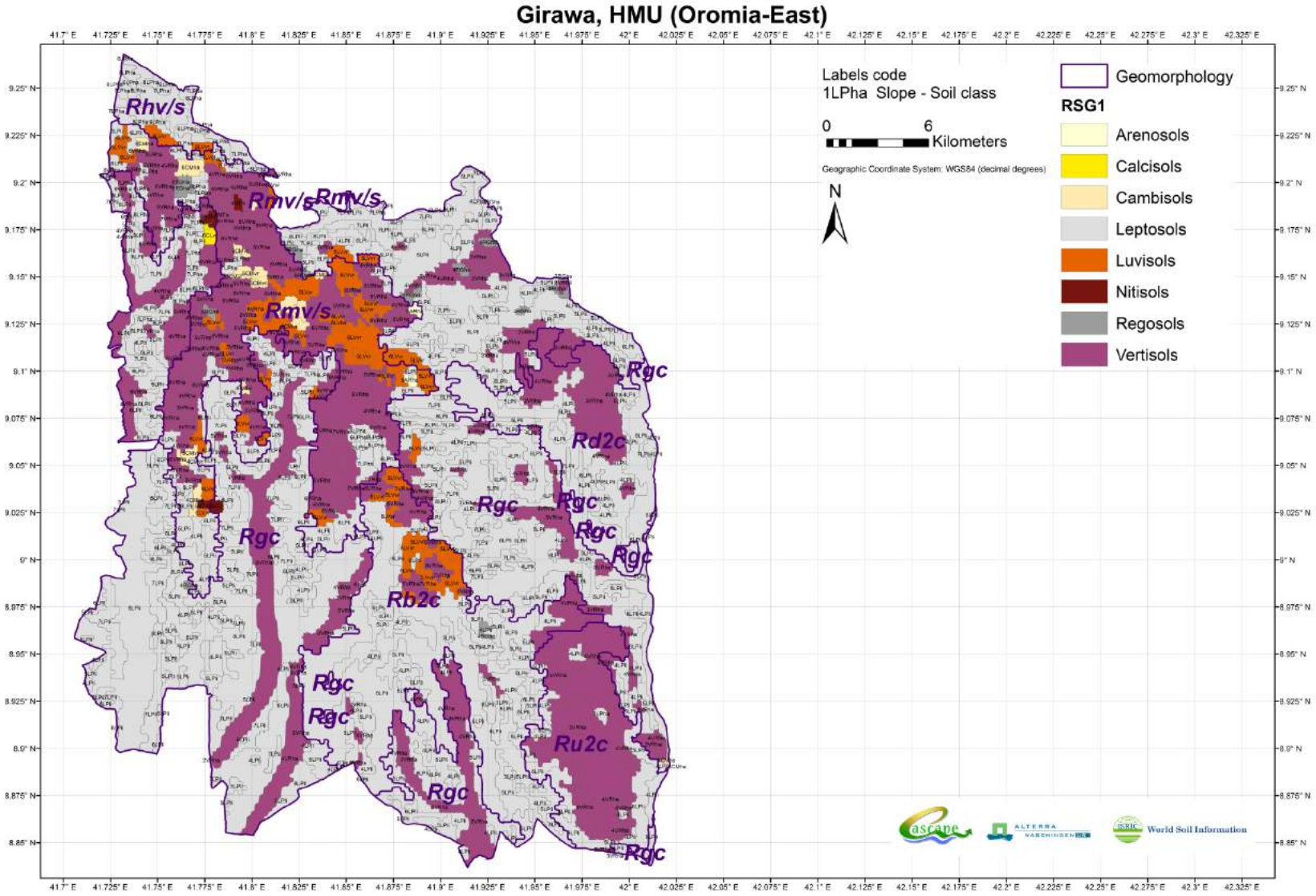
N
Geomorphology
RSG1
Leptosols
Luvisols
Phaeozems
Vertisols
World Soil Information


Girar Jarso, AAU (Oromia-Centre)
Rgs
Rgc
Rgs
Vx1
Va2
Vs1
Vx1
Vg1
Vg1
Vg1
Labels code
1LPha Slope - Soil class
0
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Leptosols
Luvisols
Nitisols
Vertisols
World Soil Information


Girawa, HMU (Oromia-East)
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6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
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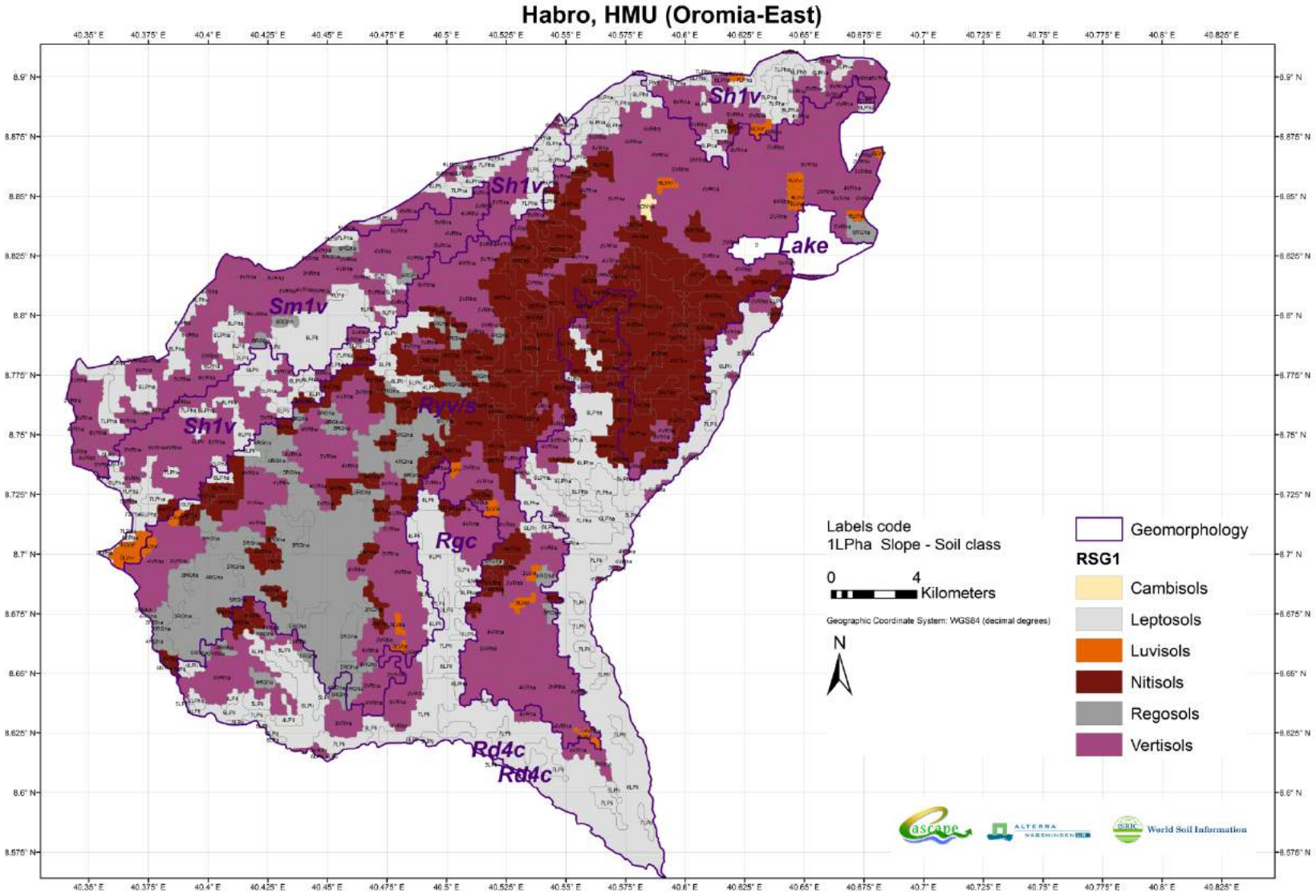
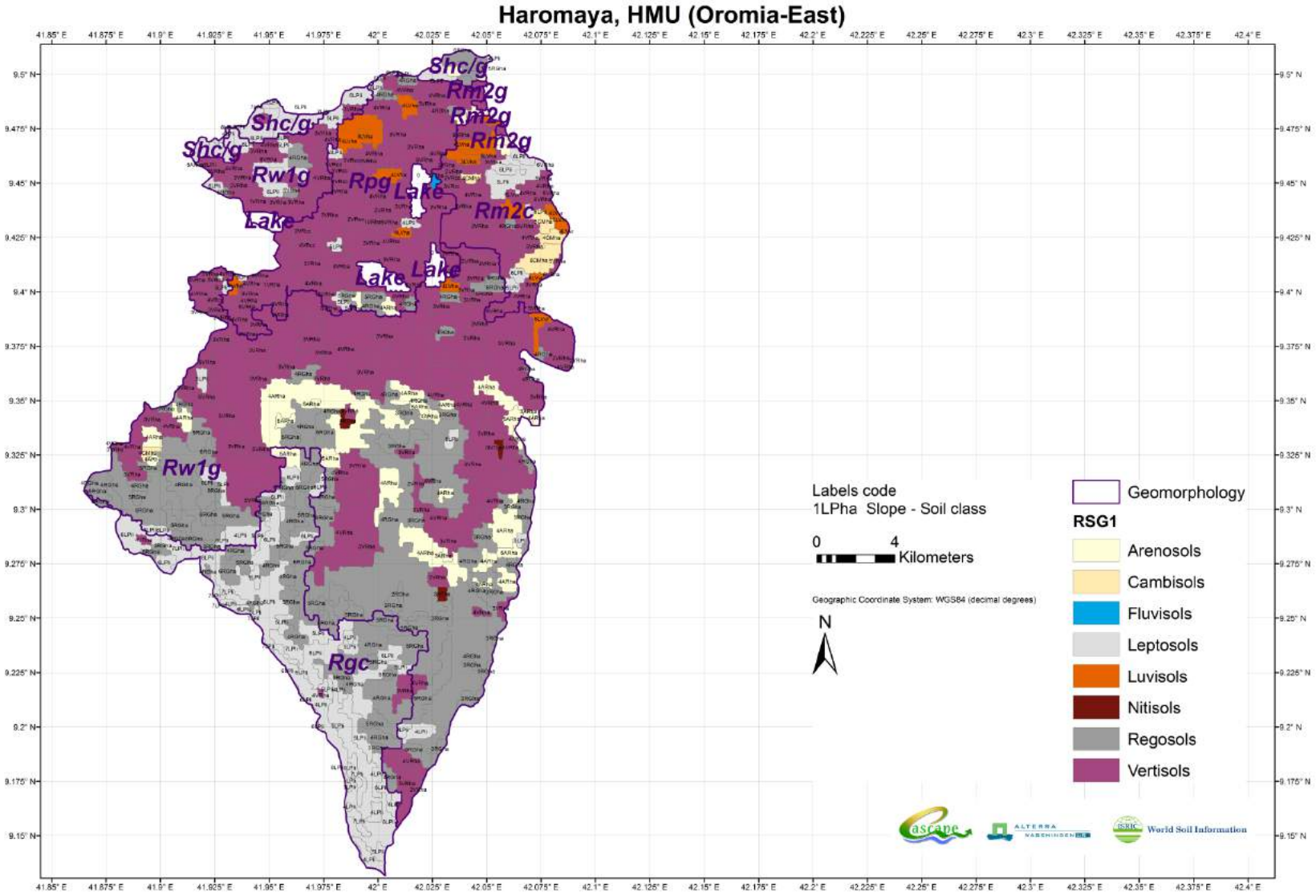
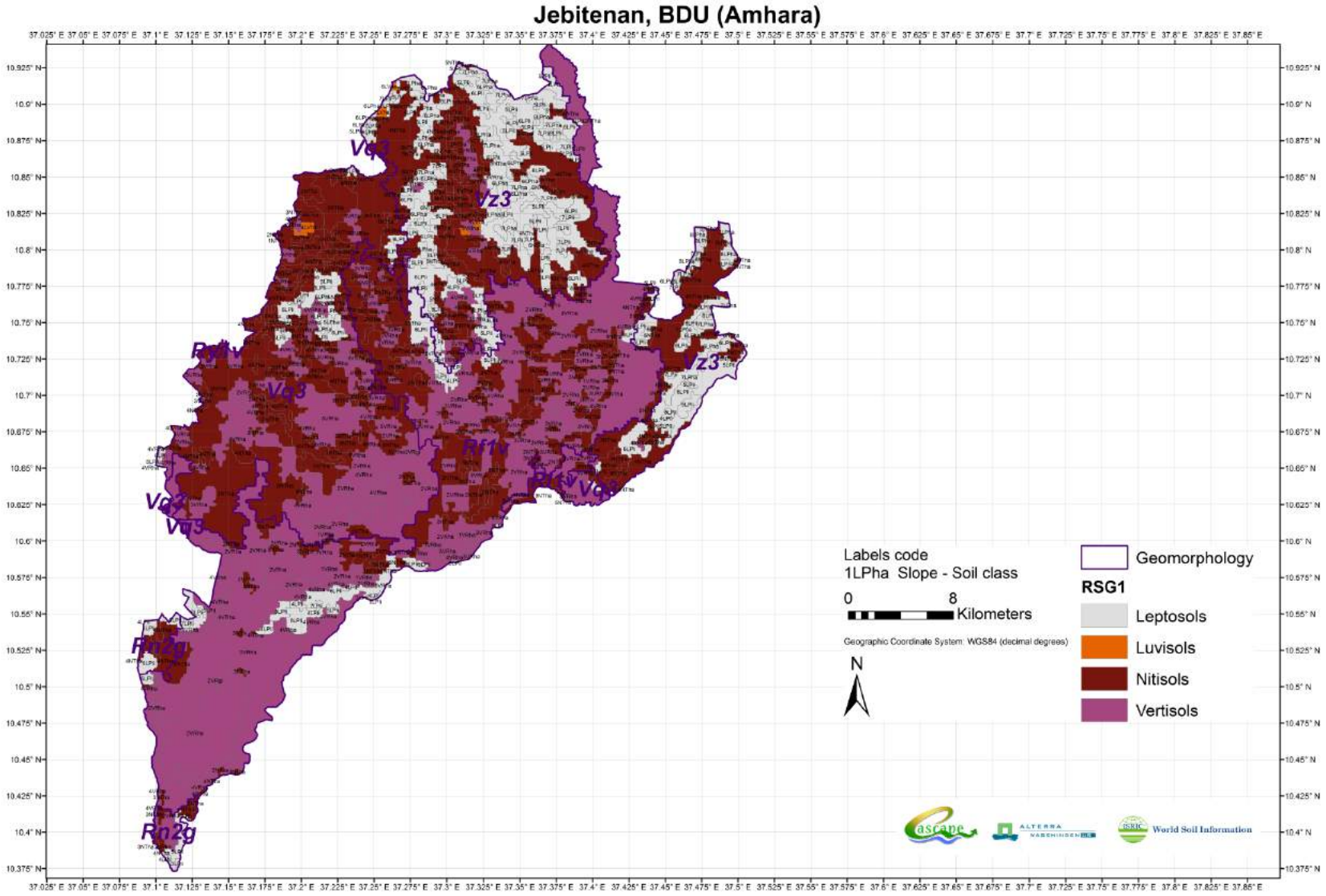
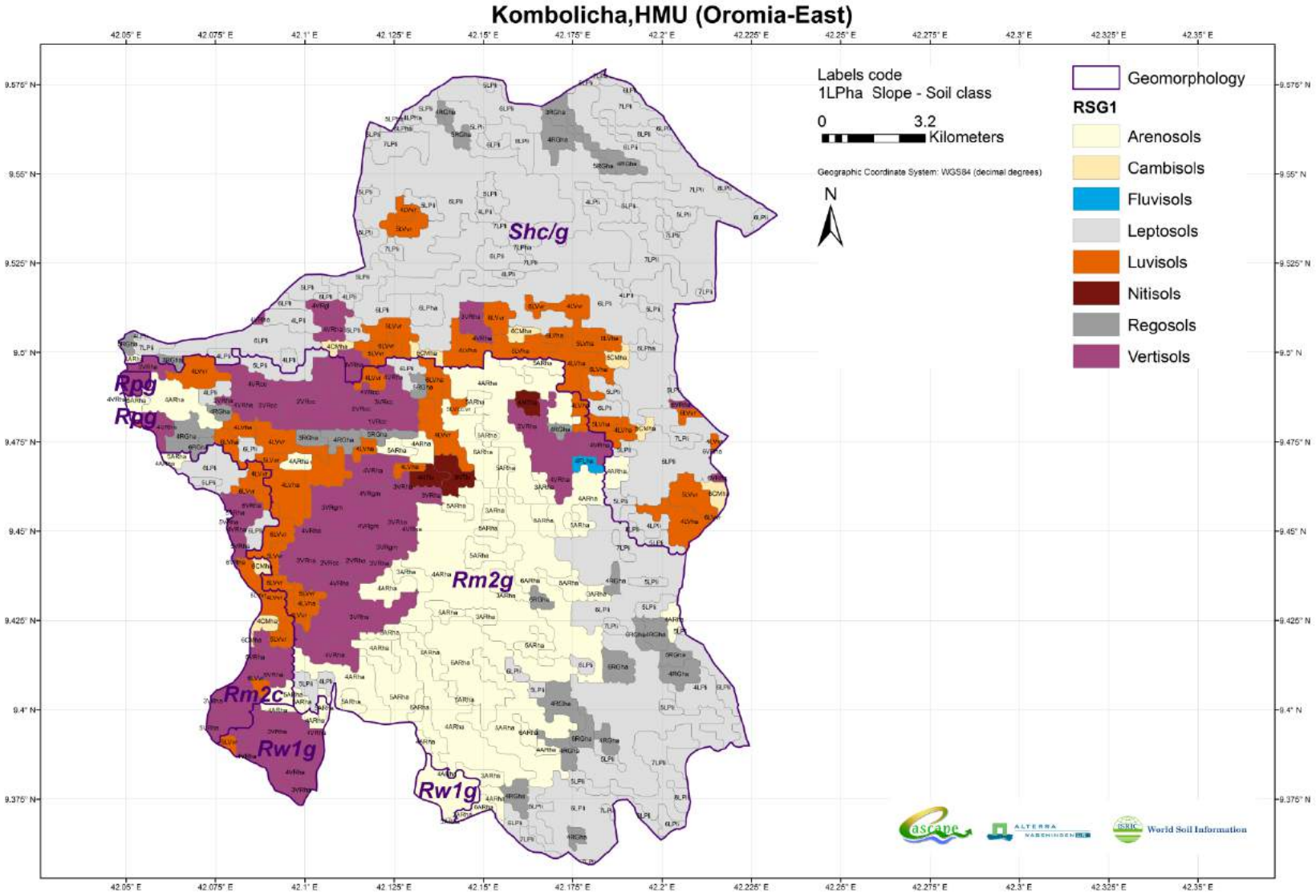
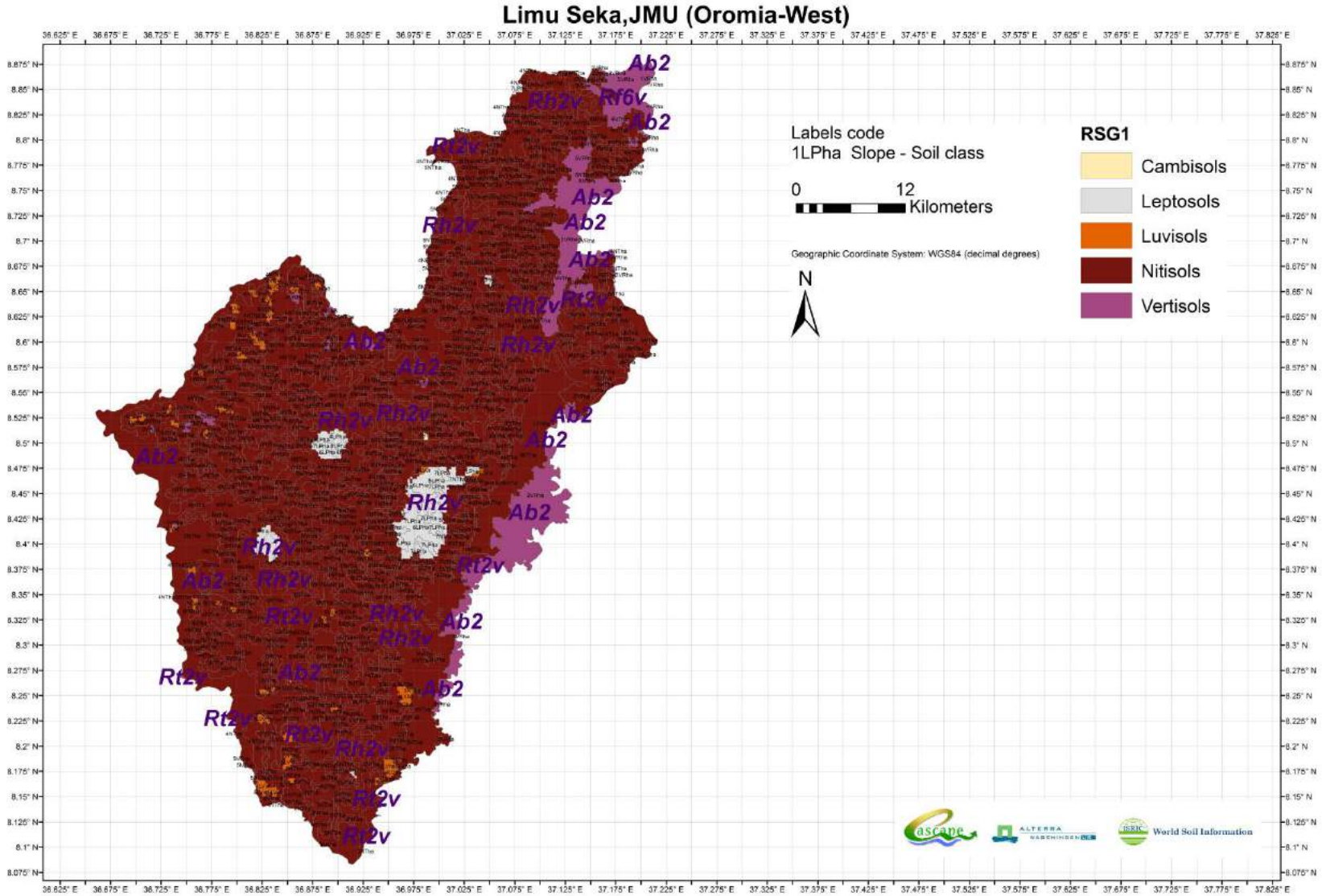
Geomorphology
RSG1
Arenosols
Calcisols
Cambisols
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
Rhv/s
Rmv/s
Rgc
Rd2c
Rb2c
Ru2c
World Soil Information


Habro, HMU (Oromia-East)
Sh1v
Sh1v
Lake
Sm1v
Sh1v
Rgc
Rd4c
Rd4c
Labels code
1LPha Slope - Soil class
0
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
World Soil Information


Haromaya, HMU (Oromia-East)
Shc/g
Rm2g
Rm2g
Shc/g
Rm2g
Shc/g
Rw1g
Rpg
Lake
Lake
Rm2c
Lake
Lake
Rw1g
Rgc
Labels code
1LPha Slope - Soil class
0
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Arenosols
Cambisols
Fluvisols
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
World Soil Information


Jebitenan, BDU (Amhara)
Vq3
Vz3
Rf1y
Rn2g
Labels code
1LPha Slope - Soil class
0
8
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Vertisols
World Soil Information


Kombolicha,HMU (Oromia-East)
Labels code
1LPha Slope - Soil class
0
3.2
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Arenosols
Cambisols
Fluvisols
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
Shc/g
Rpg
Rpg
Rm2g
Rm2c
Rw1g
Rw1g
World Soil Information


Limu Seka,JMU (Oromia-West)
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0
12
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
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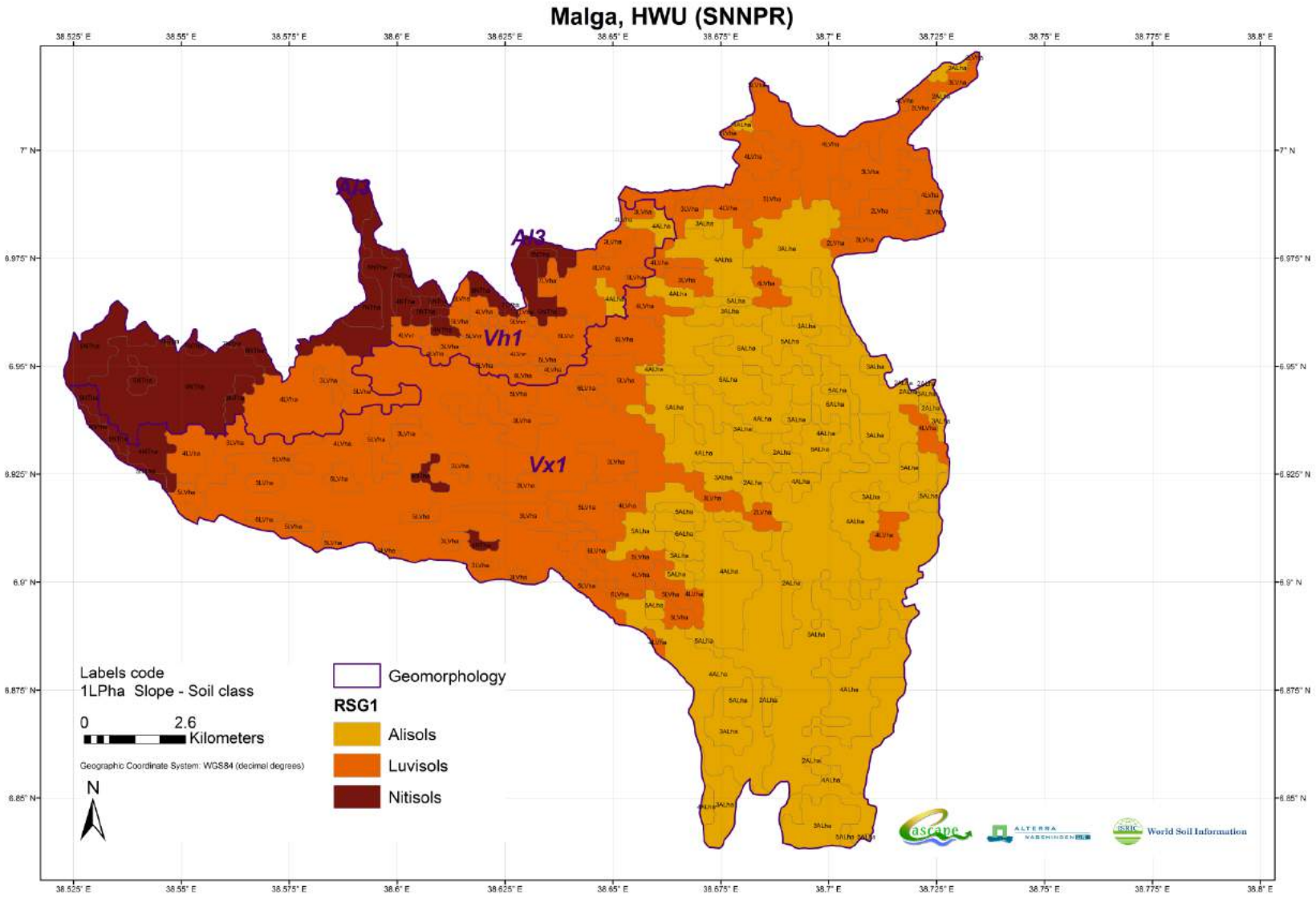
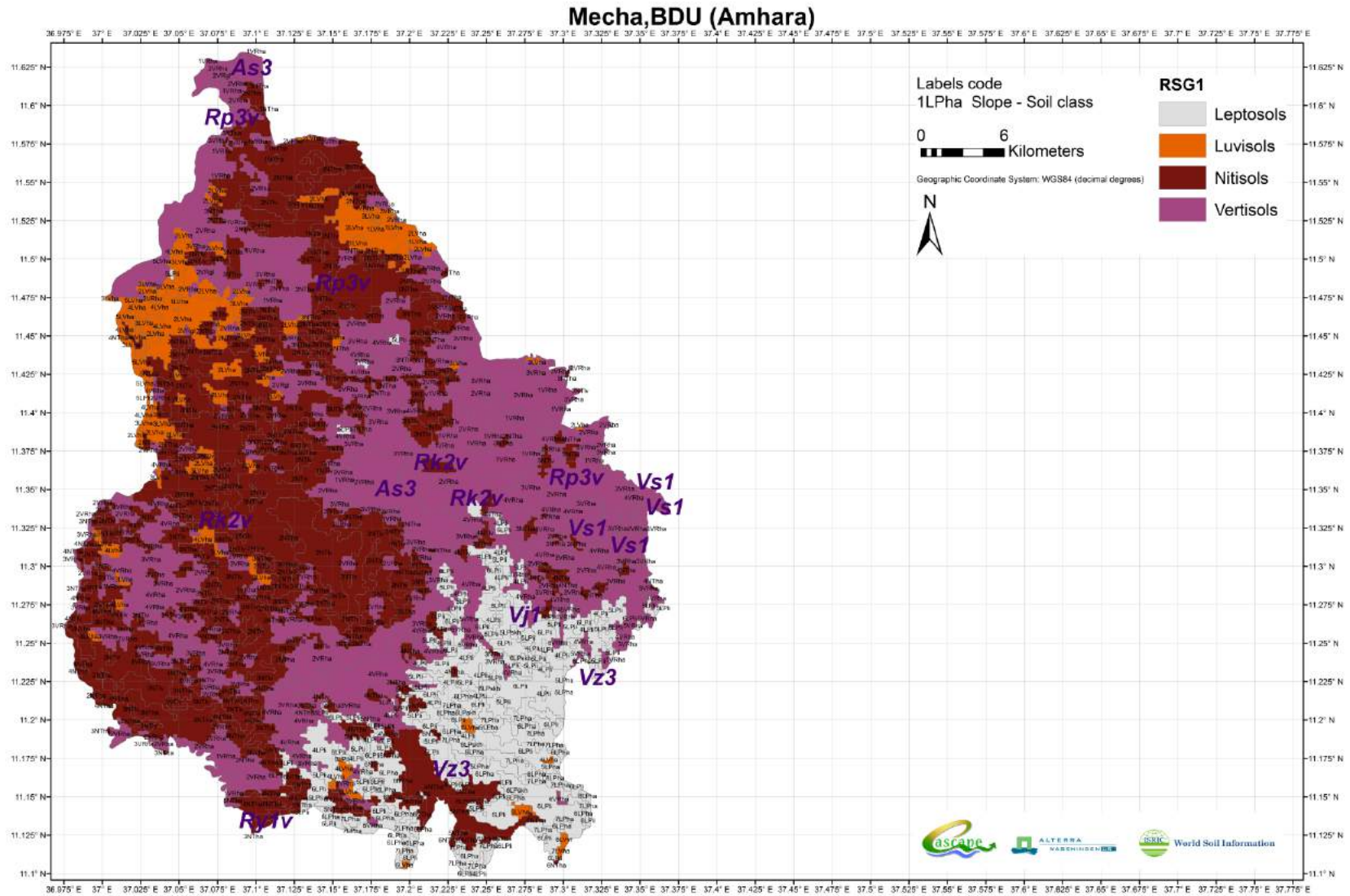
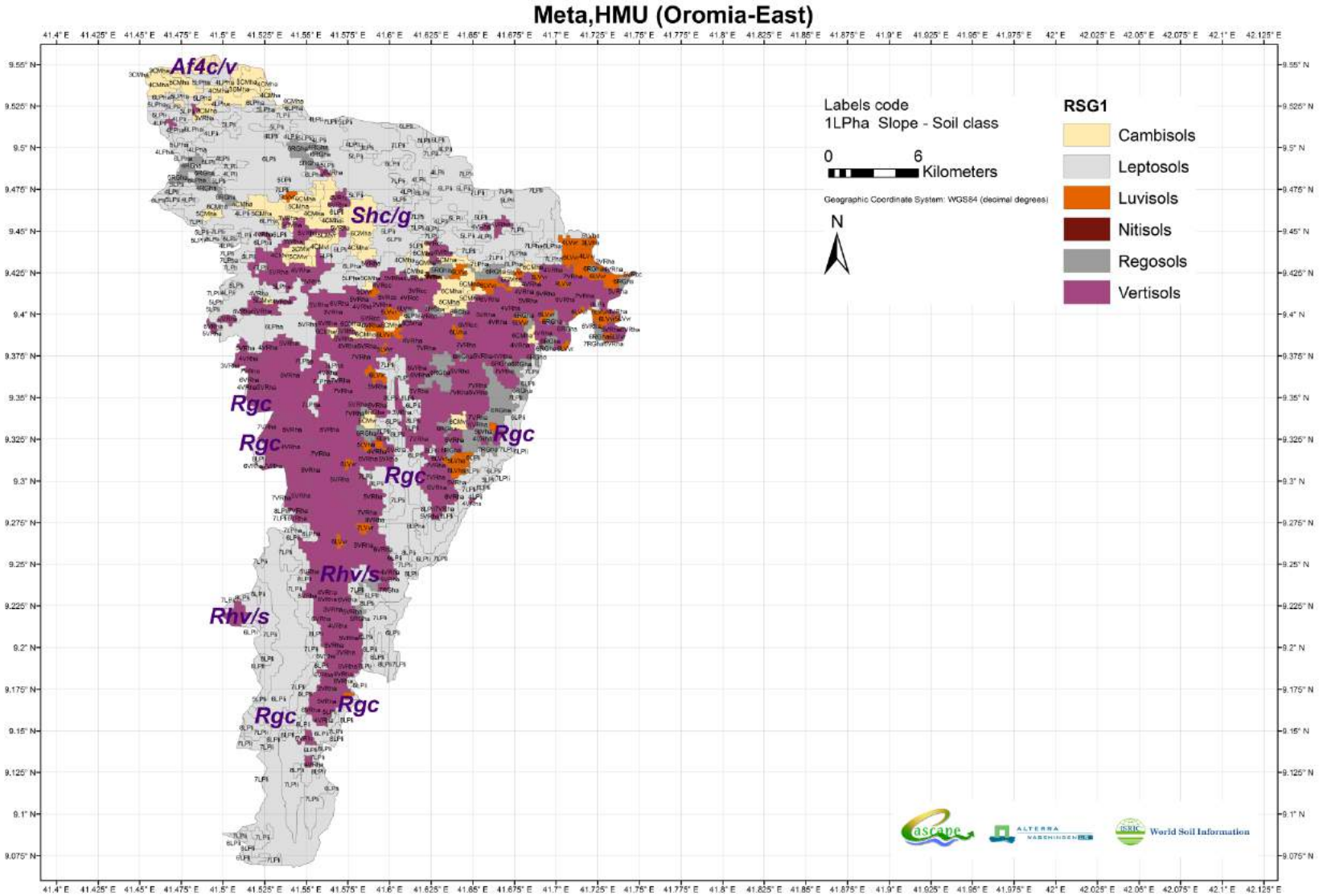
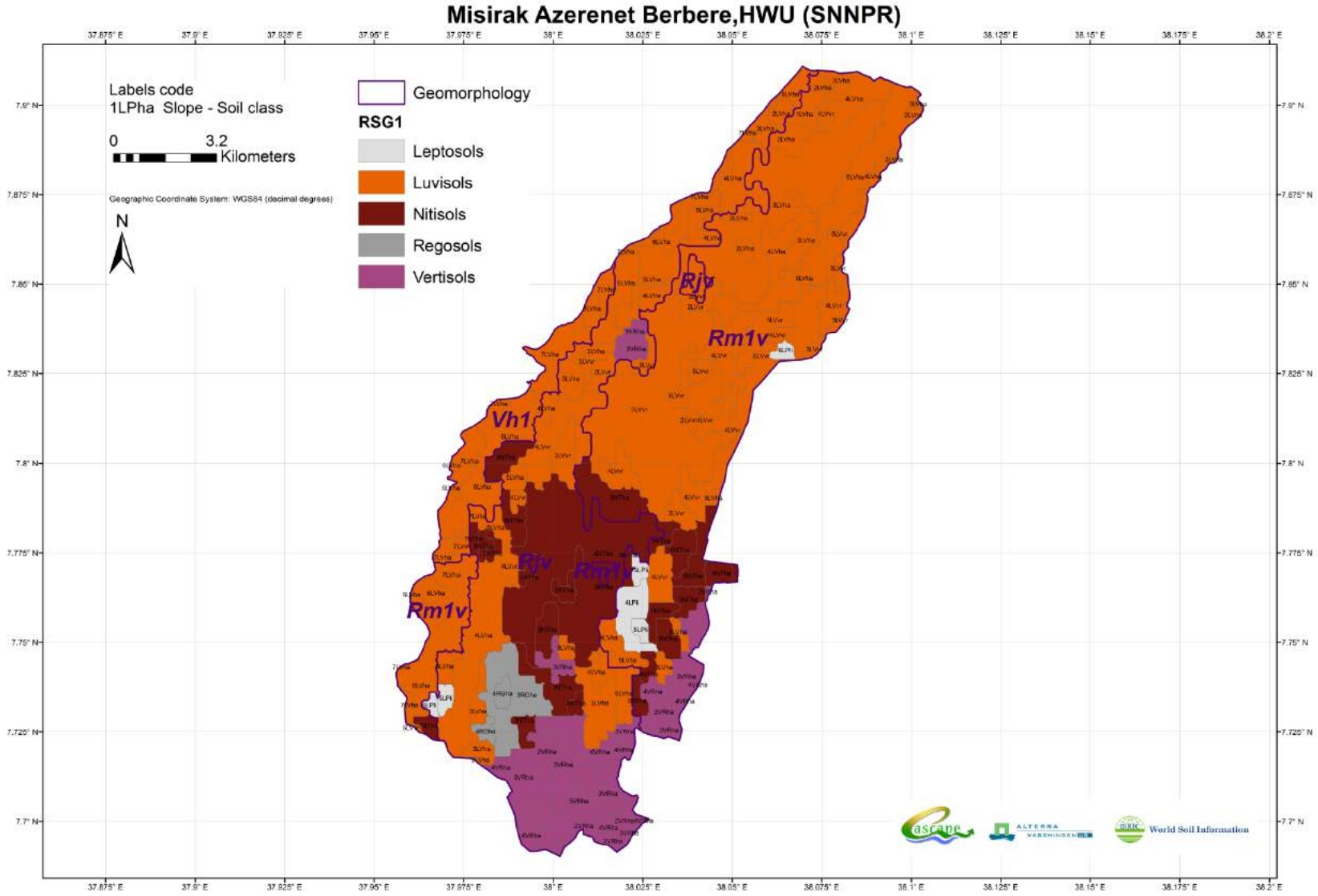
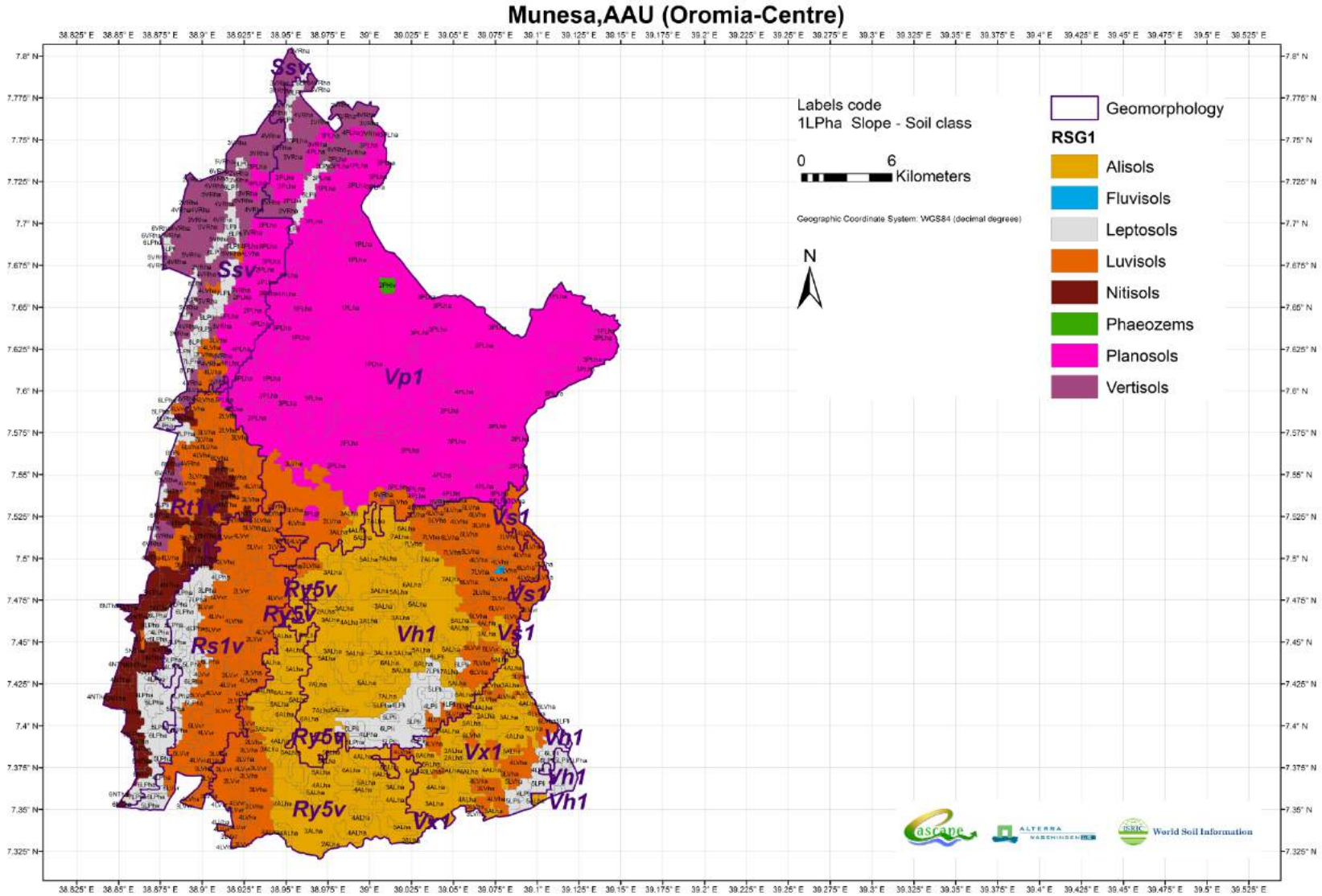
RSG1
Cambisols
Leptosols
Luvisols
Nitisols
Vertisols
Ab2
Rh2v
Rf6v
Rt2v
World Soil Information

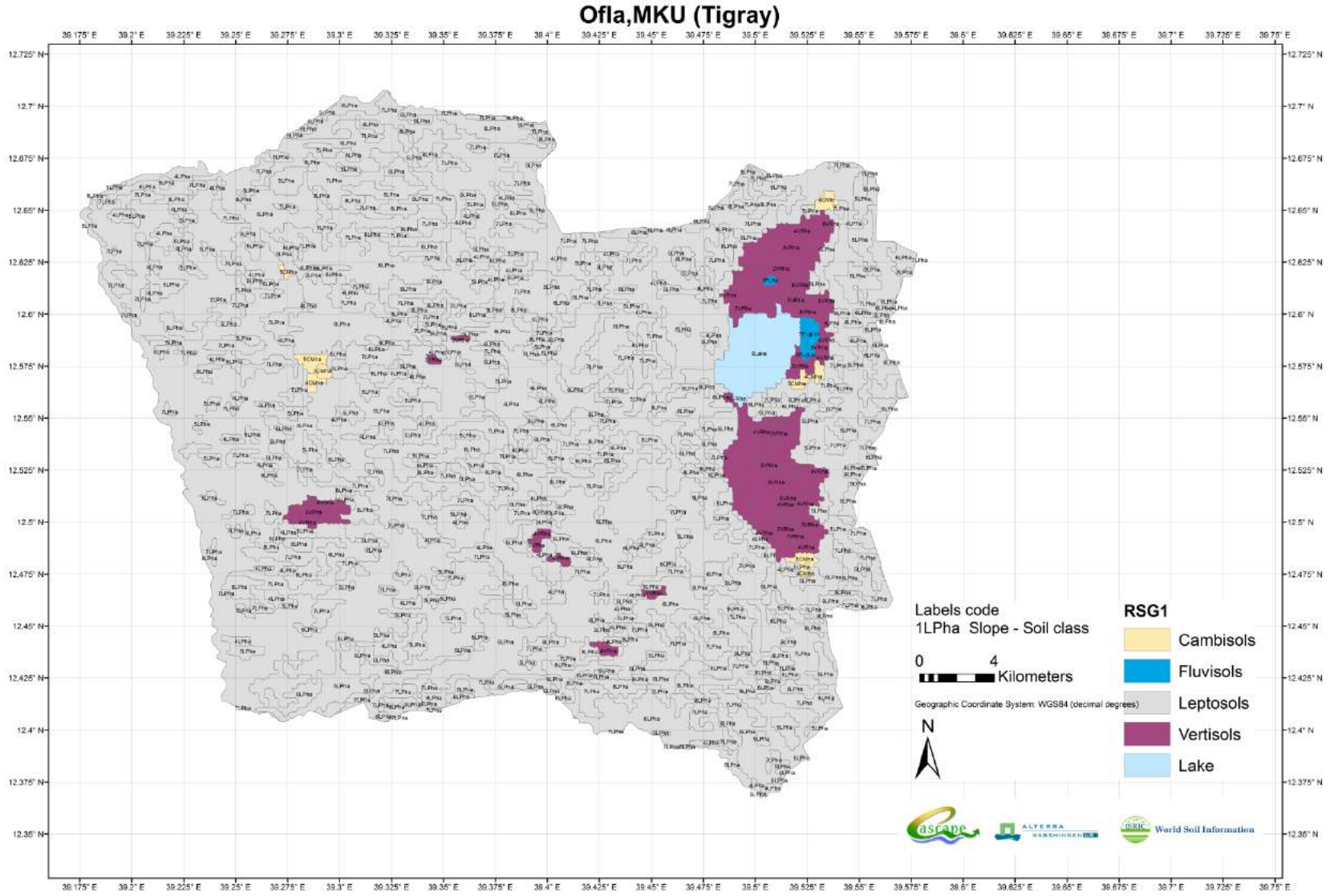

Malga, HWU (SNNPR)
Vh1
Vx1
Labels code
1LPha Slope - Soil class
0
2.6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Alisols
Luvisols
Nitisols
World Soil Information

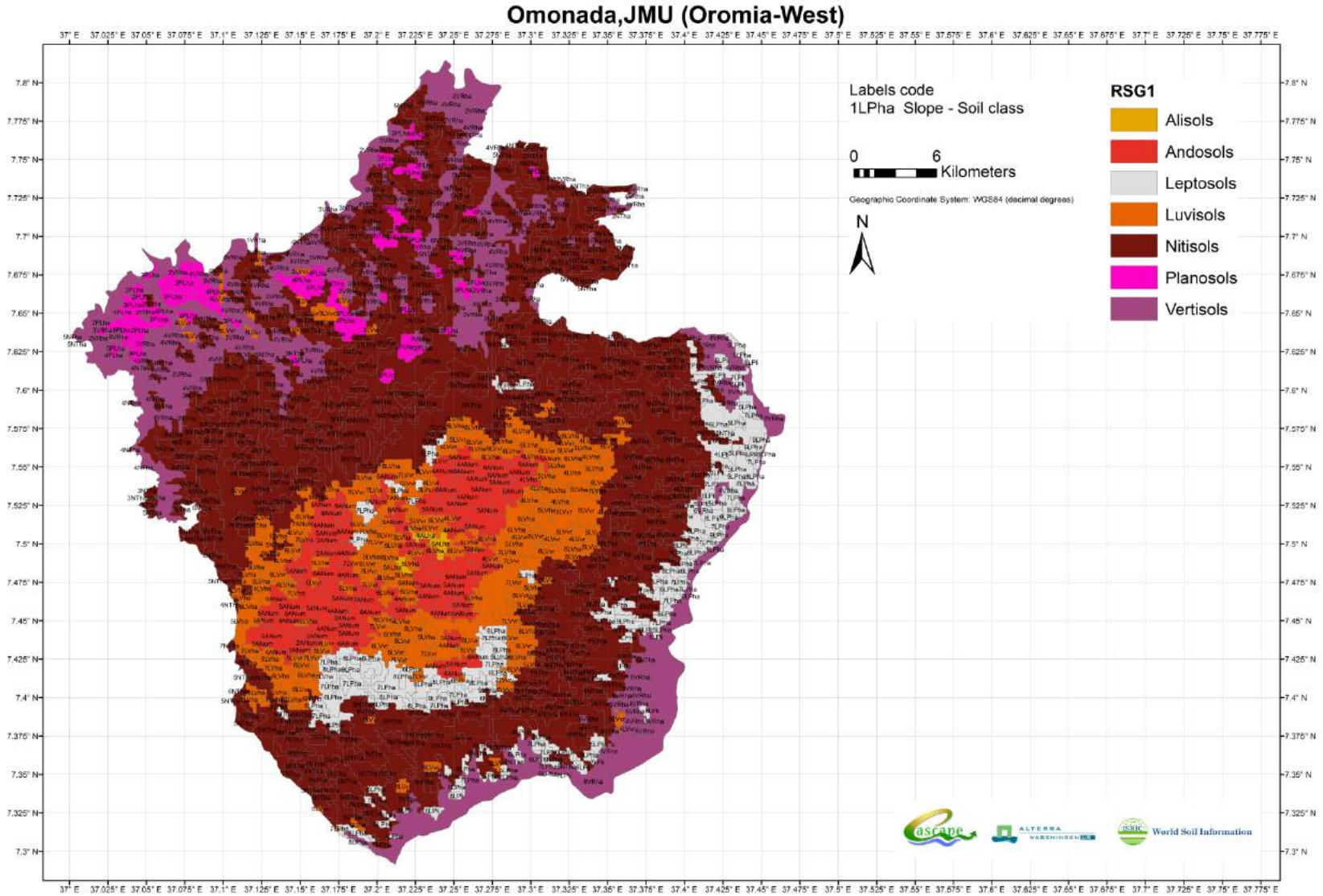

Mecha,BDU (Amhara)
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
RSG1
Leptosols
Luvisols
Nitisols
Vertisols
As3
Rp3v
Rk2v
Vs1
Vj1
Vz3
Rp1v
World Soil Information

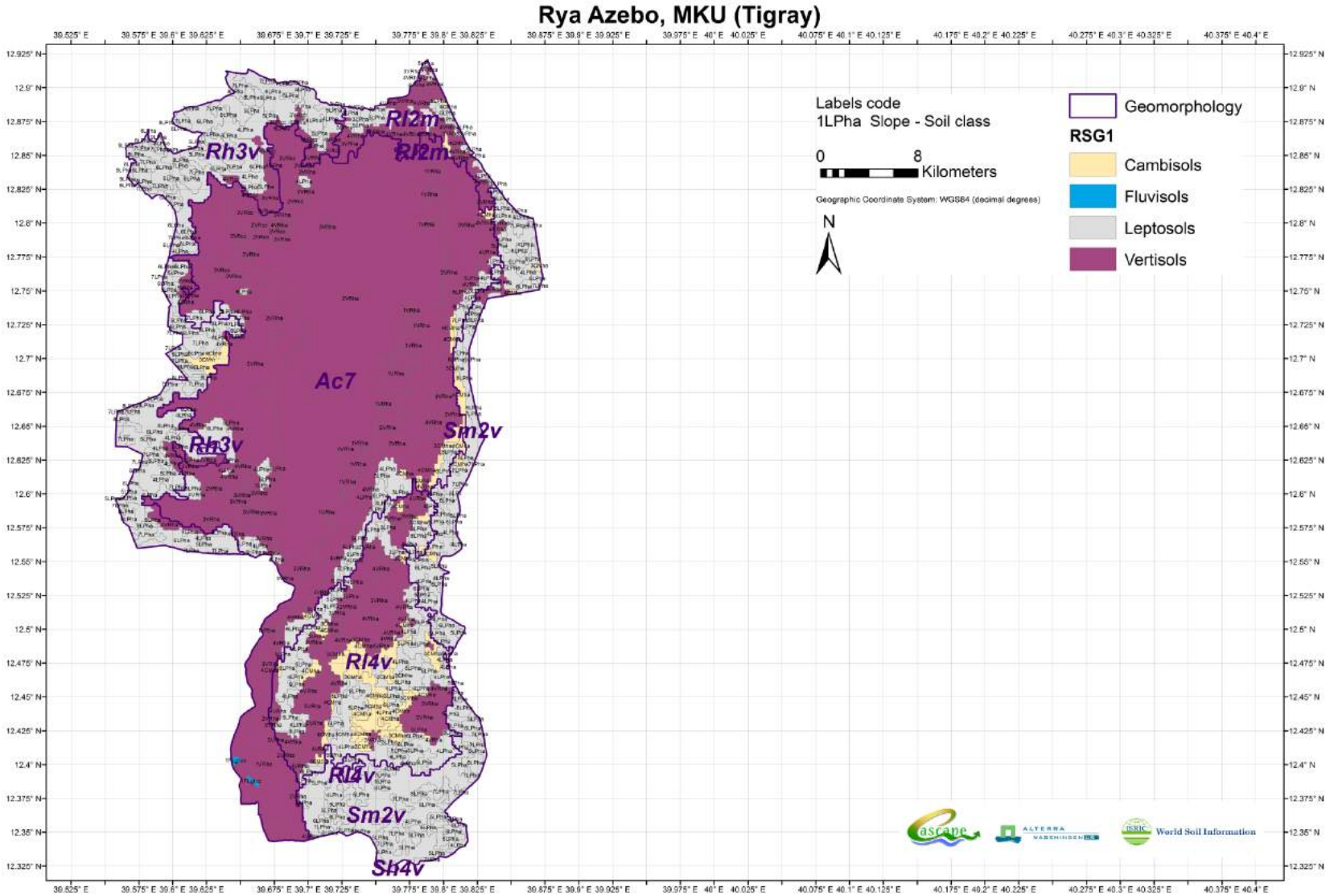

Meta,HMU (Oromia-East)
Af4c/v
Shc/g
Rgc
Rgc
Rgc
Rgc
Rhv/s
Rhv/s
Rgc
Rgc
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
RSG1
Cambisols
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
World Soil Information

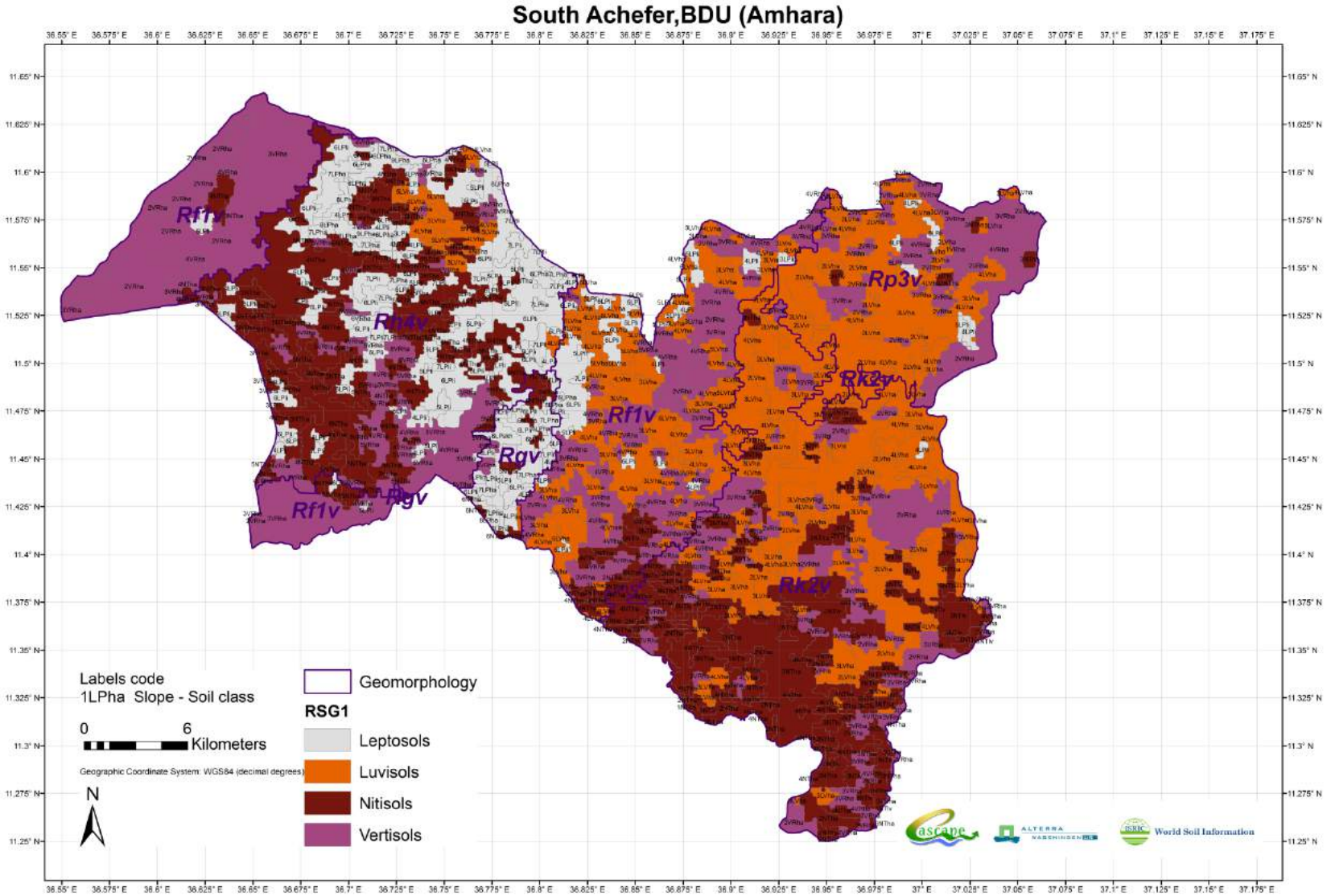

Misirak Azerenet Berbere,HWU (SNNPR)
Labels code
1LPha Slope - Soil class
0
3.2
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Regosols
Vertisols
Rjv
Rm1v
Vh1
Rjv
Rm1v
Rm1v
World Soil Information


Munesa,AAU (Oromia-Centre)
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Alisols
Fluvisols
Leptosols
Luvisols
Nitisols
Phaeozems
Planosols
Vertisols
Ssv
Vp1
Rt1v
Vs1
Ry5v
Rs1v
Vh1
Vx1
Vh1
World Soil Information


Ofla,MKU (Tigray)
Labels code
1LPha Slope - Soil class
0
4
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
RSG1
Cambisols
Fluvisols
Leptosols
Vertisols
Lake
World Soil Information


Omonada,JMU (Oromia-West)
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
RSG1
Alisols
Andosols
Leptosols
Luvisols
Nitisols
Planosols
Vertisols
World Soil Information


Rya Azebo, MKU (Tigray)
Labels code
1LPha Slope - Soil class
0
8
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Cambisols
Fluvisols
Leptosols
Vertisols
Rl2m
Rl2m
Rh3v
Ac7
Sm2v
Rh3v
Rl4v
Rl4v
Sm2v
Sh4v
World Soil Information


South Achefer,BDU (Amhara)
Rf1v
Rh4v
Rgv
Rf1v
Rgv
Rf1v
Rp3v
Rk2v
Rk2v
Labels code
1LPha Slope - Soil class
0
6
Kilometers
Geographic Coordinate System: WGS84 (decimal degrees)
N
Geomorphology
RSG1
Leptosols
Luvisols
Nitisols
Vertisols
World Soil Information

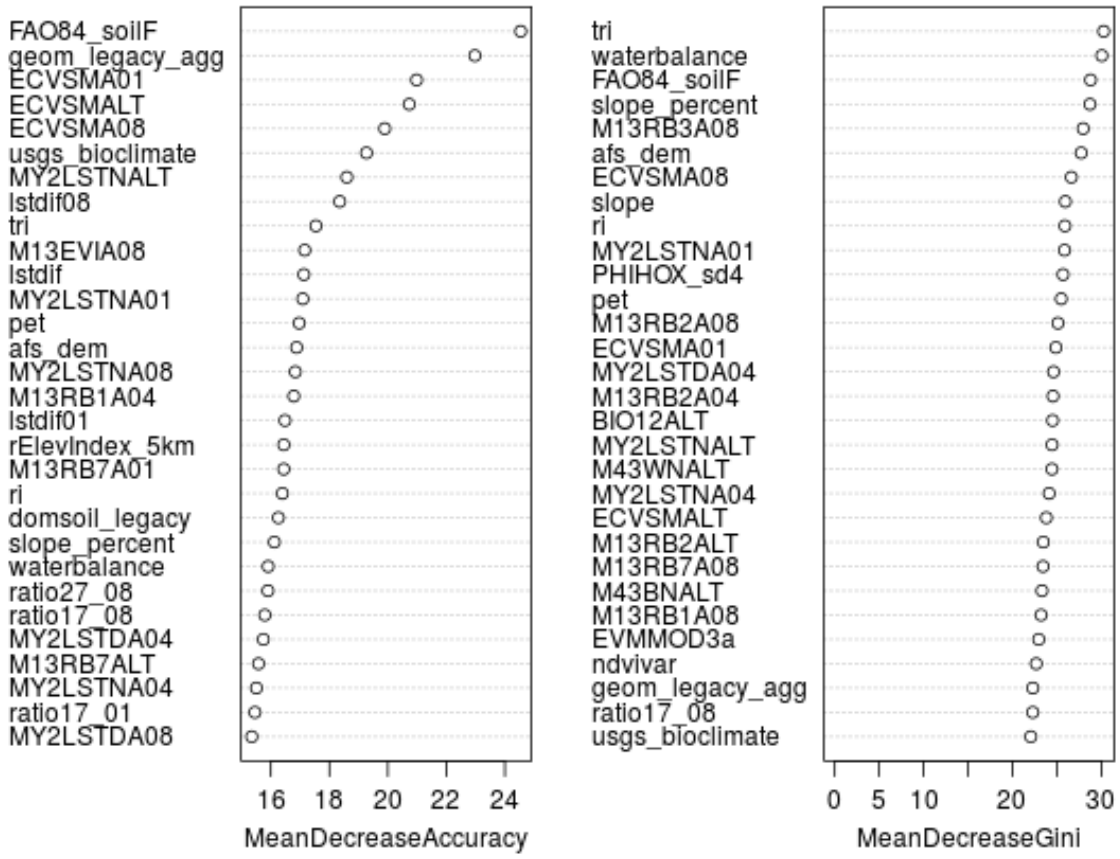
Annex 7 Spatial covariate data used for prediction modelling and extrapolation

File name	Description	Source
afs_dem	AfrHySRTM	SRTM derived, AfSIS
afs_sca	Specific Catchment Area (SCA)	SRTM derived, AfSIS
afs_twi	Topographic Wetness Index (TWI)	SRTM derived, AfSIS
bio12alt	Annual Precipitation, long term average	Climate Collection, AfSIS (WorldClim)
bioalt	Annual Temperature, long term average (24h temp?)	Climate Collection, AfSIS (WorldClim)
cl25_b271	Unsupervised classification of Modis bands 2, 7 and 1. Dry season.	Modis derived
cl6_rElevIn_500m	Unsupervised classification in 6 classes of rElevIndex_500.tif	SRTM (afs_dem) derived, in ArcMap
cl6_rElevIn_5km	Unsupervised classification in 6 classes of rElevIndex_5km.tif	SRTM (afs_dem) derived, in ArcMap
cl7_tpi	Unsupervised classification of TPI. (7 cluster).	Modis derived
cl7_tri	Unsupervised classification of TRI. (7 cluster).	Modis derived
classes_std_slope	Slope file classified using standard thresholds.	Modis derived
curvature	Derived from DEM	SRTM derived
domsoil_legacy	Dominant soil type	FAO, 1998. SOTER for NE Africa (DOMSOIL)
ecvsma01	Essential Climate Variable, Soil Moisture Monthly Average January	Climate Collection, AfSIS
ecvsma08	Essential Climate Variable, Soil Moisture Monthly Average August	Climate Collection, AfSIS
ecvsmalt	Essential Climate Variable, Soil Moisture Long term average	Climate Collection, AfSIS
evmmod3a	Mean value of the monthly MODIS EVI time series data	Modis, WorldGrids, ISRIC
FAO84_Phase	Soil phases	FAO, 1984. Geomorphology & soils, disaggregated, Ask Johan
FAO84_SoilF	Soil types according to FAO74 legend, disaggregated by landscape facets (slope classes)	FAO, 1984. Geomorphology & soils, disaggregated, Ask Johan
flatness	Flatness terrain attribute	SRTM (afs_dem) derived by e-Soter WP1 procedure
g03esa3a	Perc. of pixels with mosaic of cropland (50-70%) /vegetation (grassland/shrubland/forest) (20-50%)	WorldGrids, ISRIC
g04esa3a	Perc. of pixels with mosaic of vegetation (grassland/shrubland/forest) (50-70%) / cropland (20-50%)	WorldGrids, ISRIC
g13esa3a	Closed to open (>15%) herbaceous vegetation (grassland, savannas or lichens/mosses)	WorldGrids, ISRIC
geology_FAO	Geology	FAO, 1998. SOTER for NE Africa (GEOLOGY)
geology_legacy	Geology	Geology map. 1: 2 M
geom_legacy_agg	Geomorphology reclassified (legend up to 2 letters level)	FAO, 1984. Geomorphology and soils.
glcesa3a	Land Cover classes	MERIS FR images , WorldGrids, ISRIC
glcjrc3a	Global Land Cover for the year 2000	GLC2000, WorldGrids, ISRIC
hypsclass	Hypsometry	SRTM (afs_dem) derived by e-Soter WP1 procedure
l3pobi3a	Physiographic landforms	SCALA project, WorldGrids, ISRIC

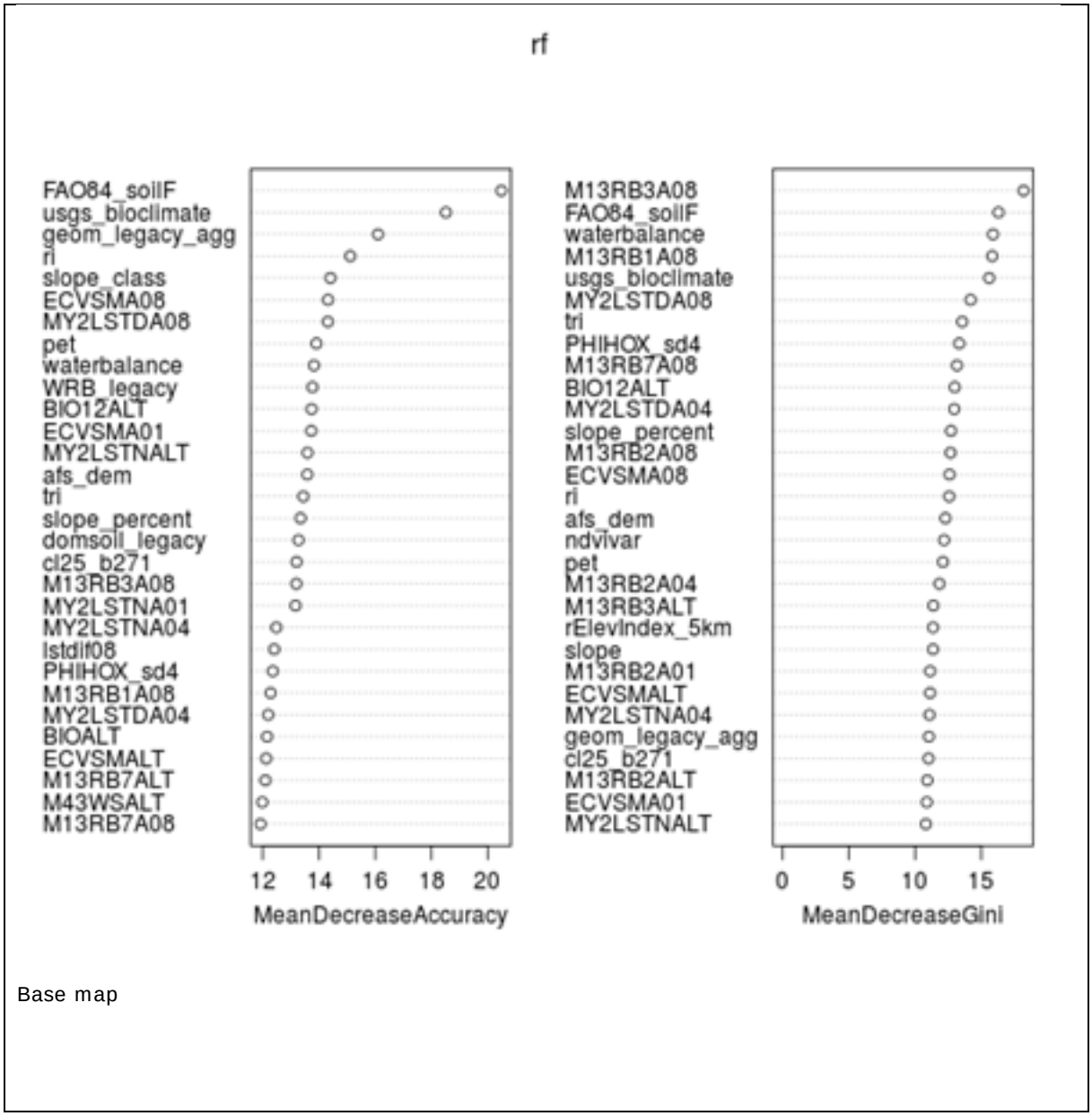
File name	Description	Source
lammod3a	Mean value of the 8-day MODIS LAI time series data	Modis, WorldGrids, ISRIC
lstdif	lstdif <- lstdif01 - lstdif08	Modis derived
lstdif01	lstdif01 <- lstda01-lstna01	Modis derived
lstdif08	lstdif08 <- lstda08-lstna08	Modis derived
m12lca	Land cover type 2 Annual averages for 2001,2,3,4,5,6,7,8,9	Modis collection, AfSIS (/MCD12Q1)
m13evia	Enhanced vegetation index; monthly averages for Jan., Apr. and Aug. and long term average	Modis collection, AfSIS
m13ndvia	Normalized difference vegetation index; monthly averages for Jan., Apr. and Aug. and long term avg	Modis collection, AfSIS
m13rb1a	Red reflectance band 1; monthly averages for Jan., Apr. and Aug. and long term average	Modis collection, AfSIS
m13rb2a	Near infrared reflectance band 2; monthly averages for Jan., Apr. and Aug. and long term average	Modis collection, AfSIS
m13rb3a	Blue reflectance band 3; monthly averages for Jan., Apr. and Aug. and long term average	Modis collection, AfSIS
m13rb7a	Mid infrared reflectance band 7; monthly averages for Jan., Apr. and Aug. and long term average	Modis collection, AfSIS
m15fpralt	Fraction of Photosynthetically Active Radiation, FPAR (long-term average)	Modis collection, AfSIS
m15laialt	Leaf area index (long-term average)	Modis collection, AfSIS
m17gpp2000	Gross primary production (gpp) annual average 2000, 2001, ..., 2010	Modis collection, AfSIS
m17nppa2000	Net primary production (npp) annual average 2000, 2001, ..., 2010	Modis collection, AfSIS
m43bnalt	Black Sky Albedo Near Infrared Band (long-term average)	Modis collection, AfSIS
m43bsalt	Black Sky Albedo Shortwave Band (long-term average)	Modis collection, AfSIS
m43bvalt	Black Sky Albedo Visible Band (long-term average)	Modis collection, AfSIS
m43wnalt	White Sky Albedo Near Infrared Band (long-term average)	Modis collection, AfSIS
m43wsalt	White Sky Albedo Shortwave Band (long-term average)	Modis collection, AfSIS
m43wvalt	White Sky Albedo Visible Band (long-term average)	Modis collection, AfSIS
my2lstda01	Land surface day temperature (monthly averages for Jan., Apr. and Aug. and long term average)	Modis collection, AfSIS
my2lstna01	Land surface night temperature (monthly averages for Jan., Apr. and Aug. and long term average)	Modis collection, AfSIS
ndiib7_01	Index, adapted ndii b7	Modis derived
ndiib7_08	Index, adapted ndii b7	Modis derived
ndvivar	ndvivar <- ndvi08-ndvi01	Modis derived
PET	Global Aridity Index (Global-Aridity) and Global Potential Evapo-Transpiration (Global-PET)	Trabucco, A., and Zomer, R.J. 2009.
PHASE1SO1_FAO.itf	Soil phase	FAO, 1998. SOTER for NE Africa (PHASE1SO1)
PHIHOX_T_M_sd4	pH H2O, predicted at 45 cm depth (30-60 cm)	AfSoilgrids250m. ISRIC & AfSIS, 2015
pm_fao	Parent material	FAO, 1998. SOTER for NE Africa (PARENTMAT1)
ratio17_01	ratio17_04 <- 100*(M13RB1A04/M13RB7A04)	Modis derived
ratio17_08	ratio17_08 <- 100*(M13RB1A08/M13RB7A08)	Modis derived
ratio27_01	ratio27_04 <- 100*(M13RB2A04/M13RB7A04)	Modis derived

File name	Description	Source
ratio27_08	ratio27_08 <- 100*(M13RB2A08/M13RB7A08)	Modis derived
rElev_500m.tif	Elevation minus mean elevation of 500m radius area (m).	SRTM (afs_dem) derived, in ArcMap
rElev_5km.tif	Elevation minus mean elevation of 5km radius area (m).	SRTM (afs_dem) derived, in ArcMap
rElevIndex_500m.tif	Relative elevation index in 500m radius area (%).	SRTM (afs_dem) derived, in ArcMap
rElevIndex_5km.tif	Relative elevation index in 5km radius area (%).	SRTM (afs_dem) derived, in ArcMap
ri	relief intensity	SRTM (afs_dem) derived by e-Soter WP1 procedure
riclass	relief intensity class	SRTM (afs_dem) derived by e-Soter WP1 procedure
slope	Slope	SRTM derived
slope_class	slope class	SRTM (afs_dem) derived by e-Soter WP1 procedure
slope_percent	slope class in percent	SRTM derived
slpsrt3a	Slope map in percent (by DEMSRE3)	DEM derived, WorldGrids, ISRIC
soilcomponent	From ET_20130909 dissolve by soil component (?)	SRTM (afs_dem) derived by e-Soter WP1 procedure
tdmmod3a	Mean value the 8-day MODIS day-time LST time series data	Modis, WorldGrids, ISRIC
tnmmod3a	Mean value the 8-day MODIS night-time LST time series data	Modis, WorldGrids, ISRIC
tpi	Topographic position index (TPI)	SRTM derived, in QGIS
tri	Topographic Ruggedness Index (TRI)	SRTM derived, in QGIS
usgs_bioclimate	African Isobioclimates	USGS
usgs_ecosystem	African Labeled Ecosystems	USGS
usgs_landforms	African Landsurface forms	USGS
usgs_lithology	African Surficial Lithology	USGS
usgs_topomoist	African topographic_position	USGS
vb_prediction_default	Bottom valley (SAC_valley_bottom_logistic_model tool)	DEM derived, WorldGrids, ISRIC
Water Balance	Annual precipitation minus annual potential evapotranspiration (mm)	Derived from BIO12_alt & PET
wrb_legacy	Dominant soil WRB	Jones et al., 2013. Soil atlas of Africa.

Annex 8 Relevance of covariates for map accuracy

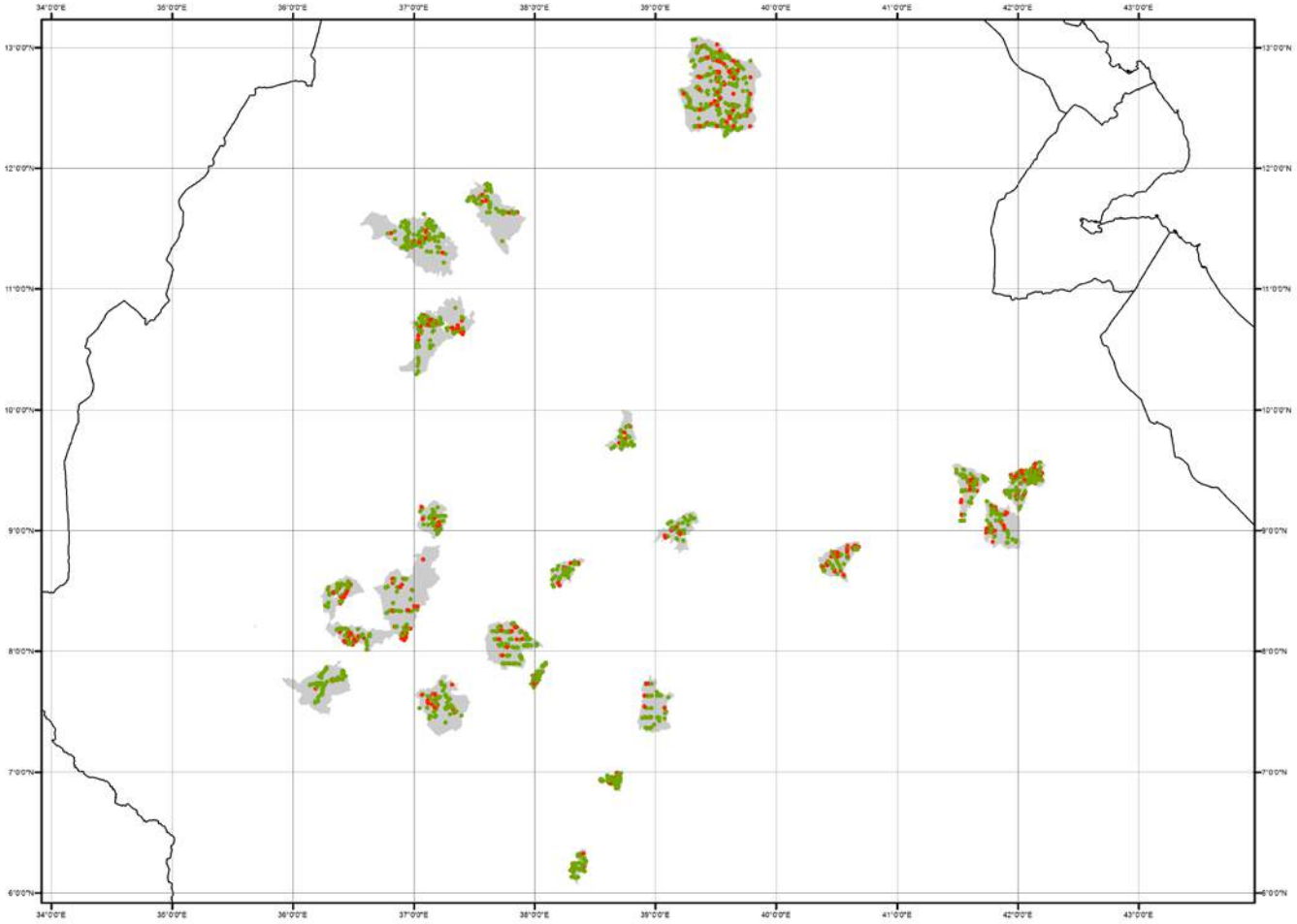


Final map.
Left: Excluding a spatial covariate from the predictive modelling implies a decrease of the map accuracy by the percentage indicated. Most relevant covariate was thus the map of soil-landscape facets as disaggregated from the Geomorphology and Soils map. Second most relevant covariate was the same map not disaggregated.


rf
FAO84_soilF
usgs_bioclimate
geom_legacy_agg
ri
slope_class
ECVSMA08
MY2LSTDA08
pet
waterbalance
WRB_legacy
BIO12ALT
ECVSMA01
MY2LSTNALT
afs_dem
tri
slope_percent
domsoil_legacy
cl25_b271
M13RB3A08
MY2LSTNA01
MY2LSTNA04
lstdif08
PHIHOX_sd4
M13RB1A08
MY2LSTDA04
BIOALT
ECVSMALT
M13RB7ALT
M43WSALT
M13RB7A08
12
14
16
18
20
MeanDecreaseAccuracy
M13RB3A08
FAO84_soilF
waterbalance
M13RB1A08
usgs_bioclimate
MY2LSTDA08
tri
PHIHOX_sd4
M13RB7A08
BIO12ALT
MY2LSTDA04
slope_percent
M13RB2A08
ECVSMA08
ri
afs_dem
ndvivar
pet
M13RB2A04
M13RB3ALT
rElevIndex_5km
slope
M13RB2A01
ECVSMALT
MY2LSTNA04
geom_legacy_agg
cl25_b271
M13RB2ALT
ECVSMA01
MY2LSTNALT
0
5
10
15
MeanDecreaseGini

Base map

Annex 9 Map correspondence (match of observed and mapped reference soil group)



Soil profiles classified as reference soil groups not matching with reference soil group predicted on the map at similar location.

PrfID	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap	PrfID	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap
AAUB_15	SCS2	38.19000	8.56630	Luvisols	Vertisols	HWUMAL_042	SCS2	38.61640	6.91063	Nitisols	Luvisols
AAUB_16	SCS2	38.20700	8.54700	Luvisols	Vertisols	HWUMAL_044	SCS2	38.63333	6.90965	Nitisols	Luvisols
AAUBa_03	SCS2	37.06450	9.19700	Regosols	Nitisols	HWUMAL_047	SCS2	38.63945	6.90654	Nitisols	Luvisols
AAUBa_08	SCS2	37.16773	9.10365	Nitisols	Vertisols	ILU/B/B/A1	SCS1	36.37735	8.52471	Leptosols	Nitisols
AAUBa_09	SCS2	37.17548	9.11347	Luvisols	Nitisols	ILU/B/B/A2	SCS1	36.37814	8.52422	Gleysols	Nitisols
AAUBa_28	SCS2	37.19423	9.04133	Luvisols	Nitisols	ILU/B/B/A3	SCS1	36.37620	8.53784	Leptosols	Nitisols
AAUBa_29	SCS2	37.21322	9.03978	Luvisols	Nitisols	ILU/B/B/P1	SCS1	36.36727	8.53467	Luvisols	Nitisols
AAUBa_33	SCS2	37.21118	9.07357	Regosols	Nitisols	ILU/B/HG/A2	SCS1	36.39254	8.45327	Acrisols	Nitisols
AAUGI_14	SCS2	39.08062	8.94090	Phaeozems	Vertisols	ILU/B/HG/A8	SCS1	36.40884	8.44279	Luvisols	Nitisols
AAUGI_15	SCS2	39.17695	9.02134	Phaeozems	Vertisols	ILU/B/HG/P1	SCS1	36.40727	8.45688	Acrisols	Cambisols
AAUGI_18	SCS2	39.19912	8.97766	Phaeozems	Vertisols	ILU/B/HG/P2	SCS1	36.39254	8.45327	Cambisols	Nitisols
AAUGI_19	SCS2	39.19997	8.97861	Phaeozems	Vertisols	ILU/B/MM/A2	SCS1	36.33477	8.48633	Acrisols	Nitisols
AAUGIR_10	SCS2	38.78881	9.86189	Vertisols	Leptosols	ILU/B/MM/A4	SCS1	36.34116	8.48704	Cambisols	Nitisols
AAUGIR_14	SCS2	38.72634	9.72048	Vertisols	Luvisols	ILU/B/MM/A5	SCS1	36.34461	8.48910	Vertisols	Nitisols
AAUGIR_19	SCS2	38.74397	9.75624	Luvisols	Vertisols	ILU/B/MM/A6	SCS1	36.32893	8.48492	Leptosols	Nitisols
AAUGIR_26	SCS2	38.74108	9.81081	Nitisols	Leptosols	ILU/B/MM/A7	SCS1	36.33330	8.48855	Luvisols	Nitisols
AAUMu_010	SCS2	38.91835	7.73290	Cambisols	Vertisols	ILU/B/MM/A8	SCS1	36.33217	8.49385	Fluvisols	Nitisols
AAUMu_013	SCS2	38.92458	7.73177	Phaeozems	Vertisols	ILU/B/MM/P1	SCS1	36.33477	8.48633	Luvisols	Nitisols
AAUMu_014	SCS2	38.93595	7.73397	Planosols	Vertisols	ILU/B/Y/A2	SCS1	36.39060	8.39632	Acrisols	Cambisols
AAUMu_018	SCS2	38.90886	7.63351	Cambisols	Vertisols	ILU/B/Y/P1	SCS1	36.39532	8.40827	Acrisols	Cambisols
AAUMu_040	SCS2	38.95241	7.45526	Luvisols	Alisols	ILU/D/G/A2	SCS1	36.50391	8.09084	Vertisols	Nitisols
AAUMu_053	SCS2	38.90753	7.54622	Leptosols	Nitisols	ILU/D/G/A3	SCS1	36.51905	8.09244	Cambisols	Nitisols
ABAP002	SCS1	37.15567	10.73617	Nitisols	Vertisols	ILU/D/G/A7	SCS1	36.50896	8.09924	Cambisols	Nitisols
ABWAP002	SCS1	37.11122	10.73852	Nitisols	Luvisols	ILU/D/G/A8	SCS1	36.51758	8.08674	Cambisols	Nitisols
ABWGP002	SCS1	37.06100	10.63700	Vertisols	Nitisols	ILU/D/G/P1	SCS1	36.49777	8.12672	Luvisols	Nitisols
ADQP001	SCS1	37.45009	11.73484	Luvisols	Leptosols	ILU/D/M/A2	SCS1	36.45421	8.14463	Luvisols	Nitisols
AJJIP001	SCS1	37.32483	10.65928	Nitisols	Vertisols	ILU/D/M/A4	SCS1	36.44647	8.13551	Fluvisols	Nitisols
AJJP002	SCS1	37.37190	10.66651	Vertisols	Nitisols	ILU/D/M/A6	SCS1	36.45754	8.13098	Cambisols	Nitisols
AMAP001	SCS1	37.09966	11.47332	Luvisols	Vertisols	ILU/D/S/A5	SCS1	36.49303	8.05630	Vertisols	Nitisols
ASAAKP001	SCS1	36.94537	11.41630	Nitisols	Luvisols	ILU/D/S/A6	SCS1	36.48536	8.06043	Luvisols	Nitisols
ASAAKP002	SCS1	36.94382	11.42921	Vertisols	Luvisols	ILU/D/Y/A1	SCS1	36.46893	8.16074	Planosols	Nitisols
BDU_A001	SCS1	37.50376	11.73460	Vertisols	Nitisols	ILU/D/Y/A4	SCS1	36.38671	8.16158	Fluvisols	Nitisols
BDU_A003	SCS1	37.49006	11.76461	Luvisols	Vertisols	ILU/D/Y/A5	SCS1	36.45350	8.16742	Fluvisols	Nitisols
BDU_A014	SCS1	37.74734	11.64014	Leptosols	Luvisols	ILU/D/Y/A8	SCS1	36.47994	8.14908	Cambisols	Nitisols
BDU_A020	SCS1	37.79332	11.63210	Leptosols	Luvisols	ILU/D/Y/P1	SCS1	36.46893	8.16074	Gleysols	Nitisols
BDU_A023	SCS1	37.85337	11.63591	Leptosols	Luvisols	JIM/G/GC/A3	SCS1	36.25560	7.72209	Fluvisols	Nitisols
BDU_A027	SCS1	37.12472	11.43001	Nitisols	Vertisols	JIM/G/GC/P1	SCS1	36.26393	7.72931	Gleysols	Nitisols
BDU_A032	SCS1	37.11034	11.41530	Vertisols	Nitisols	JIM/G/KA/A1	SCS1	36.31644	7.76738	Planosols	Nitisols
BDU_A037	SCS1	37.04200	11.38681	Leptosols	Luvisols	JIM/G/KA/A3	SCS1	36.32979	7.76690	Leptosols	Nitisols
BDU_A041	SCS1	37.09383	11.42073	Leptosols	Nitisols	JIM/G/KA/A5	SCS1	36.32677	7.77282	Fluvisols	Nitisols
BDU_A055	SCS1	37.00429	11.38981	Leptosols	Luvisols	JIM/G/KA/P1	SCS1	36.31644	7.76738	Gleysols	Nitisols

PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap	PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap
BDU_A056	SCS1	37.01444	11.36776	Vertisols	Nitisols	JIM/G/SL/A3	SCS1	36.40593	7.81524	Planosols	Nitisols
BDU_A068	SCS1	36.93901	11.53834	Leptosols	Luvisols	JIM/G/SL/P1	SCS1	36.40593	7.81524	Planosols	Nitisols
BDU_A073	SCS1	37.11610	10.73880	Leptosols	Nitisols	JIM/G/WK/A2	SCS1	36.36644	7.76765	Luvisols	Nitisols
BDU_A075	SCS1	37.04516	10.63315	Vertisols	Nitisols	JIM/G/WK/A3	SCS1	36.37144	7.78543	Luvisols	Nitisols
BDU_A081	SCS1	37.16432	10.72930	Leptosols	Nitisols	JIM/G/WK/A5	SCS1	36.38047	7.77288	Cambisols	Nitisols
BDU_A082	SCS1	37.14877	10.73505	Leptosols	Nitisols	JIM/G/WK/A6	SCS1	36.36454	7.76708	Fluvisols	Nitisols
BDU_A083	SCS1	37.15703	10.74387	Leptosols	Nitisols	JIM/LS/DG/A1	SCS1	36.91865	8.09296	Planosols	Nitisols
BDU_A086	SCS1	37.13814	10.75043	Leptosols	Nitisols	JIM/LS/DG/A2	SCS1	36.91488	8.10635	Fluvisols	Nitisols
BDU_A094	SCS1	37.03664	10.58028	Leptosols	Nitisols	JIM/LS/DG/A4	SCS1	36.89781	8.10626	Fluvisols	Nitisols
BDU_A096	SCS1	37.18251	10.73180	Leptosols	Nitisols	JIM/LS/DG/A5	SCS1	36.90003	8.14434	Luvisols	Nitisols
BDU_A102	SCS1	37.18754	10.70704	Nitisols	Vertisols	JIM/LS/DG/A6	SCS1	36.92930	8.11126	Planosols	Nitisols
BDU_A103	SCS1	37.15017	10.69822	Nitisols	Vertisols	JIM/LS/DG/A7	SCS1	36.93334	8.11743	Fluvisols	Nitisols
BDU_A104	SCS1	37.15719	10.69834	Leptosols	Vertisols	JIM/LS/DG/P1	SCS1	36.91865	8.09296	Luvisols	Nitisols
BDU_A110	SCS1	37.36283	10.67054	Leptosols	Vertisols	JIM/LS/G/A3	SCS1	36.92309	8.16074	Leptosols	Nitisols
BDU_A112	SCS1	37.38390	10.65936	Nitisols	Vertisols	JIM/LS/G/A4	SCS1	36.93503	8.15074	Acrisols	Nitisols
BDU_A113	SCS1	37.36411	10.69556	Nitisols	Vertisols	JIM/LS/G/A5	SCS1	36.91837	8.09296	Planosols	Nitisols
BDU_A114	SCS1	37.36379	10.70087	Leptosols	Nitisols	JIM/LS/G/A7	SCS1	36.93534	8.13986	Vertisols	Nitisols
BDU_A116	SCS1	37.33343	10.66039	Leptosols	Nitisols	JIM/LS/G/P1	SCS1	36.93503	8.15074	Luvisols	Nitisols
BDU_A118	SCS1	37.33121	10.64391	Leptosols	Nitisols	JIM/LS/M/P1	SCS1	37.02948	8.36271	Gleysols	Vertisols
BDUB_002	SCS2	37.07557	10.78152	Leptosols	Luvisols	JIM/LS/MZ/A5	SCS1	37.02948	8.36271	Planosols	Vertisols
BDUB_010	SCS2	37.11637	10.70377	Vertisols	Nitisols	JIM/LS/MZ/A6	SCS1	37.00068	8.37723	Leptosols	Nitisols
BDUB_011	SCS2	37.03447	10.61157	Vertisols	Nitisols	JIM/LS/MZ/A8	SCS1	37.03256	8.37180	Planosols	Vertisols
BDUB_024	SCS2	37.08926	10.78389	Vertisols	Luvisols	JIM/LS/S/A5	SCS1	36.96979	8.18799	Planosols	Nitisols
BDUB_030	SCS2	37.05707	10.69127	Leptosols	Vertisols	JIM/LS/S/A7	SCS1	36.94279	8.19970	Luvisols	Nitisols
BDUD_001	SCS2	37.50478	11.72507	Leptosols	Vertisols	JIM/OMN/DY/P1	SCS1	37.26864	7.62153	Luvisols	Nitisols
BDUD_003	SCS2	37.56513	11.72549	Nitisols	Luvisols	JIM/OMN/DY/P3	SCS1	37.28559	7.58903	Phaeozems	Luvisols
BDUD_008	SCS2	37.56927	11.78242	Nitisols	Vertisols	JIM/OMN/NB/A3	SCS1	37.18808	7.54708	Cambisols	Nitisols
BDUD_009	SCS2	37.57522	11.77231	Leptosols	Vertisols	JIM/OMN/NB/A7	SCS1	37.19388	7.54998	Vertisols	Nitisols
BDUD_015	SCS2	37.59487	11.73102	Leptosols	Vertisols	JIM/OMN/NB/P2	SCS1	37.18808	7.54708	Cambisols	Nitisols
BDUD_021	SCS2	37.59366	11.81693	Cambisols	Vertisols	JIM/OMN/NC/A3	SCS1	37.17983	7.62679	Vertisols	Nitisols
BDUJT_001	SCS2	37.39888	10.73987	Nitisols	Vertisols	JIM/OMN/NC/A5	SCS1	37.18294	7.59986	Leptosols	Nitisols
BDUJT_020	SCS2	37.40432	10.62615	Nitisols	Vertisols	JIM/OMN/TB/A1	SCS1	37.11631	7.57129	Planosols	Nitisols
BDUJT_023	SCS2	37.30787	10.68128	Nitisols	Vertisols	JIM/OMN/TB/A2	SCS1	37.14975	7.56153	Planosols	Nitisols
BDUJT_025	SCS2	37.32006	10.67771	Nitisols	Vertisols	JIM/OMN/TB/A4	SCS1	37.12883	7.62374	Fluvisols	Vertisols
BDUJT_026	SCS2	37.39383	10.64142	Leptosols	Vertisols	JIM/OMN/TB/A5	SCS1	37.11546	7.59374	Cambisols	Nitisols
BDUJT_029	SCS2	37.40781	10.63934	Leptosols	Nitisols	JIM/OMN/TB/P1	SCS1	37.14975	7.56153	Planosols	Nitisols
BDUM_002	SCS2	37.16796	11.42320	Nitisols	Vertisols	JMUBD_006	SCS2	36.45639	8.57224	Vertisols	Luvisols
BDUM_017	SCS2	37.23577	11.30126	Nitisols	Vertisols	JMUBD_010	SCS2	36.47674	8.55104	Luvisols	Vertisols
BDUM_020	SCS2	37.10097	11.48620	Nitisols	Vertisols	JMUBD_013	SCS2	36.45440	8.52346	Regosols	Luvisols
BDUSA_023	SCS2	36.98747	11.35902	Vertisols	Luvisols	JMUBD_015	SCS2	36.45021	8.50324	Regosols	Nitisols
BDUSA_028	SCS2	36.81071	11.46384	Leptosols	Vertisols	JMUBD_016	SCS2	36.43775	8.48003	Regosols	Nitisols
Ch-Wo-P1	SCS1	37.77583	8.16028	Luvisols	Nitisols	JMUBD_017	SCS2	36.42118	8.45144	Luvisols	Nitisols
En-Go-P1	SCS1	37.77111	8.06083	Luvisols	Vertisols	JMUDD_004	SCS2	36.54197	8.12768	Regosols	Nitisols

PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap	PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap
GRW/LH/A4	SCS1	41.78183	9.19697	Nitisols	Vertisols	JMUDD_011	SCS2	36.58105	8.11291	Luvisols	Nitisols
GRW/LT/A2	SCS1	41.77739	9.03228	Leptosols	Luvisols	JMUDD_028	SCS2	36.45998	8.10569	Regosols	Nitisols
GRW/LT/A6	SCS1	41.76900	9.05153	Cambisols	Leptosols	JMUDD_031	SCS2	36.43131	8.07731	Luvisols	Nitisols
GRW/LT/A7	SCS1	41.76536	9.05706	Nitisols	Cambisols	JMUDD_033	SCS2	36.42662	8.08333	Luvisols	Nitisols
GRW/RJ/A2	SCS1	41.81064	9.19142	Luvisols	Vertisols	JMUDD_034	SCS2	36.42242	8.08791	Luvisols	Nitisols
GRW/RJ/A3	SCS1	41.80964	9.18789	Vertisols	Luvisols	JMUGR_022	SCS2	36.18623	7.69261	Alisols	Nitisols
GRW/UJ/A4	SCS1	41.81986	9.15942	Regosols	Vertisols	JMUGR_023	SCS2	36.19227	7.69454	Alisols	Nitisols
GRW/UJ/A6	SCS1	41.81608	9.16689	Luvisols	Regosols	JMULS_003	SCS2	36.87299	8.53189	Luvisols	Nitisols
Haw_A075	SCS1	37.77417	8.05889	Luvisols	Vertisols	JMULS_006	SCS2	36.88692	8.53314	Luvisols	Nitisols
Haw_A104	SCS1	38.60750	6.92250	Nitisols	Luvisols	JMULS_009	SCS2	36.91967	8.60015	Vertisols	Nitisols
Haw_A121	SCS1	38.54417	6.93556	Cambisols	Nitisols	JMULS_014	SCS2	36.89847	8.55456	Vertisols	Nitisols
Haw_A122	SCS1	38.54722	6.93694	Cambisols	Nitisols	JMULS_017	SCS2	36.83236	8.60192	Luvisols	Nitisols
HE/GRW/LH/P2	SCS1	41.78153	9.19714	Nitisols	Vertisols	JMULS_019	SCS2	36.82610	8.60026	Regosols	Luvisols
HE/GRW/UJ/P2	SCS1	41.80325	9.16575	Cambisols	Vertisols	JMULS_020	SCS2	36.82600	8.56867	Regosols	Nitisols
HE/HMY/DJ/P3	SCS1	42.05472	9.41733	Fluvisols	Vertisols	JMULS_029	SCS2	36.98512	8.50870	Luvisols	Cambisols
HE/HMY/DJ/P4	SCS1	42.05511	9.41536	Regosols	Vertisols	JMULS_036	SCS2	36.82706	8.33700	Vertisols	Nitisols
HE/HMY/KJ/P1	SCS1	42.00694	9.46333	Luvisols	Vertisols	JMULS_037	SCS2	36.83203	8.33515	Vertisols	Nitisols
HE/KOM/EG/P1	SCS1	42.11139	9.49172	Cambisols	Vertisols	JMULS_043	SCS2	36.94687	8.34090	Leptosols	Nitisols
HE/KOM/KK/P1	SCS1	42.13706	9.46442	Luvisols	Nitisols	JMULS_044	SCS2	36.95480	8.34090	Luvisols	Nitisols
HE/MTA/HB/P1	SCS1	41.71578	9.43994	Nitisols	Luvisols	JMULS_047	SCS2	36.84559	8.20622	Luvisols	Nitisols
HE/MTA/HB/P2	SCS1	41.74500	9.42528	Luvisols	Vertisols	JMUON_001	SCS2	37.15649	7.64623	Luvisols	Nitisols
HMUG_002	SCS2	41.85841	9.08452	Cambisols	Vertisols	JMUON_005	SCS2	37.17475	7.64568	Planosols	Luvisols
HMUG_003	SCS2	41.86131	9.08396	Cambisols	Vertisols	JMUON_006	SCS2	37.17686	7.64529	Luvisols	Planosols
HMUG_021	SCS2	41.88278	9.02304	Arenosols	Vertisols	JMUON_009	SCS2	37.06760	7.64010	Planosols	Vertisols
HMUG_022	SCS2	41.88001	9.04382	Arenosols	Luvisols	JMUON_017	SCS2	37.17356	7.53609	Andosols	Luvisols
HMUG_023	SCS2	41.85023	9.07843	Leptosols	Vertisols	JMUON_018	SCS2	37.12984	7.46175	Andosols	Luvisols
HMUG_027	SCS2	41.90640	9.14605	Regosols	Vertisols	JMUON_025	SCS2	37.31514	7.72436	Planosols	Nitisols
HMUG_029	SCS2	41.89355	9.14963	Luvisols	Vertisols	JMUON_031	SCS2	37.33923	7.49727	Leptosols	Luvisols
HMUG_035	SCS2	41.89236	9.13443	Vertisols	Leptosols	JMUON_033	SCS2	37.34157	7.50096	Nitisols	Luvisols
HMUG_038	SCS2	41.78067	8.98698	Regosols	Leptosols	JMUON_039	SCS2	37.32112	7.52912	Leptosols	Luvisols
HMUG_040	SCS2	41.73532	8.98499	Luvisols	Leptosols	JMUON_040	SCS2	37.32460	7.53524	Regosols	Luvisols
HMUG_042	SCS2	41.73775	9.01591	Luvisols	Leptosols	KOM/BL/A2	SCS1	42.10369	9.46833	Regosols	Luvisols
HMUG_043	SCS2	41.73611	9.01044	Luvisols	Leptosols	KOM/EG/A2	SCS1	42.11136	9.49167	Luvisols	Vertisols
HMUG_044	SCS2	41.73997	9.01683	Vertisols	Leptosols	KOM/KK/A8	SCS1	42.13019	9.49100	Regosols	Leptosols
HMUG_049	SCS2	41.78890	8.90950	Leptosols	Vertisols	KOM/WM/A2	SCS1	42.18314	9.45600	Fluvisols	Leptosols
HMUG_053	SCS2	41.80914	9.00005	Leptosols	Vertisols	KOM/WM/A3	SCS1	42.19836	9.47603	Luvisols	Leptosols
HMUHB_006	SCS2	40.38217	8.69709	Cambisols	Vertisols	KOM/WM/A7	SCS1	42.16664	9.46508	Fluvisols	Arenosols
HMUHB_007	SCS2	40.38402	8.69122	Cambisols	Regosols	Ma-Si-P1	SCS1	38.54500	6.93528	Cambisols	Nitisols
HMUHB_013	SCS2	40.42475	8.74594	Leptosols	Regosols	MKU_004	SCS2	39.34619	13.00458	Vertisols	Leptosols
HMUHB_017	SCS2	40.48022	8.66183	Luvisols	Vertisols	MKU_009	SCS2	39.37413	12.90191	Cambisols	Leptosols
HMUHB_018	SCS2	40.47809	8.67199	Luvisols	Vertisols	MKU_011	SCS2	39.42195	12.91484	Vertisols	Leptosols
HMUHB_019	SCS2	40.47291	8.68329	Nitisols	Vertisols	MKU_015	SCS2	39.63359	12.52958	Cambisols	Vertisols
HMUHB_025	SCS2	40.45327	8.78452	Luvisols	Leptosols	MKU_022	SCS2	39.61391	12.42550	Fluvisols	Vertisols

PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap	PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap
HMUHB_027	SCS2	40.55339	8.63514	Luvisols	Vertisols	MKU_023	SCS2	39.61158	12.41453	Fluvisols	Vertisols
HMUHB_028	SCS2	40.53064	8.67044	Luvisols	Vertisols	MKU_024	SCS2	39.61391	12.42550	Fluvisols	Vertisols
HMUHB_040	SCS2	40.48104	8.82029	Regosols	Vertisols	MKU_032	SCS2	39.43540	12.37160	Vertisols	Leptosols
HMUHB_042	SCS2	40.58763	8.87394	Leptosols	Vertisols	MKU_038	SCS2	39.34605	12.76034	Cambisols	Leptosols
HMUHB_044	SCS2	40.58675	8.86328	Nitisols	Vertisols	MKU_041	SCS2	39.36287	12.75749	Cambisols	Leptosols
HMUHB_046	SCS2	40.58396	8.85603	Cambisols	Vertisols	MKU_044	SCS2	39.42988	12.77627	Vertisols	Leptosols
HMUHB_048	SCS2	40.58376	8.83987	Leptosols	Cambisols	MKU_045	SCS2	39.43441	12.77513	Vertisols	Leptosols
HMUHB_049	SCS2	40.58370	8.83851	Regosols	Nitisols	MKU_046	SCS2	39.44508	12.77868	Cambisols	Leptosols
HMUHB_050	SCS2	40.50534	8.78631	Leptosols	Regosols	MKU_048	SCS2	39.34587	12.67382	Vertisols	Leptosols
HMUHB_051	SCS2	40.58704	8.78929	Cambisols	Nitisols	MKU_055	SCS2	39.28540	12.51286	Cambisols	Leptosols
HMUHB_055	SCS2	40.58725	8.78884	Leptosols	Nitisols	MKU_056	SCS2	39.27306	12.58408	Cambisols	Leptosols
HMUHB_056	SCS2	40.58445	8.79481	Arenosols	Nitisols	MKU_057	SCS2	39.33162	12.48572	Cambisols	Leptosols
HMUHB_059	SCS2	40.50508	8.81917	Regosols	Vertisols	MKU_061	SCS2	39.35136	12.35060	Cambisols	Leptosols
HMUHB_060	SCS2	40.58593	8.82666	Arenosols	Nitisols	MKU_063	SCS2	39.35646	12.35035	Fluvisols	Leptosols
HMUHR_003	SCS2	41.99015	9.27527	Regosols	Vertisols	MKU_064	SCS2	39.35720	12.34874	Fluvisols	Leptosols
HMUHR_005	SCS2	41.98248	9.26872	Arenosols	Regosols	MKU_068	SCS2	39.36622	12.34897	Cambisols	Leptosols
HMUHR_006	SCS2	41.98604	9.26850	Nitisols	Regosols	MKU_069	SCS2	39.38312	12.34673	Cambisols	Leptosols
HMUHR_011	SCS2	41.98262	9.30008	Nitisols	Vertisols	MKU_078	SCS2	39.43162	12.37443	Vertisols	Leptosols
HMUHR_013	SCS2	42.00042	9.31412	Arenosols	Vertisols	MKU_107	SCS2	39.69667	12.42861	Cambisols	Leptosols
HMUHR_016	SCS2	41.98587	9.33314	Luvisols	Arenosols	MKU_109	SCS2	39.71332	12.43569	Fluvisols	Vertisols
HMUHR_030	SCS2	42.04701	9.29925	Nitisols	Vertisols	MKU_110	SCS2	39.71656	12.43459	Fluvisols	Vertisols
HMUHR_032	SCS2	42.05656	9.31981	Nitisols	Vertisols	MKU_116	SCS2	39.75502	12.44789	Fluvisols	Cambisols
HMUHR_040	SCS2	41.65700	9.33198	Arenosols	Regosols	MKU_121	SCS2	39.76022	12.46760	Leptosols	Cambisols
HMUHR_043	SCS2	41.89117	9.32601	Cambisols	Vertisols	MKU_123	SCS2	39.76112	12.48163	Leptosols	Cambisols
HMUHR_048	SCS2	41.93940	9.46058	Arenosols	Vertisols	MKU_155	SCS2	39.30678	12.49742	Vertisols	Leptosols
HMUHR_049	SCS2	41.94235	9.45805	Fluvisols	Vertisols	MKU_173	SCS2	39.28399	12.55039	Cambisols	Leptosols
HMUHR_052	SCS2	42.02740	9.49741	Regosols	Leptosols	MKU_180	SCS2	39.36351	12.65425	Vertisols	Leptosols
HMUHR_053	SCS2	42.03223	9.47298	Arenosols	Vertisols	MKU_184	SCS2	39.35951	12.75835	Cambisols	Leptosols
HMUHR_054	SCS2	42.02092	9.39343	Cambisols	Vertisols	MKU_188	SCS2	39.44786	12.77884	Vertisols	Leptosols
HMUK_001	SCS2	42.06326	9.49936	Regosols	Leptosols	MKU_200	SCS2	39.38958	13.01341	Cambisols	Leptosols
HMUK_009	SCS2	42.13287	9.53374	Luvisols	Leptosols	MKU_224	SCS2	39.38007	12.90025	Cambisols	Leptosols
HMUK_010	SCS2	42.13146	9.54169	Luvisols	Leptosols	MKU_225	SCS2	39.38846	12.90253	Cambisols	Leptosols
HMUK_013	SCS2	42.14370	9.55401	Regosols	Leptosols	MKU_228	SCS2	39.42305	12.91567	Vertisols	Leptosols
HMUK_021	SCS2	42.14331	9.39347	Regosols	Arenosols	MKU_230	SCS2	39.43347	12.91797	Cambisols	Leptosols
HMUK_030	SCS2	42.14623	9.50081	Nitisols	Luvisols	MKU_231	SCS2	39.36792	12.34743	Regosols	Leptosols
HMUK_040	SCS2	42.10131	9.40089	Leptosols	Arenosols	MKU_232	SCS2	39.50589	12.34721	Regosols	Leptosols
HMUM_008	SCS2	41.53629	9.08157	Arenosols	Leptosols	MKU_233	SCS2	39.64386	12.34692	Regosols	Vertisols
HMUM_012	SCS2	41.53214	9.13112	Vertisols	Leptosols	MKU_234	SCS2	39.78182	12.34656	Cambisols	Leptosols
HMUM_014	SCS2	41.52472	9.23841	Regosols	Leptosols	MKU_235	SCS2	39.78222	12.48219	Cambisols	Leptosols
HMUM_015	SCS2	41.52960	9.23952	Fluvisols	Leptosols	MKU_236	SCS2	39.64419	12.48256	Regosols	Vertisols
HMUM_018	SCS2	41.53002	9.25626	Fluvisols	Leptosols	MKU_238	SCS2	39.36811	12.48308	Cambisols	Leptosols
HMUM_020	SCS2	41.56839	9.33347	Luvisols	Vertisols	MKU_240	SCS2	39.23019	12.61887	Regosols	Leptosols
HMUM_022	SCS2	41.55711	9.33385	Luvisols	Vertisols	MKU_242	SCS2	39.64453	12.61820	Regosols	Vertisols

PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap	PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap
HMUM_023	SCS2	41.56424	9.33357	Leptosols	Vertisols	MKU_243	SCS2	39.78263	12.61783	Leptosols	Vertisols
HMUM_028	SCS2	41.60057	9.34012	Regosols	Leptosols	MKU_244	SCS2	39.78305	12.75346	Regosols	Vertisols
HMY/DJ/A1	SCS1	42.08750	9.42722	Cambisols	Luvisols	MKU_245	SCS2	39.64487	12.75383	Luvisols	Vertisols
HMY/DJ/A8	SCS1	42.05389	9.41528	Regosols	Vertisols	MKU_246	SCS2	39.50669	12.75413	Cambisols	Vertisols
HMY/FI/A1	SCS1	42.03570	9.44600	Luvisols	Vertisols	MKU_247	SCS2	39.36850	12.75436	Regosols	Leptosols
HMY/FI/A2	SCS1	42.03570	9.44300	Luvisols	Vertisols	MKU_249	SCS2	39.50696	12.88977	Calcisols	Leptosols
HMY/FI/A4	SCS1	42.04033	9.45406	Nitisols	Vertisols	MKU_250	SCS2	39.64521	12.88947	Calcisols	Leptosols
HMY/FI/A8	SCS1	42.03083	9.46139	Cambisols	Vertisols	MKU_252	SCS2	39.50723	13.02541	Cambisols	Leptosols
HMY/IO/A4	SCS1	41.94900	9.44222	Nitisols	Vertisols	MKU_253	SCS2	39.53199	12.97532	Cambisols	Leptosols
HMY/IO/A6	SCS1	41.95667	9.43833	Nitisols	Vertisols	MKU_254	SCS2	39.56538	12.86109	Regosols	Leptosols
HMY/IO/A7	SCS1	41.97778	9.45194	Nitisols	Vertisols	MKU_255	SCS2	39.53458	12.57943	Fluvisols	Vertisols
HMY/IO/A8	SCS1	41.95361	9.43972	Regosols	Vertisols	MKU_256	SCS2	39.51082	12.52348	Regosols	Vertisols
HMY/KJ/A5	SCS1	42.00583	9.46917	Fluvisols	Vertisols	MKU_257	SCS2	39.46059	12.53393	Regosols	Leptosols
HMY/KJ/A6	SCS1	42.00639	9.46306	Luvisols	Vertisols	MKU_263	SCS2	39.64610	12.74450	Fluvisols	Vertisols
HRO/BD/A1	SCS1	40.64981	8.87619	Cambisols	Vertisols	MKU_264	SCS2	39.61720	12.79380	Fluvisols	Vertisols
HRO/BD/A2	SCS1	40.64336	8.86672	Luvisols	Vertisols	MKU_266	SCS2	39.67790	12.80990	Fluvisols	Vertisols
HRO/BD/A5	SCS1	40.62972	8.85567	Luvisols	Vertisols	MKU_268	SCS2	39.50970	12.62740	Cambisols	Vertisols
HRO/BD/A6	SCS1	40.63644	8.84600	Fluvisols	Vertisols	MTA/BO/A1	SCS1	41.65503	9.38425	Leptosols	Vertisols
HRO/HC/A5	SCS1	40.67936	8.86742	Luvisols	Vertisols	MTA/BO/A2	SCS1	41.65139	9.39122	Cambisols	Vertisols
HRO/IJ/A2	SCS1	40.41322	8.72300	Vertisols	Nitisols	MTA/CL/A2	SCS1	41.63139	9.42303	Nitisols	Cambisols
HRO/IJ/A4	SCS1	40.42011	8.72308	Nitisols	Vertisols	MTA/CL/A5	SCS1	41.60533	9.36814	Fluvisols	Leptosols
HRO/IJ/A7	SCS1	40.42081	8.71406	Luvisols	Vertisols	MTA/CL/A7	SCS1	41.61553	9.42256	Nitisols	Vertisols
HRO/IJ/A8	SCS1	40.42581	8.72033	Leptosols	Vertisols	MTA/CL/A8	SCS1	41.62197	9.42525	Luvisols	Nitisols
HW/HRO/BD/P1	SCS1	40.62969	8.85747	Luvisols	Vertisols	MTA/DB/A4	SCS1	41.58283	9.41272	Cambisols	Vertisols
HW/HRO/HC/P1	SCS1	40.64725	8.86539	Luvisols	Vertisols	MTA/DB/A7	SCS1	41.60542	9.41617	Nitisols	Vertisols
HW/HRO/IJ/P1	SCS1	40.41542	8.71950	Luvisols	Vertisols	MTA/DB/A8	SCS1	41.60331	9.41881	Luvisols	Vertisols
HWUBU_010	SCS2	38.30533	6.13426	Leptosols	Luvisols	MTA/HB/A5	SCS1	41.70994	9.44636	Luvisols	Leptosols
HWUBU_020	SCS2	38.37284	6.19622	Fluvisols	Luvisols	OR/BAK/DD/P2	SCS1	37.07494	9.09545	Fluvisols	Vertisols
HWUBU_021	SCS2	38.39027	6.18965	Luvisols	Alisols	OR/BEC/AB/P1	SCS1	38.29807	8.73268	Luvisols	Vertisols
HWUBU_035	SCS2	38.31487	6.21009	Nitisols	Luvisols	OR/BEC/SO/P1	SCS1	38.23842	8.69686	Luvisols	Vertisols
HWUBU_048	SCS2	38.40823	6.22286	Leptosols	Luvisols	OR/BEC/WE/P2	SCS1	38.35762	8.73474	Luvisols	Vertisols
HWUBU_049	SCS2	38.40521	6.22735	Alisols	Luvisols	OR/GIM/AD/P1	SCS1	39.12843	9.00299	Phaeozems	Vertisols
HWUBU_056	SCS2	38.40107	6.32712	Nitisols	Luvisols	OR/GIM/AD/P2	SCS1	39.13897	9.00579	Leptosols	Vertisols
HWUBU_059	SCS2	38.39853	6.32815	Nitisols	Luvisols	OR/GIM/HS/P1	SCS1	39.07652	8.96087	Leptosols	Vertisols
HWUCH_007	SCS2	37.85115	8.09957	Luvisols	Nitisols	OR/GIM/HS/P3	SCS1	39.08197	8.95673	Phaeozems	Vertisols
HWUCH_010	SCS2	37.89901	8.10212	Luvisols	Nitisols	OR/GIR/GG/P2	SCS1	38.70401	9.77277	Cambisols	Vertisols
HWUCH_027	SCS2	37.72353	8.17425	Planosols	Vertisols	OR/GIR/TN/P2	SCS1	38.69963	9.72708	Nitisols	Vertisols
HWUCH_029	SCS2	37.71591	8.20575	Planosols	Vertisols	OR/MUN/GU/P4	SCS1	39.07589	7.53545	Leptosols	Planosols
HWUCH_032	SCS2	37.83834	8.20041	Planosols	Vertisols	TALJ-ATS-A3	SCS1	39.53000	12.95833	Vertisols	Leptosols
HWUCH_034	SCS2	37.84891	8.20093	Nitisols	Planosols	TALJ-AYB-A7	SCS1	39.53278	12.88333	Cambisols	Vertisols
HWUCH_035	SCS2	37.74794	8.16667	Planosols	Vertisols	TALJ-AYB-A8	SCS1	39.52306	12.88806	Cambisols	Vertisols
HWUCH_037	SCS2	37.80879	8.16708	Luvisols	Vertisols	TALJ-SES-A4	SCS1	39.60861	12.92028	Regosols	Vertisols
HWUCH_038	SCS2	37.80600	8.16752	Planosols	Vertisols	TALJ-TEK-A1	SCS1	39.47583	12.89583	Regosols	Leptosols

PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap	PrflD	SCS	X_LonDD	Y_LatDD	WRBrsgProfile	WRBrsgMap
HWUCH_039	SCS2	37.88734	8.16605	Luvisols	Planosols	TENM-MEK-A1	SCS1	39.52139	12.74194	Vertisols	Leptosols
HWUCH_041	SCS2	37.84436	8.19946	Planosols	Vertisols	TENM-MEK-A3	SCS1	39.52833	12.74639	Fluvisols	Vertisols
HWUEN_013	SCS2	37.78194	7.96854	Leptosols	Nitisols	TENM-MEK-A8	SCS1	39.50500	12.75167	Cambisols	Leptosols
HWUEN_017	SCS2	37.72512	7.96761	Planosols	Nitisols	TENM-MES-A2	SCS1	39.56139	12.69583	Cambisols	Vertisols
HWUEN_019	SCS2	37.73394	7.96629	Luvisols	Nitisols	TENM-MES-A3	SCS1	39.57333	12.69583	Vertisols	Leptosols
HWUEN_020	SCS2	37.67763	8.09988	Vertisols	Planosols	TENM-MES-A4	SCS1	39.56194	12.71194	Cambisols	Leptosols
HWUEN_029	SCS2	37.70299	8.10009	Planosols	Vertisols	TENM-MES-A7	SCS1	39.54639	12.69056	Cambisols	Leptosols
HWUEN_034	SCS2	37.77408	8.03444	Planosols	Vertisols	TENM-SHI-A2	SCS1	39.48833	12.79722	Cambisols	Vertisols
HWUMA_011	SCS2	38.01935	7.76932	Leptosols	Nitisols	TENM-SHI-A3	SCS1	39.49194	12.78972	Cambisols	Vertisols
HWUMA_014	SCS2	38.03289	7.76690	Nitisols	Luvisols	TENM-SHI-A5	SCS1	39.52056	12.79333	Cambisols	Leptosols
HWUMA_015	SCS2	38.03493	7.76536	Luvisols	Nitisols	TENM-SHI-A6	SCS1	39.52361	12.79806	Cambisols	Leptosols
HWUMA_018	SCS2	38.00564	7.73529	Leptosols	Nitisols	TENM-SHI-A8	SCS1	39.52500	12.79444	Cambisols	Vertisols
HWUMA_021	SCS2	37.99409	7.73145	Planosols	Regosols	TENM-SHI-P2	SCS1	39.50600	12.79830	Cambisols	Vertisols
HWUMA_024	SCS2	37.99325	7.76945	Regosols	Nitisols	TENM-SHI-P3(RC)	SCS1	39.52500	12.79440	Cambisols	Vertisols
HWUMA_028	SCS2	38.00380	7.76782	Leptosols	Nitisols	TENM-SIM-A5	SCS1	39.50944	12.72111	Cambisols	Vertisols
HWUMA_031	SCS2	38.03791	7.79777	Nitisols	Luvisols	TOFL-AGO-A5	SCS1	39.49417	12.55500	Fluvisols	Vertisols
HWUMA_032	SCS2	38.06674	7.83023	Luvisols	Leptosols	TOFL-AGO-A6	SCS1	39.48861	12.56056	Fluvisols	Vertisols
HWUMA_037	SCS2	37.97892	7.80129	Leptosols	Luvisols	TOFL-HUG-A6	SCS1	39.53000	12.65472	Cambisols	Leptosols
HWUMA_038	SCS2	37.99802	7.79861	Nitisols	Luvisols	TRAL-GER-P1	SCS1	39.63800	12.47360	Fluvisols	Vertisols
HWUMA_049	SCS2	38.00081	7.80108	Leptosols	Luvisols	TRAL-SBK-A5	SCS1	39.59000	12.38667	Fluvisols	Vertisols
HWUMAL_001	SCS2	38.67831	6.99423	Gleysols	Luvisols	TRAL-SBK-A6	SCS1	39.58806	12.38139	Fluvisols	Vertisols
HWUMAL_003	SCS2	38.70456	6.96320	Gleysols	Alisols	TRAL-TAO-P1	SCS1	39.64900	12.52560	Cambisols	Vertisols
HWUMAL_009	SCS2	38.69662	6.97011	Gleysols	Alisols	TRAZ-EBO-A1	SCS1	39.66528	12.86639	Vertisols	Leptosols
HWUMAL_024	SCS2	38.63522	6.95688	Alisols	Luvisols	TRAZ-EBO-A3	SCS1	39.67889	12.87861	Vertisols	Leptosols
HWUMAL_025	SCS2	38.63516	6.95570	Alisols	Luvisols	TRAZ-TSE-A1	SCS1	39.60472	12.80222	Regosols	Leptosols
HWUMAL_026	SCS2	38.66743	6.94524	Nitisols	Alisols	TRAZ-TSE-A2	SCS1	39.61639	12.80306	Regosols	Vertisols
HWUMAL_030	SCS2	38.60655	6.96145	Luvisols	Nitisols	TRAZ-TSE-P2	SCS1	39.60800	12.80310	Regosols	Leptosols
HWUMAL_036	SCS2	38.66698	6.94758	Gleysols	Alisols	VirtualProfile_16	SCS1	37.07706	8.76118	Leptosols	Nitisols
						VirtualProfile_21	SCS1	37.98411	7.80052	Leptosols	Nitisols

Annex 10 Map purity

Map purity assessed by Random Forests considering only out-of-bag validation data, including data outside of the woredas.
Reference Soil Groups observed from soil profiles: horizontal
Reference Soil Groups predicted on the map: vertical

4. Final map (raster) produced using all woreda level soil data

Map-units \ Profiles	Acrisols	Alisols	Andosols	Arenosols	Calcisols	Cambisols	Fluvisols	Gleysols	Leptosols	Luvisols	Nitisols	Phaeozems	Planosols	Regosols	Vertisols	purity	TOT
Acrisols	2	0	0	0	0	6	0	0	0	3	0	0	0	0	0	0.18	11
Alisols	0	61	0	0	0	0	1	3	3	13	1	0	0	0	0	0.74	82
Andosols	0	0	33	0	0	2	1	0	6	2	0	0	0	1	2	0.7	47
Arenosols	0	0	0	22	0	1	1	0	3	3	2	0	0	5	2	0.56	39
Calcisols	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	2
Cambisols	5	0	3	0	0	61	5	0	15	9	6	2	0	3	17	0.48	126
Fluvisols	0	0	0	0	0	5	14	0	0	0	7	1	0	0	8	0.4	35
Gleysols	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	4
Leptosols	0	1	7	2	2	47	6	0	205	21	14	0	0	25	30	0.57	360
Luvisols	2	12	1	3	0	14	4	1	31	344	58	2	4	12	39	0.65	527
Nitisols	0	4	0	3	0	17	11	2	44	87	314	1	8	17	52	0.56	560
Phaeozems	0	0	0	0	0	4	1	0	0	1	0	10	0	0	0	0.62	16
Planosols	0	0	0	0	0	1	1	4	2	5	3	1	27	0	9	0.51	53
Regosols	0	0	1	0	0	3	1	0	11	3	6	0	1	25	9	0.42	60
Vertisols	0	1	8	3	0	48	38	1	31	63	41	11	17	16	394	0.59	672
clasrep	0.22	0.77	0.62	0.67	0.5	0.29	0.17	0	0.58	0.62	0.69	0.36	0.45	0.24	0.7	**0.58**	-
TOT	9	79	53	33	4	209	84	11	351	554	453	28	60	104	562	-	2594

2. Base map (raster) validation using out-of-kebele level soil data

Map-units \ Profiles	Acrisols	Alisols	Andosols	Arenosols	Calcisols	Cambisols	Fluvisols	Gleysols	Leptosols	Luvisols	Nitisols	Phaeozems	Planosols	Regosols	Vertisols	purity	TOT
Acrisols	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Alisols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Andosols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arenosols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcisols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cambisols	0	0	0	2	0	16	3	0	34	13	11	0	0	7	8	0.17	94
Fluvisols	0	0	0	0	0	0	1	0	1	0	0	0	0	1	2	0.2	5
Gleysols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptosols	0	0	0	4	2	27	2	0	141	13	6	0	0	20	16	0.61	231
Luvisols	0	58	17	21	0	3	2	4	26	140	71	0	5	11	34	0.36	392
Nitisols	0	4	0	2	0	5	0	0	9	62	134	0	2	18	20	0.52	256
Phaeozems	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Planosols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regosols	0	0	0	0	0	1	0	0	2	0	0	0	0	0	1	0	4
Vertisols	0	1	0	3	0	22	11	0	25	46	22	7	34	20	152	0.44	343
clasrep	0	0	0	0	0	0.22	0.05	0	0.59	0.51	0.55	0	0	0	0.65	**0.44**	-
TOT	0	63	17	32	2	74	19	4	238	276	244	7	42	77	233	-	1328

1. Base map (raster) produced using kebele level soil data

Map-units \ Profiles	Acrisols	Alisols	Andosols	Arenosols	Calcisols	Cambisols	Fluvisols	Gleysols	Leptosols	Luvisols	Nitisols	Phaeozems	Planosols	Regosols	Vertisols	purity	TOT
Acrisols	2	0	0	0	0	5	0	0	0	2	0	0	0	0	0	0.22	9
Alisols	0	13	0	0	0	0	0	0	0	2	0	0	0	0	0	0.87	15
Andosols	0	0	17	0	0	4	1	0	2	0	0	0	0	2	1	0.63	27
Arenosols	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcisols	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	2
Cambisols	5	0	4	0	0	47	5	0	6	10	10	2	0	3	14	0.44	106
Fluvisols	0	0	0	0	0	4	15	1	1	2	3	1	0	0	11	0.39	38
Gleysols	0	0	0	0	0	0	0	0	0	0	1	0	5	0	0	0	6
Leptosols	0	1	6	0	0	7	2	1	45	10	11	1	0	5	4	0.48	93
Luvisols	2	1	0	0	0	10	3	0	22	186	19	3	2	5	23	0.67	276
Nitisols	0	1	0	0	0	14	12	1	24	25	142	0	4	5	26	0.56	254
Phaeozems	0	0	0	0	0	4	1	0	0	1	0	7	0	0	1	0.5	14
Planosols	0	0	0	0	0	0	1	4	0	1	1	0	6	0	1	0.43	14
Regosols	0	0	1	0	0	1	0	0	1	4	2	0	0	5	0	0.36	14
Vertisols	0	0	8	0	0	39	25	0	12	35	20	7	1	2	248	0.62	397
clasrep	0.22	0.81	0.47	0	1	0.35	0.23	0	0.4	0.67	0.68	0.33	0.33	0.19	0.75	**0.58**	-
TOT	9	16	36	0	2	135	65	7	113	278	209	21	18	27	329	-	1265

Annex 11a Brief description of the reference soil groups

The following descriptions are taken from lecture notes on the major soil of the world by Driessen et al. (2001); for additional details see www.isric.org/content/lecture-notes-major-soils-world resp. www.isric.org/isric/webdocs/docs/major_soils_of_the_world/start.pdf.

Vertisols

Vertisols are churning heavy clay soils with a high proportion of swelling 2:1 lattice clays. These soils form deep wide cracks from the surface downward when they dry out, which happens in most years. The name Vertisols (from L. *vertere*, to turn) refers to the constant internal turnover of soil material.

Characteristics of Vertisols

- Morphological characteristics

Vertisols have A(B)C-profiles; the A-horizon comprises both the surface mulch (or crust) and the underlying structured horizon that changes only gradually with depth. The subsurface soil with its distinct vertic structure conforms to the definition of a vertic horizon but it is not always clear where the A-horizon ends and the B-horizon begins. Important morphological characteristics such as soil colour, texture, element composition, etc are all uniform throughout the solum. There is hardly any movement of soluble or colloidal soil components. (If such transport occurs, pedoturbation counteracts it.) A calcic horizon or a concentration of soft powdery lime may be present in or below the vertic horizon. Gypsum can occur as well, either uniformly distributed over the matrix or in nests of gypsum crystals.

- Physical characteristics

Vertisols with strong pedoturbation have a uniform particle size distribution throughout the solum but texture may change sharply where the substratum is reached. Dry Vertisols have a very hard consistence; wet Vertisols are (very) plastic and sticky. It is generally true that Vertisols are friable only over a narrow moisture range but their physical properties are greatly influenced by soluble salts and/or adsorbed sodium.

Infiltration of water in dry (cracked) Vertisols with surface mulch or a fine tilth is initially rapid. However, once the surface soil is thoroughly wetted and cracks have closed, the rate of water infiltration becomes almost zero. (The very process of swell/shrink implies that pores are discontinuous and non-permanent.) If, at this stage, the rains continue (or irrigation is prolonged), Vertisols flood readily. The highest infiltration rates are measured on Vertisols that have a considerable shrink/swell capacity, but maintain a relatively fine class of structure. Not only the cracks transmit water from the (first) rains but also the open spaces between slickensided ped surfaces that developed as the peds shrunk.

Data on the water holding capacity of Vertisols vary widely, which may be attributed to the complex pore space dynamics. Water is adsobed at the clay surfaces and retained between crystal lattice layers. By and large, Vertisols are soils with good water holding properties. However, a large proportion of all water in Vertisols, and notably the water held between the basic crystal units, is not available to plants. Investigations in the Sudan Gezira have shown that the soil moisture content midway between large cracks changes very little, if at all, when the clay plain is flooded for several days or even several weeks. The soil's moisture content decreases gradually from more than 50 percent in the upper 20 cm layer to 30 percent at 50 cm depth. Deeper than 100 cm, the soil moisture content remains almost invariant throughout the year.

- Chemical characteristics

Most Vertisols have a high cation exchange capacity (CEC) and a high base saturation percentage (BS). The soil reaction varies from weakly acid to weakly alkaline; pH-values are in the range 6.0 to 8.0. Higher pH values (8.0-9.5) were measured on Vertisols with much exchangeable sodium. The CEC of the soil material (in 1 M NH_4OAc at pH 7.0) is commonly between 30 and 80 cmol(+)/kg of dry soil; the CEC of the clay is of the order of 50 to 100 cmol(+)/kg clay. The base saturation percentage is greater than 50 and often close to 100 percent with Ca^{2+} and Mg^{2+} occupying more than 90 percent of the exchange sites; the Ca/Mg-ratio is normally between 3 and 1.

Management / use of Vertisols

Large areas of Vertisols in the semi-arid tropics are still unused or are used only for extensive grazing, wood chopping, charcoal burning and the like. These soils form a considerable agricultural potential but adapted management is a precondition for sustained production. The comparatively good chemical fertility and their occurrence in extensive level plains where reclamation and mechanical cultivation can be envisaged are assets of Vertisols. Their physical soil characteristics and notably their difficult water management cause problems.

- Farming systems on Vertisols
The agricultural use of Vertisols ranges from very extensive (grazing, collection of fire wood, charcoal burning) through smallholder post-rainy season crop production (millet, sorghum, cotton, chick peas) to small-scale (rice) and large-scale irrigated agriculture (cotton, wheat, barley, sorghum, chickpeas, flax, noug (*Guzotia Abessynica*) and sugar cane). Cotton is known to perform well on Vertisols allegedly because cotton has a vertical root system that is not severely damaged by cracking of the soil. Tree crops are generally less successful because tree roots find it difficult to establish themselves in the subsoil and are damaged as the soil shrinks and swells. Management practices for crop production ought to be primarily directed at water control in combination with conservation or improvement of the soil's fertility level.

- Physical land management on Vertisols
The physical properties and the soil moisture regime of Vertisols represent serious management constraints. The heavy soil texture and domination of expanding clay minerals result in a narrow soil moisture range between moisture stress and water excess. Tillage is hindered by stickiness when the soil is wet and by hardness when it is dry. The susceptibility of Vertisols to waterlogging is the single most important factor that reduces the actual growing period (below estimates based on climatic data). Excess water during the rainy season must be stored for post-rainy season use (`water harvesting') on Vertisols with very slow infiltration rates.
Several management practises have been devised to improve the water regime (not copied here).

- Maintaining the nutrient status of Vertisols
Vertisols are considered to be among the most fertile soils of the seasonally dry tropics. The soils are rich in bases, with calcium and magnesium prevailing on the exchange complex. Many traditional farming systems observed a fallow period of 1 - 4 years in which Vertisols could restore the organic matter content of the surface soil after a period of intensive use. Increased population pressure has now reduced the proportion of fallow land (read: the fallow period) and many areas are left in fallow only when completely degraded. Trials have shown that continuous cropping can be sustainable provided that soil and water conservation and fertiliser management are adequate.
Many Vertisols are deficient in nitrogen, in line with their low organic matter content. Nitrogen fertilisers have to be applied in such a way that excessive volatilisation of ammoniacal nitrogen or leaching of nitrate ions are avoided. Placement of nitrate fertiliser in the root zone is best in dry regions whereas split banded application is preferred in wet conditions. If nitrogen is supplied in the ammonium form, the exchange complex of Vertisols, which curbs (leaching) losses, retains it. Many Vertisols have a low content of *available* phosphorus. In the East-African highlands, Vertisols on weathered basalt showed little response to application of phosphate under low-intensity farming but phosphorus became strongly limiting if farming was intensified (and yields went up). Acidic Alic Vertisols and Chromic Vertisols may contain much exchangeable aluminium and are notorious for inactivating fertiliser phosphate. In places Vertisols are low on sulphur and/or zinc.
It is generally believed that application of animal manure would improve soil organic matter and soil physical properties but trials remained largely inconclusive. Crop residues should be returned to the land but are used instead as animal feed, fuel and building materials. Trials with green manure (legumes) showed a remarkable increase of the yields of cereals and increased efficiency of mineral fertiliser uptake. Combining broad beds and furrows with application of phosphorus fertiliser and inter-cropping of cereals and legumes takes full benefit of crop-livestock interactions. The legumes overgrow the cereal stover after harvest (Jutzi et al., 1987; Gryseels, 1988).

Luvisols

The Reference Soil Group of the Luvisols holds soils whose dominant characteristic is a marked textural differentiation within the soil profile, with the surface horizon being depleted of clay and with accumulation of clay in a subsurface `*argic*' horizon. Luvisols have high activity clays and lack the *abrupt textural change* of Planosols, *albeluvic tonguing* as in Albeluvisols, a *mollic* surface horizon as in steppe soils, and the *alic properties* of Alisols.

Characteristics of Luvisols

- Morphological characteristics

Luvisols have typically a brown to dark brown surface horizon over a (greyish) brown to strong brown or red argic subsurface horizon. In subtropical Luvisols in particular, a calcic horizon may be present or pockets of soft powdery lime occur in and below a reddish brown argic horizon. Soil colours are less reddish in Luvisols in cool regions than in warmer climates. In wet environments, the surface soil may become depleted of clay and free iron oxides to the extent that a greyish eluviation horizon forms under a dark but thin A-horizon.

- Mineralogical characteristics

Luvisols are moderately weathered soils; they contain less Al-, Fe- and Ti-oxides than their tropical counterparts, the Lixisols, and have an SiO_2/Al_2O_3 ratio in excess of 2.0. Luvisols tend to become richer in swelling and shrinking clays towards the dry end of their climatic zone. As a consequence, pressure faces and parallelepiped structure elements become more and more prominent.

- Physical characteristics

By and large, Luvisols have favourable physical properties; they have granular or crumb surface soils that are porous and well aerated. The `available' moisture storage capacity is highest in the argic horizon (15 to 20 volume percent). The argic horizon has a stable blocky structure but surface soils with a high silt content may be sensitive to slaking and erosion.
Most Luvisols are well drained but Luvisols in depression areas with shallow groundwater may develop gleyic soil properties in and below the argic horizon. Stagnic properties are found where a dense illuviation horizon obstructs downward percolation and the surface soil becomes saturated with water for extended periods of time

- Chemical characteristics

The chemical properties of Luvisols vary with parent material and pedogenetic history. Surface soils are normally wholly or partly de-calcified and slightly acid in reaction; they contain a few percent organic matter with a C/N ratio of 10 to 15. Subsurface soils tend to have a neutral reaction and may contain some calcium carbonate.

Management and use of Luvisols

With the possible exception of Leptic, Gleyic, Vitric, Albic, Ferric and Dystric soil units, Luvisols are fertile soils and suitable for a wide range of agricultural uses. Luvisols with a high silt content are susceptible to structure deterioration if tilled in wet condition and/or with heavy machinery. Luvisols on steep slopes require erosion control measures.
The eluvial horizons of some Luvisols are depleted to the extent that an unfavourable platy structure formed with `*pseudogley*' (stagnic properties) as a result. This is the reason why truncated Luvisols are in many instances better soils for farming than the original, non-eroded soils.
Luvisols in the Temperate Zone are widely grown to small grains, sugar beet and fodder; in sloping areas they are used for orchards and/or grazing. In the Mediterranean region, where Chromic, Calcic and Vertic Luvisols are common in colluvial deposits of limestone weathering, the lower slopes are commonly sown to wheat and/or sugar beet while (eroded) upper slopes are in use for extensive grazing or planted to tree crops.

Nitisols

The Reference Soil Group of the Nitisols accommodates deep, well-drained, red, tropical soils with diffuse horizon boundaries and a subsurface horizon with more than 30 percent clay and moderate to strong angular blocky structure elements that easily fall apart into characteristic shiny, polyhedric ('nutty') elements. Nitisols are strongly weathered soils but far more productive than most other red tropical soils.

Characteristics of Nitisols

- Morphological characteristics
Nitisols are normally deeper than 150 cm and dusky red or dark red in colour. They are well-drained soils with a clayey subsurface horizon that is deeply stretched and has nutty or polyhedric blocky structure elements with shiny ped faces. Reticular manganese segregation on ped faces is common in the lower parts of the `*nitic'* subsurface horizon. The relative decrease of the clay content of the nitic horizon is gradual (less than 20 percent from its maximum at 150 cm below the surface). Horizon boundaries are typically gradual or diffuse. Laterally, the nitic horizon may wedge out or decrease in thickness, or dip below a ferralic or argic horizon. It may replace either one of these or change into a cambic horizon. It also may acquire properties found in vertic or ferric horizons. Such lateral transitions are gradual and hardly perceptible within distances of 5 to 10 metres.

- Mineralogical characteristics
The clay assemblage of Nitisols is dominated by kaolinite and (meta)halloysite. Minor quantities of illite, chloritized vermiculite and randomly interstratified clay minerals may be present, alongside hematite, goethite and gibbsite. Nitisols contain 4.0 percent or more `free' iron ($Fe_2O_3$ by dithionite-citrate extraction) in the fine earth fraction and more than 0.2 percent `active' iron (by acid oxalate extraction at pH 3). The ratio of `active' to `free' iron is 0.05 or more. The mineralogical composition of the sand fraction depends strongly on the nature of the parent material. Although weathering-resistant minerals (notably quartz) predominate, minor quantities of more easily weathering minerals, e.g. feldspars, volcanic glass, apatite, or amphiboles, may (still) be present indicating that Nitisols are less strongly weathered than associated Ferralsols.

- Hydrological characteristics
Nitisols are free-draining soils and permeable to water (50-60 percent pores). Their retention of `plant-available' moisture is only fair (5-15 percent by volume) but their total moisture storage is nonetheless satisfactory because the rootable soil layer extends to great depth, commonly deeper than 2 m.. Most Nitisols can be tilled within 24 hours after wetting without serious deterioration of the soil structure.

- Physical characteristics
Nitisols are hard when dry, very friable to firm when moist and sticky and plastic when wet. Gravel or stones are rare but fine iron-manganese concretions (`*shot'*) may be present.

- Chemical characteristics
The cation exchange capacity of Nitisols is high if compared to that of other tropical soils such as Ferralsols, Lixisols and Acrisols. The reasons are:
Although the clay assemblage is dominated by low-activity clays, the *clay content is high* (more than 30 percent and not seldom more than 60 percent), *and Soil organic matter* makes a considerable contribution to the overall CEC, especially in mollic or umbric soil units.
Base saturation varies from less than 10 to more than 90 percent. The soil-pH(H_2O) is typically between 5.0 and 6.5; P-fixation is considerable but acute P-deficiency is rare.

- Biological characteristics
Intense faunal activity is accountable for the typical gradual horizon boundaries of Nitisols. Termites are particularly effective in homogenizing soil; volcanic glass deposited on the (present) surface was found back at a depth of 7 meters in Nitisols in Kenya.

Management and use of Nitisols

Nitisols are among the most productive soils of the humid tropics. The deep and porous solum and the stable soil structure of Nitisols permit deep rooting and make these soils quite resistant to erosion. The good workability of Nitisols, their good internal drainage and fair water holding properties are complemented by chemical (fertility) properties that compare favourably to those of most other tropical soils. Nitisols have relatively high contents of weathering minerals and surface soils may contain several percent of organic matter, in particular under forest or tree crops. Nitisols are planted to plantation crops such as cocoa, coffee, rubber and pineapple, and are also widely used for food crop production on smallholdings. High P-sorption calls for application of P-fertilizer, usually provided as slow release, low-grade `rock phosphate' (several tons/ha with maintenance doses every few years) in combination with smaller applications of better soluble `super phosphate' for short-term response by the crop.

Leptosols

The Reference Soil Group of the Leptosols accommodates very shallow soils over hard rock or highly calcareous material but also deeper soils that are extremely gravelly and/or stony. Leptosols are azonal soils with an incomplete solum and/or without clearly expressed morphological features. They are particularly common in mountain regions.

Characteristics of Leptosols

- Morphological characteristics
Most Leptosols have an A(B)R or A(B)C configuration of only weakly expressed horizons. Rendzic and Mollic Leptosols have more pronounced morphological features. Their dark brown or black calcareous organo-mineral surface soil, in Rendzic Leptosols speckled with white limestone fragments, has a stable crumb or granular structure, or a vermicular structure with abundant earth worm casts. At the base of the soil profile, there is an abrupt change to the underlying rock or there may be a narrow transition horizon.

- Hydrological, chemical and physical characteristics
The Reference Soil Group of the Leptosols includes a wide variety of soils with greatly differing chemical and physical properties. By and large, Leptosols are free-draining soils with the exception of certain Hyperskeletic Leptosols that may have groundwater at shallow depth. Stagnic properties can occur in Leptosols on gentle slopes or in pockets but are rather exceptional.
The physical, chemical and biological properties of non-calcareous Leptosols are largely conditioned by the characteristics of the parent material and the climate. Calcareous Leptosols have generally better physical and chemical properties than non-calcareous ones and are also less diverse. Leptosols are normally free from noxious levels of soluble salts. However, their shallowness and/or stoniness, and implicit low water holding capacity, are serious limitations. The natural vegetation on Leptosols varies with the climate but is generally richer on calcareous Leptosols than on acid ones. Earthworms, enchytraeid worms and arthropods are the chief soil organisms. The soil fauna may be temporarily inactive in dry spells.

Management and use of Leptosols

Leptosols have a resource potential for wet-season grazing and as forest land. Areas with Rendzic Leptosols in southeast Asia are planted to teak and mahogany; Rendzic Leptosols in the temperate zone are under (mainly) deciduous mixed forest whereas acid Lithic, Umbric and Dystric Leptosols are commonly under pine forest.
Erosion is the greatest threat to Leptosol areas, particularly in mountain regions in the temperate zone where high population pressure (tourism), overexploitation and increasing environmental pollution lead to increasing deterioration of forests and threaten large areas of vulnerable Leptosols.
Leptosols on hill slopes are generally more fertile than their counterparts on more level land. One or a few `good' crops could perhaps be grown on such slopes but at the price of severe erosion. Steep slopes with shallow and stony soils can be transformed into cultivable land through terracing, the removal of stones by hand and their use as terrace fronts. Agro-forestry (a combination of rotation of arable crops

and forest under strict control) holds promise but is largely still in an experimental stage. The excessive internal drainage of many Leptosols can cause drought even in a humid environment.

Cambisols

The Reference Soil Group of the Cambisols holds soils with incipient soil formation. Beginning transformation of soil material is evident from weak, mostly brownish discolouration and/or structure formation below the surface horizon.

Characteristics of Cambisols

- Morphological characteristics

The `typical' Cambisol profile has an ABC horizon sequence with an ochric, mollic or umbric A-horizon over a cambic B-horizon that has normally a yellowish-brown colour but that may also be an intense red. Cambisols in poorly drained terrain positions may show `*redoximorphic'* features. The soil texture is loamy to clayey. Signs of beginning clay illuviation may be detectable in the cambic horizon but the clay content is normally (still) highest in the A-horizon.

- Mineralogical, physical and chemical characteristics

It is not well possible to sum up all mineralogical, physical and chemical characteristics of Cambisols in one generalised account because Cambisols occur in such widely differing environments. However: most Cambisols *contain at least some weatherable minerals* in the silt and sand fractions; most Cambisols *occur in regions with a precipitation surplus* but in *terrain positions; that permit surficial discharge of excess water;* most Cambisols *are medium-textured* and have a *good structural stability, a high porosity, a good water holding capacity and good internal drainage;* most Cambisols have a *neutral to weakly acid soil reaction*, a satisfactory chemical fertility and an active soil fauna. *Note that* there are numerous exceptions to the above generalisations !

Management and use of Cambisols

By and large, Cambisols make good agricultural land and are intensively used. The Eutric Cambisols of the Temperate Zone are among the most productive soils on earth. The Dystric Cambisols, though less fertile, are used for (mixed) arable farming and as grazing land. Cambisols on steep slopes are best kept under forest; this is particularly true for Cambisols in highlands.
Vertic and Calcaric Cambisols in (irrigated) alluvial plains in the dry zone are intensively used for production of food and oil crops. Eutric, Calcaric and Chromic Cambisols in undulating or hilly (mainly colluvial) terrain are planted to a variety of annual and perennial crops or are used as grazing land. Dystric and Ferralic Cambisols in the humid tropics are poor in nutrients but still richer than associated Acrisols or Ferralsols and they have a greater cation exchange capacity. Many Gleyic Cambisols in alluvial plains make productive `paddy soils'.

Regosols

The Reference Soil Group of the Regosols is a taxonomic rest group containing all soils that could not be accommodated in any of the other Reference Soil Groups. In practice, Regosols are very weakly developed mineral soils in unconsolidated materials that have only an ochric surface horizon and that are not very shallow (*Leptosols*), sandy (*Arenosols*) or with fluvic properties (*Fluvisols*). Regosols are extensive in eroding lands, in particular in arid and semi-arid areas and in mountain regions.

Connotation: soils in the weathered shell of the earth; from Gr. *rhegos*, blanket.
Parent material: unconsolidated, finely grained weathering material.
Environment: all climate zones without permafrost and at all elevations. Regosols are particularly common in arid areas, in the dry tropics and in mountain regions.
Profile development: AC-profiles with no other diagnostic horizon than an ochric surface horizon. Profile development is minimal as a consequence of young age and/or slow soil formation e.g. because of prolonged drought.
Use: land use and management vary widely. Some Regosols are used for capital-intensive irrigated farming but the most common land use is low volume grazing. Regosols in mountain areas are best left under forest.

Fluvisols

The Reference Soil Group of the Fluvisols accommodates genetically young, azonal soils in alluvial deposits.

Connotation: soils developed in alluvial deposits; from L. *fluvius*, river.
Parent material: (predominantly) recent, fluvial, lacustrine or marine deposits.
Environment: periodically flooded areas (unless empoldered) of alluvial plains, river fans, valleys and (tidal) marshes, on all continents and in all climate zones.
Profile development: AC-profiles with evidence of stratification; weak horizon differentiation but a distinct Ah-horizon may be present. *Redoximorphic* features are common, in particular in the lower part of the profile.
Use: Fluvisols are planted to annual crops and orchards and many are used for grazing. Flood control, drainage and/or irrigation are normally required.

Alisols

The Reference Soil Group of the Alisols consists of strongly acid soils with accumulated high activity clays in their subsoils. They occur in humid (sub-)tropical and warm temperate regions, on parent materials that contain a substantial amount of unstable Al-bearing minerals. Ongoing hydrolysis of these minerals releases aluminium, which occupies more than half of the cation exchange sites. Hence, Alisols are unproductive soils under all but acid-tolerant crops.

Connotation: strongly acid soils with subsurface accumulation of high activity clays that have more than 50 percent Al3+ saturation; from L. *aluminium*, alum.
Parent material: Alisols can form in a wide variety of parent materials having high-activity clay minerals such as vermiculite or smectite. Most occurrences of Alisols reported so far are on weathering products of basic rocks.
Environment: most common in old land surfaces with a hilly or undulating topography, in humid (sub-) tropical and monsoon climates.
Profile development: ABtC profiles. Variations among Alisols are mostly related to truncation of A-horizons in eroded lands.
Use: Alisols contain low levels of plant nutrients (except for Mg2+ in some cases) whereas soluble inorganic Al is present in toxic quantities. If liming and full fertilization is no option, use of these soils is generally restricted to crops, which accommodate with low nutrient contents and tolerate high levels of free Al. Alisols are traditionally used in shifting cultivation and for low volume production of undemanding crops. In the past decades, Alisols have increasingly been planted to Al-tolerant estate crops such as tea and rubber, and also to oil palm.

Planosols

The Reference Soil Group of the Planosols holds soils with bleached, light-coloured, eluvial surface horizons that show signs of periodic water stagnation and abruptly overly dense, slowly permeable subsoil with significantly more clay than the surface horizon. These soils were formerly regarded as ‘pseudogley soils’

Connotation: soils with a degraded, eluvial surface horizon abruptly over dense subsoil, typically in seasonally waterlogged flat lands; from L. *planus*, flat.
Parent material: mostly clayey alluvial and colluvial deposits.
Environment: seasonally or periodically wet, level (plateau) areas, mainly in sub-tropical and temperate, semi-arid and sub-humid regions with light forest or grass vegetation.
Profile development: AEBC profiles. Destruction and/or removal of clay produced relatively coarse-textured bleached surface soil abruptly overlying finer subsoil. Impeded downward water percolation accounts for *stagnic* soil properties in the bleached horizon.
Use: Planosols are poor soils. In regions with a warm summer season they are mostly under wetland rice. Elsewhere, Planosols are sown to dryland (e.g. fodder) crops or used for extensive grazing. Many Planosol areas are not used for agriculture.

Andosols

The Reference Soil Group of the Andosols holds soils developed in volcanic materials.

Connotation: black soils of volcanic landscapes.
Parent material: mainly volcanic ash, but also tuff, pumice, cinders and other volcanic ejecta.

Environment: undulating to mountainous, humid, arctic to tropical regions with a wide range of vegetation types.
Profile development: AC- or ABC-profile. Rapid weathering of porous volcanic material resulted in accumulation of stable organo-mineral complexes and short-range-order minerals such as *allophane*, *imogolite* and *ferrihydrite*.
Use: many Andosols are intensively cultivated and planted to a variety of crops, their major limitation being their considerable capacity to render phosphorus unavailable to plants. In places, steep topography is a serious constraint.

Arenosols

The Reference Soil Group of the Arenosols consists of sandy soils, both soils developed in residual sands, *in situ* after weathering of old, usually quartz-rich soil material or rock, and soils developed in recently deposited sands as occur in deserts and beach lands.

Connotation: sandy soils; from L. *arena*, sand.
Parent material: unconsolidated, in places calcareous, translocated sand; relatively small areas of Arenosols occur on residual sandstone or siliceous rock weathering.
Environment: from arid to (per)humid and from extremely cold to extremely hot; landforms vary from recent dunes, beach ridges and sandy plains under scattered (mostly grassy) vegetation, to very old plateaus under light forest.
Profile development: A(E)C profiles. In the dry zone, an *ochric* surface horizon is the only diagnostic horizon. Arenosols in the perhumid tropics tend to develop thick *albic* eluviation horizons; most Arenosols of the humid temperate zone show signs of alteration or transport of humus, iron or clay, but too weak to be diagnostic.
Use: most Arenosols in the dry zone are used for little more than extensive grazing but they could be used for arable cropping if irrigated. Arenosols in temperate regions are used for mixed arable cropping and grazing; supplemental (sprinkler) irrigation is needed during dry spells. Arenosols in the perhumid tropics are chemically exhausted and highly sensitive to erosion. They are best left untouched.

Phaeozems

The Reference Soil Group of the Phaeozems accommodates soils of wet steppe (prairie) regions. Phaeozems are much like Chernozems and Kastanozems but are more intensively leached in wet seasons. Consequently, they have dark, humous surface soils that are less rich in bases than surface soils of Chernozems and Kastanozems and Phaeozems have no (signs of) secondary carbonates in the upper metre of soil.

Connotation: dark soils rich in organic matter.
Parent material: aeolian (loess), glacial till and other unconsolidated, predominantly basic materials.
Environment: flat to undulating land in warm to cool (e.g. tropical highland) regions, humid enough that there is some percolation of the soil in most years but also with periods in which the soil dries out. The natural vegetation is tall grass steppe and/or forest.
Profile development: mostly AhBC profiles with a mollic surface horizon (thinner and somewhat less dark than in Chernozems) over a cambic or argic subsurface horizon.
Use: Untouched Phaeozems (of which there are few left) carry a grass or forest vegetation. Phaeozems are fertile soils; they are planted to irrigated cereals and pulses or are used for cattle rearing and fattening on improved pastures. Periodic drought and wind and water erosion are the main limitations.

Gleysols

The Reference Soil Group of the Gleysols holds wetland soils that, unless drained, are saturated with groundwater for long enough periods to develop a characteristic “gleyic colour pattern”. This pattern is essentially made up of reddish, brownish or yellowish colours at ped surfaces and/or in the upper soil layer(s), in combination with greyish/bluish colours inside the peds and/or deeper in the soil.

Connotation: soils with clear signs of excess wetness; from R. *gley*, mucky mass.
Parent material: a wide range of unconsolidated materials, mainly fluvial, marine and lacustrine sediments of Pleistocene or Holocene age, with basic to acidic mineralogy.
Environment: depression areas and low landscape positions with *shallow groundwater*.
Profile development: mostly A(Bg)Cr or H(Bg)Cr profiles. Evidence of reduction processes with or without segregation of iron compounds within 50 cm of the surface.
Use: wetness is the main limitation of virgin Gleysols; these are covered with natural swamp vegetation and lie idle or are used for extensive grazing. Artificially drained Gleysols are used for arable cropping, dairy farming and horticulture. Gleysols in the tropics and subtropics are widely planted to rice.

Acrisols

The Reference Soil Group of the Acrisols holds soils that are characterized by accumulation of low activity clays in an *argic* subsurface horizon and by a low base saturation level.

Connotation: strongly weathered acid soils with low base saturation; from L. *acris*, very acid.
Parent material: most extensive on acid rock weathering, notably in strongly weathered clays, which are undergoing further degradation.
Environment: mostly old land surfaces with hilly or undulating topography, in regions with a wet tropical/monsoonal, subtropical or warm temperate climate. Light forest is the natural vegetation type.
Profile development: AEBtC-profiles. Variations in Acrisols will normally correlate with variations in terrain conditions (drainage, seepage). A shallow A-horizon with dark, raw and acid organic matter grades into a yellowish E-horizon. The underlying argic Bt-horizon has stronger reddish or yellowish colour than the E-horizon.
Use: a general paucity of plant nutrients, aluminium toxicity, strong phosphorus sorption, slaking/crusting and high susceptibility to erosion impose severe restrictions on arable land uses. Large areas of Acrisols are used for subsistence farming, partly in a system of shifting cultivation. By and large, Acrisols are not very productive soils; they perform best under undemanding, acidity-tolerant crops such as pineapple, cashew, oil palm or rubber.

Calcisols

The Reference Soil Group of the Calcisols accommodates soils in which there is substantial secondary accumulation of lime. Calcisols are common in calcareous parent materials and widespread in arid and semi-arid environments.

Connotation: soils with substantial secondary accumulation of lime; from L. *calcarius*, calcareous
Parent material: mostly alluvial, colluvial and aeolian deposits of base-rich weathering material.
Environment: level to hilly land in arid and semi-arid regions. The natural vegetation is sparse and dominated by xerophytic shrubs and trees and/or ephemeral grasses.
Profile development: 'typical' Calcisols have ABC or AB(t)C-profiles with a pale brown ochric surface horizon over a cambic or argic subsurface horizon. Finely textured subsurface horizons may develop some or all of the characteristics of a vertic horizon. Substantial secondary accumulation of lime occurs within 100 cm from the surface.
Use: dryness, and in places also stoniness and/or the presence of a shallow petrocalcic horizon, limit the suitability of Calcisols for agriculture. If irrigated, drained (to prevent salinisation) and fertilised, Calcisols can be highly productive under a wide variety of crops. Hilly areas with Calcisols are predominantly used for low volume grazing of cattle, sheep and goats.

Annex 11b Soil analytical data summarised for reference soil groups

Use with caution. This summary of soil analytical data is preliminary and drawn only from the first depth interval sampled from the soil profiles, with depths varying from one profile to the other (see table).

Min = minimum value observed, max = maximum value observed, Ave = average of the values observed, SD = standard deviation.
The units of expression associated with the values are as those specified in annex 3b.

WRBrsg	Acrisols	Calcisols	Cambisols	Fluvisols	Gleysols	Leptosols	Luvisols	Nitisols	Phaeozems	Planosols	Regosols	Vertisols
Cnt_WRBrsg	2	1	23	7	4	5	63	45	4	3	2	45
Min_LowDpth	13	20	8	10	2	10	7	2	15	8	16	10
Max_LowDpth	15	20	30	25	10	12	35	35	21	13	34	35
Ave_LowDpth	14.0	20.0	19.0	19.3	7.5	11.6	19.9	17.1	16.5	11.3	25.0	22.5
SD_LowDpth	1.4	0.0	6.2	5.3	3.8	0.9	6.0	6.3	3.0	2.9	12.7	5.8
Max_Sand	30	40	58	72	48	45	76	61	43	34	55	50
Ave_Sand	27	40	39	43	37	35	33	25	30	26	51	24
SD_Sand	5	0	12	18	11	11	15	15	9	8	5	11
Min_Silt	19	7	8	7	12	11	2	8	10	22	10	6
Max_Silt	20	7	27	45	26	20	40	43	32	36	12	43
Ave_Silt	20	7	19	22	20	17	21	22	22	30	11	22
SD_Silt	1	0	5	13	7	4	8	8	9	7	2	8
Min_Clay	51	53	29	21	28	40	21	26	45	42	33	37
Max_Clay	56	53	67	42	55	60	81	82	50	47	42	83
Ave_Clay	54	53	42	35	43	48	46	53	48	44	37	55
SD_Clay	4	0	10	8	12	9	12	12	3	2	6	11
Min_BlkDens	1.01	1.34	1.00	1.03	1.01	1.10	0.92	1.02	1.13	1.01	1.28	0.95
Max_BlkDens	1.06	1.34	1.58	1.48	1.05	1.31	1.37	1.52	1.41	1.07	1.31	1.73
Ave_BlkDens	1.04	1.34	1.25	1.25	1.03	1.21	1.13	1.15	1.27	1.04	1.30	1.21
SD_BlkDens	0.04	0.00	0.14	0.16	0.02	0.08	0.11	0.10	0.14	0.03	0.02	0.12
Min_PHH2O	4.3	7.8	4.5	5.1	4.4	5.8	4.5	4.7	5.5	4.3	6.8	4.9
Max_PHH2O	4.3	7.8	8.1	8.0	5.3	8.0	7.8	6.7	7.8	5.4	7.8	8.2
Ave_PHH2O	4.3	7.8	6.4	7.2	4.7	6.7	5.6	5.4	6.6	4.9	7.3	6.8

WRBrsg	Acrisols	Calcisols	Cambisols	Fluvisols	Gleysols	Leptosols	Luvisols	Nitisols	Phaeozems	Planosols	Regosols	Vertisols
SD_PHH2O	0.0	0.0	1.0	1.2	0.4	1.0	0.8	0.5	1.0	0.6	0.7	0.9
Min_EC	0.03	0.20	0.03	0.10	0.05	0.05	0.02	0.03	0.04	0.04	0.06	0.03
Max_EC	0.03	0.20	0.29	0.32	0.27	0.20	20.30	0.40	0.13	0.04	0.21	41.70
Ave_EC	0.03	0.20	0.10	0.18	0.11	0.12	0.41	0.07	0.10	0.04	0.14	1.12
SD_EC	0.00	0.00	0.07	0.08	0.11	0.07	2.55	0.06	0.04	0.00	0.11	6.20
Min_ExCa	10.92	33.28	9.15	16.58	7.70	26.16	0.00	9.24	17.81	9.24	11.50	10.80
Max_ExCa	11.02	33.28	41.86	27.30	15.35	38.72	39.38	28.56	33.14	14.28	19.71	48.34
Ave_ExCa	10.97	33.28	23.06	22.14	10.61	33.37	19.41	17.05	26.27	11.21	15.61	28.95
SD_ExCa	0.07	0.00	7.31	3.89	3.48	4.92	7.74	4.32	6.34	2.69	5.81	7.95
Min_ExMg	4.20	11.65	3.33	5.66	3.33	8.72	0.00	3.36	5.94	3.36	4.11	5.46
Max_ExMg	4.24	11.65	13.95	9.66	5.12	13.20	20.40	18.80	11.34	5.04	7.01	20.20
Ave_ExMg	4.22	11.65	7.99	7.60	4.03	11.30	6.95	7.50	8.90	4.20	5.56	10.51
SD_ExMg	0.03	0.00	2.65	1.40	0.84	1.79	3.12	3.60	2.24	0.84	2.05	2.75
Min_ExNa	1.48	0.82	0.33	0.29	1.63	0.34	0.00	0.10	0.32	1.41	0.32	0.10
Max_ExNa	1.68	0.82	2.08	1.08	1.86	1.23	3.00	2.23	1.71	2.37	0.95	2.13
Ave_ExNa	1.58	0.82	1.03	0.74	1.75	0.87	1.07	1.04	0.89	1.87	0.64	0.88
SD_ExNa	0.14	0.00	0.42	0.30	0.10	0.33	0.57	0.64	0.60	0.48	0.45	0.45
Min_ExK	0.33	0.85	0.18	0.13	0.32	0.59	0.00	0.06	1.20	0.39	0.15	0.09
Max_ExK	0.36	0.85	2.53	1.09	0.50	1.96	3.10	2.51	1.70	0.48	0.44	1.40
Ave_ExK	0.35	0.85	0.71	0.44	0.41	1.32	0.82	0.82	1.36	0.42	0.30	0.57
SD_ExK	0.02	0.00	0.64	0.33	0.08	0.51	0.58	0.65	0.23	0.05	0.21	0.33
Min_ExBases	16.9	46.6	15.6	23.1	13.3	37.1	0.0	15.9	27.2	15.5	17.0	21.9
Max_ExBases	17.3	46.6	56.7	38.2	22.5	54.1	54.3	39.4	46.3	21.5	27.2	67.1
Ave_ExBases	17.1	46.6	32.8	30.9	16.8	46.9	28.2	26.4	37.4	17.7	22.1	40.9
SD_ExBases	0.3	0.0	9.8	5.2	4.2	6.6	10.3	6.3	7.9	3.3	7.2	9.9
Min_CecSoil	38.3	51.6	30.8	29.9	32.1	45.0	0.0	25.3	41.3	30.6	26.8	31.0
Max_CecSoil	38.8	51.6	58.3	44.2	40.7	59.7	59.6	56.6	54.0	41.2	38.6	76.0
Ave_CecSoil	38.5	51.6	39.4	38.4	37.8	52.2	39.0	42.6	45.9	35.6	32.7	49.0
SD_CecSoil	0.4	0.0	7.2	4.6	4.0	6.6	10.1	7.1	6.0	5.3	8.3	9.2
Min_Bsat	43.6	90.4	50.7	71.0	34.9	82.3	0.0	41.7	65.5	39.1	63.5	53.8

WRBrsg	Acrisols	Calcisols	Cambisols	Fluvisols	Gleysols	Leptosols	Luvisols	Nitisols	Phaeozems	Planosols	Regosols	Vertisols
Max_Bsat	45.2	90.4	97.9	92.9	55.7	96.5	96.2	95.4	93.7	61.3	70.5	98.0
Ave_Bsat	44.4	90.4	82.1	80.5	44.2	89.8	70.9	62.9	81.3	50.3	67.0	83.3
SD_Bsat	1.1	0.0	14.3	8.8	8.6	6.2	17.9	15.3	11.9	11.1	5.0	11.2
Min_OrgC	20.2	13.5	9.6	9.1	29.4	7.8	10.4	4.5	8.4	15.3	13.3	8.3
Max_OrgC	21.4	13.5	37.3	35.3	59.1	26.7	53.9	48.0	30.3	39.8	13.4	48.0
Ave_OrgC	20.8	13.5	16.4	18.9	39.8	16.9	23.7	25.6	18.3	24.2	13.3	17.7
SD_OrgC	0.8	0.0	7.5	9.9	13.2	7.5	9.3	10.1	9.1	13.6	0.1	8.3
Min_TotalN	2.5	1.5	1.0	1.0	3.1	0.8	0.7	0.4	1.1	1.5	1.4	0.8
Max_TotalN	2.5	1.5	4.1	3.2	7.3	2.9	4.1	4.6	2.2	4.3	1.5	3.2
Ave_TotalN	2.5	1.5	1.9	1.9	4.6	1.8	2.2	2.2	1.6	2.5	1.5	1.8
SD_TotalN	0.0	0.0	0.8	0.9	1.9	0.8	0.8	0.8	0.5	1.6	0.1	0.6
Min_CN	8.1	9.3	6.3	7.4	8.1	7.9	7.3	8.0	7.8	9.3	8.7	7.0
Max_CN	8.6	9.3	10.0	12.6	9.5	11.0	21.2	21.8	13.7	10.9	9.3	21.8
Ave_CN	8.4	9.3	8.6	9.9	8.9	9.5	10.7	11.9	11.3	10.1	9.0	9.9
SD_CN	0.4	0.0	0.9	1.8	0.6	1.1	2.7	3.9	2.5	0.8	0.4	3.0
Min_AvailP	9.3	22.5	7.4	11.3	7.3	14.0	1.1	2.4	4.7	4.2	13.0	1.1
Max_AvailP	12.0	22.5	24.0	26.4	10.7	22.0	29.5	26.4	22.5	9.7	14.5	31.7
Ave_AvailP	10.6	22.5	14.2	18.0	8.4	16.9	11.3	8.5	12.8	6.1	13.8	13.3
SD_AvailP	1.9	0.0	4.5	6.6	1.6	3.5	6.2	5.7	7.4	3.1	1.0	7.3

Annex 12 Reference soil groups vs. local soil names

Local name	RSG	Count	RSG	Local name	Count
Adada	Vertisols	7	Alisols	Kolisho	24
Ashewa	Leptosols	53	Alisols	Demile	12
Ashewa	Regosols	46	Alisols	Tiloke	12
Ashewa	Arenosols	31	Alisols	Dura	11
Ashewa	Cambisols	4	Alisols	Guracha	4
Ashewa	Luvisols	1	Andosols	Guracha	16
Awuyatie	Nitisols	19	Andosols	Dima	1
Bakel	Cambisols	13	Arenosols	Ashewa	31
Beda	Regosols	1	Arenosols	Kefera	1
Bekola	Luvisols	2	Cambisols	Guracha	17
Bisha	Luvisols	26	Cambisols	Bakel	13
Bisha	Nitisols	16	Cambisols	Boda	11
Bisha	Leptosols	1	Cambisols	Shahsher	7
Biye dima	Nitisols	8	Cambisols	Ashewa	4
Biye dima	Regosols	1	Cambisols	Demoke	3
Biye Guracha	Vertisols	1	Cambisols	Keahtay	3
Boda	Leptosols	21	Cambisols	Keyahtay	3
Boda	Cambisols	11	Cambisols	Walka	3
Boda	Fluvisols	10	Cambisols	Dumbo	2
Boda	Vertisols	5	Cambisols	Bula	1
Bollele	Nitisols	7	Cambisols	Chirecha	1
Bore	Planosols	5	Cambisols	Demile	1
Borebor	Luvisols	22	Cambisols	Koticha	1
Borebor	Leptosols	3	Fluvisols	Boda	10
Bula	Cambisols	1	Fluvisols	Guracha	3
Bunama	Nitisols	8	Fluvisols	Dimokie	1
Bunama	Luvisols	2	Gleysols	Kolisho	4
Busha	Luvisols	25	Leptosols	Shahsher	86
Busha	Regosols	4	Leptosols	Ashewa	53
Busha	Leptosols	1	Leptosols	Hutsa	26
Cari	Phaeozems	6	Leptosols	Boda	21
Chara	Vertisols	14	Leptosols	Keyahtay	10
Chari	Leptosols	1	Leptosols	Hofi	7
Chirecha	Regosols	9	Leptosols	Nechate Afer	4
Chirecha	Luvisols	4	Leptosols	Borebor	3
Chirecha	Nitisols	2	Leptosols	Dima	2
Chirecha	Cambisols	1	Leptosols	Keye Afer	2
Chirecha	Leptosols	1	Leptosols	Owarie	2
Daleti	Phaeozems	1	Leptosols	Bisha	1
Demile	Luvisols	15	Leptosols	Busha	1
Demile	Alisols	12	Leptosols	Chari	1
Demile	Nitisols	5	Leptosols	Chirecha	1
Demile	Cambisols	1	Leptosols	Dimokie	1
Demile	Regosols	1	Leptosols	Kelal Afer	1
Demima	Nitisols	1	Leptosols	Kokari	1
Demoke	Cambisols	3	Leptosols	Kururi	1
Dewol	Nitisols	1	Leptosols	Odosie	1
Dima	Nitisols	106	Luvisols	Tiloke	67
Dima	Luvisols	33	Luvisols	Guracha	59
Dima	Leptosols	2	Luvisols	Dima	33
Dima	Andosols	1	Luvisols	Bisha	26
Dimokie	Nitisols	5	Luvisols	Busha	25
Dimokie	Fluvisols	1	Luvisols	Borebor	22
Dimokie	Leptosols	1	Luvisols	Gombore	19
Dumbo	Luvisols	5	Luvisols	Gembena	18

Local name	RSG	Count	RSG	Local name	Count
Dumbo	Nitisols	3	Luvisols	Kolisho	16
Dumbo	Cambisols	2	Luvisols	Demile	15
Dura	Alisols	11	Luvisols	Kefera	12
Dura	Luvisols	4	Luvisols	Meka	12
Faro	Vertisols	1	Luvisols	Megala	7
Gembena	Planosols	22	Luvisols	Dumbo	5
Gembena	Luvisols	18	Luvisols	Tuba	5
Gembena	Vertisols	11	Luvisols	Chirecha	4
Gombore	Luvisols	19	Luvisols	Dura	4
Gombore	Vertisols	7	Luvisols	Keyahtay	3
Gombore	Nitisols	2	Luvisols	Shira	3
Gtosh meret	Luvisols	1	Luvisols	Bekola	2
Gtosh meret	Vertisols	1	Luvisols	Bunama	2
Guracha	Luvisols	59	Luvisols	Koticha	2
Guracha	Vertisols	45	Luvisols	Meldima	2
Guracha	Cambisols	17	Luvisols	Ashewa	1
Guracha	Andosols	16	Luvisols	Gtosh meret	1
Guracha	Alisols	4	Nitisols	Dima	106
Guracha	Fluvisols	3	Nitisols	Keye Afer	40
Guracha	Regosols	1	Nitisols	Awuyatie	19
Hofi	Leptosols	7	Nitisols	Bisha	16
Hutsa	Leptosols	26	Nitisols	Biye dima	8
Keahtay	Cambisols	3	Nitisols	Bunama	8
Kefera	Luvisols	12	Nitisols	Kefera	8
Kefera	Nitisols	8	Nitisols	Bollele	7
Kefera	Arenosols	1	Nitisols	Kolisho	6
Kelal Afer	Leptosols	1	Nitisols	Demile	5
Keyahtay	Leptosols	10	Nitisols	Dimokie	5
Keyahtay	Cambisols	3	Nitisols	Dumbo	3
Keyahtay	Luvisols	3	Nitisols	Chirecha	2
Keyahtay	Nitisols	1	Nitisols	Gombore	2
Keye Afer	Nitisols	40	Nitisols	Demima	1
Keye Afer	Leptosols	2	Nitisols	Dewol	1
Kokari	Leptosols	1	Nitisols	Keyahtay	1
Kolisho	Alisols	24	Nitisols	Tiloke	1
Kolisho	Luvisols	16	Phaeozems	Cari	6
Kolisho	Nitisols	6	Phaeozems	Daleti	1
Kolisho	Gleysols	4	Planosols	Gembena	22
Koticha	Vertisols	56	Planosols	Koticha	14
Koticha	Planosols	14	Planosols	Bore	5
Koticha	Luvisols	2	Regosols	Ashewa	46
Koticha	Cambisols	1	Regosols	Chirecha	9
Kururi	Leptosols	1	Regosols	Busha	4
Megala	Luvisols	7	Regosols	Beda	1
Megala	Regosols	1	Regosols	Biye dima	1
Meka	Luvisols	12	Regosols	Demile	1
Meldima	Luvisols	2	Regosols	Guracha	1
Mune	Vertisols	2	Regosols	Megala	1
Nechate Afer	Leptosols	4	Vertisols	Walka	91
Odosie	Leptosols	1	Vertisols	Koticha	56
Owarie	Leptosols	2	Vertisols	Guracha	45
Sancha	Vertisols	5	Vertisols	Chara	14
Shahsher	Leptosols	86	Vertisols	Tikur	14
Shahsher	Cambisols	7	Vertisols	Gembena	11
Shira	Luvisols	3	Vertisols	Adada	7
Tikur	Vertisols	14	Vertisols	Gombore	7
Tiloke	Luvisols	67	Vertisols	Boda	5

Local name	RSG	Count	RSG	Local name	Count
Tiloke	Alisols	12	Vertisols	Sancha	5
Tiloke	Nitisols	1	Vertisols	Mune	2
Tuba	Luvisols	5	Vertisols	Biye Guracha	1
Walka	Vertisols	91	Vertisols	Faro	1
Walka	Cambisols	3	Vertisols	Gtosh meret	1