Assessment of the threats to the Heritage Sheep breeds in Europe using a geographical information system

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The present work has been developed in the frame of the Heritage sheep project funded under the EU Regulation 870/04. The project aims at the identification of the potential threats and values of the genetic resources of heritage sheep breeds and the development of a scoring system. Furthermore, case studies for the *in situ* conservation and strategies for the *ex situ* conservation of the heritage sheep breeds were elaborated. A specific WP is devoted on the establishment of a website and a database for the dynamic presentation of the information for the Heritage Sheep breeds. The data collected referred to the assessment of the threats to the breeds, the definition of regions of high risk and economical, social and environmental pressures. Geographical information linked with the breeding regions of the breeds was collected in order to present the results of the analysis using the ArcGIS 9.3. The Geographical Information System was used as a tool in order to increase the awareness on the local sheep genetic resources of the relevant stakeholders, but also of the general public.

An integrated view of technical, economic and social factors influencing sustainability of sixteen local European cattle breeds

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This study aims to identify common patterns influencing dynamics and sustainability of 16 local European cattle breeds from Belgium, Estonia, Finland, France, Holland, Ireland, Italy and Spain. A broad range of factors related to technical (e.g. farm size, cows/ha, land ownership), economic (e.g. cattle importance on farm and family income, type of market) and social (e.g. farmers and stakeholders attitude) aspects were surveyed on a total of 401 farms. Discriminant Analysis has been used to study the implications that heterogeneity within and across countries and breeds may have in making inferences in across country or breed analyses. Thus, farms were classified according to country and breeds. Then the objective was to evaluate how all factors available allow us to distinguish such classes. The analyses provided the percentage of observations (farms) that should not be included in the pre-defined groups (country and breed) according to the variables considered. When only economic variables were considered in the analyses, 36% and 59% of farms were incorrectly assigned to their country and breed, respectively. However, considering technical variables the proportions went down to 33% and 45%. Finally, when both groups of variables were considered 20% and 35% of farms were incorrectly assigned. To what extent these mismatches may allow us to identify general patterns has to be evaluated.