3.4 Improving livelihoods and resource management in the Central Rift Valley of Ethiopia (ILCE)

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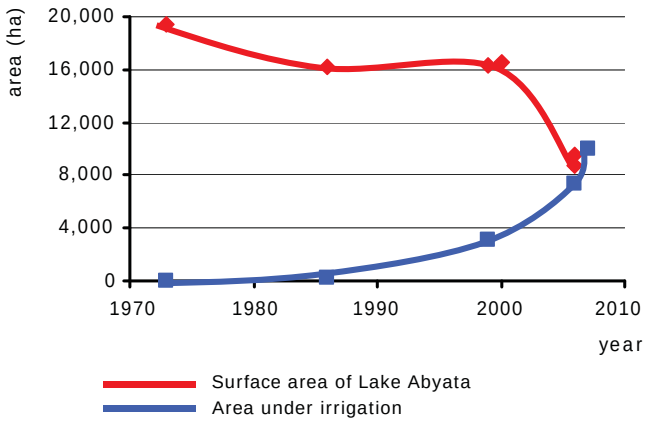
Over the past decade, economic liberalization and the globalization of food and non-food systems have fostered large-scale investments in irrigated horticulture and floriculture in Ethiopia's Central Rift Valley. Commercialization of smallholder production systems, crop diversification and irrigation were actively supported by the Ethiopian Government and international donors. Their policies, which included favourable tax holidays and financing schemes as well as technical support, have resulted in a strong increase of the land area under irrigation. The Central Rift Valley, a river basin of some 1 million ha with a population of about 1.5 million, comprises agricultural land as well as the extensive wetlands of the Abyata-Shala Lakes

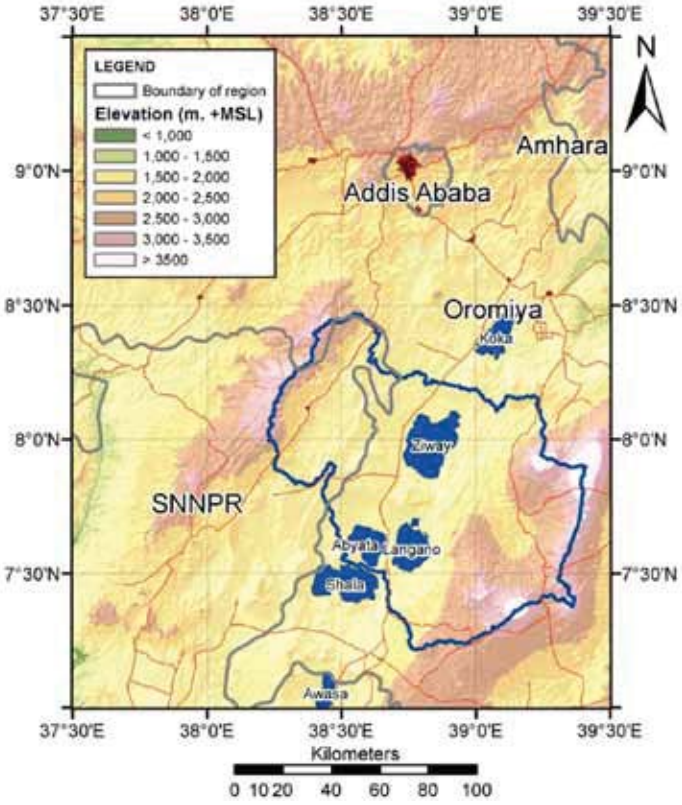


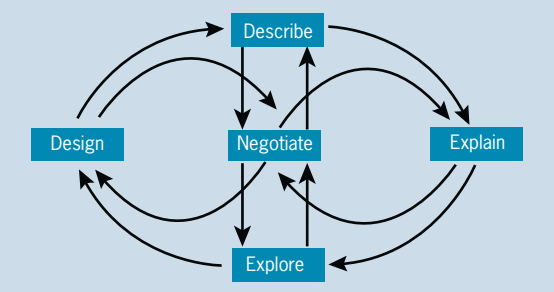
Increasing competition for water: While irrigation expands, Lake Abyata is drying up.

National Park. The park, which is very rich in biodiversity, has great potential for eco-tourism. The ILCE project addressed the competing claims that have arisen from the diverse interests of different users in terms of their quest for scarce natural resources (land *and* water) in this area.

As the Central Rift Valley is a land-locked basin -there is no surface inflow and outflow of water- interventions such as irrigation have far-reaching impacts on ecosystem goods and services. Ever since irrigation expanded, the water levels in most of the lakes in the Rift Valley have dropped and most dramatically so in Lake Abyata: In ten years' time the lake has shrunk to about half its original size. Other forms of environmental degradation that result from resource competition include the erosion of wood stocks, over-grazing of communal pasture lands and decreasing productivity levels due to expansion into marginal lands.

The main aim of the ILCE project was to strengthen the capacity of local authorities, development organizations and the private sector in natural resource management and land use planning in order to mitigate competition for natural resources while improving livelihoods of the population in the Central Rift Valley. This was done by applying the NE-DEED Framework (Giller et al., 2008; see section 3.1 of this booklet), which hinges on four analytical and interactive steps that feed into different phases of stakeholder negotiation processes: Describing, Explaining, Exploring and Designing (see figure the right). The Framework was used to support a policy dialogue among stakeholders grouped in the Central Rift Valley Working Group, with science-based information. The Working Group comprised professionals from the public sector (federal, regional and local government authorities), the private sector (tourism enterprises, horticultural producers), civil society organizations and academia.





The NE-DEED Framework as used to support stakeholder negotiation processes (modified from Giller et al., 2008)

Results

In its Descriptive phase the ILCE project disentangled the various driving forces impacting at different scales. In this phase too, the project unravelled how the chain of drivers resulted not only in decreased availability of water but also, how it contributed to increased claims on land and biomass. As an example, when the Ethiopian federal government forced local and regional administrations to make land available for agricultural investors, this often resulted in the conversion of communal grazing land into irrigated land as, for communal land, financial compensation of individual farmers is not legally required. The resulting land conversion implied that less land, biomass and water became available to local herdsmen and for pastoralists from other regions.

The Explanatory phase focused on the quantification of resource uses and claims, in particular water use (efficiency) by consumers as different as greenhouse floriculture, the soda-ash industry, smallholder horticulture and domestic users. The studies showed that, by far, smallholder horticulture is the biggest absolute consumer of fresh water: it involves the largest acreage of land and water-use efficiency is relatively low. Also, it was shown that economic and environmental performance of this sector can be improved considerably. Moreover, the potential negative impact of the agro-chemicals used in horticulture and floriculture threatens the quality of surface water. Alternative livelihood strategies need to be identified and implemented to put less pressure on fresh water resources. These may include tourism, rain fed agriculture and fisheries.

As some of these conclusions conflicted with government policies, with on-going activities of civil society organizations and with common beliefs and opinions, policy makers as well as other stakeholders had difficulty in accepting them. The fact that, for example, irrigated horticulture was the largest fresh water consumer was an eye opener for all stakeholders alike though for each from their own perspective. Irrigated horticulture is a smallholder sector mainly and it receives substantial financial and technical support from government and civil society organizations. The negative impact of agro-chemicals was a more-easily accepted conclusion. This specific study also revealed that, in Ethiopia, public institutions responsible for monitoring of water quality are lacking.

The ILCE project gradually moved from a focus on policy dialogue to local action. In doing so, full account was taken of the capabilities and mandates of local stakeholders. Mutual trust and bridges were built in stakeholder workshops and this allowed the identification of action-oriented research and development activities: Training of horticultural extension staff, water quality monitoring, building buffer zones along water bodies and developing promotion materials to stimulate (eco-)tourism in the Central Rift Valley. All actions made extensive use of the knowledge base developed by the project and they are being implemented in new public, private and civil society partnerships. Moreover, three Ethiopian students have embarked on PhD-level researches that investigate options to improve rain fed agricultural production systems in the area.

Conclusions and lessons learnt

The ILCE project has contributed to a better understanding of the resource claims and the underlying driving forces in the Central Rift Valley. By sharing this improved insight the project was able to build trust with and, even more-importantly, among local stakeholders. This enabled them to develop – in a participatory mode – initiatives to respond to the different resource claims. The multi-stakeholder Central Rift Valley Working Group was instrumental in bringing the different stakeholders together and engaging them in a policy dialogue.

A lesson learnt is that policy dialogue takes place at different governance levels. In a country like Ethiopia, having a strong central government and restricted transparency in policy formulation and implementation, it is difficult to trace and access such governance levels. Moreover, discourses at different scales need to be fed with evidence-based information that is relevant at the specific scale.

Neglect of environmental issues at policy level is partly caused by a lack of information on the impacts associated with intensified agricultural production systems. Also, the project faced the high ambitions of the Ethiopian Government to stimulate economic growth and to reduce chronic and wide-spread poverty and food insecurity: The political stakes to achieve these goals are extremely high and new environmental concerns associated with agricultural intensification are not readily appreciated. The ILCE project generated insight that, if not properly planned and managed, agricultural intensification contributes to increased resource claims. The project has clearly played the role of 'early warning', but whether policy is an 'early listener' remains to be seen.

Obviously, it is important to involve those stakeholders that drive and face developments in designing solutions to mitigate competing resource claims. In this respect the project brought stakeholders together that did not know each other before but that had similar interests. This resulted in new partnerships among the public, private and civil society sectors and in the participatory design of action-oriented research and development activities.

Improving livelihoods and resource management in the Central Rift Valley
Fact sheet/Highlights

Aim/objective
Mitigating competition for natural resources while improving rural livelihoods in the Central Rift Valley of Ethiopia.

Project location
Central Rift Valley, Ethiopia

Project partners

In the Netherlands
- Plant Research International
- Alterra, part of Wageningen UR
- Wageningen University, Chair Group Plant Production Systems
- Wageningen University, Chair Group Land Degradation and Development
- LEI, part of Wageningen UR
- Wageningen UR Livestock Research
- Government Service for Land and Water Management (DLG)

In Ethiopia
- Addis Ababa University (AAU), Faculty of Science
- Haramaya University (HU), College of Agriculture and Environmental Sciences
- Amhara Regional Agricultural Research Institute (ARARI)
- Ethiopian Institute of Agricultural Research (EIAR)
- Horn of Africa-Regional Environment Centre and Network (HoA-REC)
- Selam Environmental Development
- Ethiopian Rainwater Harvesting Association

Target groups
- Central Rift Valley Working Group: a multi-stakeholder platform of the public sector, private enterprises, NGO's and farmer organizations
- Ministry of Agriculture and Rural Development (now: Ministry of Agriculture), Ethiopia
- Ministry of Water Resources, Ethiopia
- Ethiopian Investment Agency
- Local and regional governmental authorities and institutions
- Royal Netherlands Embassy, Addis Ababa, Ethiopia.

Project output
- Project website containing full project information, publications and reports: www.crv.wur.nl
- Land use plan and map of the western part of Lake Ziway, Central Rift Valley, Ethiopia.
- Trained staff at Ethiopian collaborating institutions (extension officers, researchers, staff of NGO's and farmer organizations), some 85 in total
- MSc and PhD students supervised: at Haramaya University: 2; at Wageningen University: 5
- Selected scientific publications:
  - Halsema, G.E. van, Beshir Keddi Lencha, Mengistu Assefa, Hengsdijk, H. and Wesseler, J., 2011. Performance assessment of smallholder irrigation in the Central Rift Valley of Ethiopia (In press: *Irrigation & Drainage*).
  - Hengsdijk, H., Groot, A., Driel, J. van, Kidanemariam Jembere, Uum, J. van, Boone, P., 2009. Towards a sustainable future of the western shoreline of Lake Ziway. Participatory land use development workshop, Ziway. December 1-4, 2008. PRI Report 234. Wageningen UR/PSG/PRI.
  - Moges, G., Hengsdijk, H. and Jansen, H., 2011. Review and quantitative assessment of ex-situ household rainwater harvesting systems in Ethiopia. (Submitted: *Agricultural Water Management*)
  - Hengsdijk, H., Driel, J. van, Haile, A., Argaw, M., 2011. Competing claims for water resources in the Central Rift Valley: From global drivers to local opportunities (Submitted: *Water International*)

Website
www.dgis.wur.nl/UK and www.crv.wur.nl

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