



## **ETHIOPIA: Sustainable Management of Natural Resources Reduces Poverty and Vulnerability**

Institut für  
Entwicklung  
und Frieden



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Ways out of extreme poverty, vulnerability  
and food insecurity (AVE)

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**Karin Gaesing**

## Sustainable management of natural resources in Ethiopia reduces poverty and vulnerability

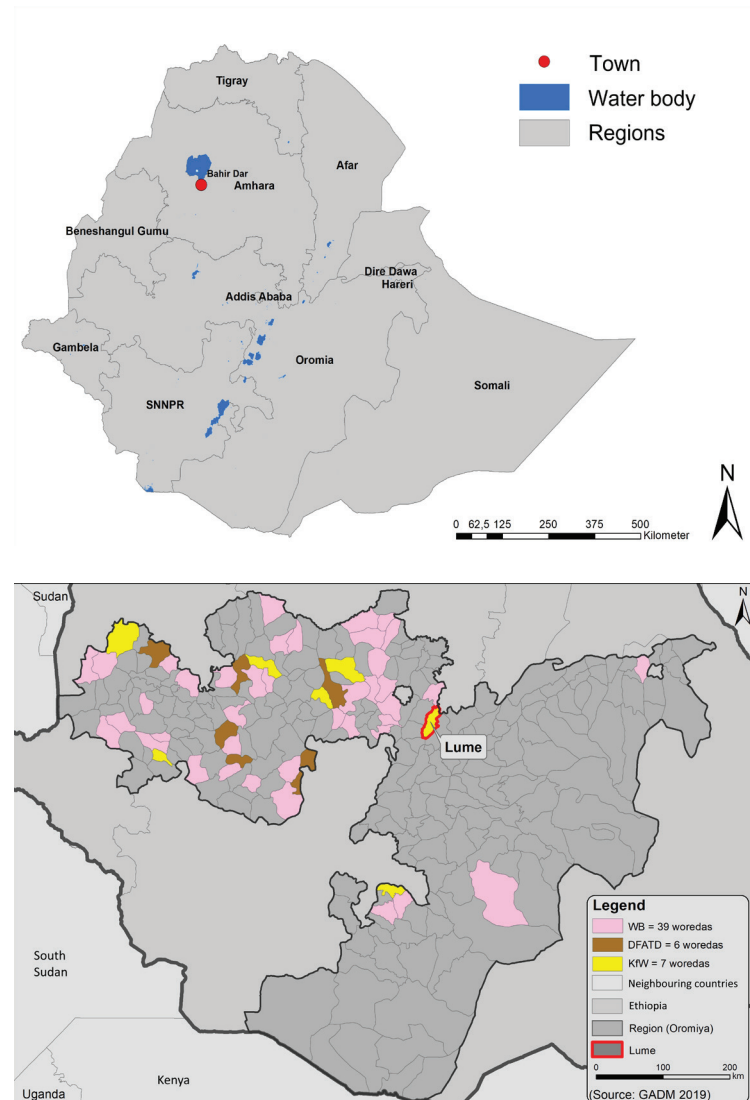
The Sustainable Land Management Programme (SLMP) in Ethiopia, which is implemented by the Ministry of Agriculture and supported by several donor organisations, is implemented in a total of six of the Ethiopian federal states and in 176 *woredas* (districts). SLMP is carried out in water catchment areas (watersheds) characterised by high soil erosion and degradation, which make people living mainly from agriculture highly vulnerable. The measures supported by SLMP include the organisation of the population concerned for the planning, management and implementation of measures at various administrative levels and their further training. The water catchment areas are improved with biophysical land resource (soil, water, etc.) conservation measures such as the rehabilitation of erosion gullies, the afforestation of hilltops, the terracing of slopes and the planting of grass strips along the slope contour lines. In addition, degraded areas are enclosed for rehabilitation through natural ways and enrichment planting with multipurpose tree and grass species. Additional project activities include drilling wells for drinking water, building access roads and promoting small-scale irrigation and animal husbandry to generate income. A basic prerequisite that gives farmers legal security in the management of their fields is the registration of land and the granting of land titles to married couples. Participation in the project has led to a tremendous increase of groundwater discharge. It also led to a higher income for all families surveyed in the INEF study by increasing the production of the treated areas and thus offers a way out of poverty.

*Sustainable watershed management, production increase for small farmers, registration of land titles, Ethiopia*

### Country and project background

Ethiopia ranks 147th out of 188 countries included in the Human Development Index (UNDP 2015), making it one of the poorest and least developed countries in the world. Nevertheless, it is the Ethiopian government's declared goal to become a middle-income country within the next ten years. Over the past two decades Ethiopia has indeed made considerable progress in

terms of economic development. Between 2004 and 2011, it recorded growth in gross national income of 10.6% compared with its neighbouring countries, which recorded average growth of 5.4% over the same period (World Bank 2015).



The vast majority of the Ethiopian population (more than 70%) live from agriculture (cf. CIA 2018). However, this sector is characterised by high soil degradation, erosion, high dependence on rainfall, climate change, the consequences of deforestation and recurrent droughts, and its productivity is severely affected. In response to these challenges and the associated food insecurity of large sections of the rural population, the Ethiopian government is implementing three nationwide rural development packages, depending on the socio-economic and environmental situation of the *woredas* (an administrative unit equivalent to a district): The Productive Safety Net Programme (PSNP)

for social security is conducted exclusively in the *woredas* classified as food-insecure. The Sustainable Land Management Programme (SLMP) focuses on vulnerable *woredas* in relatively potential areas to protect further land degradation, and the Agricultural Growth Programme (AGP) is applied in food-secure *woredas* with a potential for agricultural production.



SLMP is a multi-sectoral and multi-stakeholder country-wide programme. Its intervention coverage has increased from 35 *woredas* in 2008 to 176 *woredas* in 2017. It is operational in six regional states: Amhara, Oromiya, Tigray, Southern Nations, Nationalities and Peoples' Region (SNNPR), Benishangul Gumuz and Gambella. Current funding for SLMP comes from the International Development Association (IDA), the Global Environment Facility (GEF), German Development Cooperation (GDC) represented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Kreditanstalt für Wiederaufbau (KfW), the Canadian Department of Foreign Affairs, Trade and Development (DFATD), the European Union (EU), Finland, Norway and the Government of the Federal Democratic Republic of Ethiopia (GoE).

### Objectives and activities of the project

The overall goal of SLMP is to improve the living conditions and the income situation of participating rural households in the programme area. The specific project objective of the second phase is to reduce land degradation and to improve land productivity on smallholder farms in selected watersheds in targeted regions of Ethiopia. This is to be achieved through four inter-linked components: (i) Integrated Watershed and Landscape Management: to support the scaling up and adoption of appropriate sustainable land and water

management technologies and practices by smallholder farmers and communities in selected watersheds/*woredas*. It also promotes Homestead and Farmland Development, Livelihood Improvements and Climate Smart Agriculture (ii) Institutional Strengthening, Capacity Development and Knowledge Generation and Management, (iii) Rural Land Administration, Certification and Land Use: to provide security of tenure to smallholder farmers in the project watersheds by supporting the process of awarding individual land certificates as an incentive to increase the adoption of sustainable soil and water management technologies and practices and expanding the coverage of participatory land use planning as well as (iv) project management (cf. GIZ, KfW, SLMP 2017). The first component focuses on measures that can reduce or control the degradation of natural resources such as area closure, erosion control measures on hillsides, gully treatment, tree planting and other means to increase the infiltration of water into the soil. These measures are applied both in communal areas and in private farmland. GIZ mainly deals with capacity development of the local experts on different administrative levels up to the *woreda* level. GIZ has developed guidelines and initiated discussion for the exchange on success factors and knowledge management. GIZ has also assisted the predecessor projects of SLMP and piloted participatory land use planning with the use of Geographical Information Systems as well as its implementation in Ethiopia. This has contributed to the emergence of SLMP and SLMP has considerably benefitted from the experience of those past projects.



In Gololcha watershed (a major watershed in Lume Woreda) the project started with an entry or so-called trust-building activity. One of the major problems of the communities living in the watershed was the

provision of water. In the dry season, the women and youth had to walk for three hours (each way) to fetch water. In 2012, a potable water distribution point was established with funding from KfW. This water point serves five *kebeles* (a lower administrative unit) and is used by around 1,000 people per day.

The population has formed Community Watershed Teams (CWT) for the needs assessment, prioritisation, management and implementation of activities. In the committees on this user level, men and women actively take part in the work. However, in the Kebele and Woreda Watershed Teams which administer, coordinate and decide about the implementation, the required 30% participation of women has not been achieved. In Golocha watershed, all the activities described above are implemented in addition to the development of the water point, the construction of a feeder road and assistance to dig 15 ponds for small scale irrigation. These ponds are managed by neighbourhoods, not individual households, and can provide water up to the month of March and thus more or less bridge the gap between two rainy seasons. Another income-generating activity promoted by SLMP is the rearing of poultry and sheep.



### Project impact to date

This report is mainly based on information compiled by a research team of the Institute for Development and Peace (INEF) of the University of Duisburg-Essen through interviews with government experts and staff of GIZ and KfW as well as focus group discussions (FGDs), intensive interviews and a questionnaire-based household survey of 400 households in Lume

Woreda in Oromiya Region between December 2017 and September 2018.

SLMP directly benefits up to 832,500 people who belong to households from watershed and landscape management interventions; and indirectly benefits 1,020,000 people through improved watersheds and landscapes such as improved water flow downstream, reduced siltation to reservoirs or reduced risk of erosion and mudslide.



A direct effect of watershed management measures is the increase in land fertility which leads to a higher productivity, increased yields and thus to more income for smallholder farmers. Farmers state that they have doubled their yields without having extended their cultivated surface, others talk about a yield increase of 20% to 30%. Moreover, formerly completely unproductive land like highly degraded hillsides and erosion gullies have been reclaimed for cultivation. Gully rehabilitation with gabions (a large cage usually made from wire mesh filled with stones) and the plantation of species like sesbania, vetch, acacia and elephant grass provide fodder for animals, and the planting of eucalyptus provides wood for construction and household energy. In addition, bee keeping is encouraged in the rehabilitated gullies.

Apart from the direct effect of the soil and water conservation measures, the development of the water point and the road construction are highly appreciated. In one of the FGDs, the women expressed that lack of access roads and the large and deep erosion gullies that cut across the lands really limited their mobility in the past. With the road construction and the successful rehabilitation of the gullies, this has greatly improved. Due to the road construction, the ambulance was able to reach the village, which was especially useful for marketing their produce and in

cases of child birth. However, currently the road needs maintenance. The gullies have filled up with soil and vegetation and can now be easily crossed.

The grass, shrubs and trees growing in gullies, area closures and afforestation sites are harvested by members of the assigned teams and partly sold among the community members. Women's Groups and Youth Self-help Income Generation Activity Groups were also established for protection, use and formation of seed money. The money gained through these activities is deposited in a bank account. The women in one FGD plan to buy a grinding mill from their savings. The grass and shrubs are mainly fed to animals. Some farmers have observed a slight increase in milk yield as a consequence of feeding their cattle.



All land has been registered in Lume Woreda. The households have been provided with a land certificate containing the names of husband and wife. The women emphasise that the certification gives them tenure security and avoids cases, where the wife is driven away from the land after the husband's death. They also feel that the respect between husband and wife has increased due to the certification. An interview with a researcher of the Ethiopian Development Research Institute (EDRI) at Addis Ababa University confirms positive gender effects of the land certification. Women have a stronger position when going into sharecropping agreements and generally have more bargaining power when holding a land title.

Women in FGDs declare that previously, they would not have gone to public meetings or contradicted their husbands. Nowadays, they talk in public and the men also listen to them. Not all of these gender effects can be attributed solely to the project, however, the fact that women's participation is always required in

meetings, committees and implementation of activities played its role.

The construction of ponds for irrigation and the simultaneous introduction of horticulture benefits mainly the women, because they cultivate the vegetables, utilise them for food preparation and sell the surplus on the local market. The fact that monitoring data in SLMP are not collected in a gender disaggregated way, however, leaves room for improvement.

The INEF team conducted a wealth ranking exercise in the research area. The participants of the FGDs were first asked to describe the characteristics of a poor, a middle-income and a wealthy household in their village. The next step was to estimate the number of households in the three categories before the project started and presently. The results in all four *kebeles* suggest that poverty has considerably reduced in the past five years since SLMP started operating in Gololcha watershed and the number of middle and rich households has increased. Farmers state that the key issue for being rich or poor is land. Those who can afford it rent land from others.

With regard to food security and nutrition quality, the participants of the FGDs state that food security is achieved throughout the year and that due to the distribution of poultry to women in the watershed, children are now given eggs to eat. Generally, the meals are more varied and contain more and different vegetables than before. People go to the market once a week to sell eggs, sheep, some *teff* (local grain) and vegetables and buy other necessary items at the same time. It is interesting to note that people say that before SLMP the children did not get any breakfast at home, because they did not go to school anyway. Now parents can not only send their children to school, but also provide them with bread, tea and sugar or other types of breakfast in the morning.

Whereas very poor people were excluded from social networks before, because they had nothing to give and networks are based on the principles of reciprocity, participants of FGDs state that they have joined rotating customary savings and credit clubs (*equb*). Another type of such networks are neighbourhood based working groups, the so-called *dabo*, that cultivate people's farms in turns. These groups are equally based on reciprocity. Only those households

who can afford to host a *dabo* and provide them with food and drink can cultivate their farms with the help of those groups. Due to labour shortage, female headed households are in need of group labour, however, often do not have the means to host them. With the increased income from SLMP activities, this is now possible.

Surplus money gained through increased yield and new income-generating activities is mostly spent on schooling the children, on more and better nutrition and on renting land and labour.



### Conditions for success and challenges

► The Ethiopian government's and its authorities' ownership of SLMP is both a condition for success and a challenge. Extending to six out of eleven of Ethiopia's federal states (two of which are administrative urban regions), SLMP is an almost nationwide programme. Coordination and implementation are carried out entirely by the local authorities, with the various donor organisations providing only technical and financial support. Ideally, development cooperation should run like this. However, despite years of technical and organisational training of staff at different administrative levels, the Ethiopian authorities involved have not been able to implement the programme completely on their own with only financial support. This may partly be due to the constant change of personnel. In some cases, however, responsibility is unnecessarily transferred to donor organisations.

► One of the challenges of the project is the lack of skilled workers. According to local agricultural experts, for example, the money available for the implementation of irrigation measures cannot be spent because of improper assignment of skilled personnel to implement them.

► The basic prerequisite for small farmers to make investments on the land they cultivate is a long-term guarantee of use for that land. In the present project this is provided by the registration of land and the allocation of land titles and is further promoted by the organisations involved. It is important that the wives, together with their husbands, are listed in the certificate as the owners of the land. In contrast to traditional practice, this allows women to retain their land in the event of divorce or the death of their husband.

► The combination of sustainable resource management, which is not necessarily the first priority for farmers, with the provision of drinking water and the construction of access roads as an input measure and the promotion of income-generating measures is a very successful concept that reinforces the sustainability of the positive effects of SLMP on the situation of households in the project area. The Sustainable Utilisation of Rehabilitated Lands for Economic Development (SURED) project implemented by GIZ from 2018 builds on the success of SLMP and consequently takes the next step: increasing agricultural productivity on the land already treated and promoting agricultural value chains.

► The establishment of savings and credit groups, which traditionally exist in Ethiopia, enables farmers to build up reserves from their profits and thus make larger investments at a given time. The formation of assets, which is important for strengthening the resilience of poor households, is thus possible.



### Conclusions for development cooperation in general

► In areas where soil degradation, for example due to water or wind erosion, takes on considerable proportions and severely impairs agricultural productivity,

sustainable management of natural resources, above all with erosion control measures, is a basic prerequisite for agricultural production. If this basis is given and its necessity and effect are anchored in the minds of farmers, other measures can additionally increase productivity and production.

► The use of small-scale irrigation has been shown to lift smallholder farms out of poverty and can help a region achieve economic growth. Small-scale irrigation almost always goes hand-in-hand with vegetable and possibly fruit growing. Consequently, nutrition advice that leads to a better and more balanced diet should be integrated into the extension package provided to farmers. The promotion of infrastructure, such as the construction of access roads that can be used throughout the year, as well as the marketing and processing of agricultural products, lead to an additional increase in value.



► The issuing of land titles creates security for farmers in the long-term management of their land and thus has a decisive influence on their investments in the land. If, as in the case of Ethiopia's spouses, the certificates are jointly recorded, women can assert their rights under modern land law to the land on the farm in the event of divorce or the death of their husband. In Ethiopia, as in other African countries, the law grants women a share of the land in these cases, but in practice this is often handled differently. Women are often deprived of their land or are urged to renounce their entitlement. However, this new practice is not undisputed, since land is considered rather clan property than individual property, therefore land issues in divorce cases need careful handling. Only in the future will it become clear whether this modern regulation can be enforced against the traditional ideas of land being exclusively in the hands of men.

► The implementation of resource conservation measures should be accompanied by the provision of urgently needed infrastructure, such as drinking water supply and road construction in this case. The population also wants electricity, e.g. for the operation of a grain mill. The presence of electricity is also beneficial for the storage and processing of agricultural products.

## Literature

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## Images

1. Watershed with contour bunds, gully treatment and hilltop afforestation, 2. + 3. Maps of the project region (cartography by Ann-Kathrin Kaiser and Fabio Pruß), 4. Hillside treated with terracing and afforestation, 5. Soil bunds with fodder plants, 6. Borehole serving five communities, 7. Erosion gully, 8. Gully treatment with gabions, 9. FGDs and Wealth Ranking with men, 10. Wealth ranking result, 11. FGDs with women.

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## Project characteristics\*

B6 – Intensity of research team involvement

G0 – Gender index

P3 – Participation

A2 – Target group index

\* For explanation see Good Practice Handbook or [www.inef-reachthepoorest.de](http://www.inef-reachthepoorest.de)

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## Previously published in the Good Practice Series:

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## INEF - Research Project

The research project aims to develop recommendations for state development cooperation. The aim is to identify measures that can better reach extremely poor, food-insecure and vulnerable population groups.

We examine the interdependencies of extreme poverty, vulnerability and food insecurity in order to identify both blockages and success factors for development cooperation.

Based on literature analyses and surveys of professional organisations at home and abroad, successfully practised approaches ("good practices") are to be identified and intensively analysed within the framework of field research. In addition to a socio-cultural contextualisation, the gender dimension is consistently

taken into account throughout. The local investigations focus on the participation of the affected population in order to capture their perception of the problems and ideas for solutions.

We initially conduct our research in Ethiopia, Benin, Kenya and Cambodia.

The project is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) under the special initiative "One World – No Hunger".

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