

# Summary Report „Topics in Integrated Watershed Management“, Tigray, Ethiopia

## Introduction

The Research Institute Water and Environment at Universität Siegen has conducted this workshop from 10<sup>th</sup>-14<sup>th</sup> of November 2008 in Tigray/Ethiopia, with the support of the Association of Ethiopians Educated in Germany (AEEG) and GTZ-SUN Tigray (Sustainable Utilization of Natural Resources for Food Security). The workshop was funded by the Goethe Institute and EU Project “Capacity Building for Integrated Watershed Management in Eastern Africa (IWMNET)“. German alumni have been specifically invited to participate.

## Objectives and Workshop Program

The workshop focused on topics of integrated watershed management (IWM) in eastern Africa and consisted of three days of field excursions in northern Tigray and two additional days of keynote presentations and plenary discussion in Mekelle. The workshop aimed to provide a platform for experience exchange and knowledge sharing about approaches and components of IWM, including soil and water conservation, agricultural practices, livelihood interventions, sanitation, energy, community dynamics, etc. The workshop aimed to compare experiences in IWM in Ethiopia and beyond. Workshop participants were contributing via group activities and discussed the dissemination of best practices of IWM.

Tigray stands out for its conservation-led regional development strategy and multiple efforts made at various scales to manage natural resources for improved food security. Field excursions were coordinated with GTZ-SUN. SUN is implementing a range of IWM activities and participants visited selected project watersheds. Woreda experts, development agents, tabia chairmen and selected farmers participated in excursions. A brief area description, IWM activities and implementation modalities was given by a GTZ expert, as well as details about program achievements with respect to gully rehabilitation, farmland and hillside developments, and livelihood activities.

## Workshop Outcomes

The workshop was initiated in the historic town of Axum. Twenty-three (plus three additional half-day participants, not paid) participants attended the workshop, the majority German alumni. Participants came from a wide range of disciplines and organizations, from different regions within the country and eastern Africa.

The field excursions covered watersheds in Medebay Zana, Tahtay Maichew, Adwa, Ahferom, Gulomekeda, and Kilte Awlaelo woredas. The activities revolved around observing and discussing the positive IWM developments apparent in Tigray and what lessons can be learnt for other regions. Participants were divided into four groups and each focused on one topic: (1) institutions and governance; (2) scaling up options; (3) economic/livelihood sustainability; and (4) environmental sustainability. The group travelled several hundred kilometers by road through northern Tigray, spending each night in a different town – Axum, Adigrat, Mekelle. Participants were observing efforts to rehabilitate and stabilize degraded hillsides and gullies, improved pastures and farmland, as well as structures for water harvesting, biogas production and income generating activities, such as small-scale irrigation for vegetable and fruit production, beekeeping, fodder production, etc. A lot of hours were

spent walking through watersheds and experiencing local conditions first hand. In-depth discussions took place amongst participants and with community representatives and local experts. The field visits were well organized by Edries Mohammed, a SUN senior watershed management expert. In the evenings, participants continued their discussions.

Field excursions were followed by two days of invited keynote presentations by representatives of development organizations active in Tigray, selected community representatives, woreda experts, and participants. The groups prepared presentations that included observations, pros and cons with respect to their topic, experiences from people's own work, applicability of observed approaches to other regions, and presented their different opinions. The group results were discussed in the plenary.

Tigray is characterized by harsh environmental conditions, rugged terrain, serious water scarcity problems, leading to widespread food insecurity and vulnerability. Over the last decade, successful IWM has been implemented, particularly with respect to natural resources management. This is apparent from satellite imagery time series showing a general 'greening' of the region. During the field visits, the group has been observing the fruits of the combined IWM efforts made by development organizations, regional bureaus and local communities. The overall outcome in these highly drought prone environments has been more sustainable natural resources management for reduced drought risk and livelihood vulnerability, as well as improved income earning opportunities.

Major lessons learnt have been identified.

- Community participation in combination with strong local institutions and leadership is crucial. Commitment, discipline and hard work, as well as community mobilization and voluntary contributions are important aspects of community efforts and success in IWM.
- Local governance is important in the successful mobilization of communities for IWM.
- The creation of awareness at the community level and capacity building are crucial to bring attitudinal change with respect to IWM.
- Effective policies and by-laws that regulate community contributions and the implementation of IWM strategies, such as controlled grazing systems, are crucial and community ownership is essential to ensure enforcement of existing regulations.
- It is recognized that conflict is inevitable, especially when opportunities are created. Ideally, potential conflicts are avoided from the onset through establishing ownership of created assets, by-laws and local institutions. Existing conflicts could be dealt with locally, through indigenous conflict resolution mechanisms, e.g. elders' councils.
- The participation of relevant stakeholders at different levels, including development organizations (e.g. WFP, GTZ and REST), regional bureaus and communities, is crucial for the success of IWM for improved livelihood security.
- The introduction of area closure and controlled grazing is possibly one of the most important interventions, not only in the context of IWM, but also with respect to livelihood security. Free grazing is common in Ethiopia and poses a serious threat to the sustainability of development interventions and income generating activities.
- Challenges identified included the high level of natural resource scarcity, the need to overcome resistances and to bring attitudinal change, the complexity of coordination and mobilization of communities and the potential of community conflicts.
- Interventions in IWM have to have direct benefits with respect to increased incomes for rural communities to be sustainable. Thus, it is proposed to promote high value fruit and horticultural crops and to establish better market access for these products.
- Scaling up existing best practices is a major challenge to the sustainability of IWM. In Tigray, stakeholder participation at different levels has proven vital. However, community participation and by-in is crucial and bottom-up approaches to IWM are appropriate when

they specifically address community needs. Technologies to be scaled up have to be affordable to farmers and suitable to prevailing conditions. Scaling up should be supported by capacity building and the strengthening of local institutions. Currently, sustainability depends on external inputs. An exit strategy could be combined with scaling up efforts.

- In conclusion, the governance for IWM in Tigray is encouraging and can be seen as a model for other regions. Conservation-led development policies in combination with strong community by-laws attempts for enforcement are promising to ensure sustainability.

More detailed outcomes of this workshop, including presentations and reports are available online at the German Alumni Water Network [www.gawn.de](http://www.gawn.de) under the News section (“Workshop Tigray”). All German Alumni can also register at GAWN in order to have access to a wider network of water professions, obtain updated information about news, jobs, workshops, etc.

## **Recommendations for Future Programs and Additional Measures**

The workshop has offered an integrated view to watershed management, taking its diverse components into consideration. Exposure to new approaches has been very beneficial. Participants have greatly benefited from field visits. While it was a tight schedule and a lot of walking, the experience was invaluable with respect to gaining practical experiences. This is particularly important if participants are otherwise working in more theoretical settings with limited exposure to practical components. Most participants will hardly get an opportunity outside of workshops like this one to visit such areas.

It has proven invaluable to have a local partner and organizer in the region. This has made workshop organization and implementation easier. More importantly, however, it has also given legitimacy to the program in terms of local relevance. It is recommended that workshops should have outputs formulated which have clear societal goals and value, beyond the creation of opportunities for German alumni.

Furthermore, while workshops are valuable with respect to experience sharing it is recommended to offer opportunities for follow up workshops. This is important, especially with respect to workshop outputs, proposed recommendations and possible strategies of action. It would also promote the creation of professional networks that could collaborate on future activities.

## **Evaluation of the Workshop**

The workshop is considered a success. A wide range of participants have been invited to the workshop. All of those invited attended and made it a success through their active participation, lively discussions and genuine interest in the subject matter and the region. The field visits were exhausting, but very informative. They were the most crucial contributing factor to the success of this workshop.

The participants provided written, anonymous feedback about the workshop, as well as personal comments. Overall, everybody was very happy with the workshop with respect to content, organization and outputs and very much appreciated the active involvement of local farmers throughout the workshop. The detailed results of the anonymous evaluation are represented in the tables below. In addition, participants made additional suggestions: invite participation of women, allow more workshop time, create follow up workshop and future networking opportunities.



