Report on the implementation of the Groasis Waterboxx Ecological Water Saving Technology (EWST) in the Afar region

Strengthening Drought Resilience in Pastoral and Agro-pastoral Areas of Ethiopia (SDR), GIZ project, Addis Ababa, Ethiopia

Background

The programme "Strengthening Drought Resilience in Pastoral and Agro-pastoral Areas of Ethiopia" (SDR) was launched as a support to the Ethiopian Government in the implementation of its economic development strategies. It is closely linked to the Country Programming Paper (CPP) to End Drought Emergencies in the Horn of Africa and anchored in the over-arching Growth and Transformation Plan (GTP). The programme is implemented jointly by the Ethiopian Ministry Livestock and Fisheries Development (MoLF), the Ethiopian Ministry of Agriculture and Natural Resources (MoANR), their respective decentralised bureaus and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), mandated by the German Federal Ministry of Economic Cooperation and Development (BMZ). The programme with its different projects aims overall at strengthening the capacities of communities and responsible institutions in the Afar and Somali Region to implement drought resilience measures within a legal, political and institutional framework reflecting the concerns of pastoralists and agro-pastoralists. The project has been designed to respond to the needs and priorities of pastoralists and agro-pastoralists in the Afar and Somali Region and to the key problems in the management of the natural resources, they are facing. The measures will be focusing on the adaptation of Natural Resource Management (NRM) to the local situation by pilot-interventions on community level, the improvement of livelihoods based on income generating activities and the development of capacities of major stakeholders at village, community, regional and national level.

Overall Objectives for the Assignment

To design, conduct and document a ToT training with woreda and programme staff from the Afar Region that enables the participants to get understand, use and upscale the use of the Waterboxx technology in Afar.

The Waterboxx saves water by more than 90% when compared with any other planting technologies in the first year. From the second year onwards, the seedlings effectively

established and no water supply is needed. Within less than a year, the seedlings developed normal tap roots that can absorb water by capillary means and plant function continues as normal in the drier areas of the lowlands. However, the matching of rainwater supply with the effective seedling establishment requires intensive skill and knowledge in the application of Waterboxx.

The specific objectives for the assignment including all tasks comprise:

– Introduction to the Waterboxx technology, including assembling
– Selection of suitable species to be used with the technology
– Extensive practical exercises
– Institutional implementation arrangements
– Planning and implementation of upscaling activities

Deliverables

- Planning and Design of the training to be accepted by the programme prior to the implementation
- Preparation/Facilitation of the training
- Documentation of the training, including analysis and evaluation

Achievements

Workshop preparation and implementation: According to the proposed terms of reference, a consultant (Gebremedhin Woldewahid) with many years of experience in facilitating, organising and implementing ToT, and Groasis Waterboxx ecological water saving technology (EWST). The consultant is also experienced and have a good knowledge about irrigation systems and their constraints in Ethiopia and specifically about the Afar region.

Based on the close guideline and support from the Strengthening Drought Resilience in the Pastoral and Agro-pastoral Lowlands of Ethiopia Afar Soil Rehabilitation Project of GIZ HQ, the ToT wokshop prepared and implemented from 22-25 August 2017. The ToT was implemented in Chifera (one of the project site), 23-24 August 2017. In the ToT, project partners, GIZ focal persons and other relevant partners were invited from the project districts. A total of 24 (23/1F) trainees attended in the workshop. The training specifically focused on technological, organizational, and institutional aspects of the Groasis Waterboxx implementation with high value fruits crops and livestock feeds in support of the livelihood of

the Afar community (Table 1). Resources persons mainly Gerben van Ek and Jemal Nur participated in the implementation of the training in addition to the consultant. The practical training specifically addressed skills and knowledge in implementing the new EWST, selection of high value fruit and feed crops, and their integration in improving the livelihood of the community living in drought prone areas of the Afar region. Relevant resources marterials and references were provided in the ToT.

Documentation of the training, including analysis and evaluation: Expectation of the trainees with the new EWST was discussed. The expectation of the trainees was to learn and exercise skills and knowledge on the implementation of the Waterboxx EWST in high value fruits and feeds in support of the livelihood of the Afar community. At the end of the training, trainees suggested that the identification of the technology is appropriate to the local condition and the delivery of the training was practical. The practical training activities were captured using pictures. The trainees showed exemplary interest and listening attention for the training on new technology but the exercise but adaption may need some follow up and support in the field.

Planning and implementation of upscaling activities: The implementation of the Waterboxx EWST should adapt to the specific high value crops or feeds according to the specific ecological domains along the natural resource conserved gradient. The project sites in the Afar region need to be visited in order to develop location specific planning and implementation action points. The integrated planning and implementation of the Waterboxx EWST with specific crop type and ecology may require some technical support in the field. In this regard, it is advisable to arrange an expert field visit in order to develop implementation action points in the application of the Groasis Waterboxx in relation to the variation in conserved resources and high value crop types.

Tentative course outline on Groasis Waterboxx ecological water saving technology (EWST), 23-24 August 2017, Chifra, Ethiopia.

Time	Course content	Facilitator
14 Aug 2017		
8:00-8:30	Registration and welcome	Jemal/District Pastoral representative
8:30-9:00	Introduction: ***Groasis Ecological Water Saving Technology (EWST)-a new invention***	Gebremedhin/Gerben
9:00-9:30	Bridging the water supply and fruit seedling establishment gaps using Groasis Waterboxx EWST	Gebremedhin/Gerben
9:30-10:00	Selection of fruit types and handling of healthy fruit seedlings with Groasis Waterboxx EWST	Gebremedhin/Gerben
10:00-10:20	**Tea break**	
10:20-11:20	Field exercise on preparing healthy fruit seedling planting	Group/individual
11:20-11:40	Steps in assembling Groasis Waterboxx EWST	Gebremedhin/Gerben
11:40-12:30	Assembling exercise Groasis Waterboxx EWST	Group/individual
12:30-14:00	**Lunch**	
14:00-15:00	Fruit planting with waterboxx in the field: Demonstration	Gerben/Gebremedhin
15:00-17:00	Fruit planting with waterboxx in the field: Exercise	Group/individual
17:00-17:30	Interactive discussion	
17:30-18:00	Recapping the lessons learned	
15 Aug 2017		
8:00-9:30	Group exercise: Fruits seedling planting with Waterbox EWST	Group exercise
9:30-10:00	Individual exercise: Fruits seedling planting with Waterbox EWST	Individual exercise
10:00-10:20	**Tea break**	
10:15-12:00	Interactive discussion	Gerben/Gebrmedhin
12:00-12:30	Care of seedling after planting with Groasis EWST	Gebremedhin/Gerben
12:30-14:00	**Lunch**	
14:00-15:00	Fruit seedling planting with Waterboxx EWST: Demonstration	Gebremedhin/Gerben
15:30-17:00	Fruit seedling planting with Waterboxx EWST: Field exercise	Group/individual
17:00-17:30	Interactive discussion	Gerben/Gebremedhin
17:30-17:45	Data recording and reporting protocols with Groasis EWST	Gerben/Gebremedhin
17:45-18:00	Feedback from trainees and closing remarks	Gerben/District Pastoral representative