Annex 4.8

Proceedings of the project evaluation workshop

Federal Democratic Republic of Ethiopia

Ministry of Water Resources

Food and Agricultural Organization of the United Nations

Project: Strengthening national water monitoring capacities, with emphasis on agricultural water management (GCP/GLO/207/ITA)

Proceedings of the Project Evaluation Workshop

1-2 December 2009

Queen Sheba Hotel

Addis Ababa

I. Opening

Welcome Address

Ato Teshome Atnafe the national project coordinator from the Ministry of Water Resources welcomed participants and provided briefing on the purposes of the project with a short account of what has been undertaken.

Opening remarks
Ato Getu Zegeye, Chief economist and Advisor to the Minister, ministry of Water Resources gave the opening speech. He started his speech by explaining major national policy directions of the government and the water resources management policy provisions in particular.

Key Note Address
Mr, Maffa Chipetta FAO sub regional office coordinator and representative to Ethiopia and the African Union gave a key note address. Speaking on the importance of the precious resource water, he explained how water could be a unifying factor linking different aspects of development (power generation, agricultural production, industrial production etc.) when well managed and how water could spark conflicts when it gets scarce and improperly managed. He spoke appreciatively about the he called the ambitious plans of the Ministry of Water Resources, with particular reference to the program of the "growth corridor". He stressed on the importance of anticipation and indicated future actions and strategies need to be tuned towards copping the growing scarcity of water.

Water monitoring strategy of the Ministry of Water Resources (Ato Getu Zegeye, MoWR)
He spoke on the wider scope of water resources management including waste water management and drainage. The vital role of strengthened national water resources monitoring in the overall water resources management was underlined. Ato Getu stressed on the need to harmonize and integrate the different initiatives supported by different development partners and the government to achieve the intended results.

II. Presentations

2.1 Overview of the project (Mr. Benjamin Kiersch)

The presentation provided a short summary of the project including components of the intervention, budget as well as implementation arrangements made. Attempt was also made to relate the project to global context and relevant Millennium Development Goals (MDGs). The UN-Water and the FAO mandates were mentioned and with that the information system AQUASTAT as information service provider was mentioned. Lack of information gathering capacities at country levels have greatly affected the

effectiveness of this global information system. This project which is geared towards addressing scarcity of data, inconsistencies and lack of coordination is believed to some how address gaps at country level. The rationale of this project was presented as "too improve monitoring capacity to produce reliable data for decision makers at the various levels and to enable measure performance and also create wide-spread awareness in water resources management. Primary and secondary stakeholders in the implementation of the project, anticipated results, outcomes and impacts as well as the time frame were presented.

The following were raised following the presentation:

- NGOs, CBOs and other grass root organizations which are not included as stakeholders could play significant role.
- Are there plans on the FAO side to improve the global information system AQUASTAT and to encourage countries to apply systems that have worked out well with the system?

Reminding participants that this project is just about getting data on agricultural water-use, the presenter underlined the need to make efforts to look in to the different aspects of the global system with the aim of determining which methodologies and approaches could be applicable at country level

2.2 Methodology of data collection (Mr. Yibeltal Tiruneh)

Approaches and methodologies used in the survey, as well as the selection of indicators made from among the indicators determined by the GIRWI project to make the exercise focussed on agricultural water use were explained. The selection of the pilot area

Comments and suggestions raised related to the presentation were:

- Appreciating the good start made by the project, question was asked about how the project approached environmental Impact Assessment (EIA)
- Question was also asked about how the sites were selected.
- Livestock production takes significant share of agricultural water use, and it was asked why it has been omitted.
- How should drainage be treated and monitored in this affair?
- Was there any attempt made to estimate potential or focus is only made on existing irrigation?
- How is improved traditional irrigation scheme defined?
- Tow of the
- How does the collected data from the field relate to reality on the ground what was the role of the EPA?
- Which Environmental indicators and parameters were included?
- Many stakeholders should participate,

In response to the above, it was explained that no attempt has been made to go in-depth with environmental aspects as the scope of the study doesn't permit that, However, environment and drainage were part of the survey as both are related to the management

of water resources, although at a more general level. With regard to livestock, it was mentioned that livestock production is a place holder in the database.

Although no cleared and established definition for improved traditional it is meant that schemes equipped with some form of improvement.
Regarding data, it was mentioned that the data obtained from secondary sources of information and literature are very much exaggerated when compared to what was obtained through the survey and indication was made that there are inclinations of overstating at the different levels.

Another contribution made in form of a comment was that- this exercise should be taken as a means of testing the methodology and laying foundation to activities aimed at fully developing the system and not as completed tool to be immediately applied. The criteria set for data collection such as land-use and catchments were not adhered to, instead only (woredas were taken as levels of data acquisition and collection. In view of this, the questions of how and where at which intervals should data collection take place need to get answers to push the process forward.

Another contribution stressed on the difficulty on the ground in obtaining data and mentioned this is particularly challenging when it comes to traditional irrigation on which no information and data are available.

With regard to environmental indicators and parameters, it was mentioned that they have not been considered for reasons of permissible scope. In addition, Earlier under the GIRWI project the EPA was approached and consulted, however the "State of the Environment report" of the EPA failed to include indicators although we agreed to put indicators.

2.3 Data analysis methodology (Mr. Yibeltal Tiruneh)

Presenting the data analysis, it was mentioned that inconsistencies in the data was a major challenge.

Questions raised were:

- How were Soil and Water Conservations included and used?
- Agricultural Water requirement calculations using ETo, how does it compare with other methods
- How sere the data collected and analysis carried out at top, medium and tail ends of irrigation
- Which roles did the GIRWI project and how does it relate to this project?

The following was said in response to the questions.
Medium, top and tail classification of data collection is based on the assumption that farms at the top and medium levels are better in productivity than those at the tail end which mostly suffer from shortage of water.
Regarding the GIRWI project, this project was informed at the commencement of activities that overall responsibility was give to GIRWI to oversee and coordinate work

on monitoring aspects. GIRWI has responsibility on the overall water resources management while this project is focused on monitoring aspects specifically. According to the ministry both were expected to work complementarily. However, since the GIRWI 2nd phase is delayed, we assume that it will benefit form the outcomes and findings of this project.

2.4 GIS related data and mapping (Mr. Belay Seyoum)

The presentation first focused on explaining the GIS system and its major components. Possibilities of using different data base management systems for GIS were explained Data collected in the framework of the project and the ge0-referenced maps produced were presented. Layers of infrastructure development, agro-ecology, small-scale irrigation distribution as well as polygons of large-scale irrigation farms were presented.
The following questions were raise after the presentation:

- The biggest challenge that will be facing the monitoring system to be developed is acquisition of data regularly with affordable expenses. Are there possibilities in which remote sensing could be used for quick data collection applicable to agricultural water monitoring (for example NVI)?
- How is data security ensured

In response to the questions it was mentioned that all data base security measures available for securing data are applicable to GIS too.
Normalized Vegetation Index (NDI) and others could be used, but the most important thing is their resolution. High resolution (which is not usually chip) is required for monitoring purposes...

2.5 Web based AWM database system (Mr. Yohannes Tesfaye)

Introducing the developed system and its main features, the different connecting and accessing procedures and the different pages which included the following were described: *water resources, profiles, Agricultural water, Maps, home page.*
Questions and issues raised following the presentation were:

- How is data entered in to the system?
- Who enters the data?
- How do we check data integrity (data quality)?
- MoWR is to host this site, it is important that the ministry people get involved right from the early phases but this does not seem to happen
- How is the management of the web-site to be handled?
- Who will be responsible for maintenance?

Regarding data integrity, it was mentioned that this will be ensured in that the ministry will grant data entry privilege only to selected people.

2.6 Irrigation performance of selected irrigation schemes (Mr. Yibeltal)

Irrigation performance was one of the project components it was reminded, some definitions were presented and indicators used were also enumerated. Before that the

objectives of the performance assessment component were explained and the selected irrigation locations indicated. The methodology used was schematically explained.

As limitations of the exercise were mentioned:

- Lack of qualitative data
- Incompleteness of data and information
- Lack of project documents
- Timing of field visit which often was not synchronized with farm operation seasons

Problems, mostly related to lay-out of irrigation schemes was extensively presented. Finally conclusions and recommendations were presented.

Issues and questions raise included the following:

- What will be recommendations to policy makers?
- Have you looked in to the literature and secondary sources of information particularly on work done regarding environmental indicators?
- How is this to be integrated in to the MoWR data base?
- How the impact of particularly small scale irrigation is schemes to be captured as they are widely dispersed and because of that perceived to do no harm to the environment?
- Should environmental indicators not be included in the performance management?
- Are there any established technically sound evaluation methodologies for evaluating irrigation schemes?
- How big is the issue of ownership when it comes to irrigation schemes?
- Are there any checks made when data are entered in to the data base?

2.7 Experience sharing (Experts participating from Tanzania and Kenya)

Tanzanian experience particularly emphasized on the inclusion of the private sector in many aspects and made recommendations towards increased involvement of private sector actors. Data collection is also a challenging task in Tanzania and efforts are being made to involve students of higher learning institutions to participate in data collection. Tanzanian experience reveals that strengthening the basin Authorities is very critical while increased involvement of zonal offices is also vital.
In Kenya it was reported huge data has been collected in the framework of the anile basin initiative project. It was mentioned however, that the data quality is said to be poor since data are generated through digitizing existing maps and extrapolating from secondary sources. Who, when, by whom should data be collected are also outstanding questions in Kenya. The classification of irrigation schemes in to the categories of privates, small holder and national schemes have been found to significantly deviate from the system in Ethiopia. The issuance of water permits is mentioned as one means of enhancing monitoring of water extraction.

III. Group presentations

Three groups were formed for group discussions under the following three thematic areas:

Group 1: **methodology for data collection and calculation of indicators of irrigated agriculture and Agricultural Water Withdrawal (AWW**

Responding to the general questions provided to the group the following were mentioned: to the question as to which approach should be taken in data collection, a multidisciplinary team based approach was suggested instead of the woreda based data collection in which different individuals are sent to different places. The team based approach ensures uniformity and enhances the quality of data that is collected. It was underlined that the team must be composed of skilful and trained knowledgeable individuals and all materials and instruments need to be provided for them.
To the question whether the methodology could be substituted with remote-sensing and similar other technologies, positive response was given by mentioning that such technologies could accelerate data collection and could be less costly as well.

Five year data collection interval was recommended as realistic and pragmatic.
To the question raised as to who should be monitoring the indicators, it was mentioned MoARD should be responsible for small scale while the MoWR should handle the big farms. It was mentioned the regions and the basin authorities should channel information to the MoWR

Group 2: **Agricultural Water Management Database System updating and integration with other sectors**

The group presented as lessons learnt for the web-site part the following:

- Providing water sector information and collection of data at community level is possible
- This intervention is the 2nd of its kind in the country and adds to earlier rudimentary efforts
- collection of data is possible from areas where there is viable information structure
- the intervention reveals that if opportunities are availed, much work could be done at community levels
- Provides knowledge and creates awareness to other sectors

As problems and questions left open the group said the following:

- Required entry of irrigation data
- Partnership with stakeholders should be established (to run the web-site)
- Integration with the MoWR system should be undertaken
- Responsibility to run internet connection availing computers and accessories at regional level should be cleared
- data integrity and quality aspects not yet addressed
- Validation rules not yet clearly spelt out

Under institutions to be involved were mentioned MoARD, BoARD, MoWR, regional water bureaus. It was schematically depicted that data generation takes place at community and kebele levels while data consolidation collection should take place at woreda level. Data entry takes place at the regional water bureaus, regional bureaus of agriculture as well as the basin authorities.
To the question as to who should modify the data, it was recommended the MoRS personnel should do that. To the question as to which information system to link with the following were enumerated: "Eniramed" (UNECA) which is an environmental and natural resources database; Meteorology web-site; AQUASTAT and EWMI

Group 3: **methodology and indicators for irrigation performance assessment at national level**

To the general questions provided for discussion the group responded as follows.
Under lessons learnt from the project were given:

- Water resources are not adequately and properly utilized and managed
- the water sector lacks rules and regulations
- Responsibilities and obligations are not well defined
- No institutional mechanisms are put in place for performance assessment
- No water audit

Under problems left open were mentioned:

- soil and water conservation not well considered
- Interface between ground and surface water not well considered
- Monitoring tools in the design not well integrated
- Environmental aspects not included
- Relevant stakeholders not involved
- Rules and regulations not in place
- Land use management and water management not integrated
- Drainage component and elements not well integrated
- Extrapolation to national level remains a challenge

As institutions that need to be involved were mentioned: the MoARD; the EPA; Mining Authority; NGOs; Enterprises; Regional Bureaus; and Administrations. An independent coordinating body is recommended.
On the specific questions the responses were the following.

To the question as to how to standardise the performance assessment methodology to national level it was recommended to refer to international experiences, draw lessons from the pilot survey and take in to account agro-ecology, socio-economics as well as the objectives of the schemes.

With the closing remarks of Mr. Teshome Atnafe the national coordinator, MoWR, the workshop was officially closed

Annex 1: Participants of Final Workshop
Project: Strengthening National Water Monitoring Capacities with Emphasis on Agricultural Water Management (GCP/GLO/207/ITA)
1-2 December 2009
Queen Sheba Hotel, Addis Ababa

No	Name	Organization	Region	Phone
1	Waloa Wittica	Afar Water Bureau	Afar	0911-717742
2	Frew Abebe	Awash Basin Authority	Federal	0913-007240
3	Girma Lemma	OARDB	Oromia	0912-228506
4	Amare Yimechio	World Bank	A.A	0912-439847
5	Aweke Nigatu	MoWR	A.A	0911562845
6	Eng.PW. Muchangi	MWI/kenya	Kenya	254-722-873668
7	Tadesse Shimelles	AMU	SNNP	0813-528494
8	Teshome Atnafie	MoWR	A.A	0911-611238
9	Getu Zegeye	MoWR	A.A	0911-446370
10	Tsegaye Debebe	MoWR	A.A	0911-636322
11	Tilahun Hoerdafa	EIAR/Nazareth	Federal	0911-842492
12	Tesfaye Kebede	Dire Dawa	D.D	0815-231838
13	Getachew Alem	GIRWI	A.A	0911-223346
14	Demis Alamirew	Geologicl Survey	Federal	0911-476280
15	J.pve Hixgevenn	Fao HQ	Rome	
16	Yohannes Zerihun	MoWR	A.A	0911-898046
17	Mequannint Tenaw	MoWR	A.A	0911-457747
18	Solomon Cherir	MoWR	A.A	0911-887678
19	Yemane Sahlu	A/AUA	A.A	013485683
20	Belachew Mehari	Wonji Sugar	Oromia	0911-005663
21	Girum Keshewabely	MoWR	Federal	0911-641594
22	Tadesse Bekelle	MoWR	Federal	0911-883246
23	PABA Thichele	IOC		0911-487670
24	Tewodrees Fikrie	Debre Brihan	Amhara	0911-354649
25	Aster Barhe	Debre Brihan	Amhara	0911-752766
26	Yonus T/Micheal	EDA	A.A	0911-770414
27	Dr. Amos Majule	TRA-VDSM-TARAPHY	Tanzania	255-754-365644
28	Dawit Ayele	MoFED	Federal	0911-564289
29	Awel Kedir	MoMRB	Oromia	0911-082896
30	Israel Tessema	MoWR	Federal	0911-315896
31	Abebe Tasew	MoWR	Federal	0911-730052