Nile Basin Initiative/Eastern Nile Technical Regional Office

Federal Ministry of Water Resources

Amhara Region Food Security Coordination and Disaster Prevention Office

Community Action Plans

2008/09

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NBI/ENTRO: Flood Preparedness and Early Warning Project

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1. General

The Flood Preparedness and Early Warning project (FPEW or Flood Project) is one of the fast track projects of the Eastern Nile Regional Technical Office (ENTRO) which was developed under the framework of Eastern Nile Subsidiary Action Program (ENSAP). The project Goal is to reduce human suffering from floods and increase the benefits of floods for the citizens of the Eastern Nile nations – Egypt, Ethiopia and Sudan.

In Ethiopia the FPEW which is also commonly referred to as the Flood Project is being targeted mainly at rural communities in the floodplains surrounding the Lake Tana area in the Abay River basin. The project will also work with communities in Gambella town in the Baro-Akobo basin in south-western Ethiopia. In Amhara Region, the project is to be coordinated by the Food Security and Disaster Prevention Office by deputation from the Amhara Region Bureau of Water Resources. Two weredas Fogera and Libo Kemekem weredas have been selected for participation in FPEW I and each has selected two Kebeles or communities to lead engagements in project supported flood preparedness and early warning activities.

A special mission tasked with completing community action plans for the 2008/09 season was deployed to the field between 15 and 25 July, 2008. The mission comprised of W/o Semunesh Golla of the Hydrology Department at Federal Ministry of Water Resources who is also the National Flood Project Coordinator, Ato Mulugeta Tadesse who is the Geographic Information System (GIS) specialist at ENTRO's Regional Flood Coordination Offices and Ato Yohannes Habtu, a national consultant assigned to facilitate and provide technical assistance to the planning process. The team was assisted in the field by staff from the Amahara Region Food Security Coordination and Disaster Prevention Office, the South Gondar Zone Food Security and Disaster Prevention Office, Fogera Wereda Administration, Libo Kemkem Wereda Administration and the Wereta Technical Vocational College.

1.1 Participatory Planning Process

A rigorous participatory process was undertaken in the creation of the action plans. The mission began its activities by holding consultative meetings with the FSCDPO on both the content and procedures to be followed in conducting the participatory planning process. The FSCDPO helped host and organize a one-day orientation workshop of project stakeholders at the zone, wereda and kebele levels. The orientation was held in the premises of the Wereta Agricultural Technical Vocational Training College on Sunday 20, July 2008. The list of attendants at that meeting is provided in Annex C. Following the orientation workshop the mission held participatory planning work group meetings in which community representatives from the selected Kebeles, pertinent wereda officials, the FSCDPO zonal staff and ORDA staff were represented. The detailed plan of action for the individual Kebeles were extracted from these day-long participatory planning meetings.

1.2 Prioritization of Community Needs

The communities' needs are in excess of the scope and resources of FPEW I project. Consequently it has been necessary to match needs with the project's ability to respond. A participatory approach based on building mutual consensus was adopted in the process of prioritizing the community needs and matching them with the project's response capabilities. Below is a summary of how the group managed options for responding to the most acute identified needs

- Access Roads for reducing the suffering from physical isolation received the highest priority from both community representatives and Wereda and Kebele officials. However, extensive discussions on the prohibitive costs of road construction in the floodplains and information about the limited scope of the Flood Project resulted in acceptance of the need for innovative solutions to overcoming the suffering from physical isolation. Accordingly it was decided that the project would seek to relieve the impacts of physical isolation by investing in communication equipment and studying the opportunities for supporting the rehabilitation of existing footpaths and animal tracks.
- River training and dredging were also awarded high priority by the community representatives and local officials. This was avoided because of the prohibitive costs and challenges of sustainability.
- Sustainable resources Use (Reciprocal Grazing Rights) periodically emerged as a priority because the floodplains communities host the wereda's herds during the dry season when pastures are plentiful but do not share the same hospitality form upland communities during the flooding season when their land is submerged and floodplains communities are hit by acute pasture shortages during the flood season. The issue was addressed as a governance issue to be tackled by the Wereda Administrator and his team. The project has kept the possibility of using the constraint as a reason for providing training on sustainable resource use and environmental sustainability.
- Human and Animal Health Interventions also appeared high on the community's priority list but are to be addressed by future phase of the project and not the immediate start-up phase of FPEW I.

1.3 Targeting and Sustainability

The project benefits are all community-based and there is no need to develop mechanisms for targeting individual households though as a matter of best practice the project will monitor social impact safeguards by checking to ensure no groups are systematically or accidentally left out from enjoying the project's benefits. The Amhara Region Food Security and Disaster Prevention Office selected the two weredas based on their estimation of the acuteness of needs in the two weredas and the understanding that the expanded Flood II project will be activated in the coming year during which time it will be possible to include the other weredas. The wereda administration selected pilot communities on the basis of their estimation of the acuteness of needs in the target communities. Targeting has therefore been undertaken on the principle of giving priority to addressing the needs of the worst affected

Kebeles and communities and on shared communities between the communities, government and the project in reducing suffering from floods.

The planning process has also been cautious in applying principles of technical, financial, social and environmental sustainability in its pursuit of solutions to the suffering caused by floods.

1.4 Implementation Arrangements and Timelines

Implementation of the Community Action Plans is to be spearheaded by the Amhara Region Food Security Coordination and Disaster Prevention Office (FSCDP) which has been assigned the tasks by deputation from the Federal Ministry of Water Resources and the Amhara Region Bureau of Water Development. FSCDP is the lead and central coordinating institution in the management of flood emergencies in the Lake Tana area. It is mandated to coordinate the efforts of both government and civil society institutions. The existing flood preparedness and mitigation system is weak on preparedness and forecasting and strong on emergency response. Flood preparedness does not currently encompass the provision of early warning data or information to communities at-risk. The grim choices faced by flood-affected communities around Lake Tana consists of weathering the consequences of seasonal floods or evacuating to temporary shelters outside the floodplains. FSCDP's experience with flood preparedness and mitigation has been evolving relatively rapidly over the past three years. In the Lake Tana area it coordinates flood season emergency support for acutely affected communities in Dembia, Derra, Fogera and Libo Kemkem weredas. A number of NGOs including the Ethiopian Red Cross, ORDA and World Vision International have been involved in the provision of emergency support to flood affected communities and limited post-flood water and sanitation rehabilitation work with floodplains communities. There is currently no comprehensive flood preparedness and early warning system being operated by NGOs or the government in the floodplains. Outside of the floodplains, mainly in North Wollo Zone of the Amhara Region, FSCDP and ORDA have developed a successful partnership in flood prevention and management. The approach melds low-technology community-based and capital intensive (machine-based structural works) instruments to reduce the risk of flooding to both rural and urban populations. FSCDP and ORDA have executed three such projects so far with one pending completion. In the first project of its kind, FSCDP contracted ORDA to train the *Dikkalla River* which threatened the livelihoods of rural populations inhabiting its embankments and posed a threat to the small town of Kobo in North Wollo zone. ORDA mobilized the rural communities to undertake labor-intensive stabilization works in water-shed draining into the river and around the river embankments as well while it engineers undertook structural works for training the river back on its natural trajectory. A similar project was undertaken by ORDA on behalf of FSCDP in Habru Wereda, North Wello zone where the *Derqwenz* River was trained back to its natural course and the threat to the small town of Habru was eliminated by FSCDP/ORDA's interventions. A third project is pending completion in the Borkena valley of Dawa Cheffa Wereda of South Wello Zone where a similar mix of community-based water shed management and flood preparedness are to be coupled with structural works to reduce the threats of the *Borkena* and *Dimma Rivers* to both rural and small-town populations in the wereda. The flood preparedness activities are financed from the Regional Government's budget with one of the projects receiving financial support from the European Union (EU). Due to the strength

of the partnership between FSCDP and ORDA, because of the pressing need to commence community-level activities the FSCDP and FPEW I planning team have opted to sole source a limited number of activities to ORDA. [See Annex D and E for Illustrative Terms of Reference]. The sole sourced activities are intended to sustain the momentum of FPEW's initial community engagements and will be confined in FPEW I to the conducting of feasibility study for the rehabilitation of existing footpaths. Community awareness creation on the emerging flood preparedness and early warning system will be embedded into the feasibility study. The awareness creation will be supported with an external consultant who will be responsible for developing the content to be communicated in the community awareness creation sessions. Broader participation of civil society and private contractors is anticipated under Flood II as is a more comprehensive investment in the development of the content to be communicated in the comprehensive flood preparedness and early warning system that will emerge under FPEW II.

Implementation timelines for the project have been aligned with the timing of seasonal flood cycles in the implementation areas. The community action plans are being completed at a time when the flood season in the Lake Tana area is beginning to peak and this has affected the sequencing of some of the activities but is not expected to alter the community and stakeholder set project priorities. Implementation of Flood I activities are anticipated to stretch to the end of 2009. However, because the transition between Flood I and Flood II is expected to be managed as a continuum a three-year implementation time frame (which would capture two full flood seasons within the project cycle) has been proposed.

1.5 Integration with Other Project Components

The community action plan is an integral part of the overall FPEW I project and sustains direct links with the Government Capacity Building and Regional Collaboration components of the FPEW project. Thhhe community component relies on the government capacity building component of the project for access to improved early warning services the core responsibilities for which are borne by specialized government agencies. Accordingly the community component relies on NMSA to install rain gauges and train development agents in rainfall data collection in all project kebeles including Wagetera. The Hydrology Department of the Federal Ministry of Water Resources will support the community component with the provision of hydrological information for early warning purposes once the Ministry begins to operate its planed flood forecasting center. Until the FFC is established the Hydorlogy Department will share real time hydrological data from upstream river monitoring stations, including two on the Ribb River with the community's designated flood preparedness and early warning groups.

There are also robust links with the Regional component of the project as care is to be taken to collate key lessons learned in the implementation of the project so the acquired knowledge can be shared with Regional partners in the appropriate platforms.

Wagettera

Community Action Plan

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2. Wagettera Community Action Plan

2.1 Wagettera: Flood Vulnerability Profile

Wagettera Kebele is a community of more than 1200 households with an estimated population of 10675 inhabitants. Its topography and location expose Wagettera to regular devastation by floods. Wedged between the *Ribb* and *Gumera* rivers to its north and south respectively and bordering Lake Tana to its west, the entire Kebele is submerged in water for up to 95 days each year. This is due to periodice breaching of the banks of both the *Ribb* and *Gumera* rivers and seasonal backflow from the Lake. Flooding usually starts in July (Hamle 1) and does not recede or dry out until late September (Meskerem 15) to mid-October (Ttikimt 05).

Floods often result in human deaths in Wagettera Kebele. Last year a three year old child was confirmed dead from drowning during the floods. It is believed that other deaths did occur but they were not reported due to the physical isolation of the community during the flooding season. Livestock, the main form of traditional savings of the community, are also regularly lost to floods. In the 2006/07 flood season 2 heifers, 2 bulls, six calves and an untold number of sheep were lost to drowning during the floods. The floods also increase the incidence of human and livestock diseases. Floods aggravate the incidence of acute diarrhea and other waterborne disease for humans during the peak flooding periods and the incidence of malaria in the post-flood season. Livestock are affected by trypanosomiasis, liver fluke and a broad variety of animal diseases because of the conducive insect breeding conditions created by the excess availability of flood waters.

Suffering also results from the physical isolation caused by floods. The part of the Wagettera population which lacks the strength or knowledge of the safe routes to negotiate walking across the floodplains at peak flood seasons is severed from communications with the rest of the world until the floods recede and footpaths re-surface from their submergence. The economic costs of isolation are high because the floods coincide with the highest seasonal price peaks for grains which traditionally occur during the rainy season. In addition to the missed economic opportunities physical isolation aggravates morbidity in the community because the sick and weak are unable to make the journey to health facilities on the main road and nearby towns. Physical isolation also impedes communication with the rest of the wereda and constrains the ability of the community to acquire and react to life or property threatening events.

Wagettera is a proactive community in its struggle to reduce suffering from floods and has a strong history of collective action to alleviate suffering from floods. The community is organized into workgroups and has this year completed works involving the installation of 750 sandbags to reinforce the dikes around the main course of the Ribb River. In the past, the community has organized volunteer groups which contracted heavy machinery from nearby towns to assist their voluntary labor-based reinforcements of dikes and physical protection structures on the Ribb River. The effort included collection of contributions from community members to pay for the hired machinery.

2.2 Wagettera Summary Description of Project Activities and Tasks

Wagettera Activity One: Enhancing Community Participation and Use of Early Warning System	Lead Implementing Agency
Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .	MoWR/ENTRO Planning Mission
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	ENTRO/ANRS FSCDPO/Wereda Administration
Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).	MoWR/Wereda Administration
Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.	Local consultant/FSCDPO
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	NMSA
Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information	Wereda Administration/Kebele Flood Early Warning Cells and Sub-station representatives
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	ENTRO/MoWR/ANRS FSCDPO

During the participatory planning exercises consensus was reached by all the stakeholders on the need to capture the vital contribution that flood early warning information can make to helping communities save lives and protect property. Stakeholders also recognized that the formal flood early warning system being operated by the various government agencies is in the process of building its technical capacities and does not currently have the capacity to provide early warning analysis and reports to affected communities in a timely manner. Consequently all parties, including community representatives agreed on the need to award the highest priority to *enhancing community participation and use of the flood early warning system to reduce loss of human life and damage to property from floods*. The team identified seven things that the project could do to realize this objective the sum of which would substantially reduce suffering from floods.

Activity 1: Task #1. The first task identified as being crucial to increasing community participation and use of early warning information was the need to organize community level Flood Early Warning Cells (FEWCs). Flood early warning data is currently collected by the Kebele Disaster Prevention Committee

and passed on to the Wereda Administration and Regional Food Security Coordination and Disaster Prevention Office respectively. Flood monitoring is very difficult in Wagettera during the flood season when it is needed the most because the floods make movement difficult, the Kebele has no boats and committee members either have to walk through the flooded fields or wait for information about flood disasters to come to them. This limits flood *prevention* capabilities and tilts the entire flood early warning system towards response-orientation. To help resolve these problems the project will assist the Kebele in establishing flood-early warning sub-stations in three outlying *Gotts*[1] in the Kebele. The three sub-stations will be operated by volunteers to be selected by the Kebele leadership and community members. The sum of the three sub-stations and the main reporting center at the Kebele level will form the Community Flood Early Warning Cell for Wagettera Kebele. The FEWCs will be responsible for both gathering community level flood early warning data and disseminating hydromet and other flood early warning data to their respective communities. The re-organization is expected to increase efficiencies in the early warning system mainly arising from the ability of the multi-tasking Kebele Committees to delegate the specialized task of gathering and disseminating flood early warning information to their respective community members and by eliminating the information blackout period caused be the physical inaccessibility of most of the communities during peak flood events. The FEWCs will be supported with start-up training in flood *monitoring* and early warning and their capacities upgraded as the technical content of the national flood early warning system is articulated and a standardized system of flood early warning evolves with FPEW support.

Activity One: Task 2. The project will supply Kebele Flood Preparedness and Early Warning Cells with mobile telephones. Community representatives voiced a marked preference for mobile phones over solar- powered wireless telephones on the grounds that the fixed units were technical less reliable because the technology is still evolving and because the units are security-intensive as they attract the unwelcome the attentions of inquisitive children and the odd village vandal. KFEWCs will be responsible for adhering to a publicized schedule of telephone communications at fixed timely intervals. A system of one check-in call every 24 hours is to be used to transmit community level data and receive hydromet data between the sub-stations and the Kebele. The intervals can be reduced to 12 or 6 hour intervals in the case of monitoring the progress of serious flood threats. In the case of extreme flood events the telephones can be used to help manage rapid responses and the system of scheduled calls can be replaced by an emergency no-blackout period. The project will provide pre-paid cards in the amount of … Birr worth … minutes of call time to the KFEWCs to start-up the system and to last throughout the 95 day flood season. Cards will be replenished at the start of each flood season for the coming (3) years. The Kebele administration will be responsible for dispensing the telephones to the selected individuals and retrieving them at the end of each flood season. The individual users will be responsible for compensating the Kebele FEWCs for any loss or damage to the telephone apparatus.

[1] *Gotts* are small clusters of settlements (small villages) that are loosely organized to perform social and community governance functions.

Activity 1: Task #3. The main source of life and property threatening floods in Wagettera comes from the tendency of the River Ribb, and, to a lesser extent, the Gumera Rivers to break their banks and veer off course during the flooding season. Access to lead time on the likelihood of such flooding events can have a profound impact on the ability of Wagettera's communities to prepare and protect themselves from life threatening floods. The Ministry of Water Resources has two river-gauge stations in the upper and lower sections of the Ribb River. As the processing and analysis turnaround time on river-gauge readings is currently too long to provide the communities with flood early warning analysis and reports it has been decided that the project will help the communities access real-time hydrological data with preliminary estimates of downstream impact times as an introductory flood early warning service. The river-gauge stations will report to a delegated point-person at the Fogera Wereda Administration who will in turn be responsible for cascading the information to the FEWCs.

Rainfall data will also be made available to the wereda but will not be shared with the FEWCs because the data sets are large and require processing to be meaningful.

Activity 1: Task #4. The FEWCs will be supported with technical assistance to help develop the skills and systems they need to fulfill their new responsibilities. The training will consistent of raising the awareness of the selected FEWCs candidates on the emerging Flood Preparedness and Early Warning System and developing their skills in telephone communication, familiarizing them with the apparatus and overall communication system. One training event will be organized for FEWCs from the three other participating Kebeles in Fogera and Libo Kemkem weredas.

Activity 1: Task #5. The project will to invest in expanding the hydrological and meteorological database of the participating communities. One of the measures the project will introduce to this end is the installation of at least one rain gauge in each participating kebele. Accordingly Wagettera will receive rain gauges for one Grade 4 meteorological station from National Meteorological Services Agency through the support of the project. The project will pay for the equipment and training for the Bureau of Agriculture and Rural Development staff (Development Agents) who will be responsible for taking the readings. ENTRO will facilitate payments for the gauge and embedded training services and NMSA will construct and install the equipment on a site to be selected in Wagettera.

Activity 1: Task #6. Community participation in the flood early warning and preparedness system is vital to its effectiveness. This is mainly because flooding in Wagetterra tends to build-up slowly but often occurs at night-time when it is difficult for communities to observe its progress. Extreme flooding events in Wagettera tend to be small and too localized to be picked by current early warning instruments and the formal early warning system also suffers from a near blackout on preventive flood early warning information at the peak of the flooding season due to the difficulties of mobility in the flooding season. The activities of the FEWCs combined with real-time data sharing with the hydromet data collecting agencies and general project support can significantly increase early warning lead times and help reduce suffering from floods. To this end the FPEWCs will be responsible for assemblining and transmitting early warning data to the main Kebele center and as necessary to the wereda center while they will also be responsible for receiving and disseminating, in a timely and accurate manner any

information on flood early warning in general and early warning lead-time in particular to their respective communities.

Activity 1:Task #7. The main responsibility for monitoring the efficient execution of this activity will be that of the ANRS FSCDPO which has officially been delegated focal implementation agency for the flood project by the Regional Government of Amhara National Regional State. ENTRO and MoWR will also provide general monitoring support while the implementation partnerships on which the project is based emphasizes the principle that each implementing agency is ultimately responsible for the technical, managerial and social efficacy of the implementation of their respective roles and responsibilities.

Wagettera Activity TWO: Reduce the impact of physical isolation due to floods.	**Lead Implementing Agency**
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	ORDA with contract supervision from ENTRO/FSCDPO
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	ORDA
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	ORDA
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	ORDA/Local consultant
Task #5: reinforce community footpaths and animal tracks	ORDA/Local construction company

Perhaps the biggest impediment to eliminating human suffering from floods in Wagettera is the challenge posed by the seasonal physical isolation of the communities. The seriousness of this challenge is recognized by all of the project's stakeholders. There is also recognition that the lasting long-term solution to the problem is the construction of all-weather access roads. However, the floodplains are set on deep and unstable alluvial soils with a high water table which makes construction of structures with deep foundations prohibitively expensive. However the depth of the problem and consequences of inaction were also recognized by all project stakeholders to be unacceptably high. Consequently the project has devised an innovative set of tasks to help reduce the impact of physical isolation.

Activity Two. Task #1. At the community's request the planning mission has approved the decision to study options for rehabilitating dry-season footpaths and animal tracks for use during the flood season. The embankments of the Ribb river have been identified by the communities as the most consistently elevated structure in the Kebele and the community seeks the project to study the possibility of reinforcing the embankments in the dry season to serve as an all weather footpath and animal track for

servicing the communities during the flood season. The community-based structural reinforcements would enhance compaction of the embankments and would facilitate rapid evacuation is the event of extreme floods. The embankments cut across a cross-section of flood affected woredas in the flood plains and for this reason a special assessment of the feasibility of upgrading the footpaths along the Ribb Rivers embankments or on alternative elevated routes for enhancing flood season mobility is to be commissioned to the Organization for Rehabilitation and Development in Amhara. [Annex … Terms of reference for study of routes and costs of all weather footpaths in Fogera floodplains]. The extent of project support for rehabilitation of the foot paths or even whether the project will support footpath rehabilitation will rely on the outcome of the study's cost and feasibility assessments.

Activity 2: Task #2. The project will support the installation of color-coded wooden poles to mark-out safe passage ways and warn users of flood danger levels in the floodplains during the flood season. Installation of the polls will be sequenced to enhance the integration of the project's investments in flood early warning and preparedness with its support to community-based structural works. The poles will be re-usable with installations in the pre-flood season (end-of June) and removal in the late flood season (after mid-September). Sotrage will be provided in temporary flood shelters where the polls will be re-painted each-year before re-deployment. A Keeper of the Color Coded Polies will be designated by the community and Kebele leadership. Especially high risk areas will be denoted by the use of flags with a three color flag code signifying safety status (green, yellow and red flags in depicting declining orders of safety and accessibility). In 2009 the poles will be installed early in the flood season to demonstrate their use and significance to community members.

Activity Two: Task #3. The project will supply sirens and emergency lights (hurricane lamps) to illuminate safe passageways and temporary shelters for nighttime evacuations to temporary shelters and local safe havens. Sirens will also use sound codes to denote different risk levels and will be installed only in locations where responsible community leaders are delegated for flood preparedness and management by their communities and the Kebele leadership. ENTRO procure materials and ORDA will distribute as embedded service in its footpaths rehabilitation and community education and mobilization implementation sub-contract**.**

Activity Two: Task #4: Awareness creation and action learning events will be organized to ensure community members understand how the enhanced flood preparedness and early warning system works and to hold mock emergency evacuation trails. The aim of the exercises is to ensure the community's user-readiness for engaging in the enhanced flood preparedness and early warning facility.

Activty Two: Task #5. Based on the recommendations of the assessment study and the availability of funds, the project will support the structural reinforcement and construction of dry season footpaths and animal tracks to serve as elevated safe access ways in the flood season.

Wagettera Activity Three: Upgrade community preparedness and response capabilities	Lead Implementing Agency
Task#1: Upgrade potential and existing temporary shelter facilities.	ORDA
Task #2: Provide material support and training on temporary shelter management.	ORDA

One of the features of the suffering from floods in Wegettera is that it is not always on a massive scale and is often on a very localized but intense scale where villagers have to evacuate their homes and abandon their holdings for a few hours and can return to their inundated homes shortly afterwards. The current response facility is only geared to responding to disasters of a larger magnitude when affected populations have to be moved to shelters in the high-grounds outside the floodplains for several weeks. The community and planning mission identified the need for a more staggered response capability so communities have the means to react to intense localized events without drawing on the Wereda's resources and can gradually move out of their localities if and only as the problem becomes more widespread and of a longer-duration. To this end the project will help communities by supporting the execution of the two tasks enumerated below.

Activity Three: Task #1. Upgrading existing and potential temporary shelter facilities will allow for a more staggered response to flood disasters in the Wagettera. The current options are either to evacuate to the highland above the Wereta-Bahir Dar highway or to suffer the full brunt of the floods. The community has identified its schools as the best facilities for providing temporary shelter from floods. The project will assess the feasibility of rehabilitating the structures and converting the selected structures for multipurpose uses as schools and temporary shelters from floods. The following five potential sites have been identified for potential assessments. The goal will be to match temporary support facilities with the number of FEWC sub-stations so each sub-unit has some autonomy in both its early warning and response capabilities and affected populations do not have to trek far to access support for temporary shelter. The following five locations have been identified for assessment.

1. Mehal Wagettera (Upto 4th Grade – 5 Rooms)
2. Kristos Samera (Up to 3rd Grade – 2 Rooms)
3. Ttelifa (Upto 3rd Grade – 3 Rooms)
4. Enggorr (Upto 2nd Grade – 1 room)
5. Tsadik (Under 7s - 1 room)

Activity Three:Task #2. The project will provide limited material support and some equipment to the temporary shelters. Support will be limited to the provision of hurricane lamps for lighting during nighttime evacuations and sanitary materials for cleaning out the shelters after they have been used. No food, blankets or other forms of relief will be provided at the temporary shelters other than protection from intense flooding events. Users will have to rely on their own resources for the consumables they use while in the shelter. Structural works will be limited to reinforcing the selected structures to withstand extreme flooding events and will wherever possible avoid the construction of new structures.

Wagettera Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	Lead Implementing Agency
Task#1: Hold awareness creation and community consensus building meetings and events.	ANRS FSDPC/Wereda Administration/ORDA
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	ANRS FSDPO/Wereda Administration/ORDA/Local consultant

The people of Wagettera are not accustomed to the attentions of international organizations as the kebele is a food secure kebele with little history of external assistance. The Wagettera has some experience with a matching fund based water and sanitation project financed by FINIDA, it has very little history of engagement with international assistance organizations whether for technical assistance or material support. Consequently some mutual learning will need to take place for a clear and cohesive understanding of the respective responsibilities of the project, government counterparts and community contributions to be understood by the general community population. Attainment of a clear and transparent understanding of the respective roles and responsibilities of implementation partners will require the holding of several community awareness creation and skill transfer events.

Activity Four: Task 1. Four half-day community awareness creation events will be held at the sub-stations to present the project to the community and seek their endorsement of the persons selected to lead early warning and preparedness activities in their respective localities. Project stakeholders from both Federal and Regional level will be invited to take part in the events and provide technical backstopping on the accuracy of presentations to the community. The Wereda Administration will be invited to make an especially strong showing at these events to demonstrate its backing for the project and its commitment to inheriting and operating the system over the long-term.

2.3 Wagettera Budget Breakdown

Budget - Activity One: Enhancing Community Participation and Use of Early Warning System	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Establish community flood early warning and preparedness groups at *Kebele* and (3) *Gott* (sub-station) levels .	500	500	500	1,500
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	1040	250	250	1,540
Task #3: Share real time hydromet data from government stations with communities and wereda administration.	100	100	100	300
Task #4: Provide start-up training on early warning information collection and dissemination to selected community members.	3,000	1,500	1,500	6,000
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	0	0	0	0
Task #6: Community Flood Early Warning cells will collect and disseminate flood Early Warning information	500	500	500	1,500
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	500	500	500	1,500
Total Annual and Three-year Budget – Activity One	5,640	3,350	3,350	**12,340**

2.4 Wagettera Note on Activity One budget.

Task #1 has been completed by the planning mission. The annual USD 500 budget is allocated for calling and supporting general community meetings to endorse the selection of delegates onto the FEWCs. The money will be made available to the FEWCs either through embedded services with ORDA or through transfers to the ANRS FSCDPO which can also facilitate the annual events.

Task # 2. Budget is for procurement of 4 SIM cards and 6 mobile phone apparatuses at USD 50 and USD 100 per unit respectively. Prepaid cards of Birr 100/month/apparatus for 3 months (USD 190) will also be A contingency of USD 50 has been reserved for miscellaneous expenses related to distributing the mobile telephone sets. USD 250 has also been reserved for annual replenishment of pre-paid card costs.

Task #3 will receive project support in the form of printed, standardized formats for receiving and disseminating information. Readings of the rain gauge will be made by Ministry of Water resources employees. Wereda administration will absorb costs of dissemination to Kebele FEWCs.

Task #4. Training will be provided by a local consultant to be recruited by ENTRO or embedded in ORDA's services subcontract. The training will be three days long and will target ten candidates from the Kebele. The budget includes the estimated per diem costs of 10 participants, the travel, accommodation and per diem costs of the consultant have also been equally apportioned to the four participating Kebeles. Training will be held at two separate venues in Fogera and Libo Kemkem weredas. Wagetterra's candidates will attend session in Wereta. Annual one or one and a half day refresher training events have also been budgeted for the coming two years. The refresher courses are intended to upgrade and refresh the technical capabilities of previously trained staff and to also introduce any new staff to the technical features of the community-based flood early warning and preparedness system.

Task #5 will have its costs embedded in the NMSA sub-contract. NMSA will be responsible for constructing and installing rain gauges on site as well as training the Development Agents on how to read the gauge and record readings.

Task #6 will be financed mainly from community resources. The project has budgeted USD 500 per year to support the cost of stationeries and annual candidate selection/endorsement meetings for positions in the FEWCs.

Task #7 is the allocation made to ANRS FSCDPO for monitoring the progress of actitivities in Wagettera kebele.

Budget Activity TWO: Reduce the impact of physical isolation due to floods.	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	30,000	0	0	30,000
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	10,000	10,000	0	20,000
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	5,000	0	0	5,000
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	3,000	1,500	1,500	6,000
Task #5: Reinforce community footpaths and animal tracks	15,000	15,000	10,000	40,000
Activity Sub-Total	63,000	26,500	11,500	**101,000**

2.5 Wagettera Note on Activity Two Budget

Task One: Costs of the Study for both participating kebeles in Fogera wereda and kebeles sharing borders with the Ribb Rriver embankment are bundled into the line item. The study will be undertaken by ORDA. Ministry of Water Resources will be responsible for negotiating the contract and ENTRO will be responsible for dispensing the funds. Study will include the production of a bill of quantities for supporting community rehabilitation of the footpaths and animal tracks from which a more accurate budget estimate of the construction costs will be inferred.

Task #2: Costs will cover purchase of poles, labor and materials for color-coding and costs of transport and on-site installation.
Task #3. ENTRO will procure equipment and ORDA/FSCDPO will dispense to Kebele FEWCs and install sirens at selected sites.
Task #4. Budget includes costs of introductory post-flood season event in 2008 and a more sustained campaign in the pre-flood season of 2009.
Task #5. Only estimated costs are used. Study will produce more accurate costs of construction and assess technical feasibility of proposal. Works will be contracted to ORDA water and sanitation unit in order to leverage community labor and other resources.

Activity Three: Upgrade community preparedness and response capabilities	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Upgrade potential and existing temporary shelter facilities.	10,000	10,000	10,00	30,000
Task #2: Provide material support and training on temporary shelter management.	3,000	3,000	3,00	9,000
Activity Sub-Total	13,000	13,000	13,000	**39,000**

2.6 Wagettera Note on Activity Three Budget

Task #1. Costs include purchase and transport of construction materials and contractors fees. Communities will supplement with contributions in labor and in-kind (local materials and services) for completion of works.

Task #2. ENTRO will procure materials and equipment. ORDA or Wereda Administration by deputation from FSCDPO will install in sites. Budget includes costs of hurricane lamps, per diems of training staff, and lockers.

Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Hold awareness creation and community consensus building meetings and events.	2,000	2,000	2,000	6,000
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	3,000	3,000	3,000	9,000
Activity Sub-Total	5,000	5,000	5,000	**15,000**

2.7 Wagettera Note on Activity Four Budget

Task #1. Budget includes per diem costs for visiting Regional, Zonal or Wereda officials and resource persons.
Task #2. Content of training will be determined by project management and community felt needs.

2.8 Wagettera Time plan of Action

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 1:Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .												
Act. 1:Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.												
Act. 1: Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).												
Act. 1:Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.												
Act. 1: Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.												
Act. 1: Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information												
Act. 1:Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.												
Act. 2:Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.												
Act. 2: Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.												
Act. 2: Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.												
Act. 2: Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.												
Act. 2:Task #5: Reinforce community footpaths and animal tracks												

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 3:Task#1: Upgrade potential and existing temporary shelter facilities.												
Act. 3:Task #2: Provide material support and training on temporary shelter management.												
Act. 4:Task#1: Hold awareness creation and community consensus building meetings and events.												
Act. 4: Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.												

Nabega Kebele

Community Action Plan

2008/09

NBI/ENTRO: Flood Preparedness and Early Warning Project

3 Nabega Community Action Plan

3.1 Nabega: Flood Vulnerability Profile

Nabega Kebele is a community of 1165 households with an estimated population of 10957 inhabitants. Its topography and location expose Nabega to regular devastation by floods. Wedged between the *Ribb* and *Gumera* rivers to its north and south respectively and bordering Lake Tana to its west, the entire Kebele is submerged in water for up to 95 days each year. This is due to periodice breaching of the banks of both the *Ribb* and *Gumera* rivers and seasonal backflow from the Lake. Flooding usually starts in July (Hamle 1) and does not recede or dry out until late September (Meskerem 15) to mid-October (Ttikimt 05).

Floods often result in human deaths in Nabega Kebele. In last year's floods one man, a father of 4, died from flash floods. The incidence of acute diarrhea also resulted in an unknown number of deaths. Livestock, the main form of traditional savings of the community, are also regularly lost to floods. In the 2006/07 flood season 5 heifers and calves died from floods. An unknown number of sheep also died last year. Poultry and beehives are also very badly affected by floods. The community has struggled to maintain its beehives during the flood season because it can be a lucrative source of dry season income for households. Floods also destroyed crops in the field including teff, rice and noug fields. Nabega also lost a classroom from one of its few schools to floods last year. Shallow wells and capped springs built with the assistance of FINIDA were also destroyed by the floods last year.

Suffering has also resulted from the physical isolation caused by floods. Like Wagettera, Nabega Kebele is also isolated from the main wereda population for more than three months in the year. The economic costs of isolation are high because the floods coincide with the highest seasonal price peaks for grains which traditionally occur during the rainy season. In addition to the missed economic opportunities physical isolation aggravates morbidity in the community because the sick and weak are unable to make the journey to health facilities on the main road and nearby towns. Physical isolation also impedes communication with the rest of the wereda and constrains the ability of the community to acquire and react to life or property threatening events.

Nabega is a proactive community in its struggle to reduce suffering from floods and has a strong history of collective action to alleviate suffering from floods. This year the community came together collected Birr 12,000 in contributions and rented a bulldozer to help dredge the River Ribb. The bulldozer got stuck in the floodplains at the end of the works and the people contributed labor and more than 300 eucalyptus poles to extract the machine from the mud and avoid the damages that might have been levied against them.

3.2 Nabega Summary Description of Project Activities and Tasks

Nabega Activity One: Enhancing Community Participation and Use of Early Warning System	Lead Implementing Agency
Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .	MoWR/ENTRO Planning Mission
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	ENTRO/ANRS FSCDPO/Wereda Administration
Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).	MoWR/Wereda Administration
Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.	Local consultant/FSCDPO
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	NMSA
Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information	Wereda Administration/Kebele Flood Early Warning Cells and Sub-station representatives
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	ENTRO/MoWR/ANRS FSCDPO

During the participatory planning exercises consensus was reached by all the stakeholders on the need to capture the vital contribution that flood early warning information can make to helping communities save lives and protect property. Stakeholders also recognized that the formal flood early warning system being operated by the various government agencies is in the process of building its technical capacities and does not currently have the capacity to provide early warning analysis and reports to affected communities in a timely manner. Consequently all parties, including community representatives agreed on the need to award the highest priority to *enhancing community participation and use of the flood early warning system to reduce loss of human life and damage to property from floods*. The team identified seven things that the project could do to realize this objective the sum of which would substantially reduce suffering from floods.

Activity 1: Task #1. The first task identified as being crucial to increasing community participation and use of early warning information was the need to organize community level Flood Early Warning Cells (FEWCs). Flood early warning data is currently collected by the Kebele Disaster Prevention Committee

and passed on to the Wereda Administration and Regional Food Security Coordination and Disaster Prevention Office respectively. Flood monitoring is very difficult in Nabega during the flood season when it is needed the most because the floods make movement difficult, the Kebele has no boats and committee members either have to walk through the flooded fields or wait for information about flood disasters to come to them. This limits flood *prevention* capabilities and tilts the entire flood early warning system towards response-orientation. To help resolve these problems the project will assist the Kebele in establishing flood-early warning sub-stations in three outlying *Gotts*[2] in the Kebele. The three sub-stations will be operated by volunteers to be selected by the Kebele leadership and community members. The sum of the three sub-stations and the main reporting center at the Kebele level will form the Community Flood Early Warning Cell for Nabega Kebele. The FEWCs will be responsible for both gathering community level flood early warning data and disseminating hydromet and other flood early warning data to their respective communities. The re-organization is expected to increase efficiencies in the early warning system mainly arising from the ability of the multi-tasking Kebele Committees to delegate the specialized task of gathering and disseminating flood early warning information to their respective community members and by eliminating the information blackout period caused be the physical inaccessibility of most of the communities during peak flood events. The FEWCs will be supported with start-up training in flood *monitoring* and early warning and their capacities upgraded as the technical content of the national flood early warning system is articulated and a standardized system of flood early warning evolves with FPEW support.

Activity One: Task 2. The project will supply Kebele Flood Preparedness and Early Warning Cells with mobile telephones. Community representatives voiced a marked preference for mobile phones over solar- powered wireless telephones on the grounds that the fixed units were technical less reliable because the technology is still evolving and because the units are security-intensive as they attract the unwelcome the attentions of inquisitive children and the odd village vandal. KFEWCs will be responsible for adhering to a publicized schedule of telephone communications at fixed timely intervals. A system of one check-in call every 24 hours is to be used to transmit community level data and receive hydromet data between the sub-stations and the Kebele. The intervals can be reduced to 12 or 6 hour intervals in the case of monitoring the progress of serious flood threats. In the case of extreme flood events the telephones can be used to help manage rapid responses and the system of scheduled calls can be replaced by an emergency no-blackout period. The project will provide pre-paid cards in the amount of Birr 2000 to the KFEWCs to start-up the system and to last throughout the 95 day flood season. Cards will be replenished at the start of each flood season for the coming (3) years. The Kebele administration will be responsible for dispensing the telephones to the selected individuals and retrieving them at the end of each flood season. The individual users will be responsible for compensating the Kebele FEWCs for any loss or damage to the telephone apparatus.

[2] *Gotts* are small clusters of settlements (small villages) that are loosely organized to perform social and community governance functions.

Activity 1: Task #3. The main source of life and property threatening floods in Nabega comes from the tendency of the River Ribb, and, to a lesser extent, the Gumera Rivers to break their banks and veer off course during the flooding season. Access to lead time on the likelihood of such flooding events can have a profound impact on the ability of Nabega's communities to prepare and protect themselves from life threatening floods. The Ministry of Water Resources has two river-gauge stations in the upper and lower sections of the Ribb River. As the processing and analysis turnaround time on river-gauge readings is currently too long to provide the communities with flood early warning analysis and reports it has been decided that the project will help the communities access real-time hydrological data with preliminary estimates of downstream impact times as an introductory flood early warning service. The river-gauge stations will report to a delegated point-person at the Fogera Wereda Administration who will in turn be responsible for cascading the information to the FEWCs.

Rainfall data will also be made available to the wereda but will not be shared with the FEWCs because the data sets are large and require processing to be meaningful.

Activity 1: Task #4. The FEWCs will be supported with technical assistance to help develop the skills and systems they need to fulfill their new responsibilities. The training will consistent of raising the awareness of the selected FEWCs candidates on the emerging Flood Preparedness and Early Warning System and developing their skills in telephone communication, familiarizing them with the apparatus and overall communication system. One training event will be organized for FEWCs from the three other participating Kebeles in Fogera and Libo Kemkem weredas.

Activity 1: Task #5. The project will to invest in expanding the hydrological and meteorological database of the participating communities. One of the measures the project will introduce to this end is the installation of at least one rain gauge in each participating kebele. Accordingly Nabega will receive rain gauges for one Grade 4 meteorological station from National Meteorological Services Agency through the support of the project. The project will pay for the equipment and training for the Bureau of Agriculture and Rural Development staff (Development Agents) who will be responsible for taking the readings. ENTRO will facilitate payments for the gauge and embedded training services and NMSA will construct and install the equipment on a site to be selected in Nabega.

Activity 1: Task #6. Community participation in the flood early warning and preparedness system is vital to its effectiveness. This is mainly because flooding in Wagetterra tends to build-up slowly but often occurs at night-time when it is difficult for communities to observe its progress. Extreme flooding events in Nabega tend to be small and too localized to be picked by current early warning instruments and the formal early warning system also suffers from a near blackout on preventive flood early warning information at the peak of the flooding season due to the difficulties of mobility in the flooding season. The activities of the FEWCs combined with real-time data sharing with the hydromet data collecting agencies and general project support can significantly increase early warning lead times and help reduce suffering from floods. To this end the FPEWCs will be responsible for assemblining and transmitting early warning data to the main Kebele center and as necessary to the wereda center while they will also be responsible for receiving and disseminating, in a timely and accurate manner any information on flood early warning in general and early warning lead-time in particular to their respective communities.

Activity 1:Task #7. The main responsibility for monitoring the efficient execution of this activity will be that of the ANRS FSCDPO which has officially been delegated focal implementation agency for the flood project by the Regional Government of Amhara National Regional State. ENTRO and MoWR will also provide general monitoring support while the implementation partnerships on which the project is based emphasizes the principle that each implementing agency is ultimately responsible for the technical, managerial and social efficacy of the implementation of their respective roles and responsibilities.

Nabega Activity TWO: Reduce the impact of physical isolation due to floods.	Lead Implementing Agency
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	ORDA with contract supervision from ENTRO/FSCDPO
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	ORDA
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	ORDA
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	ORDA/Local consultant
Task #5: reinforce community footpaths and animal tracks	ORDA/Local construction company

Perhaps the biggest impediment to eliminating human suffering from floods in Nabega is the challenge posed by the seasonal physical isolation of the communities. The seriousness of this challenge is recognized by all of the project's stakeholders. There is also recognition that the lasting long-term solution to the problem is the construction of all-weather access roads. However, the floodplains are set on deep and unstable alluvial soils with a high water table which makes construction of structures with deep foundations prohibitively expensive. However the depth of the problem and consequences of inaction were also recognized by all project stakeholders to be unacceptably high. Consequently the project has devised an innovative set of tasks to help reduce the impact of physical isolation.

Activity Two. Task #1. At the community's request the planning mission has approved the decision to study options for rehabilitating dry-season footpaths and animal tracks for use during the flood season. The embankments of the Ribb river have been identified by the communities as the most consistently elevated structure in the Kebele and the community seeks the project to study the possibility of reinforcing the embankments in the dry season to serve as an all weather footpath and animal track for servicing the communities during the flood season. The community-based structural reinforcements would enhance compaction of the embankments and would facilitate rapid evacuation is the event of extreme floods. The embankments cut across a cross-section of flood affected woredas in the flood

plains and for this reason a special assessment of the feasibility of upgrading the footpaths along the Ribb Rivers embankments or on alternative elevated routes for enhancing flood season mobility is to be commissioned to the Organization for Rehabilitation and Development in Amhara. [Annex … Terms of reference for study of routes and costs of all weather footpaths in Fogera floodplains]. The extent of project support for rehabilitation of the foot paths or even whether the project will support footpath rehabilitation will rely on the outcome of the study's cost and feasibility assessments.

Activity 2: Task #2. The project will support the installation of color-coded wooden poles to mark-out safe passage ways and warn users of flood danger levels in the floodplains during the flood season. Installation of the polls will be sequenced to enhance the integration of the project's investments in flood early warning and preparedness with its support to community-based structural works. The poles will be re-usable with installations in the pre-flood season (end-of June) and removal in the late flood season (after mid-September). Sotrage will be provided in temporary flood shelters where the polls will be re-painted each-year before re-deployment. A Keeper of the Color Coded Polies will be designated by the community and Kebele leadership. Especially high risk areas will be denoted by the use of flags with a three color flag code signifying safety status (green, yellow and red flags in depicting declining orders of safety and accessibility). In 2009 the poles will be installed early in the flood season to demonstrate their use and significance to community members.

Activity Two: Task #3. The project will supply sirens and emergency lights (hurricane lamps) to illuminate safe passageways and temporary shelters for nighttime evacuations to temporary shelters and local safe havens. Sirens will also use sound codes to denote different risk levels and will be installed only in locations where responsible community leaders are delegated for flood preparedness and management by their communities and the Kebele leadership. ENTRO procure materials and ORDA will distribute as embedded service in its footpaths rehabilitation and community education and mobilization implementation sub-contract**.**

Activity Two: Task #4: Awareness creation and action learning events will be organized to ensure community members understand how the enhanced flood preparedness and early warning system works and to hold mock emergency evacuation trails. The aim of the exercises is to ensure the community's user-readiness for engaging in the enhanced flood preparedness and early warning facility.

Activty Two: Task #5. Based on the recommendations of the assessment study and the availability of funds, the project will support the structural reinforcement and construction of dry season footpaths and animal tracks to serve as elevated safe access ways in the flood season.

Nabega Activity Three: Upgrade community preparedness and response capabilities	**Lead Implementing Agency**
Task#1: Upgrade potential and existing temporary shelter facilities.	ORDA
Task #2: Provide material support and training on temporary shelter management.	ORDA

One of the features of the suffering from floods in Wegettera is that it is not always on a massive scale and is often on a very localized but intense scale where villagers have to evacuate their homes and abandon their holdings for a few hours and can return to their inundated homes shortly afterwards. The current response facility is only geared to responding to disasters of a larger magnitude when affected populations have to be moved to shelters in the high-grounds outside the floodplains for several weeks. The community and planning mission identified the need for a more staggered response capability so communities have the means to react to intense localized events without drawing on the Wereda's resources and can gradually move out of their localities if and only as the problem becomes more widespread and of a longer-duration. To this end the project will help communities by supporting the execution of the two tasks enumerated below.

Activity Three: Task #1. Upgrading existing and potential temporary shelter facilities will allow for a more staggered response to flood disasters in the Nabega. The current options are either to evacuate to the highland above the Wereta-Bahir Dar highway or to suffer the full brunt of the floods. The community has identified its schools as the best facilities for providing temporary shelter from floods. The project will assess the feasibility of rehabilitating the structures and converting the selected structures for multipurpose uses as schools and temporary shelters from floods. The following five potential sites have been identified for potential assessments. The goal will be to match temporary support facilities with the number of FEWC sub-stations so each sub-unit has some autonomy in both its early warning and response capabilities and affected populations do not have to trek far to access support for temporary shelter. The following five locations have been identified for assessment.

6. Fotta School (up to 6th Grade and1 FTC) - Can accommodate temporary shelter.
7. Tigre (Up to 4th Grade.) – Can accommodate temporary shelter.
8. Buwabuwatie (New school – 1 Room) – Can accommodate temporary shelter.
9. Dekiebet na Grarge (New School 1 room). – Can accommodate temporary shelter.
10. Luhabet (1 Room now destroyed).
11. Sarku (No school) .

Activity Three:Task #2. The project will provide limited material support and some equipment to the temporary shelters. Support will be limited to the provision of hurricane lamps for lighting during nighttime evacuations and sanitary materials for cleaning out the shelters after they have been used. No food, blankets or other forms of relief will be provided at the temporary shelters other than protection from intense flooding events. Users will have to rely on their own resources for the consumables they use while in the shelter. Structural works will be limited to reinforcing the selected structures to withstand extreme flooding events and will wherever possible avoid the construction of new structures.

Nabega Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	Lead Implementing Agency
Task#1: Hold awareness creation and community consensus building meetings and events.	ANRS FSDPC/Wereda Administration/ORDA
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	ANRS FSDPO/Wereda Administration/ORDA/Local consultant

The people of Nabega are not accustomed to the attentions of international organizations as the kebele is a food secure kebele with little history of external assistance. The Nabega has some experience with a matching fund based water and sanitation project financed by FINIDA, it has very little history of engagement with international assistance organizations whether for technical assistance or material support. Consequently some mutual learning will need to take place for a clear and cohesive understanding of the respective responsibilities of the project, government counterparts and community contributions to be understood by the general community population. Attainment of a clear and transparent understanding of the respective roles and responsibilities of implementation partners will require the holding of several community awareness creation and skill transfer events.

Activity Four: Task 1. Four half-day community awareness creation events will be held at the sub-stations to present the project to the community and seek their endorsement of the persons selected to lead early warning and preparedness activities in their respective localities. Project stakeholders from both Federal and Regional level will be invited to take part in the events and provide technical backstopping on the accuracy of presentations to the community. The Wereda Administration will be invited to make an especially strong showing at these events to demonstrate its backing for the project and its commitment to inheriting and operating the system over the long-term.

3.3 Nabega Budget Breakdown

Budget - Activity One: Enhancing Community Participation and Use of Early Warning System	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Establish community flood early warning and preparedness groups at *Kebele* and (3) *Gott* (sub-station) levels .	500	500	500	1,500
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	1040	250	250	1,540
Task #3: Share real time hydromet data from government stations with communities and wereda administration.	100	100	100	300
Task #4: Provide start-up training on early warning information collection and dissemination to selected community members.	3,000	1,500	1,500	6,000
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	0	0	0	0
Task #6: Community Flood Early Warning cells will collect and disseminate flood Early Warning information	500	500	500	1,500
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	500	500	500	1,500
Total Annual and Three-year Budget – Activity One	5,640	3,350	3,350	**12,340**

3.4 Nabega Note on Activity One budget.

Task #1 has been completed by the planning mission. The annual USD 500 budget is allocated for calling and supporting general community meetings to endorse the selection of delegates onto the FEWCs. The money will be made available to the FEWCs either through embedded services with ORDA or through transfers to the ANRS FSCDPO which can also facilitate the annual events.

Task # 2. Budget is for procurement of 4 SIM cards and 6 mobile phone apparatuses at USD 50 and USD 100 per unit respectively. Prepaid cards of Birr 100/month/apparatus for 3 months (USD 190) will also be A contingency of USD 50 has been reserved for miscellaneous expenses related to distributing the mobile telephone sets. USD 250 has also been reserved for annual replenishment of pre-paid card costs.

Task #3 will receive project support in the form of printed, standardized formats for receiving and disseminating information. Readings of the rain gauge will be made by Ministry of Water resources employees. Wereda administration will absorb costs of dissemination to Kebele FEWCs.

Task #4. Training will be provided by a local consultant to be recruited by ENTRO or embedded in ORDA's services subcontract. The training will be three days long and will target ten candidates from the Kebele. The budget includes the estimated per diem costs of 10 participants, the travel, accommodation and per diem costs of the consultant have also been equally apportioned to the four participating Kebeles. Training will be held at two separate venues in Fogera and Libo Kemkem weredas. Wagetterra's candidates will attend session in Wereta. Annual one or one and a half day refresher training events have also been budgeted for the coming two years. The refresher courses are intended to upgrade and refresh the technical capabilities of previously trained staff and to also introduce any new staff to the technical features of the community-based flood early warning and preparedness system.

Task #5 will have its costs embedded in the NMSA sub-contract. NMSA will be responsible for constructing and installing rain gauges on site as well as training the Development Agents on how to read the gauge and record readings.

Task #6 will be financed mainly from community resources. The project has budgeted USD 500 per year to support the cost of stationeries and annual candidate selection/endorsement meetings for positions in the FEWCs.

Task #7 is the allocation made to ANRS FSCDPO for monitoring the progress of actitivities in Nabega kebele.

Budget Activity TWO: Reduce the impact of physical isolation due to floods.	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.		…	…	…
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	10,000	10,000	0	20,000
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	5,000	0	0	5,000
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	3,000	1,500	1,500	6,000
Task #5: Reinforce community footpaths and animal tracks	15,000	15,000	10,00	40,000
Activity Sub-Total				**71,000**

3.5 Nabega Note on Activity Two Budget

Task One: Costs are bundled in Wagettera budget. Study will include the production of a bill of quantities for supporting community rehabilitation of the footpaths and animal tracks from which a more accurate budget estimate of the construction costs will be inferred .

Task #2: Costs will cover purchase of poles, labor and materials for color-coding and costs of transport and on-site installation.
Task #3. ENTRO will procure equipment and ORDA/FSCDPO will dispense to Kebele FEWCs and install sirens at selected sites.
Task #4. Budget includes costs of introductory post-flood season event in 2008 and a more sustained campaign in the pre-flood season of 2009.
Task #5. Only estimated costs are used. Study will produce more accurate costs of construction and assess technical feasibility of proposal. Works will be contracted to ORDA water and sanitation unit in order to leverage community labor and other resources.

Activity Three: Upgrade community preparedness and response capabilities	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Upgrade potential and existing temporary shelter facilities.	10,000	10,000	10,00	30,000
Task #2: Provide material support and training on temporary shelter management.	3,000	3,000	3,00	9,000
Activity Sub-Total	13,000	13,000	13,000	**39,000**

3.6 Nabega Note on Activity Three Budget

Task #1. Costs include purchase and transport of construction materials and contractors fees. Communities will supplement with contributions in labor and in-kind (local materials and services) for completion of works.

Task #2. ENTRO will procure materials and equipment. ORDA or Wereda Administration by deputation from FSCDPO will install in sites. Budget includes costs of hurricane lamps, per diems of training staff, and lockers.

Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Hold awareness creation and community consensus building meetings and events.	2,000	2,000	2,000	6,000
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	3,000	3,000	3,000	9,000
Activity Sub-Total	5,000	5,000	5,000	**15,000**

3.7 Nabega Note on Activity Four Budget

Task #1. Budget includes per diem costs for visiting Regional, Zonal or Wereda officials and resource persons.
Task #2. Content of training will be determined by project management and community felt needs.

3.8 Nabega Timeplan of Action

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 1:Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .												
Act. 1:Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.												
Act. 1: Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).												
Act. 1:Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.												
Act. 1: Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.												
Act. 1: Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information												
Act. 1:Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.												
Act. 2:Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.												
Act. 2: Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.												
Act. 2: Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.												
Act. 2: Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.												
Act. 2:Task #5: Reinforce community footpaths and animal tracks												

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 3:Task#1: Upgrade potential and existing temporary shelter facilities.												
Act. 3:Task #2: Provide material support and training on temporary shelter management.												
Act. 4:Task#1: Hold awareness creation and community consensus building meetings and events.												
Act. 4: Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.												

Gendawuha Giorgis

Community Action Plan

2008/09

NBI/ENTRO: Flood Preparedness and Early Warning Project

4 Gendawuha Giorgis Community Action Plan

4.1 Gendawuha Giorgis: Flood Vulnerability Profile

Gendawuha Giorgis Kebele is a community about 1,300 households in Libo Kemkem wereda. It has a population in excess of 5,000 people, more than 3,000 of which are regularly affected by floods every year. The main source of flooding the Ribb river which breaks it banks every year. However, this year flooding has also been aggravated by upstream structural works. Dredging of the Ribb river in Shina the area around Shina kebele has had a funneling effect on the Ribb River which now releases it ferocious energy when it hits Genedawuha Girogis. Flooding lasts upto 70 days in Gendawuha Giorgis, starting in mid-July and stretching to the end of September.

Floods often result in human deaths but Gendawuha Giorgis did not suffer any last year because of better preparedness and rapid disaster response by the wereda. The worst affected in the community migrate to *Yifag* town a few kilometers off the main bahir Dar – Gondar highway in search of shelter during peak flood periods. They migrate with their livestock to locations on higher ground such as *Wusha Ttirs, Birra Estifanos and Ttibaga* as a way reducing potential livestock deaths. Though the evacuation helped save human and livestock lives, Gendawuha Giorgis still suffered damage to its school and health center from last year's flooding. There are fears that the structures main not survive this year's floods.

Like its neighbors in Fogera wereda, Gendawuha Giorgis also suffers physical isolation for more than two months in the year. Here too, the economic costs of isolation are high. In addition to the missed economic opportunities physical isolation aggravates morbidity in the community because the sick and weak are unable to make the journey to health facilities on the main road and nearby towns. Physical isolation also impedes communication with the rest of the wereda and constrains the ability of the community to acquire and react to life or property threatening events.

Gendawuha Giorgis is a proactive community in its struggle to reduce suffering from floods and has a strong history of collective action to alleviate suffering from floods. This year the community came together collected Birr 12,000 in contributions and rented a bulldozer to help dredge the River Ribb. The bulldozer got stuck in the floodplains at the end of the works and the people contributed labor and more than 300 eucalyptus poles to extract the machine from the mud and avoid the damages that might have been levied against them.

4.2 Gendawuha Giorgis Summary Description of Project Activities and Tasks

Gendawuha Giorgis Activity One: Enhancing Community Participation and Use of Early Warning System	Lead Implementing Agency
Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .	MoWR/ENTRO Planning Mission
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	ENTRO/ANRS FSCDPO/Wereda Administration
Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).	MoWR/Wereda Administration
Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.	Local consultant/FSCDPO
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	NMSA
Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information	Wereda Administration/Kebele Flood Early Warning Cells and Sub-station representatives
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	ENTRO/MoWR/ANRS FSCDPO

During the participatory planning exercises consensus was reached by all the stakeholders on the need to capture the vital contribution that flood early warning information can make to helping communities save lives and protect property. Stakeholders also recognized that the formal flood early warning system being operated by the various government agencies is in the process of building its technical capacities and does not currently have the capacity to provide early warning analysis and reports to affected communities in a timely manner. Consequently all parties, including community representatives agreed on the need to award the highest priority to *enhancing community participation and use of the flood early warning system to reduce loss of human life and damage to property from floods*. The team identified seven things that the project could do to realize this objective the sum of which would substantially reduce suffering from floods.

Activity 1: Task #1. The first task identified as being crucial to increasing community participation and use of early warning information was the need to organize community level Flood Early Warning Cells (FEWCs). Flood early warning data is currently collected by the Kebele Disaster Prevention Committee

and passed on to the Wereda Administration and Regional Food Security Coordination and Disaster Prevention Office respectively. Flood monitoring is very difficult in Gendawuha Giorgis during the flood season when it is needed the most because the floods make movement difficult, the Kebele has no boats and committee members either have to walk through the flooded fields or wait for information about flood disasters to come to them. This limits flood *prevention* capabilities and tilts the entire flood early warning system towards response-orientation. To help resolve these problems the project will assist the Kebele in establishing flood-early warning sub-stations in three outlying *Gotts*[3] in the Kebele. The three sub-stations will be operated by volunteers to be selected by the Kebele leadership and community members. The sum of the three sub-stations and the main reporting center at the Kebele level will form the Community Flood Early Warning Cell for Gendawuha Giorgis Kebele. The FEWCs will be responsible for both gathering community level flood early warning data and disseminating hydromet and other flood early warning data to their respective communities. The re-organization is expected to increase efficiencies in the early warning system mainly arising from the ability of the multi-tasking Kebele Committees to delegate the specialized task of gathering and disseminating flood early warning information to their respective community members and by eliminating the information blackout period caused be the physical inaccessibility of most of the communities during peak flood events. The FEWCs will be supported with start-up training in flood *monitoring* and early warning and their capacities upgraded as the technical content of the national flood early warning system is articulated and a standardized system of flood early warning evolves with FPEW support.

Activity One: Task 2. The project will supply Kebele Flood Preparedness and Early Warning Cells with mobile telephones. Community representatives voiced a marked preference for mobile phones over solar- powered wireless telephones on the grounds that the fixed units were technical less reliable because the technology is still evolving and because the units are security-intensive as they attract the unwelcome the attentions of inquisitive children and the odd village vandal. KFEWCs will be responsible for adhering to a publicized schedule of telephone communications at fixed timely intervals. A system of one check-in call every 24 hours is to be used to transmit community level data and receive hydromet data between the sub-stations and the Kebele. The intervals can be reduced to 12 or 6 hour intervals in the case of monitoring the progress of serious flood threats. In the case of extreme flood events the telephones can be used to help manage rapid responses and the system of scheduled calls can be replaced by an emergency no-blackout period. The project will provide pre-paid cards in the amount of Birr 2000 to the KFEWCs to start-up the system and to last throughout the 95 day flood season. Cards will be replenished at the start of each flood season for the coming (3) years. The Kebele administration will be responsible for dispensing the telephones to the selected individuals and retrieving them at the end of each flood season. The individual users will be responsible for compensating the Kebele FEWCs for any loss or damage to the telephone apparatus.

[3] *Gotts* are small clusters of settlements (small villages) that are loosely organized to perform social and community governance functions.

Activity 1: Task #3. The main source of life and property threatening floods in Gendawuha Giorgis comes from the tendency of the River Ribb, and, to a lesser extent, the Gumera Rivers to break their banks and veer off course during the flooding season. Access to lead time on the likelihood of such flooding events can have a profound impact on the ability of Gendawuha Giorgis's communities to prepare and protect themselves from life threatening floods. The Ministry of Water Resources has two river-gauge stations in the upper and lower sections of the Ribb River. As the processing and analysis turnaround time on river-gauge readings is currently too long to provide the communities with flood early warning analysis and reports it has been decided that the project will help the communities access real-time hydrological data with preliminary estimates of downstream impact times as an introductory flood early warning service. The river-gauge stations will report to a delegated point-person at the Fogera Wereda Administration who will in turn be responsible for cascading the information to the FEWCs.

Rainfall data will also be made available to the wereda but will not be shared with the FEWCs because the data sets are large and require processing to be meaningful.

Activity 1: Task #4. The FEWCs will be supported with technical assistance to help develop the skills and systems they need to fulfill their new responsibilities. The training will consistent of raising the awareness of the selected FEWCs candidates on the emerging Flood Preparedness and Early Warning System and developing their skills in telephone communication, familiarizing them with the apparatus and overall communication system. One training event will be organized for FEWCs from the three other participating Kebeles in Fogera and Libo Kemkem weredas.

Activity 1: Task #5. The project will to invest in expanding the hydrological and meteorological database of the participating communities. One of the measures the project will introduce to this end is the installation of at least one rain gauge in each participating kebele. Accordingly Gendawuha Giorgis will receive rain gauges for one Grade 4 meteorological station from National Meteorological Services Agency through the support of the project. The project will pay for the equipment and training for the Bureau of Agriculture and Rural Development staff (Development Agents) who will be responsible for taking the readings. ENTRO will facilitate payments for the gauge and embedded training services and NMSA will construct and install the equipment on a site to be selected in Gendawuha Giorgis.

Activity 1: Task #6. Community participation in the flood early warning and preparedness system is vital to its effectiveness. This is mainly because flooding in Wagetterra tends to build-up slowly but often occurs at night-time when it is difficult for communities to observe its progress. Extreme flooding events in Gendawuha Giorgis tend to be small and too localized to be picked by current early warning instruments and the formal early warning system also suffers from a near blackout on preventive flood early warning information at the peak of the flooding season due to the difficulties of mobility in the flooding season. The activities of the FEWCs combined with real-time data sharing with the hydromet data collecting agencies and general project support can significantly increase early warning lead times and help reduce suffering from floods. To this end the FPEWCs will be responsible for assemblining and transmitting early warning data to the main Kebele center and as necessary to the wereda center while they will also be responsible for receiving and disseminating, in a timely and accurate manner any

information on flood early warning in general and early warning lead-time in particular to their respective communities.

Activity 1:Task #7. The main responsibility for monitoring the efficient execution of this activity will be that of the ANRS FSCDPO which has officially been delegated focal implementation agency for the flood project by the Regional Government of Amhara National Regional State. ENTRO and MoWR will also provide general monitoring support while the implementation partnerships on which the project is based emphasizes the principle that each implementing agency is ultimately responsible for the technical, managerial and social efficacy of the implementation of their respective roles and responsibilities.

Gendawuha Giorgis Activity TWO: Reduce the impact of physical isolation due to floods.	**Lead Implementing Agency**
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	ORDA with contract supervision from ENTRO/FSCDPO
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	ORDA
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	ORDA
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	ORDA/Local consultant
Task #5: reinforce community footpaths and animal tracks	ORDA/Local construction company

Perhaps the biggest impediment to eliminating human suffering from floods in Gendawuha Giorgis is the challenge posed by the seasonal physical isolation of the communities. The seriousness of this challenge is recognized by all of the project's stakeholders. There is also recognition that the lasting long-term solution to the problem is the construction of all-weather access roads. However, the floodplains are set on deep and unstable alluvial soils with a high water table which makes construction of structures with deep foundations prohibitively expensive. However the depth of the problem and consequences of inaction were also recognized by all project stakeholders to be unacceptably high. Consequently the project has devised an innovative set of tasks to help reduce the impact of physical isolation.

Activity Two. Task #1. At the community's request the planning mission has approved the decision to study options for rehabilitating dry-season footpaths and animal tracks for use during the flood season. The embankments of the Ribb river have been identified by the communities as the most consistently elevated structure in the Kebele and the community seeks the project to study the possibility of reinforcing the embankments in the dry season to serve as an all weather footpath and animal track for

servicing the communities during the flood season. The community-based structural reinforcements would enhance compaction of the embankments and would facilitate rapid evacuation is the event of extreme floods. The embankments cut across a cross-section of flood affected woredas in the flood plains and for this reason a special assessment of the feasibility of upgrading the footpaths along the Ribb Rivers embankments or on alternative elevated routes for enhancing flood season mobility is to be commissioned to the Organization for Rehabilitation and Development in Amhara. [Annex … Terms of reference for study of routes and costs of all weather footpaths in Fogera floodplains]. The extent of project support for rehabilitation of the foot paths or even whether the project will support footpath rehabilitation will rely on the outcome of the study's cost and feasibility assessments.

Activity 2: Task #2. The project will support the installation of color-coded wooden poles to mark-out safe passage ways and warn users of flood danger levels in the floodplains during the flood season. Installation of the polls will be sequenced to enhance the integration of the project's investments in flood early warning and preparedness with its support to community-based structural works. The poles will be re-usable with installations in the pre-flood season (end-of June) and removal in the late flood season (after mid-September). Sotrage will be provided in temporary flood shelters where the polls will be re-painted each-year before re-deployment. A Keeper of the Color Coded Polies will be designated by the community and Kebele leadership. Especially high risk areas will be denoted by the use of flags with a three color flag code signifying safety status (green, yellow and red flags in depicting declining orders of safety and accessibility). In 2009 the poles will be installed early in the flood season to demonstrate their use and significance to community members.

Activity Two: Task #3. The project will supply sirens and emergency lights (hurricane lamps) to illuminate safe passageways and temporary shelters for nighttime evacuations to temporary shelters and local safe havens. Sirens will also use sound codes to denote different risk levels and will be installed only in locations where responsible community leaders are delegated for flood preparedness and management by their communities and the Kebele leadership. ENTRO procure materials and ORDA will distribute as embedded service in its footpaths rehabilitation and community education and mobilization implementation sub-contract**.**

Activity Two: Task #4: Awareness creation and action learning events will be organized to ensure community members understand how the enhanced flood preparedness and early warning system works and to hold mock emergency evacuation trails. The aim of the exercises is to ensure the community's user-readiness for engaging in the enhanced flood preparedness and early warning facility.

Activty Two: Task #5. Based on the recommendations of the assessment study and the availability of funds, the project will support the structural reinforcement and construction of dry season footpaths and animal tracks to serve as elevated safe access ways in the flood season.

Gendawuha Giorgis Activity Three: Upgrade community preparedness and response capabilities	Lead Implementing Agency
Task#1: Upgrade potential and existing temporary shelter facilities.	ORDA
Task #2: Provide material support and training on temporary shelter management.	ORDA

One of the features of the suffering from floods in Wegettera is that it is not always on a massive scale and is often on a very localized but intense scale where villagers have to evacuate their homes and abandon their holdings for a few hours and can return to their inundated homes shortly afterwards. The current response facility is only geared to responding to disasters of a larger magnitude when affected populations have to be moved to shelters in the high-grounds outside the floodplains for several weeks. The community and planning mission identified the need for a more staggered response capability so communities have the means to react to intense localized events without drawing on the Wereda's resources and can gradually move out of their localities if and only as the problem becomes more widespread and of a longer-duration. To this end the project will help communities by supporting the execution of the two tasks enumerated below.

Activity Three: Task #1. Upgrading existing and potential temporary shelter facilities will allow for a more staggered response to flood disasters in the Gendawuha Giorgis. The current options are either to evacuate to the highland above the Wereta-Bahir Dar highway or to suffer the full brunt of the floods. The community has identified its schools as the best facilities for providing temporary shelter from floods. The project will assess the feasibility of rehabilitating the structures and converting the selected structures for multipurpose uses as schools and temporary shelters from floods. The following five potential sites have been identified for potential assessments. The goal will be to match temporary support facilities with the number of FEWC sub-stations so each sub-unit has some autonomy in both its early warning and response capabilities and affected populations do not have to trek far to access support for temporary shelter. Only one potential site, Yalember School (up to 4th Grade), has been identified as a potential site for temporary shelter in Gendawuha Girogis and more sites will need to be identified in the post-flood and dry season to match temporary shelter capacities with sub-station capacity.

Activity Three:Task #2. The project will provide limited material support and some equipment to the temporary shelters. Support will be limited to the provision of hurricane lamps for lighting during nighttime evacuations and sanitary materials for cleaning out the shelters after they have been used. No food, blankets or other forms of relief will be provided at the temporary shelters other than protection from intense flooding events. Users will have to rely on their own resources for the consumables they use while in the shelter. Structural works will be limited to reinforcing the selected structures to withstand extreme flooding events and will wherever possible avoid the construction of new structures.

Gendawuha Giorgis Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	Lead Implementing Agency
Task#1: Hold awareness creation and community consensus building meetings and events.	ANRS FSDPC/Wereda Administration/ORDA
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	ANRS FSDPO/Wereda Administration/ORDA/Local consultant

The people of Gendawuha Giorgis are not accustomed to the attentions of international organizations as the kebele is a food secure kebele with little history of external assistance. The Gendawuha Giorgis has some experience with a matching fund based water and sanitation project financed by FINIDA, it has very little history of engagement with international assistance organizations whether for technical assistance or material support. Consequently some mutual learning will need to take place for a clear and cohesive understanding of the respective responsibilities of the project, government counterparts and community contributions to be understood by the general community population. Attainment of a clear and transparent understanding of the respective roles and responsibilities of implementation partners will require the holding of several community awareness creation and skill transfer events.

Activity Four: Task 1. Four half-day community awareness creation events will be held at the sub-stations to present the project to the community and seek their endorsement of the persons selected to lead early warning and preparedness activities in their respective localities. Project stakeholders from both Federal and Regional level will be invited to take part in the events and provide technical backstopping on the accuracy of presentations to the community. The Wereda Administration will be invited to make an especially strong showing at these events to demonstrate its backing for the project and its commitment to inheriting and operating the system over the long-term.

4.3 Gendawuha Giorgis Budget Breakdown

Budget - Activity One: Enhancing Community Participation and Use of Early Warning System	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Establish community flood early warning and preparedness groups at *Kebele* and (3) *Gott* (sub-station) levels .	500	500	500	1,500
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	1040	250	250	1,540
Task #3: Share real time hydromet data from government stations with communities and wereda administration.	100	100	100	300
Task #4: Provide start-up training on early warning information collection and dissemination to selected community members.	3,000	1,500	1,500	6,000
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	0	0	0	0
Task #6: Community Flood Early Warning cells will collect and disseminate flood Early Warning information	500	500	500	1,500
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	500	500	500	1,500
Total Annual and Three-year Budget – Activity One	5,640	3,350	3,350	**12,340**

4.4 Gendawuha Giorgis Note on Activity One budget.

Task #1 has been completed by the planning mission. The annual USD 500 budget is allocated for calling and supporting general community meetings to endorse the selection of delegates onto the FEWCs. The money will be made available to the FEWCs either through embedded services with ORDA or through transfers to the ANRS FSCDPO which can also facilitate the annual events.

Task # 2. Budget is for procurement of 4 SIM cards and 6 mobile phone apparatuses at USD 50 and USD 100 per unit respectively. Prepaid cards of Birr 100/month/apparatus for 3 months (USD 190) will also be A contingency of USD 50 has been reserved for miscellaneous expenses related to distributing the mobile telephone sets. USD 250 has also been reserved for annual replenishment of pre-paid card costs.

Task #3 will receive project support in the form of printed, standardized formats for receiving and disseminating information. Readings of the rain gauge will be made by Ministry of Water resources employees. Wereda administration will absorb costs of dissemination to Kebele FEWCs.

Task #4. Training will be provided by a local consultant to be recruited by ENTRO or embedded in ORDA's services subcontract. The training will be three days long and will target ten candidates from the Kebele. The budget includes the estimated per diem costs of 10 participants, the travel, accommodation and per diem costs of the consultant have also been equally apportioned to the four participating Kebeles. Training will be held at two separate venues in Fogera and Libo Kemkem weredas. Wagetterra's candidates will attend session in Wereta. Annual one or one and a half day refresher training events have also been budgeted for the coming two years. The refresher courses are intended to upgrade and refresh the technical capabilities of previously trained staff and to also introduce any new staff to the technical features of the community-based flood early warning and preparedness system.

Task #5 will have its costs embedded in the NMSA sub-contract. NMSA will be responsible for constructing and installing rain gauges on site as well as training the Development Agents on how to read the gauge and record readings.

Task #6 will be financed mainly from community resources. The project has budgeted USD 500 per year to support the cost of stationeries and annual candidate selection/endorsement meetings for positions in the FEWCs.

Task #7 is the allocation made to ANRS FSCDPO for monitoring the progress of actitivities in Gendawuha Giorgis kebele.

Budget Activity TWO: Reduce the impact of physical isolation due to floods.	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	30,000			30,000
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	10,000	10,000	0	20,000
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	5,000	0	0	5,000
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	3,000	1,500	1,500	6,000
Task #5: Reinforce community footpaths and animal tracks	15,000	15,000	10,00	40,000
Activity Sub-Total				**101,000**

4.5 Gendawuha Giorgis Note on Activity Two Budget

Task One: Costs of the Study for both participating kebeles in Libo Kemkem wereda and kebeles sharing borders with the Ribb Rriver embankment are bundled into the line item. The study will be undertaken by ORDA with the contract managed by ENTRO in collaboration with the ANRS FSCDPO. Study will include the production of a bill of quantities for supporting community rehabilitation of the footpaths and animal tracks from which a more accurate budget estimate of the construction costs will be inferred .

Task #2: Costs will cover purchase of poles, labor and materials for color-coding and costs of transport and on-site installation.
Task #3. ENTRO will procure equipment and ORDA/FSCDPO will dispense to Kebele FEWCs and install sirens at selected sites.
Task #4. Budget includes costs of introductory post-flood season event in 2008 and a more sustained campaign in the pre-flood season of 2009.

Task #5. Only estimated costs are used. Study will produce more accurate costs of construction and assess technical feasibility of proposal. Works will be contracted to ORDA water and sanitation unit in order to leverage community labor and other resources.

Activity Three: Upgrade community preparedness and response capabilities	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Upgrade potential and existing temporary shelter facilities.	10,000	10,000	10,00	30,000
Task #2: Provide material support and training on temporary shelter management.	3,000	3,000	3,00	9,000
Activity Sub-Total	13,000	13,000	13,000	**39,000**

4.6 Gendawuha Giorgis Note on Activity Three Budget

Task #1. Costs include purchase and transport of construction materials and contractors fees. Communities will supplement with contributions in labor and in-kind (local materials and services) for completion of works.
Task #2. ENTRO will procure materials and equipment. ORDA or Wereda Administration by deputation from FSCDPO will install in sites. Budget includes costs of hurricane lamps, per diems of training staff, and lockers.

Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Hold awareness creation and community consensus building meetings and events.	2,000	2,000	2,000	6,000
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	3,000	3,000	3,000	9,000
Activity Sub-Total	5,000	5,000	5,000	**15,000**

4.7 Gendawuha Giorgis Note on Activity Four Budget

Task #1. Budget includes per diem costs for visiting Regional, Zonal or Wereda officials and resource persons.
Task #2. Content of training will be determined by project management and community felt needs.

4.8 Gendawuha Giorgis Timeplan of Action

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 1:Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .												
Act. 1:Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.												
Act. 1: Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).												
Act. 1:Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.												
Act. 1: Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.												
Act. 1: Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information												
Act. 1:Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.												
Act. 2:Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.												
Act. 2: Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.												
Act. 2: Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.												
Act. 2: Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.												
Act. 2:Task #5: Reinforce community footpaths and animal tracks												

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 3:Task#1: Upgrade potential and existing temporary shelter facilities.												
Act. 3:Task #2: Provide material support and training on temporary shelter management.												
Act. 4:Task#1: Hold awareness creation and community consensus building meetings and events.												
Act. 4: Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.												

Ttez Amba Community Action Plan

2008/09

NBI/ENTRO: Flood Preparedness and Early Warning Project

5 Ttez Amba Community Action Plan

5.1 Ttez Amba: Flood Vulnerability Profile

Ttez Amba Kebele is a community about 95500 households in Libo Kemkem wereda. It has a population in excess of 5,000 people, more than 3,000 of which are regularly affected by floods every year. The main source of flooding the Ribb river which breaks it banks every year. However, this year flooding has also been aggravated by upstream structural works. Dredging of the Ribb river in Shina the area around Shina kebele has had a funneling effect on the Ribb River which now releases it ferocious energy when it hits Genedawuha Girogis. Flooding lasts up to 65 days in Ttez Amba, starting in mid-July and stretching to the end of September. Some parts of the Kebele are only partially affected but by the end of the flood season all of the Kebele will have been inundated for at least one month in the year.

Floods often result in human deaths but Ttez Amba did not suffer any last year because of better preparedness and rapid disaster response by the wereda. The worst affected in the community migrate to *Yifag* town a few kilometers off the main bahir Dar – Gondar highway in search of shelter during peak flood periods. They migrate with their livestock to locations on higher ground such as *Wusha Ttirs, Birra Estifanos and Ttibaga* as a way reducing potential livestock deaths. Though the evacuation helped save human and livestock lives, Ttez Amba still suffered damage to its school and health center from last year's flooding. There are fears that the structures main not survive this year's floods.

Like its neighbors in Fogera wereda, Ttez Amba also suffers physical isolation for more than two months in the year. Here too, the economic costs of isolation are high. In addition to the missed economic opportunities physical isolation aggravates morbidity in the community because the sick and weak are unable to make the journey to health facilities on the main road and nearby towns. Physical isolation also impedes communication with the rest of the wereda and constrains the ability of the community to acquire and react to life or property threatening events.

Ttez Amba is a proactive community in its struggle to reduce suffering from floods and has a strong history of collective action to alleviate suffering from floods. This year the community came together collected Birr 12,000 in contributions and rented a bulldozer to help dredge the River Ribb. The bulldozer got stuck in the floodplains at the end of the works and the people contributed labor and more than 300 eucalyptus poles to extract the machine from the mud and avoid the damages that might have been levied against them.

5.2 Ttez Amba Summary Description of Project Activities and Tasks

Ttez Amba Activity One: Enhancing Community Participation and Use of Early Warning System	Lead Implementing Agency
Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .	MoWR/ENTRO Planning Mission
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	ENTRO/ANRS FSCDPO/Wereda Administration
Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).	MoWR/Wereda Administration
Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.	Local consultant/FSCDPO
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	NMSA
Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information	Wereda Administration/Kebele Flood Early Warning Cells and Sub-station representatives
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	ENTRO/MoWR/ANRS FSCDPO

During the participatory planning exercises consensus was reached by all the stakeholders on the need to capture the vital contribution that flood early warning information can make to helping communities save lives and protect property. Stakeholders also recognized that the formal flood early warning system being operated by the various government agencies is in the process of building its technical capacities and does not currently have the capacity to provide early warning analysis and reports to affected communities in a timely manner. Consequently all parties, including community representatives agreed on the need to award the highest priority to *enhancing community participation and use of the flood early warning system to reduce loss of human life and damage to property from floods*. The team identified seven things that the project could do to realize this objective the sum of which would substantially reduce suffering from floods.

Activity 1: Task #1. The first task identified as being crucial to increasing community participation and use of early warning information was the need to organize community level Flood Early Warning Cells (FEWCs). Flood early warning data is currently collected by the Kebele Disaster Prevention Committee

and passed on to the Wereda Administration and Regional Food Security Coordination and Disaster Prevention Office respectively. Flood monitoring is very difficult in Ttez Amba during the flood season when it is needed the most because the floods make movement difficult, the Kebele has no boats and committee members either have to walk through the flooded fields or wait for information about flood disasters to come to them. This limits flood *prevention* capabilities and tilts the entire flood early warning system towards response-orientation. To help resolve these problems the project will assist the Kebele in establishing flood-early warning sub-stations in three outlying *Gotts*[4] in the Kebele. The three sub-stations will be operated by volunteers to be selected by the Kebele leadership and community members. The sum of the three sub-stations and the main reporting center at the Kebele level will form the Community Flood Early Warning Cell for Ttez Amba Kebele. The FEWCs will be responsible for both gathering community level flood early warning data and disseminating hydromet and other flood early warning data to their respective communities. The re-organization is expected to increase efficiencies in the early warning system mainly arising from the ability of the multi-tasking Kebele Committees to delegate the specialized task of gathering and disseminating flood early warning information to their respective community members and by eliminating the information blackout period caused be the physical inaccessibility of most of the communities during peak flood events. The FEWCs will be supported with start-up training in flood *monitoring* and early warning and their capacities upgraded as the technical content of the national flood early warning system is articulated and a standardized system of flood early warning evolves with FPEW support.

Activity One: Task 2. The project will supply Kebele Flood Preparedness and Early Warning Cells with mobile telephones. Community representatives voiced a marked preference for mobile phones over solar- powered wireless telephones on the grounds that the fixed units were technical less reliable because the technology is still evolving and because the units are security-intensive as they attract the unwelcome the attentions of inquisitive children and the odd village vandal. KFEWCs will be responsible for adhering to a publicized schedule of telephone communications at fixed timely intervals. A system of one check-in call every 24 hours is to be used to transmit community level data and receive hydromet data between the sub-stations and the Kebele. The intervals can be reduced to 12 or 6 hour intervals in the case of monitoring the progress of serious flood threats. In the case of extreme flood events the telephones can be used to help manage rapid responses and the system of scheduled calls can be replaced by an emergency no-blackout period. The project will provide pre-paid cards in the amount of Birr 2000 to the KFEWCs to start-up the system and to last throughout the 95 day flood season. Cards will be replenished at the start of each flood season for the coming (3) years. The Kebele administration will be responsible for dispensing the telephones to the selected individuals and retrieving them at the end of each flood season. The individual users will be responsible for compensating the Kebele FEWCs for any loss or damage to the telephone apparatus.

[4] *Gotts* are small clusters of settlements (small villages) that are loosely organized to perform social and community governance functions.

Activity 1: Task #3. The main source of life and property threatening floods in Ttez Amba comes from the tendency of the River Ribb, and, to a lesser extent, the Gumera Rivers to break their banks and veer off course during the flooding season. Access to lead time on the likelihood of such flooding events can have a profound impact on the ability of Ttez Amba's communities to prepare and protect themselves from life threatening floods. The Ministry of Water Resources has two river-gauge stations in the upper and lower sections of the Ribb River. As the processing and analysis turnaround time on river-gauge readings is currently too long to provide the communities with flood early warning analysis and reports it has been decided that the project will help the communities access real-time hydrological data with preliminary estimates of downstream impact times as an introductory flood early warning service. The river-gauge stations will report to a delegated point-person at the Fogera Wereda Administration who will in turn be responsible for cascading the information to the FEWCs.

Rainfall data will also be made available to the wereda but will not be shared with the FEWCs because the data sets are large and require processing to be meaningful.

Activity 1: Task #4. The FEWCs will be supported with technical assistance to help develop the skills and systems they need to fulfill their new responsibilities. The training will consistent of raising the awareness of the selected FEWCs candidates on the emerging Flood Preparedness and Early Warning System and developing their skills in telephone communication, familiarizing them with the apparatus and overall communication system. One training event will be organized for FEWCs from the three other participating Kebeles in Fogera and Libo Kemkem weredas.

Activity 1: Task #5. The project will to invest in expanding the hydrological and meteorological database of the participating communities. One of the measures the project will introduce to this end is the installation of at least one rain gauge in each participating kebele. Accordingly Ttez Amba will receive rain gauges for one Grade 4 meteorological station from National Meteorological Services Agency through the support of the project. The project will pay for the equipment and training for the Bureau of Agriculture and Rural Development staff (Development Agents) who will be responsible for taking the readings. ENTRO will facilitate payments for the gauge and embedded training services and NMSA will construct and install the equipment on a site to be selected in Ttez Amba.

Activity 1: Task #6. Community participation in the flood early warning and preparedness system is vital to its effectiveness. This is mainly because flooding in Wagetterra tends to build-up slowly but often occurs at night-time when it is difficult for communities to observe its progress. Extreme flooding events in Ttez Amba tend to be small and too localized to be picked by current early warning instruments and the formal early warning system also suffers from a near blackout on preventive flood early warning information at the peak of the flooding season due to the difficulties of mobility in the flooding season. The activities of the FEWCs combined with real-time data sharing with the hydromet data collecting agencies and general project support can significantly increase early warning lead times and help reduce suffering from floods. To this end the FPEWCs will be responsible for assemblining and transmitting early warning data to the main Kebele center and as necessary to the wereda center while they will also be responsible for receiving and disseminating, in a timely and accurate manner any

information on flood early warning in general and early warning lead-time in particular to their respective communities.

Activity 1:Task #7. The main responsibility for monitoring the efficient execution of this activity will be that of the ANRS FSCDPO which has officially been delegated focal implementation agency for the flood project by the Regional Government of Amhara National Regional State. ENTRO and MoWR will also provide general monitoring support while the implementation partnerships on which the project is based emphasizes the principle that each implementing agency is ultimately responsible for the technical, managerial and social efficacy of the implementation of their respective roles and responsibilities.

Ttez Amba Activity TWO: Reduce the impact of physical isolation due to floods.	**Lead Implementing Agency**
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	ORDA with contract supervision from ENTRO/FSCDPO
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	ORDA
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	ORDA
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	ORDA/Local consultant
Task #5: reinforce community footpaths and animal tracks	ORDA/Local construction company

Perhaps the biggest impediment to eliminating human suffering from floods in Ttez Amba is the challenge posed by the seasonal physical isolation of the communities. The seriousness of this challenge is recognized by all of the project's stakeholders. There is also recognition that the lasting long-term solution to the problem is the construction of all-weather access roads. However, the floodplains are set on deep and unstable alluvial soils with a high water table which makes construction of structures with deep foundations prohibitively expensive. However the depth of the problem and consequences of inaction were also recognized by all project stakeholders to be unacceptably high. Consequently the project has devised an innovative set of tasks to help reduce the impact of physical isolation.

Activity Two. Task #1. At the community's request the planning mission has approved the decision to study options for rehabilitating dry-season footpaths and animal tracks for use during the flood season. The embankments of the Ribb river have been identified by the communities as the most consistently elevated structure in the Kebele and the community seeks the project to study the possibility of reinforcing the embankments in the dry season to serve as an all weather footpath and animal track for

servicing the communities during the flood season. The community-based structural reinforcements would enhance compaction of the embankments and would facilitate rapid evacuation is the event of extreme floods. The embankments cut across a cross-section of flood affected woredas in the flood plains and for this reason a special assessment of the feasibility of upgrading the footpaths along the Ribb Rivers embankments or on alternative elevated routes for enhancing flood season mobility is to be commissioned to the Organization for Rehabilitation and Development in Amhara. [Annex … Terms of reference for study of routes and costs of all weather footpaths in Fogera floodplains]. The extent of project support for rehabilitation of the foot paths or even whether the project will support footpath rehabilitation will rely on the outcome of the study's cost and feasibility assessments.

Activity 2: Task #2. The project will support the installation of color-coded wooden poles to mark-out safe passage ways and warn users of flood danger levels in the floodplains during the flood season. Installation of the polls will be sequenced to enhance the integration of the project's investments in flood early warning and preparedness with its support to community-based structural works. The poles will be re-usable with installations in the pre-flood season (end-of June) and removal in the late flood season (after mid-September). Sotrage will be provided in temporary flood shelters where the polls will be re-painted each-year before re-deployment. A Keeper of the Color Coded Polies will be designated by the community and Kebele leadership. Especially high risk areas will be denoted by the use of flags with a three color flag code signifying safety status (green, yellow and red flags in depicting declining orders of safety and accessibility). In 2009 the poles will be installed early in the flood season to demonstrate their use and significance to community members.

Activity Two: Task #3. The project will supply sirens and emergency lights (hurricane lamps) to illuminate safe passageways and temporary shelters for nighttime evacuations to temporary shelters and local safe havens. Sirens will also use sound codes to denote different risk levels and will be installed only in locations where responsible community leaders are delegated for flood preparedness and management by their communities and the Kebele leadership. ENTRO procure materials and ORDA will distribute as embedded service in its footpaths rehabilitation and community education and mobilization implementation sub-contract**.**

Activity Two: Task #4: Awareness creation and action learning events will be organized to ensure community members understand how the enhanced flood preparedness and early warning system works and to hold mock emergency evacuation trails. The aim of the exercises is to ensure the community's user-readiness for engaging in the enhanced flood preparedness and early warning facility.

Activty Two: Task #5. Based on the recommendations of the assessment study and the availability of funds, the project will support the structural reinforcement and construction of dry season footpaths and animal tracks to serve as elevated safe access ways in the flood season.

Ttez Amba Activity Three: Upgrade community preparedness and response capabilities	Lead Implementing Agency
Task#1: Upgrade potential and existing temporary shelter facilities.	ORDA
Task #2: Provide material support and training on temporary shelter management.	ORDA

One of the features of the suffering from floods in Wegettera is that it is not always on a massive scale and is often on a very localized but intense scale where villagers have to evacuate their homes and abandon their holdings for a few hours and can return to their inundated homes shortly afterwards. The current response facility is only geared to responding to disasters of a larger magnitude when affected populations have to be moved to shelters in the high-grounds outside the floodplains for several weeks. The community and planning mission identified the need for a more staggered response capability so communities have the means to react to intense localized events without drawing on the Wereda's resources and can gradually move out of their localities if and only as the problem becomes more widespread and of a longer-duration. To this end the project will help communities by supporting the execution of the two tasks enumerated below.

Activity Three: Task #1. Upgrading existing and potential temporary shelter facilities will allow for a more staggered response to flood disasters in the Ttez Amba. The current options are either to evacuate to the highland above the Wereta-Bahir Dar highway or to suffer the full brunt of the floods. The community has identified its schools as the best facilities for providing temporary shelter from floods. The project will assess the feasibility of rehabilitating the structures and converting the selected structures for multipurpose uses as schools and temporary shelters from floods. The following five potential sites have been identified for potential assessments. The goal will be to match temporary support facilities with the number of FEWC sub-stations so each sub-unit has some autonomy in both its early warning and response capabilities and affected populations do not have to trek far to access support for temporary shelter. Only one school is available as a potential site for temporary shelter in Ttezz Amaba – Fotta school which has 12 classrooms. However, the usual point of retreat from disasters in Ttez Amba is the church (Ttez Amba Mariam also known as *Qurttit)* which located on an outcrop of rocks and community leaders expresede an interest in establishing a temporary shelter there. Other sites will also need to be identified to match the number of sub-stations with the number of potential temporary shelters.

Activity Three:Task #2. The project will provide limited material support and some equipment to the temporary shelters. Support will be limited to the provision of hurricane lamps for lighting during nighttime evacuations and sanitary materials for cleaning out the shelters after they have been used. No food, blankets or other forms of relief will be provided at the temporary shelters other than protection from intense flooding events. Users will have to rely on their own resources for the consumables they use while in the shelter. Structural works will be limited to reinforcing the selected structures to withstand extreme flooding events and will wherever possible avoid the construction of new structures.

Ttez Amba Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	Lead Implementing Agency
Task#1: Hold awareness creation and community consensus building meetings and events.	ANRS FSDPC/Wereda Administration/ORDA
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	ANRS FSDPO/Wereda Administration/ORDA/Local consultant

The people of Ttez Amba are not accustomed to the attentions of international organizations as the kebele is a food secure kebele with little history of external assistance. The Ttez Amba has some experience with a matching fund based water and sanitation project financed by FINIDA, it has very little history of engagement with international assistance organizations whether for technical assistance or material support. Consequently some mutual learning will need to take place for a clear and cohesive understanding of the respective responsibilities of the project, government counterparts and community contributions to be understood by the general community population. Attainment of a clear and transparent understanding of the respective roles and responsibilities of implementation partners will require the holding of several community awareness creation and skill transfer events.

Activity Four: Task 1. Four half-day community awareness creation events will be held at the sub-stations to present the project to the community and seek their endorsement of the persons selected to lead early warning and preparedness activities in their respective localities. Project stakeholders from both Federal and Regional level will be invited to take part in the events and provide technical backstopping on the accuracy of presentations to the community. The Wereda Administration will be invited to make an especially strong showing at these events to demonstrate its backing for the project and its commitment to inheriting and operating the system over the long-term.

5.3 Ttez Amba Budget Breakdown

Budget - Activity One: Enhancing Community Participation and Use of Early Warning System	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Establish community flood early warning and preparedness groups at *Kebele* and (3) *Gott* (sub-station) levels .	500	500	500	1,500
Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.	1040	250	250	1,540
Task #3: Share real time hydromet data from government stations with communities and wereda administration.	100	100	100	300
Task #4: Provide start-up training on early warning information collection and dissemination to selected community members.	3,000	1,500	1,500	6,000
Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.	0	0	0	0
Task #6: Community Flood Early Warning cells will collect and disseminate flood Early Warning information	500	500	500	1,500
Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.	500	500	500	1,500
Total Annual and Three-year Budget – Activity One	5,640	3,350	3,350	**12,340**

5.4 Ttez Amba Note on Activity One budget.

Task #1 has been completed by the planning mission. The annual USD 500 budget is allocated for calling and supporting general community meetings to endorse the selection of delegates onto the FEWCs. The money will be made available to the FEWCs either through embedded services with ORDA or through transfers to the ANRS FSCDPO which can also facilitate the annual events.

Task # 2. Budget is for procurement of 4 SIM cards and 6 mobile phone apparatuses at USD 50 and USD 100 per unit respectively. Prepaid cards of Birr 100/month/apparatus for 3 months (USD 190) will also be A contingency of USD 50 has been reserved for miscellaneous expenses related to distributing the mobile telephone sets. USD 250 has also been reserved for annual replenishment of pre-paid card costs.

Task #3 will receive project support in the form of printed, standardized formats for receiving and disseminating information. Readings of the rain gauge will be made by Ministry of Water resources employees. Wereda administration will absorb costs of dissemination to Kebele FEWCs.

Task #4. Training will be provided by a local consultant to be recruited by ENTRO or embedded in ORDA's services subcontract. The training will be three days long and will target ten candidates from the Kebele. The budget includes the estimated per diem costs of 10 participants, the travel, accommodation and per diem costs of the consultant have also been equally apportioned to the four participating Kebeles. Training will be held at two separate venues in Fogera and Libo Kemkem weredas. Wagetterra's candidates will attend session in Wereta. Annual one or one and a half day refresher training events have also been budgeted for the coming two years. The refresher courses are intended to upgrade and refresh the technical capabilities of previously trained staff and to also introduce any new staff to the technical features of the community-based flood early warning and preparedness system.

Task #5 will have its costs embedded in the NMSA sub-contract. NMSA will be responsible for constructing and installing rain gauges on site as well as training the Development Agents on how to read the gauge and record readings.

Task #6 will be financed mainly from community resources. The project has budgeted USD 500 per year to support the cost of stationeries and annual candidate selection/endorsement meetings for positions in the FEWCs.

Task #7 is the allocation made to ANRS FSCDPO for monitoring the progress of actitivities in Ttez Amba kebele.

Budget Activity TWO: Reduce the impact of physical isolation due to floods.	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.	30,000			30,000
Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.	10,000	10,000	0	20,000
Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.	5,000	0	0	5,000
Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.	3,000	1,500	1,500	6,000
Task #5: Reinforce community footpaths and animal tracks	15,000	15,000	10,00	40,000
Activity Sub-Total				**101,000**

5.5 Ttez Amba Note on Activity Two Budget

Task One: Costs of the Study for both participating kebeles in Libo Kemkem wereda and kebeles sharing borders with the Ribb Rriver embankment are bundled into the line item. The study will be undertaken by ORDA with the contract managed by ENTRO in collaboration with the ANRS FSCDPO. Study will include the production of a bill of quantities for supporting community rehabilitation of the footpaths and animal tracks from which a more accurate budget estimate of the construction costs will be inferred .

Task #2: Costs will cover purchase of poles, labor and materials for color-coding and costs of transport and on-site installation.
Task #3. ENTRO will procure equipment and ORDA/FSCDPO will dispense to Kebele FEWCs and install sirens at selected sites.
Task #4. Budget includes costs of introductory post-flood season event in 2008 and a more sustained campaign in the pre-flood season of 2009.

Task #5. Only estimated costs are used. Study will produce more accurate costs of construction and assess technical feasibility of proposal. Works will be contracted to ORDA water and sanitation unit in order to leverage community labor and other resources.

Activity Three: Upgrade community preparedness and response capabilities	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Upgrade potential and existing temporary shelter facilities.	10,000	10,000	10,00	30,000
Task #2: Provide material support and training on temporary shelter management.	3,000	3,000	3,00	9,000
Activity Sub-Total	13,000	13,000	13,000	**39,000**

5.6 Ttez Amba Note on Activity Three Budget

Task #1. Costs include purchase and transport of construction materials and contractors fees. Communities will supplement with contributions in labor and in-kind (local materials and services) for completion of works.

Task #2. ENTRO will procure materials and equipment. ORDA or Wereda Administration by deputation from FSCDPO will install in sites. Budget includes costs of hurricane lamps, per diems of training staff, and lockers.

Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	2008/09	BUDGET (USD) 2009/10	2010/2011	Total Budget for Line Item
Task#1: Hold awareness creation and community consensus building meetings and events.	2,000	2,000	2,000	6,000
Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.	3,000	3,000	3,000	9,000
Activity Sub-Total	5,000	5,000	5,000	**15,000**

5.7 Ttez Amba Note on Activity Four Budget

Task #1. Budget includes per diem costs for visiting Regional, Zonal or Wereda officials and resource persons.
Task #2. Content of training will be determined by project management and community felt needs.

5.8 Ttez Amba Timeplan of Action

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 1:Task #1: Establish community flood early warning and preparedness groups at Kebele and (3) Gott (sub-station) levels .												
Act. 1:Task #2:Provide mobile telephones Kebele and establish schedule of regular communication between Wereda and Kebele and Kebele and Sub-stations.												
Act. 1: Task #3: Share real time hydromet data from government stations with communities and wereda administration. (Establish flood lead time and use data for local early warning purposes).												
Act. 1:Task #4:Provide start-up training on early warning information collection and dissemination to selected community members.												
Act. 1: Task #5: Provide rain gauges and training on data collection to expand community level hydromet database.												
Act. 1: Task #6: Community Early Warning cells will collect and disseminate flood Early Warning information												
Act. 1:Task #7: Monitor and provide technical assistance to enhance the performance of the community based flood early warning system.												
Act. 2:Task #1: Study, survey and compute costs of rehabilitating dry-season footpaths for use in flood season.												
Act. 2: Task #2: Install color-coded safe passage ways and warning poles for assisting mobility during the flood season.												
Act. 2: Task #3: Install sirens and emergency lights at key intersections and assembly points leading to temporary shelters for localized flooding events.												
Act. 2: Task #4: Enhance community user-readiness for using the freshly installed flood early-warning and preparedness systems and facilities.												
Act. 2:Task #5: Reinforce community footpaths and animal tracks												

Activity/Task	Quarter One			Quarter Two			Quarter Three			Quarter Four		
	Flood Season			Post-Flood			Dry Season			Pre-Flood		
Monthly Calendar of Operations	**2008/09**											
	J	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**
Act. 3:Task#1: Upgrade potential and existing temporary shelter facilities.												
Act. 3:Task #2: Provide material support and training on temporary shelter management.												
Act. 4:Task#1: Hold awareness creation and community consensus building meetings and events.												
Act. 4: Task #2: Provide demand driven training to fill community capacity gaps on selected flood preparedness and early warning themes.												

Annex A: Consolidated Budget for Pilot Communities (2008 – 2011)

ACTIVITY	Total Budget (USD)
Activity One: Enhancing Community Participation and Use of Early Warning System	49,360
Activity Two: Reducing the impact of physical isolation from floods	404,000
Activity Three: Upgrading community flood preparedness and response capabilities	156,000
Activity Four: Enhance community awareness and build capacity of community to prepare for and manage the incidence of floods	60,000
Grand Total	**669,360**

Annex B- Outline of Orientation Workshop

Wereta,

South Gondar,

Amhara National Regional State

Sunday 20 July, 2008

Time	Activity	Speaker/Facilitator
2:30	**Registration**	ENTRO/Fed. Water Res. Team
3:00	**Opening Statement**	Ato Aderaw, Amhara Region FSCDPO
3:15	**NBI, ENTRO and the FPEW Project – An Introduction**	Ato Mulugeta, ENTRO
3:30	**An Overview of Ethiopia in the FPEW Project**	W/o Semunesh, Federal Min. Water
3:45	**Discussion**	Ato Yohannes, Consultant
4:00	**Tea Break**	
4:30	**Community Flood Preparedness and Prevention**	Ato Yohannes, Consultant
5:15	**Discussion**	
5:30	**Progress of 2000 EC Flood Season**	Zone, FSCDPO
6:00	**Discussion**	Ato Yohannes, Consultant
6:45	**Closing Statement**	To Be Arranged
7:00	**Lunch**	
7:30	**Logistics Management**	W/o Genet, ENTRO
8:15	**Working Groups**	ENTRO

Annex C: List of Attendants – Orientation Workshop

No.	Name	Position	Organization	Address	Telephone
1	Mr. Tadesse Fenta	Kebele Chairman		Libokemkem/Banbiko	
2	Mr. Mengistu Zewdu	Agricultural Agent		Libokemkem/Shina Tsion Kebele	0918714275/0584440042
3	Mr. Gebeyehu Degu	Kebele Chairman			
4	Mr. Destaw Baye	Develeopment Agent	Woreda Agruiculture & Rural Dev't Office	Libo Kemkem Woreda	918747646
5	Mr. Mersha Merid	Develeopment Agent	Agricultral & Rural Dev't Office	Libo Kemkem-Tezamba Kebele	91874941
6	Mr. Derbew Getahun	Develeopment Agent	Agricultral & Rural Dev't Office	Libo Kemkem/Banbiko	
7	Mr. Lebera Ayale	Kebele Chairman		Libo Kemkem	582310420
8	Mr. Desalegn Tesda	Kebele Chairman		Shina	
9	Mr. Dessie Woretaw	Develeopment Agent		Libo Kemkem/Gendawa	
10	Mr. Kassaw Abebe	Kebele Chairman		Sinka/Tsion	918803700
11	Mr. Zeinabu Getahun	Kebele Chairman		Kidist Hana Kebele	
12	Mr. Enyew Muche	Develeopment Agent		Libo Kemkem/Agid Kirgna	
13	Mr. Tarekgne Adugna	Kebele Chairman		Libo Kemkem	582310114
14	Mr. Azazie Tibebu	Kebele Chairman		Libo Kemkem/Agid Kirigna	
15	Mr. Gashaw Eshetie	Kebele Chairman		Libo Kemkem-Tezamba Kebele	
16	Mr. Bantederu Abera	Develeopment Agent		Fogera Woreda	584460027168
17	Mr. Gedebea Hailu	Farmer		Nabega	0584460027/68
18	Mr. Mekonnen Wasihun	Develeopment Agent		Fogera Woreda	0584460027/68
19	Mr. Maru Belay	Kebele Chairman		Fogera Woreda	
20	Mr. Mekonen Ayele	Develeopment Agent		Kedist Hana	584460068
21	Mr. Abraraw Mequanint	Kebele Chairman		Fogera Woreda	918702887
22	Mr. Solomon Emnetu	Develeopment Agent		Fogera Woreda	918747444
23	Mr. Chekol Maru	Develeopment Agent		Shina Kebele	913328277

Annex C: List of Attendants – Orientation Workshop (continued)

24	Mr. Kassaw Legas	Develeopment Agent	Fogera Woreta Agriculture & Rural Dev't	Abunakokit	918782920
25	Ms. Tigist Tarekegn	Develeopment Agent	Fogera Woreta Agriculture & Rural Dev't		918710779
26	Mr. Markeshaw Kebru	Develeopment Agent	Woreda Agruiculture & Rural Dev't Office	Fogera Woreda	
27	Mr. Worku Mulat	Head	OARDA	Fogera Woreda	0918702671/0584461265
28	Mr. Moges Fekadu	Irrigation & Drainage Design Engineer	Amhara National Regional State Water Resources Dev't Bureau	Bahir Dar	0911129262/0582201772
29	Mr. Dagnachew Gebeyehu	Program Advisor	ORDA	Bahir Dar	0918767362/0582206975
30	Mr. Muluken Emagnu	Head, Water Resources Dev't Program	Organization for Rehabilitation & Dev't in Amhara	Bahir Dar	0918778737/0582204703
31	Mr. Minale Abera	Journalist	Amhara Mass Media Agency	Bahir Dar	0918701216/0582201121
32	Mr. Zemacho Adamo	Journalist	Amhara Mass Media Agency	Bahir Dar	0918702584/0582200930
33	Mr. Gedamu Chane	Head of Hydrological Office for Bahir Dar	MoWR	Bahir Dar	0918766074/0582209113
34	Mr. Dejene Sahlu	Branch Head	Bahir Dar Meteorology Branch Office	Bahir Dar	0918705982/0582207786, Fax 0582207792/b-darmet@ethionet.et
35	Mr. Eyasu Mesfin	Public Relation	Food Security Coordination Disaster Prevention Office	Bahir Dar	0918701136/0582181965

Annex C: List of Attendants – Orientation Workshop (continued)

36	Mr. Zerihun Simie	Hazard Monitoring Specialist	Food Security Coordination Disaster Prevention Office	Bahir Dar	09117378814/0582180099
37	Mr. Hafiz Temam	Vdeiography/Camera man	Food Security Coordination Disaster Prevention Office	Bahir Dar	0911090503/0582181965
38	Mr. Gegsew Melek	Head	North Gondar Agri & Rural Dev't Dep.	Gondar	0918704010/0581110659
39	Mr. Adebabay Tsegaw	Head	Food Security Coordination Disaster Prevention Office	North Gondar	0918777607/0581121532
40	Mr. Asnakew Adane	Head	Woreda Admin. -	Dembia	0918776913/0583350004
41	Mr. Abebe Andarge	Head	Agricultral & Rural Dev't Office	Dembia	0918785371/0583350023/22/Fax 0583350023
42	Ms. Tsega Mekonnen	Team Leader	Denbia Agriculture Food Security	Dembia	912059936
43	Mr. Eshetu Kassie	Administrator	Dera Woreda Admin. Office	Dera Woreda - Anbessamie	0918700791/0581113538
44	Mr. Mekuriaw Addis	Head Office	Agriculture Dear Woreda Agricultral Office	Dera Woreda - Anbessamie	0918707733/0581116458
45	Mr. Getinet Assefa	Team Leader	Agricultural Dev't Office	Dera Woreda - Anbessamie	581116458
46	Mr. Moges Ambaw	Early Warning Expert	Zone FSP Office	Debre Tabor	0918710867/0584412665 Fax 0584413007
47	Mr. Shumye Alemu	Head	Agricultural & Rural Dev't Dpt.	Debretabor	0918714646/0584410285
48	Mr. Alemayehu Ferede	Representative Office Head	DPPC	South Gondar	918715707
49	Mr. Fiseha Fekadu		District Health Office	Addis Zemen	584440028
50	Mr. Getnet Muche		Libo Kemkem Administration	Addis Zemen	0918782203/0584440179

Annex C: List of Attendants – Orientation Workshop (continued)

51	Mr. Ahmed Hamid	Food Security desk - World Bank Project Coordinator	Libo Kemkem Agriculture Dev't Office	Addis Zemen	0911048589/0584440872
52	Mr. Melaku Kassahun	Vice Head Offisor	Libo Kemkem Woreda	Addis Zemen	584440391
53	Mr. Bitew Alebachew	Vice Head Offisor	Libo Kemkem Wored Agri & Rural Dev't	Addis Zemen	0918747545/0584440024
54	Mr. Alelign Wubie	Head	Water Ofice	Libo Kemkem	0918747618/0584440025 /42
55	Mr. Kassegn Tesega	Head	Environmental & Land Administration	Fogera Woreda	0918708203/0584460048
56	Mr. Alemayehu Yazie	Head	Water Resource Dev't Bureau	Woreta	0918709145/0584446125 7/Fax 0584461265
57	Mr. Fissiha Ayalew	Team Leader	Agricultural Office	Fogera Woreda	912186002
58	Mr. Endalew Achamie	Head	District Health Office	Fogera Woreda	0918702605/0584460447
59	Mr. Molla Jenber	Administrator	Woreda Administration	Woreta	0918703012/0584460106 /Fax 0584410010
60	Mr. Chalachew Kassie	Deputy Head	Information Office	Fogera Woreda	0584460904/0584460117

Annex D: Terms of reference –Assessment of Costs and Feasibility of Footpath Rehabilitation in Flood Affected Kebeles of Fogera and Libo Kemkem Weredas

Background

The Flood Preparedness and Early Warning Project (FPEW) is a fast track project of the Eastern Nile countries involved in the Nile Basin Initiative. The project is being implemented in all three Eastern Nile countries – Egypt, Ethiopia and Sudan but is concentrated mainly in Ethiopia and the Sudan. In Ethiopia FPEW activities are concentrated in flood-affected areas around Lake Tana and in Gambella town of Gambella Region. The project has three components –(i) Government capacity building; (ii) Community-based flood preparedness and early warning; (iii) Regional learning and experience sharing components. FPEW is being implemented in two phases with the first phase of activities concentrating on commencing the community component in flood affected parts of the Lake Tana area. The project and Regional Government of Amhara Regional State have selected four communities in Fogera and Libo Kekem weredas in which to start project-supported flood preparedness and early warning activities. Community action plans have been prepared with the participation of community leaders and stakeholders from the selected communities. Several areas of further inquiry were identified by project stakeholders and community leaders in the course of preparing the community action plans and this request for assistance seeks to help satisfy some of the identified needs through the use of civil society and/or private sector contractors that are capable of providing the desired services. Accordingly, FPEW wishes to contract the services of local non-governmental organizations or private contractors to undertake a survey and feasibility study of options for upgrading footpaths in selected communities in Fogera and Libo Kekem weredas of Amhara National Regional State. Wagettera Kebele and Nabega Kebele have been selected for these activities in Fogera wereda while Gendawuha Giorgis and Ttez Amba kebeles have been selected in Libo Kemkem weredas. However, the footpaths main need to cross adjoining kebeles enroute to higher grounds outside the floodplains and the survey will need to be conducted in any kebeles through which the footpaths pass. The selected NGO and/or contractor will be required to complete the tasks outlined below in the execution of these services:

1. Conduct a physical survey of footpaths connecting Wagettera and Nabegga kebeles in Fogera wereda as well as Genedawuha Giorgis and Ttez Amba kebeles in Libo Kemkem wereda to to the nearest rural town or urban center outside the floodplains where the population can be sheltered from floods;
2. The survey will identify alternative routings for reaching flood shelters in the high grounds outside the flood plains as well as ease of assembly and access to on-site temporary shelters in the target communities;
3. The survey will design a network of footpaths within the selected kebeles that facilitates access of affected communities to on-site temporary flood shelters or evacuation assembly points;
4. The contractor will be produce a bill of quantities and an estimated cost of construction for upgrading the footpaths to serve under flood conditions. A least cost approach should be applied in the selection of materials and estimation of upgrading costs.

5. The contractor will specify the origin of materials to be used especially for bulk construction materials that must be transported to the sites.

Annex E – Terms of Reference for Introducing Communities to Community-Based Flood Early Warning System

Background

The Flood Preparedness and Early Warning Project (FPEW) is a fast track project of the Eastern Nile countries involved in the Nile Basin Initiative. The project is being implemented in all three Eastern Nile countries – Egypt, Ethiopia and Sudan but is concentrated mainly in Ethiopia and the Sudan. In Ethiopia FPEW activities are concentrated in flood-affected areas around Lake Tana and in Gambella town of Gambella Region. The project has three components –(i) Government capacity building; (ii) Community-based flood preparedness and early warning; (iii) Regional learning and experience sharing components. FPEW is being implemented in two phases with the first phase of activities concentrating on commencing the community component in flood affected parts of the Lake Tana area. The project and Regional Government of Amhara Regional State have selected four communities in Fogera and Libo Kekem weredas in which to start project-supported flood preparedness and early warning activities. Community action plans have been prepared with the participation of community leaders and stakeholders from the selected communities. FPEW wishes to contract the services of a local consultant to develop content for communicating the principles, costs and benefits of community-based flood preparedness and early warning activities to participating communities in the floodplains around Lake Tana. The materials will be used for community awareness creation exercisese in the target communities. The awareness sessions will take the form of community meetings and focus group discussions and will be implemented in tandem with a physical survey and feasibility study assessing options for upgrading local footpaths to serve floodplain communities during flood seasons. The awareness sessions are to be used to facilitate right of passage negotiations with community members on whose land the paths might be constructed/upgraded. The flood early warning and preparedness content development consultant will be responsible for completing the tasks enumerated below :

1. Review project documents and summarize information on the project background, objectives and modes of operation for inclusion in communication package for target communities;
2. Produce Information, Education and Communication materials for dissemination in community awareness creation events;
3. Identify and communicate to communities the types of information they will be required to provide (share with) the Early Warning system;
4. Articulate and communicate the roles to be played by community members who have been elected into the community Flood Preparedness and Early Warning Cells;
5. Articulate general population (community's) role in providing timely and accurate flood early warning information to the early warning system;
6. Articulate community role in disseminating early warning messages within the community;
7. Articulate the types of information to be gathered from the community including instruments for managing the timing and means of verification of information gathered from the community;
8. Explain links with formal Disaster Preparedness and Early Warning System;

9. Articulate general population (community's role) in using flood early warning information;
10. Assist and mentor staff of contracted NGO in delivering the community awareness messages.