

Flood Preparedness and Early Warning Project
Community Action Plans

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1. Introduction

In the Sudan as known, most villages are located right on the river banks, but residents have adapted to the seasonal flux of the rivers. It is only when the annual floods are larger than usual that serious problems arise. Then the emergency response agencies and post-flood relief agencies struggle to cope with the scale of the problems. The floods also erode river banks (known as *haddam* in the Sudan), threatening riverside dwellings, orchards, vegetable gardens and village assets like pumps. Malaria and other water-borne diseases also surge after floods because mosquitoes breed in residual ponded water, water sources may become contaminated and sanitation facilities can be adversely affected.

An important emphasis of the FPEW Project is to assist people at risk at the community level; and to promote and implement modest-scale but widespread works and activities on the ground that will directly benefit communities at risk, particularly rural and village communities. To that end, the awareness, basic skills and practical knowledge of communities need to be developed and enhanced.

Data collection activities will be undertaken under the Phase 1 program. It proposes that a web-based database of flood-related data and information (e.g. meteorology, hydrology, topography, channel/floodplain and other characteristics, land use, historical floods, existing and planned/potential regulations and other interventions, etc.) will be developed and established at ENTRO by a Regional Flood Coordination Unit (RFCU). It proposes that preliminary flood risk maps will be produced together with other related mapping products to support flood management. Phase 1 activities are proposed over a 3-year time span, and so should overlap with early activities under the Phase 2 of implementation.

1.1 Flood Project Phase 1 Objective

The main development objective of the Project is to meet urgent community needs and to reduce floods negative impacts and increase community benefits from floods.

The specific objective of FPEW I is to establish a regional institutional basis and to strengthen the existing capacities of the EN countries in flood forecasting, mitigation and management, promoting regional cooperation as well as to enhance the readiness of the EN countries to subsequent implementation of the subsequent phases of FPEW projects . It will prepare the foundation for FPEW II implementation in terms of institutional settings

and data/information collections/sharing at community and national levels, together with enhancing regional coordination and cooperation.

1.2 Outcomes expected from the FPEWI include:

- ❑ Assessment of the flood risk in the Eastern Nile region to support flood management planning
- ❑ Improved floodplain management for major urban centers vulnerable to flood damage, and for flood-prone rural communities.
- ❑ Operational flood forecasting systems in Eastern Nile countries with appropriate compatibility and mechanisms for exchange of information and data.
- ❑ Improved emergency response by governments at all levels, and enhanced community preparedness.
- ❑ Established a viable framework for an effective cooperation and partnership among government institutions, Localities, NGOs and local communities in the provision of basic services targeting particularly the flood prone areas.

A major deficiency for effective flood risk management is the lack of flood risk mapping that specifies the flood risk areas, probabilities of inundation, flood depths in planning floods, *etc.* This is regarded as a top priority to improve the capacity of flood risk management.

Apart from what the government can do for the community, there is a question of what the communities can do for themselves. First, they need to be well organized. With proper education and training, communities could be better prepared, and also more aware of the potential for simple but effective measures, and of sources of funding and government services they can access.

1.3 Flood Project Phase1 Components

FPEW I was planned for 3 years of implementation and will overlap with the first two years of FPEW II. It comprises three key components, namely, regional coordination, pilot flood preparedness and emergency response, and flood forecasting warning and communication system.

a) Pilot Flood Preparedness and Emergency Response

Identifying and mapping at-risk communities including the extent of flooding and the location of high risk areas is a basic input to flood response planning as well as to analyses aimed at identifying appropriate flood mitigation measures. It is also a major input to determining community vulnerability. A priori knowledge of the likely extent and depth of expected flooding as well as knowledge of the types of assets and activities located within the floodplain are essential. Without such information and the plans to guide response in the event of a flood, the full benefits of river height forecasts cannot be realized. Flood emergency response in the EN is currently, by and large, reactive and ad hoc. This component will strengthen flood preparedness and flood mitigation planning at national and local levels through:

- Flood-risk mapping.
- Assessment of information needs by the community for effective response.
- Facilitation of improved flood mitigation plans and mechanisms aimed at protecting property and assets.
- Development and evaluation of effectiveness (including beneficiary assessment) of community flood preparedness and response plans.

The pilot activities under community flood preparedness and response plans will include facilitating and assisting selected communities develop local and higher level flood management and response plans, trialing warning dissemination methodologies within selected communities with regard for timeliness and delivery to those who need to know; and improving community understanding and interpretation of warning information etc. This activity will involve a three step process., viz., (a) determining the information needed by the community for effective response aimed at ensuring that flood forecast and warning system development is driven both bottom up as well as top down and that it delivers what is needed to enable an effective response ahead of expected flooding; (b) facilitating development of community response plans – will involve the provision of technical and other assistance to streamline local development of plans; and (c) evaluating effectiveness of plans and process – will involve a process of participatory evaluation and address the effectiveness of the activities in terms of flood damages avoided and community well-being. The local governments (mahaliyas in Sudan) will be closely linked to piloting community flood preparedness and mitigation plans to ensure that appropriate linkages at the ground level are developed for adoption of the plans at local level.

b) Flood Forecasting, Warning and Communication Systems

This component is aimed at to improve flood forecasting institutions and developed of detailed design for flood forecasting, warning and communication system. The communications element of a flood forecast and warning system is essential to its operation and the reduction of flood damages. Data has to be acquired and transmitted to the forecast center (and in some cases to the at-risk communities as well) and the resulting forecast transmitted to the local area for interpretation, value addition and disseminated to those who need to take action. The effectiveness of the system depends not only on the accuracy of the raw data and forecast but also on the lead time available to take action before the flood begins to affect the area. The design will also be based on a rapid assessment of the current communication channels from the local to the regional/national levels (formal/informal). The design will also factor steps to enhance the communication links between upstream and downstream users.

To strengthen national flood forecasting and warning capabilities this component will:

- Enhance current flood forecasting institution and support the establishment of new flood forecasting institution of Ethiopia.
- Enhance data acquisition and communication equipment by refining flood forecast, warning and communication system requirements, identifying appropriate approaches, technologies and equipment, and pilot these at selected communities and/or locations;
- Prepare a detailed system design for a regional flood forecast, warning, and communication system and tender documentation for the EN.
- Enhance the communication links directly between upstream and downstream residents.
- Rapidly assess the current communication channel from the local to the regional/national levels (both formal and informal) to improve effectiveness of these channels.

1.4 Community Action Plans Strategy:

Community Action Plans are plans prepared by the beneficiary communities to indicate their priorities and needs for flood preparedness and response and provide appropriate implementation mechanism.

1.4.1 Participatory Planning Process

A participatory process was undertaken in the creation of the action plans. The mission began its activities by holding consultative meetings with selected communities on both the content and procedures to be followed in preparing community action plan and prioritizing community needs.

One of the key implementation challenges for flood project is limited capacity of communities targeted by the project. Almost all development initiatives in the past have been driven from the top, where communities and local government authorities are recipients of the initiatives and are not involved in the decision making process. Therefore, the communities have little or no previous experience in community driven development which requires participation of communities in making decision on matters like floods that affect the community. Moreover, other stakeholders of the project including local government entities and civil society organizations have limited experience and skills for social mobilization and could not provide effective support to the community. Lack of effective means of communication also poses a challenge which might be due both to poor road infrastructure (mobility is very difficult especially during rainy season) and telephone network.

Therefore, the project strategy aiming at building the capacity of the project stakeholders in various aspects of participatory development initiative and management. The project supported capacity building activities including training, technical assistance for, local Community-Based Organizations (CBOs), to improve their skills in the identification, planning, implementation and management of their action plans.

1.4.2 Prioritization of Community Needs

The strategy that adopted by the project is the participatory approach that involve the selected flood prone communities from the needs assessment stage up to implementation and monitoring stages. 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 and components.

Several core principles will continue to guide the community action plan strategy which is based on community participation and bottom-up approach, these will include:

- Ensuring that activities reflect the priorities of the community: All activities should be developed by community through participatory process, in consultation with local authorities and other relevant stakeholders.
- Accountability and Transparency - will be based on a clear understanding of the roles and responsibilities of each partner; information will be shared with all levels and stakeholders. In addition, there will be ongoing monitoring of the work undertaken with semi-annual reviews to assess progress, and discuss lessons learned.
- All-inclusive and sustainable programming – the flood project will be based on the principle of inclusion (social integration and inclusion), and every effort will be taken to ensure that the poorer, less vocal, under-represented groups and households in the target community are included in all of the project activities.

The main aim of flood preparedness and early warning project community action plans as piloting tasks is to reduce human suffering and damages and capture the benefits of flooding in the selected community. The action plans focus on flood risk management and non-structural approaches to mitigating impacts of floods. To prepare communities to deal with any flood hazards in the future, the proposed action plans incorporate such measures that could be implemented by the selected community flood committee and other concerned institutions of the flood project. In the event of an emergency, an effective, well-tested action plan will increase public safety and reduce property damage.

One outcome should be that community has to be better prepared and equipped with practical knowledge so that community-driven flood management initiatives can be developed and supported. The action plan pilot activities are designed to promote self-organization and self-help towards developing and implementing community-based flood

preparedness, flood mitigation planning, flood forecasting and warning, emergency response and preparedness.

1.4.3 Purpose of the Community Action Plans:

The purpose of the plans is to:

- Provide a mechanism which facilitates public safety by notifying appropriate authorities and communities in a timely manner.
- Provide information to all stakeholders to allow for an informed evaluation to be made during emergency events
- Provide a road map of actions for foreseeable flood preparedness, responses and mitigation to reduce floods negative impacts affecting the safety of the communities and their properties.

The action plans describe the components, tasks and activities of the project and provides a budget, and a procurement plan for project implementation. Implementation and institutional arrangements are included, with plans for procurement and financial management.

The following community action plans were prepared based on needs assessment that has been conducted during the field visits to these selected communities. During these visits and as shown in annexes 1, 2 and 3, communities have discussed their preparedness situation and explored their present resources, facilities and critical needs for the coming flood season.

1.4.4 Targeting and Sustainability

The project administration selected four 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 communities and on shared communities between the communities, government and the project in reducing suffering from floods. At this project pilot phase four communities will be selected for the piloting tasks and activities that could be scaled-up later at the FPEW II.

The selected criteria are:

- easily accessibility to implement the pilot activities,
- the severity of flood impacts,

- the community organization and willingness
- the type of flood impacts and flood image for the community.

The selected communities were:

1. Toti Island(Urban community at Khartoum state)
2. Wawsi Village (Rural community at Khartoum state)
3. Elabka village(Rural community at River Nile State)
4. Sidon community At River Nile state.

The four selected pilot communities are easily accessible and historically being known as highly flood prone areas. The communities at the selected sites are well organized and have a good experience of flood mitigation and control. However, the accessibility of these sites is considered an important factor for the successfulness of implementation of piloting activities and tasks.

2 Toti Island Community Action Plan

2.1 Toti Island Community Action Plan Tasks

The Project will undertake actions for capacity building, institutional strengthening and technical assistance to improve the management of flood risk in the pilot community (Toti Island). It also includes programs for practical training and rising of awareness and community preparedness in areas of high flood risk within the selected pilot area.

The action plan tasks with the community at risk from flooding (Toti Island) can be summarized as follows:

- Tasks that raise awareness and skills of the community at risk and local authorities
- Tasks that provide real-time information about storms and floods in flood risk areas, provide systems for dissemination of flood warnings to the community, and facilitate government and community response to flood emergencies. Preparedness of daily and periodic reports on floods and village situations
- Tasks that improve the knowledge of flood hazard faced by community and plan in advance for the management of flood risk.
- Tasks that undertake physical works to reduce flood risk to Toti Island community.

2.2 Toti island Community Flood Preparedness Action Plan Components

The Toti Island community action plan components are:

1. Flood Forecasting, early warning and communication component
2. Flood preparedness and Emergency Response component

2.2.1 Flood Forecasting, Early warning and Communication Component

Under community action plan component, Toti island community would be supported by strengthening its flood preparedness first by availing the flood information at an earlier time to the occurrence of floods and by providing communication facilities to enable them to be in direct contact with flood forecasting institutions. Also, the required capacity building (training programs) to flood implementing agencies will be provided to upgrade their abilities to effectively implement the project tasks and activities. Technical supports to related government institutions, such as meteorological authority, national flood center, have been provided to facilitate flood forecasting and early warning.

The following are the suggested project action plan activities that might be undertaken to carry out flood forecasting and early warning:

Activity 1-1: Public awareness/educational campaign (enhance community preparedness for using flood early warning and preparedness system and facilities.)

The campaign will be directed towards the public in order to take preventive and mitigation actions. Messages will be communicated through leaflets, posters, seminars, state broadcasting, and word of mouth. Messages will include issues such as opening drainage systems, checking of roofs, plastering mud houses; control of vectors (flies and mosquitoes), rainfall and river level forecast information, etc. The campaign will be conducted in very close cooperation with the state broadcasting and information services. Actions will be conducted in close cooperation with the local health authorities, other NGO.

Activity 1-2: Communication between Toti Island Community and stakeholders:

Response to any emergency arising from floods will be greatly improved by placing information in the hand of responsible person. Here the village committee is vital in giving information about the floods and bank conditions. Other meteorological information is vital to operation room activities at locality level to keep abreast of the prevailing hydrological conditions and resulting rainfall/runoff patterns.

All collected data should be filed and submitted to the responsible person on the flood committee on a weekly basis during flood season. Any abnormalities observed during data collection should be reported to the responsible flood committee immediately. In addition all collected data should be included in the annual detailed inspection report. A data base would be useful for managing the reported data and for receiving reports in an easy and efficient manner and will assist in producing weekly, monthly and annual report. It is recommended that the data base be managed from a central location and the locality

To reduce costs and time, a simple communications system of handsets and channels will be established to link up the Toti island flood committee and the community with the Nile Flood center and other concerned authorities. Due to the development of the telecommunication network in Sudan, and availability of cell phones at the Island, the only need to enhance communication between the community and national flood center and meteorology authority, is to have the addresses and telephone numbers of all concerned persons

2.2.2. Flood preparedness and Emergency Response Component

Activity 2-1: Monitoring and maintenance of flood mitigation measures:

A good monitoring plan is an integral part of operation and maintenance of the embankment. The plan is intended to identify deficiencies, unsafe conditions, and the maintenance required to assure the integrity of the banks to protect life, health, property...etc.

The monitoring plan includes the provision of the following:

1. Routine and detailed inspection with annual reporting of assessment and recommended improvements or maintenance.
2. Installation of reading instruments

A good maintenance program will protect an embankment against deterioration and prolongs its life. A poorly maintained embankment will deteriorate to such an extent that it could fail. The cost of a proper maintenance program is small if compared to the cost of major repairs and potential loss of life and property.

The flood committee members together with the concerned institutions should develop a basic maintenance program based primarily on systematic and frequent inspection. Detailed inspection should be performed on a yearly basis and after major floods by a technical committee. The documented results of the detailed inspection should include maintenance recommendations along with required schedules for completion of any proposed maintenance.

Activity 2-2: Preventive and environmental health

The focus will be on preventive, environmental health and first-aid services. The major activities will include posting of teams at strategic locations; training of local committees on first aid and primary health care; home visits; health education sessions directed mainly towards mothers; vector control; provision of first-aid services (e.g., wounds); vaccination, etc. To prevent the community health from water borne diseases and bites of poisonous animals, primary health care have to be secured by availing first aids kit, vaccines.

Activity 2-3: Emergency response, provision of materials for flood Mitigation (Toti Island flood committee with local contractors)

The island is surrounded by mud terrace of about seven Kilometers divided to:

3. The western terrace opposite to Omdurman is extended about two kilometers and two meter height. This part has no risk as the agricultural land lies between the terrace and the river.
4. the southern terrace opposite to Khartoum which extend to two kilometers on agricultural land and also has no risk
5. The eastern terrace opposite to Khartoum North which is considered the flood risk area that extend about three kilometers from the southern part and affected by erosion(Haddam), however, the most seriously affected area is the north-eastern part where the land eroded 2-3 meters annually.

To protect the island, the water current and waves have to be softened by using empty barrels, used tires, iron stands and granulated soils. A new dumber need to be purchased, Loader has to be hired and manual soil compaction (small structural measures for increasing community flood preparedness). Also, strengthening of the eastern terrace of the island required availing soils.

Emergency Identification:

A potential serious situation is defined as a hazardous condition at the river embankment which if not attended to, may develop into an emergency situation. Listed below are examples of conditions, which may lead to flooding:

- Excessive/ increased amounts of seepage.
- Initial evidence of embankment failure such as cracking and displacement
- High inflows due to torrents, adding water to the river.

General Responsibilities under the emergency:

In the event of an emergency situation, the village flood committee coordinator should evaluate the situation after receiving verbal reports from committees' member. He/she should initiate the notification procedure himself in consultation with the village flood committee. If time permits higher level flood institutions should be contacted and solicited for advice.

Other specific actions to be taken after implementation of the emergency include:

1. Evacuate people from affected embankment.
2. Open all drainage and discharge outlet
3. Contact media source (Television and radio station) should be notified and listed in the plan.

4. Emergency stocks: non-food stocks (sacks, blankets, plastic sheeting, kitchen kits, essential medicines, first-aid kits, water pumps, water jerrycans, etc.) will be stored and managed at the state level

Table 1: Summary of Toti community Action Plan Activities

Project Activity/task	Implementing Agency
Activity 1-1: enhance community preparedness for using flood early warning and preparedness system and facilities.	MIWR(NFC) community flood committee
Activity 1-2: Communication between Toti Island Community and stakeholders	MIWR(NFC) community flood committee
Activity 2-1: Monitoring and maintenance of flood mitigation measures	NFC/ community flood committee
Activity 2-2: Preventive and environmental health	NFC/State locality/SRCS
Activity 2-3: Emergency response, provision of materials for flood prevention	NFC/State Locality/community flood committee

2.3 Toti island Community Action Plan Implementation Mechanism:

The implementation of all activities under this project action plan will be undertaken by eligible implementing agencies through the supervision and coordination of the national flood center. Project activities will be implemented through private sector contractors and suppliers, NGOs, and communities themselves or their representative grassroots organizations.

During the implementation of the project activities, communities and their organizations that represent them would take the lead in implementation under this project. The project will encourage and support the wider use of community contracting implementation modality which has been practiced by communities and found to be very effective

Contract management is an important issue that needs close follow up during the implementation of project activities. This needs joint efforts from the national flood center and the Toti flood committee for close monitoring of the contractors' activities. It requires also careful scheduling of the implementation of the work breakdown with clear milestones to be agreed upon with contractors.

a) Institutional and Implementation Arrangements

i) The National Flood Center (NFC) The Ministry of Irrigation and Water Resources would have overall responsibility on flood preparedness and early warning project through the national flood center. This center is responsible for national level coordination with donors and for managing donor and GOS counterpart funds. Overall policy and strategy direction for the Project would be provided by the ministry of irrigation national flood project steering committee (NFPSC)

The main functions and roles of **NFC** will be to:-

- Coordinate and work closely with the Locality to ensure timely implementation of the project;
- Facilitate the process of needs identification, prioritization and subprojects submission;
- Review and appraise subproject proposals to ensure compliance with the project's strategic guidelines and eligibility criteria;
- Mobilize local government in support of the project and oversee implementation by the FPIU;
- Ensuring that all Community Action Plans (CAPs) meet minimum requirements in terms of consistency with the project objectives, standards and general priorities to ensure a speedy delivery of the interventions funded by the project;
- Coordinate between the project and other development programs and stakeholders working in the same areas, and facilitating implementation when blockages in implementation occur;
- Participate in the monitoring and evaluation (M&E) of all interventions at the community level;
- Depending on the nature of the deliverable, take the necessary arrangements with the relevant State line ministry/authority to obtain the necessary permits and authorizations; and provide the recurrent budget for Operations & Maintenance (O&M). and,
- Report on project performance to the national and regional authorities.

ii) Khartoum State Ministry of Physical planning and Public Utilities will have the responsibility for providing technical backstopping for the implementation of the action plan.

iii) Toti Island Higher Flood Committee

The members of Toti island higher flood committee have explained the establishment of the committee on 1998 as permanent committee and that it is composed of 51 members, 41 of them elected from the community and 10 by their leadership positions. From the higher committee, ten members have been selected as executive committee including chairperson of subcommittees that are responsible for different flood aspects (Technical sub-committee, information sub-committee, social sub-committee...etc) at different parts of the island. At each part of the island there is a group of people, which shouldering the responsibility flood control, composed of members from community organizations such as women, youth, clubs.etc. The coordination of flood issues and the communications between the island flood committee and other stakeholders are usually carried out by the island people' committee. (Annex1).

iv) Sudanese Red Crescent Society (Khartoum Branch)

The society and its volunteers are responsible for providing first aid assistance to the community and the required training program on flood preparedness themes.

v) Humanitarian Aid commission (HAC)

The commission office of Khartoum state has a key role of coordination of all flood emergency response issues especially those concerned with non-governmental organizations.

b) Financial Management

Financial Management of the flood project have to include, among other topics, accounting policies and procedures, chart of accounts, and reporting formats. The financial law and regulations of the country are applicable to the project.

c) Financial Statements:

The Financial Statements should suitably summaries and classify all financial transactions, including details of expenditures and of funds received to finance the Project.

All financial reports and statements should contain a signed confirmation of their accuracy and veracity by an authorized representative.

Financial Statements should comprise the following:

- Uses and sources, and an Applications of Funds Statement.
- Balance Sheet.
- Statements of Receipts.
- Statements of Expenditures.
- Uses of Funds by Project Activity

The NFC will be responsible to establish the financial management system. The NFC will prepare and submit regular financial management reports. Managing the project funds and all related financial transactions, including preparation and submission of disbursement applications throughout the project life will be the responsibility of the NFC.

d) Procurement

The procurement procedures for the flood project action plan are prepared based on the GOS Guidelines for Procurement. The National Competitive Bidding (NCB) and simplified and streamlined basic procurement methods such as shopping and local competitive bidding. All procurement activities are governed by the procurement methods and procedures outlined in the GOS procurement system.

The use of work force by the community will be promoted in the implementation of project activities as well. In order to ensure effectiveness of this implementation modality, the necessary capacity building intervention to enhance the procurement skill of the community will be provided by the project to the community.

Procurement Management Reports should comprise the following:

Details of contract expenditure (works and goods)

Details of contract expenditure (consultants)

2.4 Budget of Toti Island Community Action Plan

The following is the Toti Island community suggested budget for the proposed action plan:

Table 2: Community Proposed Budget of Toti Island Community Action Plan (2008 Flood Season)

Activity item	quantity	Cost (SDG)
Empty barrels	200	350
Used tires	500	300
Iron stands	50	500
Manual soil compaction		2700
Dumber(1cubic meter)	1	20000
Renting Loader	1	5000
First aids Kids	3	600
vaccines	20(bottles)	700
Insecticides	5(gallons)	2000
Total		55650

After the discussion and deliberations that took place at the workshop held at the ministry of irrigation on 24/July 2008, (annex4) and due to limitedness of the allotted budget for the pilot phase of the project it has been agreed that the community proposed budget of implementing the Toti Island action plan has to be revised as shown in the following table 2.

Table 3: the Revised Budget for Toti island Community Action Plan (2008 Flood Season)

Activity item	Quantity	Cost(US\$)
enhance community preparedness for using flood early warning and preparedness system and facilities	3 color poles	500
Emergency response (provision of preventive material(soils))	800 m3	6200
Monitoring and maintenance of flood mitigation measures	3 maintenance instruments	3300
Total		10000

Table 4: Tentative Work plan for Toti Island Community

Project activity/task	August 2008	September 2008	October 2008
Monthly Calendar of Operations			
Enhance community preparedness for using flood early warning and preparedness system and facilities	_____		
Communication between Toti Island Community and stakeholders	_____	_____	_____
Monitoring and maintenance of flood mitigation measures	_____	_____	_____
Preventive and environmental health		_____	_____
Emergency response, provision of materials for flood mitigation	_____	_____	_____

3. Wawsi Community Action Plan

3.1 Wawsi Community Action Plan Tasks

The Project will undertake actions for capacity building, institutional strengthening and technical assistance to improve the management of flood risk in the pilot community (Wawsi). It also includes programs for practical training and rising of awareness and community preparedness in areas of high flood risk within the selected pilot area.

The action plan tasks with the community at risk from flooding (Wawsi) can be summarized as follows:

- Tasks that raise awareness and skills of the community at risk and local authorities
- Tasks that provide real-time information about storms and floods in flood risk areas, provide systems for dissemination of flood warnings to the community, and facilitate government and community response to flood emergencies. Preparedness of daily and periodic reports on floods and village situations
- Tasks that improve the knowledge of flood hazard faced by community and plan in advance for the management of flood risk.
- Tasks that undertake physical works to reduce flood risk to the community.

3.2 Wawsi Community Flood Preparedness Action Plan Components

The Wawsi community action plan components are:

1. Flood Forecasting, early warning and communication component
2. Flood preparedness and Emergency Response component

3.2.1 Flood Forecasting, Early warning and Communication Component

Under community action plan component Wawsi community would be supported by strengthening its flood preparedness first by availing the flood information at an earlier time to the occurrence of floods and by providing communication facilities to enable them to be in direct contact with flood forecasting institutions. Also, the required capacity building (training programs) to flood implementing agencies will be provided to upgrade their abilities to effectively implement the project tasks and activities. Technical supports to related government institutions, such as meteorological authority, national flood center, have been provided to facilitate flood forecasting and early warning.

The following are the suggested project action plan activities that might be undertaken to carry out flood forecasting and early warning:

Activity 1-1: Public awareness/educational campaign (enhance community flood preparedness)

The campaign will be directed towards the public in order to take preventive and mitigation actions. Messages will be communicated through leaflets, posters, seminars, state broadcasting, and word of mouth. Messages will include issues such as the opening drainage systems, checking of roofs, plastering mud houses; control of vectors (flies and mosquitoes), rainfall and river level forecast information, etc. The campaign will be conducted in very close cooperation with the state broadcasting and information services. Actions will be conducted in close cooperation with the local health authorities, other NGOs

Activity 1-2: Communication between Wawsi Community and stakeholders:

Response to any emergency arising from floods will be greatly improved by placing information in the hand of responsible person. Here the village committee is vital in giving information about the floods and bank conditions. Other meteorological information is vital to operation room operations at locality level to keep abreast of the prevailing hydrological conditions and resulting rainfall/runoff patterns.

All collected data should be filed and submitted to responsible person on the flood committee on a weekly basis during flood season. Any abnormalities observed during data collection should be reported to the responsible flood committee immediately. In addition all collected data should be included in the annual detailed inspection report. A data base would be useful for managing the reported data and for receiving reports in an easy and efficient manner and will assist in producing weekly, monthly and annual report. It is recommended that the data base be managed from a central location and the locality

To reduce costs and time, a simple communications system of handsets and channels will be established to link up the Wawsi flood committee and the community with the Nile Flood center and other concerned authorities. Due to the development of the telecommunication network in Sudan, and availability of cell phones at the village, the only need to enhance communication between the community and national flood center and meteorology authority, is to have the list numbers of all concerned persons.

3.2.2 Flood preparedness and Emergency Response Component

Activity 2-1: Monitoring and maintenance of flood mitigation measures:

A good monitoring plan is an integral part of operation and maintenance of the embankment. The plan is intended to identify deficiencies, unsafe conditions, and the maintenance required to assure the integrity of the banks to protect life, health, property...etc.

The monitoring plan includes the provision of routine and detailed inspection of terrace and the village' Nile bank with annual reporting of assessment and recommended improvements or maintenance. A good maintenance program will protect an embankment against deterioration and prolongs its life. A poorly maintained embankment will deteriorate to such an extent that it could fail. The cost of a proper maintenance program is small if compared to the cost of major repairs and potential loss of life and property.

The flood committee members together with the concerned institutions should develop a basic maintenance program based primarily on systematic and frequent inspection of the terraces and the village' river banks. Detailed inspection should be performed on a yearly basis and after major floods by a technical committee. The documented results of the detailed inspection should include maintenance recommendations along with required schedules for completion of any proposed maintenance.

The monitoring plan includes the provision of the following:

1. Routine and detailed inspection with annual reporting of assessment and recommended improvements or maintenance
2. Installation of reading instruments

Activity 2-2: Preventive and environmental health

The focus will be on preventive, environmental health and first-aid services. The major activities will include posting of teams at strategic locations; training of local committees on first aid and primary health care; home visits; health education sessions directed mainly towards mothers; vector control; provision of first-aid services (e.g., wounds); vaccination, etc. To prevent the community health from water borne diseases and bites of poisonous animals, primary health care have to be secured by availing first aids kit, vaccines and insecticides.

Activity 2-3: Emergency Response and Flood Mitigation

Wawsi village is surrounded by eastern terrace which is extended about two kilometers and two meter height. The western part of the village extends on agricultural land and is highly affected by the erosion (Haddam) and considered to be high risk area.

To protect the village from the Haddam, and to strengthen the embankment, granulated soils have to be availed (measures for increasing community flood preparedness).

Emergency Identification:

A potential serious situation is defined as a hazardous condition at the river embankment which if not attended to, may develop into an emergency situation. Listed below are examples of conditions, which may lead to flooding:

- Excessive/ increased amounts of seepage.
- Initial evidence of embankment failure such as cracking and displacement
- High inflows due to torrents, adding water to the river.

General Responsibilities under the emergency:

In the event of an emergency situation, the village flood committee coordinator should evaluate the situation after receiving verbal reports from committees' member. He/she should initiate the notification procedure himself in consultation with the village flood committee. If time permits higher level flood institutions should be contacted and solicited for advice.

Other specific actions to be taken after implementation of the emergency include:

1. Evacuate people from affected embankment.
2. Open all drainage and discharge outlet
3. Contact media source (Television and radio station) should be notified and listed in the plan.
4. Emergency stocks: non-food stocks (sacks, blankets, plastic sheeting, kitchen kits, essential medicines, first-aid kits, water pumps, water jerrycans, etc.) will be stored and managed at the state level

Table 5: Summary of Project Activities and Tasks

Project Activity/task	Implementing Agency
Activity 1-1 task: enhance community preparedness for using flood early warning and preparedness system and facilities.	MIWR(NFC) community flood committee
Activity 1-2: Communication between Wawsi Community and stakeholders	MIWR(NFC) community flood committee
Activity 2-1: Monitoring and maintenance of flood mitigation measures	NFC/ community flood committee
Activity 2-2: Preventive and environmental health	NFC/State locality/SRCS
Activity 2-3: Emergency response, provision of materials for flood prevention	NFC/State Locality/community flood committee

Wawsi Community Action Plan Implementation Mechanism:

The implementation of all activities under this community action plan will be undertaken by eligible implementing agencies through the supervision and coordination of the national flood center. Project activities will be implemented through private sector contractors and suppliers, NGOs, and communities themselves or their representative grassroots organizations.

Contract management is an important issue that needs close follow up during the implementation of project activities. This needs joint efforts from the national flood center and the Wawsi flood committee for close monitoring of the contractors’ activities. It requires also careful scheduling of the implementation of the work breakdown with clear milestones to be agreed upon with contractors.

a) Institutional and Implementation Arrangements

i) The National Flood Center (NFC) The Ministry of Irrigation and Water Resources would have overall responsibility on flood preparedness and early warning project through the national flood center. This center is responsible for national level coordination with donors and for managing donor and GOS counterpart funds. Overall policy and strategy direction for the Project would be provided by the ministry of irrigation national flood project steering committee (NFPSC)

The main functions and roles of NFC will be to:-

- Coordinate and work closely with the Locality to ensure timely implementation of the project;
- Facilitate the process of needs identification, prioritization and subprojects submission;
- Review and appraise subproject proposals to ensure compliance with the project's strategic guidelines and eligibility criteria;
- Mobilize local government in support of the project and oversee implementation by the FPIU;
- Ensuring that all Community Action Plans (CAPs) meet minimum requirements in terms of consistency with the project objectives, standards and general priorities to ensure a speedy delivery of the interventions funded by the project;
- Coordinate between the project and other development programs and stakeholders working in the same areas, and facilitating implementation when blockages in implementation occur;
- Participate in the monitoring and evaluation (M&E) of all interventions at the community level;
- Depending on the nature of the deliverable, take the necessary arrangements with the relevant State line ministry/authority to obtain the necessary permits and authorizations; and provide the recurrent budget for Operations & Maintenance (O&M). and,
- Report on project performance to the national and regional authorities.

ii) Khartoum State Ministry of Physical planning and Public Utilities will have the responsibility for providing technical backstopping for the implementation of the action plan.

iii) Wawsi Flood Committee

The members of Wawsi flood committee have explained the establishment of the flood committee as a permanent committee and that it is composed of 10 members elected from the community shouldering the responsibility flood control, composed of members from community organizations such as women, youth, etc. There is a coordination of flood issues and the communications between the village flood committee and other stakeholders such as Khartoum State Ministry of Physical Planning and Public Utilities (Department of Engineering affairs). (See Annex5)

iv) Sudanese Red Crescent Society (Khartoum Branch)

The society and its volunteers are responsible for providing first aid assistance to the community and the required training program on flood preparedness themes.

v) Humanitarian Aid commission (HAC)

The commission office of Khartoum state has a key role of coordination of all flood emergency response issues specially those concerned with non-governmental organizations

b) Financial Management

Financial Management of the flood project have to include, among other topics, accounting policies and procedures, chart of accounts, and reporting formats. The financial law and regulations of the country are applicable to the project.

Financial Statements:

The Financial Statements should suitably summaries and classify all financial transactions, including details of expenditures and of funds received to finance the Project.

All financial reports and statements should contain a signed confirmation of their accuracy and veracity by an authorized representative.

Financial Statements should comprise the following:

- Uses and sources, and an Applications of Funds Statement.
- Balance Sheet.
- Statements of Receipts.
- Statements of Expenditures.
- Uses of Funds by Project Activity

The NFC will be responsible to establish the financial management system. The NFC will prepare and submit regular financial management reports.

Managing the project funds and all related financial transactions, including preparation and submission of disbursement applications throughout the project life will be the responsibility of the NFC.

c) Procurement

The procurement procedures for the flood project action plan are prepared based on the GOS Guidelines for Procurement. The National Competitive Bidding (NCB) and simplified and

streamlined basic procurement methods such as shopping and local competitive bidding. All procurement activities are governed by the procurement methods and procedures outlined in the GOS procurement system.

The use of work force by the community will be promoted in the implementation of project activities as well. In order to ensure effectiveness of this implementation modality, the necessary capacity building intervention to enhance the procurement skill of the community will be provided by the project to the community.

Procurement Management Reports should comprise the following:

- Details of contract expenditure (works and goods)
- Details of contract expenditure (consultants)

b) Budget of Wawsi Community Action Plan

The following is the Wawsi community suggested budget for the proposed action plan:

Table 6: Proposed Budget of Wawsi Community Action Plan(2008 Flood Season)

Activity item	quantity	Cost (SDG)
Strengthening of the terrace	200	31600
Sacks	500	6000
Renting Digger	50	15000
Total		52600

After the discussion and deliberations that took place at the workshop held at the ministry of irrigation on 24/July 2008, (annex4) and due to limitedness of the allotted budget for the pilot phase of the project it has been agreed that the community proposed budget of implementing the Wawsi community action plan has to be revised as shown in the table 5.

Table 7: The Revised Budget for Wawsi Community Action Plan(2008 Flood Season)

Activity item	Quantity	Cost(US\$)
Enhance community preparedness for using flood early warning and preparedness system and facilities	2 color poles	500
Emergency response (provision of preventive material(soils	800 m3	6500
Monitoring and maintenance of flood mitigation measures	3 maintenance instruments	3000
Communication between Wawsi Community and stakeholders		0
Total		10000

Table 8: Tentative Work plan for Wawsi Community

Project activity/task	August 2008	September 2008	October 2008
Monthly Calendar of Operations			
enhance community preparedness for using flood early warning and preparedness system and facilities	—————		
Communication between Wawsi Community and stakeholders	—————	—————	—————
Monitoring and maintenance of flood mitigation measures	—————	—————	—————
Preventive and environmental health		—————	—————
Emergency response, provision of materials for flood prevention	—————	—————	—————

4. Alabka Community Action Plan

4.1 Alabka Community Action Plan Tasks

The Project will undertake actions for capacity building, institutional strengthening and technical assistance to improve the management of flood risk in the pilot community (Alabka). It also includes programs for practical training and rising of awareness and community preparedness in areas of high flood risk within the selected pilot area.

The action plan tasks with the community at risk from flooding (Alabka) can be summarized as follows:

- Tasks that raise awareness and skills of the community at risk(Alabka) and local authorities
- Tasks that provide real-time information about storms and floods in flood risk areas, provide systems for dissemination of flood warnings to the community, and facilitate government and community response to flood emergencies. Preparedness of daily and periodic reports on floods and village situations
- Tasks that improve the knowledge of flood hazard faced by community and plan in advance for the management of flood risk.
- Tasks that undertake physical works to reduce flood risk to Alabka community.

4.2 Alabka Community Flood Preparedness Action Plan Components

Alabka community action plan components are:

1. Flood Forecasting, early warning and communication component
2. Flood preparedness and Emergency Response component

4.2.1 Flood Forecasting, Early warning and Communication Component

Under community action plan component Alabka community would be supported by strengthening its flood preparedness first by availing the flood information at an earlier time to the occurrence of floods and by providing communication facilities to enable them to be in direct contact with flood forecasting institutions. Also, the required capacity building (training programs) to flood implementing agencies will be provided to upgrade their abilities to effectively implement the project tasks and activities. Technical supports to related government institutions, such as meteorological authority, national flood center, have been provided to facilitate flood forecasting and early warning.

The following are the suggested project action plan activities that might be undertaken to carry out flood forecasting and early warning:

Activity 1-1: Public awareness/educational campaign (enhance community preparedness)

The campaign will be directed towards the public in order to take preventive and mitigation actions. Messages will be communicated through leaflets, posters, seminars, state broadcasting, and word of mouth. Messages will include issues such as the opening drainage systems, checking of roofs, plastering mud houses; control of vectors (flies and mosquitoes), rainfall and river level forecast information, etc.

The campaign will be conducted in very close cooperation with the state broadcasting and information services. Actions will be conducted in close cooperation with the local health authorities, other NGOs

Activity 1-2: Communication between Alabka Community and stakeholders:

Response to any emergency arising from floods will be greatly improved by placing information in the hand of responsible person. Here the village and committee is vital in giving information about the floods and bank conditions. Other meteorological information is vital to operation room operations at locality level to keep abreast of the prevailing hydrological conditions and resulting rainfall/ runoff patterns.

All collected data should be filed and submitted to responsible person on the flood committee on a weekly basis during flood season. Any abnormalities observed during data collection should be reported to the responsible flood committee immediately. In addition all collected data should be included in the annual detailed inspection report. A data base would be useful for managing the reported data and for receiving reports in an easy and efficient manner and will assist in producing weekly, monthly and annual report. It is recommended that the data base be managed from a central location and the locality

To reduce costs and time, a simple communications system of handsets and channels will be established to link up the Alabka flood committee and the community with the Nile Flood center and other concerned authorities. Due to the development of the telecommunication network in Sudan, and availability of cell phones at the village, the only need to enhance communication between the community and national flood center and meteorology authority, is to have the list numbers of all concerned persons

4.2.2 Flood preparedness and Emergency Response Component

Activity 2-1: Monitoring and maintenance of flood mitigation measures:

A good monitoring plan is an integral part of operation and maintenance of the embankment. The plan is intended to identify deficiencies, unsafe conditions, and the maintenance required to assure the integrity of the banks to protect life, health, property...etc.

The monitoring plan includes the provision of the following:

- Routine and detailed inspection of the terrace with annual reporting of assessment and recommended improvements or maintenance.
- Installation of reading instruments.

A good maintenance program will protect an embankment against deterioration and prolongs its life. A poorly maintained embankment will deteriorate to such an extent that it could fail. The cost of a proper maintenance program is small if compared to the cost of major repairs and potential loss of life and property.

The flood committee members together with the concerned institutions should develop a basic maintenance program based primarily on systematic and frequent inspection of the terrace. Detailed inspection should be performed on a yearly basis and after major floods by a technical committee. The documented results of the detailed inspection should include maintenance recommendations along with required schedules for completion of any proposed maintenance.

Activity 2-2: Preventive and environmental health

The focus will be on preventive, environmental health and first-aid services. The major activities will include posting of teams at strategic locations; training of local committees on first aid and primary health care; home visits; health education sessions directed mainly towards mothers; vector control; provision of first-aid services (e.g., wounds); vaccination, etc. To prevent the community health from water borne diseases and bites of poisonous animals, primary health care have to be secured by availing first aids kit, vaccines and insecticides.

Activity 2-3: Emergency response task

To protect the village, the terrace has to be strengthened by using granulated soils. (Small measures for increasing community flood preparedness). Strengthening of the village' terrace required availing soils (Annex3).

Emergency Identification:

A potential serious situation is defined as a hazardous condition at the river embankment which if not attended to, may develop into an emergency situation. Listed below are examples of conditions, which may lead to flooding:

- Excessive/ increased amounts of seepage.
- Initial evidence of embankment failure such as cracking and displacement
- High inflows due to torrents, adding water to the river.

General Responsibilities under the emergency situation:

In the event of an emergency situation, the village flood committee coordinator should evaluate the situation after receiving verbal reports from committees' member. He/she should initiate the notification procedure himself in consultation with village flood committees. If time permits higher level flood institutions should be contacted and solicited for advice.

Other specific actions to be taken after implementation of the emergency plan include:

1. Evacuate people from affected embankment.
2. Open all drainage and discharge outlet
3. Contact media source (Television and radio station) should be notified and listed in the plan.
4. Emergency stocks: non-food stocks (sacks, blankets, plastic sheeting, kitchen kits, essential medicines, first-aid kits, water pumps, water jerrycans, etc.) will be stored and managed at the state level.

Table 9: Summary of Project Activities and Tasks

Project Activity/task	Implementing Agency
Activity 1-1 task: enhance community preparedness for using flood early warning and preparedness system and facilities.	MIWR(NFC) community flood committee
Activity 1-2: Communication between Alabka Community and stakeholders	MIWR(NFC) community flood committee
Activity 2-1: Monitoring and maintenance of flood mitigation measures	NFC/ community flood committee
Activity 2-2: Preventive and environmental health	NFC/State locality/SRCS
Activity 2-3: Emergency response, provision of materials for flood prevention	NFC/State Locality/community flood committee

4.3 Alaska Community Action Plan Implementation Mechanisms:

The implementation of all activities under this community action plan will be undertaken by eligible implementing agencies through the supervision and coordination of the national flood center. Project activities will be implemented through private sector contractors and suppliers, NGOs, and communities themselves or their representative grassroots organizations.

Contract management is an important issue that needs close follow up during the implementation of project activities. This needs joint efforts from the national flood center and the Alaska flood committee for close monitoring of the contractors' activities. It requires also careful scheduling of the implementation of the work breakdown with clear milestones to be agreed upon with contractors.

a. Institutional and Implementation Arrangements

i) The National Flood Center (NFC) The Ministry of Irrigation and Water Resources would have overall responsibility on flood preparedness and early warning project through the national flood center. This center is responsible for national level coordination with donors and for managing donor and GOS counterpart funds. Overall policy and strategy direction for the Project would be provided by the ministry of irrigation national flood project steering committee (**NFPSC**)

The main functions and roles of **NFC** will be to:-

- Coordinate and work closely with the Locality to ensure timely implementation of the project;
- Facilitate the process of needs identification, prioritization and subprojects submission;
- Review and appraise subproject proposals to ensure compliance with the project's strategic guidelines and eligibility criteria;
- Mobilize local government in support of the project and oversee implementation by the FPIU;
- Ensuring that all Community Action Plans (CAPs) meet minimum requirements in terms of consistency with the project objectives, standards and general priorities to ensure a speedy delivery of the interventions funded by the project;

- Coordinate between the project and other development programs and stakeholders working in the same areas, and facilitating implementation when blockages in implementation occur;
- Participate in the monitoring and evaluation (M&E) of all interventions at the community level;
- Depending on the nature of the deliverable, take the necessary arrangements with the relevant State line ministry/authority to obtain the necessary permits and authorizations; and provide the recurrent budget for Operations & Maintenance (O&M). and,
- Report on project performance to the national and regional authorities..

ii) River Nile State Ministry of Physical planning and Public Utilities and Ministry of Irrigation (Atbara Office) will have the responsibility for providing technical backstopping for the implementation of the Alabka community action plan.

iii)Alabka flood committee the village flood committee would be responsible for preparing community needs and follow-up an supervision of the plan together the concerned authorities.

iv) Sudanese Red Crescent Society (River Nile State Branch)

The society and its volunteers are responsible for providing first aid assistance to the community and the required training program on flood preparedness themes.

v) Humanitarian Aid commission (HAC) (River Nile State office)

The commission office of Khartoum state has a key role of coordination of all flood emergency response issues specially those concerned with non-governmental organizations

b. Financial Management

Financial Management of the flood project have to include, among other topics, accounting policies and procedures, chart of accounts, and reporting formats. The financial law and regulations of the country are applicable to the project.

Financial Statements:

The Financial Statements should suitably summaries and classify all financial transactions, including details of expenditures and of funds received to finance the Project.

All financial reports and statements should contain a signed confirmation of their accuracy and veracity by an authorized representative.

Financial Statements should comprise the following:

- Uses and sources, and an Applications of Funds Statement.
- Balance Sheet.
- Statements of Receipts.
- Statements of Expenditures.
- Uses of Funds by Project Activity

The NFC will be responsible to establish the financial management system. The NFC will prepare and submit regular financial management reports.

Managing the project funds and all related financial transactions, including preparation and submission of disbursement applications throughout the project life will be the responsibility of the NFC.

c. Procurement

The procurement procedures for the flood project action plan are prepared based on the GOS Guidelines for Procurement. The National Competitive Bidding (NCB) and simplified and streamlined basic procurement methods such as shopping and local competitive bidding. All procurement activities are governed by the procurement methods and procedures outlined in the GOS procurement system.

The use of work force by the community will be promoted in the implementation of project activities as well. In order to ensure effectiveness of this implementation modality, the necessary capacity building intervention to enhance the procurement skill of the community will be provided by the project to the community.

Procurement Management Reports should comprise the following:

- Details of contract expenditure (works and goods)
- Details of contract expenditure (consultants)

4.4 Budget of Alabka Community Action Plan

The following is the Alabka community suggested budget for the proposed action plan:

Table 10: Community Proposed Budget of Alabka Community Action Plan(2008 Flood Season)

Activity item	quantity	Cost (SDG)
Strengthening of the village terrace		14000
Rainfall drainage channels	6	9000
Earth filling of lower level sites	50	30000
Training of community youth		20000
Total)		73000

After the discussion and deliberations that took place at the workshop held at the ministry of irrigation on 24/July 2008, (annex4) and due to limitedness of the allotted budget for the pilot phase of the project it has been agreed that the community proposed budget of implementing the Alabka action plan has to be revised as shown in the table 8.

Table 11: The Revised Budget for Alabka Community Action Plan(2008 Flood Season)

Activity item	Quantity	Cost(US\$)
enhance community preparedness for using flood early warning and preparedness system and facilities	2 colored poles	500
Emergency response (provision of preventive material(soils)	900 m3	7000
Preventive and environmental health	3 kids	1000
Monitoring and maintenance of flood mitigation measures	2 maintenance instruments	1500
Total		10000

Table 12: Tentative Work plan for Alabka Community

Project activity/task	August 2008	September 2008	October 2008
Monthly Calendar of Operations			
enhance community preparedness for using flood early warning and preparedness system and facilities	_____		
Communication between Alabka Community and stakeholders	_____	_____	_____
Monitoring and maintenance of flood mitigation measures	_____	_____	_____
Preventive and environmental health		_____	_____
Emergency response, provision of materials for flood prevention	_____	_____	_____

5. Sidon Community Action Plan

5.1 Sidon Community Action Plan Tasks

The Project will undertake actions for capacity building, institutional strengthening and technical assistance to improve the management of flood risk in the pilot community (Sidon). It also includes programs for practical training and rising of awareness and community preparedness in areas of high flood risk within the selected pilot area.

The action plan tasks with the community at risk from flooding (Sidon) can be summarized as follows:

- Tasks that raise awareness and skills of the community at risk (Sidon) and local authorities
- Tasks that provide real-time information about storms and floods in flood risk areas, provide systems for dissemination of flood warnings to the Sidon community, and facilitate government and community response to flood emergencies. Preparedness of daily and periodic reports on floods and village situations
- Tasks that improve the knowledge of flood hazard faced by community and plan in advance for the management of flood risk.
- Tasks that undertake physical works to reduce flood risk to Sidon community.

5.2 Sidon Community Flood Preparedness Action Plan Components

Sidon community action plan components are:

1. Flood Forecasting, early warning and communication component
2. Flood preparedness and Emergency Response component

5.2.1 Flood Forecasting, Early warning and Communication Component

Under community action plan component Sidon community would be supported by strengthening its flood preparedness first by availing the flood information at an earlier time to the occurrence of floods and by providing communication facilities to enable them to be in direct contact with flood forecasting institutions. Also, the required capacity building (training programs) to flood implementing agencies will be provided to upgrade their abilities to effectively implement the project tasks and activities. Technical supports

to related government institutions, such as meteorological authority, national flood center, have been provided to facilitate flood forecasting and early warning.

The following are the suggested project action plan activities that might be undertaken to carry out flood forecasting and early warning:

Activity 1-1: Public awareness/educational campaign (enhance community preparedness)

The campaign will be directed towards the public in order to take preventive and mitigation actions. Messages will be communicated through leaflets, posters, seminars, state broadcasting, and word of mouth. Messages will include issues such as the opening drainage systems, checking of roofs, plastering mud houses; control of vectors (flies and mosquitoes), rainfall and river level forecast information, etc.

The campaign will be conducted in very close cooperation with the state broadcasting and information services. Actions will be conducted in close cooperation with the local health authorities, other NGOs

Activity 1-2: Communication between Sidon Community and stakeholders:

Response to any emergency arising from floods will be greatly improved by placing information in the hand of responsible person. Here the village committee is vital in giving information about the floods and bank conditions. Other meteorological information is vital to operation room operations at locality level to keep abreast of the prevailing hydrological conditions and resulting rainfall/runoff patterns.

All collected data should be filed and submitted to responsible person on the flood committee on a weekly basis during flood season. Any abnormalities observed during data collection should be reported to the responsible flood committee immediately. In addition all collected data should be included in the annual detailed inspection report. A data base would be useful for managing the reported data and for receiving reports in an easy and efficient manner and will assist in producing weekly, monthly and annual report. It is recommended that the data base be managed from a central location and the locality

To reduce costs and time, a simple communications system of handsets and channels will be established to link up the Sidon flood committee and the community with the Nile Flood center and other concerned authorities. Due to the development of the telecommunication network in Sudan, and availability of cell phones at Sidon, the only need to enhance communication between

the community and national flood center and meteorology authority, is to have the list of addresses and telephone numbers of all concerned persons

5.2.2 Flood preparedness and Emergency Response Component

Activity 2-1: Monitoring and maintenance:

A good monitoring plan is an integral part of operation and maintenance of the embankment. The plan is intended to identify deficiencies, unsafe conditions, and the maintenance required to assure the integrity of the banks to protect life, health, property...etc.

The monitoring plan includes the provision of the following:

1. Routine and detailed inspection with annual reporting of assessment and recommended improvements or maintenance.
2. Installation of reading instruments.

A good maintenance program will protect an embankment against deterioration and prolongs its life. A poorly maintained embankment will deteriorate to such an extent that it could fail. The cost of a proper maintenance program is small if compared to the cost of major repairs and potential loss of life and property.

The flood committee members together with the concerned institutions should develop a basic maintenance program based primarily on systematic and frequent inspection. Detailed inspection should be performed on a yearly basis and after major floods by a technical committee. The documented results of the detailed inspection should include maintenance recommendations along with required schedules for completion of any proposed maintenance.

Activity 2-2: Preventive and environmental health

The focus will be on preventive, environmental health and first-aid services. The major activities will include posting of teams at strategic locations; training of local committees on first aid and primary health care; home visits; health education sessions directed mainly towards mothers; vector control; provision of first-aid services (e.g., wounds); vaccination, etc. To prevent the community health from water borne diseases and bites of poisonous animals, primary health care have to be secured by availing first aids kit, vaccines and insecticides.

Activity 2-3: emergency response task

To protect Sidon, the terrace has to be strengthened by using granulated soils. (Small measures for increasing community flood preparedness). Strengthening of the village' terrace required availing soils.

Emergency Identification:

A potential serious situation is defined as a hazardous condition at the river embankment which if not attended to, may develop into an emergency situation. Listed below are examples of conditions, which may lead to flooding:

- Excessive/ increased amounts of seepage.
- Initial evidence of embankment failure such as cracking and displacement
- High inflows due to torrents, adding water to the river.

General Responsibilities under the Emergency:

In the event of an emergency situation, the village flood committee coordinator should evaluate the situation after receiving verbal reports from committees' member. He/she should initiate the notification procedure himself in consultation with village flood committee. If time permits higher level flood institutions should be contacted and solicited for advice.

1. Other specific actions to be taken after implementation of the emergency plan include:
2. Evacuate people from affected embankment.
3. Open all drainage and discharge outlet
4. Contact media source (Television and radio station) should be notified and listed in the plan.
5. Emergency stocks: non-food stocks (sacks, blankets, plastic sheeting, kitchen kits, essential medicines, first-aid kits, water pumps, water jerrycans, etc.) will be stored and managed at the state level

Table 13: Summary of Project Activities and Tasks

Project Activity/task	Implementing Agency
Activity 1-1 task: enhance community preparedness for using flood early warning and preparedness system and facilities.	MIWR(NFC) community flood committee
Activity 1-2: Communication between Sidon Community and stakeholders	MIWR(NFC) community flood committee
Activity 2-1: Monitoring and maintenance of flood mitigation measures	NFC/ community flood committee
Activity 2-2: Preventive and environmental health	NFC/State locality/SRCS
Activity 2-3: Emergency response, provision of materials for flood prevention	NFC/State Locality/community flood committee

5.3 Sidon Community Action Plan Implementation Mechanism:

The implementation of all activities under this community action plan will be undertaken by eligible implementing agencies through the supervision and coordination of the national flood center. Project activities will be implemented through private sector contractors and suppliers, NGOs, and communities themselves or their representative grassroots organizations.

During the implementation of the project activities, communities and their organizations that represent them would take the lead in implementation under this project. The project will encourage and support the wider use of community contracting implementation modality which has been practiced by communities and found to be very effective

Contract management is an important issue that needs close follow up during the implementation of project activities. This needs joint efforts from the national flood center and the Toti flood committee for close monitoring of the contractors' activities. It requires also careful scheduling of the implementation of the work breakdown with clear milestones to be agreed upon with contractors.

a. Institutional and Implementation Arrangements

i) The National Flood Center (NFC) The Ministry of Irrigation and Water Resources would have overall responsibility on flood preparedness and early warning project through the national flood center. This center is responsible for national level coordination with donors and for managing donor and GOS counterpart funds. Overall policy and strategy direction for the Project would be provided by the ministry of irrigation national flood project steering committee (**NFPSC**)

The main functions and roles of **NFC** will be to:-

- Coordinate and work closely with the Locality to ensure timely implementation of the project;
- Facilitate the process of needs identification, prioritization and subprojects submission;
- Review and appraise subproject proposals to ensure compliance with the project's strategic guidelines and eligibility criteria;
- Mobilize local government in support of the project and oversee implementation by the FPIU;

- Ensuring that all Community Action Plans (CAPs) meet minimum requirements in terms of consistency with the project objectives, standards and general priorities to ensure a speedy delivery of the interventions funded by the project;
- Coordinate between the project and other development programs and stakeholders working in the same areas, and facilitating implementation when blockages in implementation occur;
- Participate in the monitoring and evaluation (M&E) of all interventions at the community level;
- Depending on the nature of the deliverable, take the necessary arrangements with the relevant State line ministry/authority to obtain the necessary permits and authorizations; and provide the recurrent budget for Operations & Maintenance (O&M). and,
- Report on project performance to the national and regional authorities.

ii) River Nile State Ministry of Physical planning and Public Utilities and Ministry of Irrigation (Atbara Office) will have the responsibility for providing technical backstopping for the implementation of the Sidon community action plan.

iii) Sidon Flood Committee the committee would responsible for identifying the community needs and supervising the implementation of the community plan together with the other concerned authorities.

iv) Sudanese Red Crescent Society (River Nile State Branch)

The society and its volunteers are responsible for providing first aid assistance to the community and the required training program on flood preparedness themes.

v) Humanitarian Aid commission (HAC) (River Nile State office)

The commission office of Khartoum state has a key role of coordination of all flood emergency response issues specially those concerned with non-governmental organizations

b. Financial Management

Financial Management of the flood project have to include, among other topics, accounting policies and procedures, chart of accounts, and reporting formats. The financial law and regulations of the country are applicable to the project.

Financial Statements:

The Financial Statements should suitably summaries and classify all financial transactions, including details of expenditures and of funds received to finance the Project.

All financial reports and statements should contain a signed confirmation of their accuracy and veracity by an authorized representative.

Financial Statements should comprise the following:

- Uses and sources, and an Applications of Funds Statement.
- Balance Sheet.
- Statements of Receipts.
- Statements of Expenditures.
- Uses of Funds by Project Activity

The NFC will be responsible to establish the financial management system. The NFC will prepare and submit regular financial management reports.

Managing the project funds and all related financial transactions, including preparation and submission of disbursement applications throughout the project life will be the responsibility of the NFC.

c. Procurement

The procurement procedures for the flood project action plan are prepared based on the GOS Guidelines for Procurement. The National Competitive Bidding (NCB) and simplified and streamlined basic procurement methods such as shopping and local competitive bidding. All procurement activities are governed by the procurement methods and procedures outlined in the GOS procurement system.

The use of work force by the community will be promoted in the implementation of project activities as well. In order to ensure effectiveness of this implementation modality, the necessary capacity building intervention to enhance the procurement skill of the community will be provided by the project to the community.

Procurement Management Reports should comprise the following:

Details of contract expenditure (works and goods)

Details of contract expenditure (consultants)

5.5 Budget of Sidon Community Action Plan

The following is the Sidon community suggested budget for the proposed action plan:

Table 14: Community Proposed Budget of Sidon Community Action Plan(2008 Flood Season)

Activity item	Cost (SDG)
Strengthening of the village terrace	20000
Rainfall drainage channels	4500
Earth filling of lower level sites(market)	30000
Training of community youth	20000
Total)	74500

After the discussion and deliberations that took place at the workshop held at the ministry of irrigation on 24/July 2008,(annex4) and due to limitedness of the allotted budget for the pilot phase of the project it has been agreed that the community proposed budget of implementing the Sidon community action plan has to be revised as shown in table 11.

Table 15: The Revised Budget for Sidon Community Action Plan(2008 Flood Season)

Activity item		Cost(US\$)
enhance community preparedness for using flood early warning and preparedness system and facilities	2 Colored poles	500
Emergency response (provision of preventive material(soils)	900 m3	7000
Preventive and environmental health	3 kids	1000
Monitoring and maintenance of flood mitigation measures	2 maintenance instruments	1500
Total		10000

Table 16: Tentative Work plan for Sidon Community

Project activity/task	August 2008	September 2008	October 2008
Monthly Calendar of Operations			
enhance community preparedness for using flood early warning and preparedness system and facilities	██████████		
Communication between Sidon Community and stakeholders	██████████	██████████	██████████
Monitoring and maintenance of flood mitigation measures	██████████	██████████	██████████
Preventive and environmental health		██████████	██████████
Emergency response, provision of materials for flood prevention	██████████	██████████	██████████

Annex 1 The Meeting with Toti Island Flood Committee

Saturday 19/07/2008 at Toti Island

Attendants:

1. Engineer Hyder Yousif National Flood Project Coordinator
2. Dr Babiker AbdAlla Ibrahim Regional Flood Project Coordinator
3. Dr Salah Mohamed Elawad National Consultant of The Flood Project
4. Mr. Eltahir Hamza Chairperson of Toti Higher Flood Committee
5. Mr. Abdurrahman Mansor Coordinator of Toti Higher Flood Committee
6. Mr. Omer Elbashir Member of Toti Higher Flood Committee
7. Engineer Gibril Elsidig member of Toti Higher Flood Committee
8. Mr. Hamid Elrashid member of Toti Higher Flood Committee
9. Mr. Yousif Mohamed Abdalla member of Toti Higher Flood Committee
10. Mr. Anas Ibrahim member of Toti Higher Flood Committee
11. Mr. Abdelhameed Osman member of Toti Higher Flood Committee
12. Mr. Gorashi Abas ex-member Toti Higher Flood Committee

The meeting started by an introduction by Engineer Hyder Yousif the National Flood Coordinator who explained the purposes of this meeting which is to get the communities that affected by floods involved in the implementation of the piloting phase of the flood project. He pointed that it has been agreed to select four communities from the 196 communities which are affected by the floods in Sudan and as Toti island had a good experiences in flood management and control it has been selected as one of them with other three areas for the piloting work that might be replicated elsewhere at other flood affected areas and/or scale-up later in the second phase of the project. Also, he identified the major project components that will be dealt with (Flood preparedness and early warning, emergency response and mitigation of flood impacts).

The regional flood project coordinator, Dr. Babiker Abdalla gave a historical evolution of the establishment of the Nile Basin Initiative and the need for a new cooperation strategy between the basin countries instead of the conflict on water and importance of developing the Nile water resources for the benefits of the Nile communities. Also, he explained that this flood project is one of many projects that have been proposed and would be coordinated by the Eastern Nile Technical Regional Organization (ENTRO) and to be

implemented in the eastern Nile countries (Sudan, Ethiopia and Egypt) for the benefits of the people in these countries.

Specifically, this first phase of the flood project have two main components; flood forecasting and early warning and community preparedness and planning for flood mitigation. The first component has been, almost, well implemented while the community preparedness component is now under piloting stage and that the European Union has avail US \$ 3.5 million for implementation of the community flood preparedness activities for flood seasons at the three countries. He pointed that the national consultant is currently preparing community flood preparedness action plans for the four selected communities for the 2008 flood season and Toti Island community has to prepare their flood preparedness and mitigation plan that will be discussed in a meeting on coming Thursday 24/ July 2008 at The Federal Ministry of Irrigation.

The national consultant of the flood project explored the structure of the community flood preparedness and mitigation action plan, (i.e. the plan strategy, components, expected outputs, and activities). He emphasized the need for having a clear organizational structure with clear roles and responsibilities for each partner together with a detailed plan and procurement and monitoring approach. The proposed plan has to be prepared based on community needs for the preparedness for the coming flood season.

The members of Toti island higher flood committee have explained the establishment of the committee on 1998 as permanent committee and that it is composed of 51 members, 41 of them elected from the community and 10 by their leadership positions. From the higher committee, ten members have been selected as executive committee including chairperson of subcommittees that are responsible for different flood aspects at different parts of the island. At each part of the island there is a group of people, which shouldering the responsibility flood control, composed of members from community organizations such as women, youth, clubs.etc. The coordination of flood issues and the communications between the island flood committee and other stakeholders are usually carried out by the island people' committee.

With regard to the committee current preparedness for the coming flood season, the committee received assistant from the Engineering department of the State Ministry of

Physical Planning in form of amount of soils for strengthening of the terrace. However, the type of the soil is considered not suitable for proper embankment. For the flood risk mapping, the committee specify the eastern part of the island(about 850 meters) to be the most vulnerable and high risky area due to the prevalence of the erosion(Haddam). In addition to the southern flat part of the island which is used to be affected annually by the floods.

Annex2 The Meeting with Wawsi Flood committee

Wawsi, 22/ July/ 2008

Attendants:

1. Engineer Hyder Yousif, National Flood Project Coordinator
2. Dr Babiker AbdAlla Ibrahim, Regional Flood Project Coordinator
3. Dr Salah Mohamed Elawad, National Consultant of the Flood Project
4. Mr. Fathi Hassan Arabi, member of Wawsi Flood Committee
5. Mr. Abdo Gasmalla Elteyb, member of Wawsi Flood Committee

Engineer Hyder Yousif (the National Flood Coordinator) explained the purposes of this meeting which is to get the flood affected communities involved in the planning and implementation of the piloting phase of the flood project.

Dr. Babiker, (the regional flood project coordinator) introduced the project concept and flood project phase I objectives of helping the selected pilot communities to reduce flood negative impacts and make use of the flood benefits. He pointed out the need for adopting an implementation structure that involve affected communities and brings the flood project support directly to the beneficiaries. Hence, this task of the project would help as piloting work to identify an optimum project implementation set-up and getting the fund for the project phase II.

The National consultant of the project further explained that this meeting is intended to discuss with the community the coming flood season needs and requirements and to prepare an action plan and procurement procedures that determine each partner' role and activities.

Members of the Wawsi flood committee have explained that the ultimate solution for their flood problems is to avail the basic services such as education and health facilities at the selected site which has been allotted to them since 1993. They mentioned that up to now about 20 percent of the village population, which is estimates to be around six thousand persons, had resettled at the resettlement area but the availability of the basic services will motivate others to move to the new site.

With regard to their preparedness to the coming flood season, the village plan has been provided to the locality engineering department. The plan includes their requirements of flood materials such as sacks, village roads and strengthening of terraces at the Nile bank.

Annex3 The Meeting with Alabka and Sidon Flood Committees

Sidon on 21/July 2008-07-22

Attendants:

1. Engineer Hyder Yousif National Flood Project Coordinator
2. Dr Babiker AbdAlla Ibrahim Regional Flood Project Coordinator
3. Dr Salah Mohamed Elawad National Consultant of The Flood Project
4. Mr. Mustafa Saed Executive Officer for Sidon Administrative Unit
5. Engineer Omer Mohamed Ahmed Ministry of Irrigation Atbara Water Nile Office
6. Engineer Hussein Mustafa Ministry of Irrigation Atbara Water Nile Office
7. Mr. Ali Fadelmula Ali Director of Services Eldamar Locality
8. Mr. Ali Elsheikh Member of Alabka community
9. Mr. Abdelmagid Ibrahim Chairperson of Alabka people committee
10. Mr. Mirgani Hamza Member of Alabka community
11. Mr. Abdallah Bashari member of Sidon community
12. Mr. Ali Mahmud member of Sidon community
13. Mr. Suleiman Elamin Mohamed Chairperson of Sidon people committee
14. Mr. Mamoun Elhassan member of Sidon community
15. Mr. Elyas Abas member of Sidon community
16. Mr. Eltahir Abdalazem member of Sidon community
17. Mr. Hassan Abdelmagid member of Sidon community
18. M. Ibrahim Ahmed member of Sidon community.

The meeting started by an introduction by Engineer Hyder Yousif (the National Flood Coordinator) who explained the purposes of this meeting which is to get the communities that affected by floods involved in the implementation of the piloting phase of the flood project. He pointed that it has been agreed to select four communities from the 196 communities which are affected by the floods in Sudan and as Sidon and Alabka villages are used to be affected by and benefited from the flood annually and due to their experiences in flood management and control they have been selected as areas for the piloting work that might be replicated elsewhere at other flood affected areas in Sudan and/or scale-up later in the second phase of the project. He mentioned that (FEWS) Flood Early Warning System Project, one of the flood projects implemented by the Federal Ministry of Irrigation have led to improvements in flood forecasting and the lead time that

provided by the project enabled the country to early prepare for the floods. Also, he identified the major project components that will be dealt with (Flood preparedness and early warning, emergency response and mitigation of flood impacts).

The regional flood project coordinator Dr. Babiker Abdalla gave a historical evolution of the establishment of the Nile Basin Initiative and the need for a new cooperation strategy between the basin countries instead of the conflict on water and importance of developing the Nile water resources for the benefits of the Nile communities. Also, he explained that this flood project is one of many projects that have been proposed and would be coordinated by the Eastern Nile Technical Regional Organization (ENTRO) and to be implemented in the eastern Nile countries (Sudan, Ethiopia and Egypt) for the benefits of the people in these countries.

Specifically, this first phase of the flood project have two main components; flood forecasting and early warning and community preparedness and planning for flood mitigation. The first component has been, almost, well implemented while the community preparedness component is now under piloting stage and that the European Union has avail US \$ 3.5 millions for implementation of the community flood preparedness activities for three flood seasons at the three countries. He pointed that the national consultant is currently preparing community flood preparedness action plans for the four selected communities for the 2008 flood season and Alabka and Sidon communities have to prepare their flood preparedness and mitigation plans that will be discussed in a meeting on coming Thursday 24/ July 2008 at The Federal Ministry of Irrigation. Dr. Babiker explained that the project will help in availability of the flood information to the communities and concerned institutions. He asked about the means of communication between the communities and the National Flood center in Khartoum and other stakeholders to avail the flood information at the appropriate time.

The national consultant of the flood project explored the structure of the community flood preparedness and mitigation action plan, (i.e. the plan strategy, components, expected outputs, and activities). He emphasized the need for having a clear organizational structure with clear roles and responsibilities for each partner together with a detailed plan and procurement and monitoring approach. The proposed plan has to be prepared based on community needs for the preparedness for the coming flood season.

Members of Alabka community (Mr. Ali Elsheikh, Mr. Abdelmagid and Mr. Mirgani Hamza) have explained the historical occurrence of the Atbara River floods in the area during the period 1946, 1988, 1992, 1994, 1996, 1998, 2000, and 2001. The flood at 2001 is considered the worst that led to some of the village families to be shifted to a higher level area. Also, they explored their historical flood management and measures of reducing floods impacts (establishment of terraces). However, they said that they contributed by third of the required amount of money for establishing a permanent terrace around the village by the local authorities, but they got nothing till now. In spite the fact that floods are considered essential for their life as rural communities depend mainly on agriculture and animal rearing, he mentioned some of the negative impacts of the floods like their complete isolation from other places and markets during flood season and prevalence of water borne disease. A point has been emphasized that the significant negative impacts of floods occurred when floods were coincided with winds and rainfall.

Members from Sidon community have explained the impacts of the floods at their villages which are not much different from that affected Alabka. In 2001 flood season one of their villages (Elgoaiz) has been largely affected and has been transferred outside the area but they suffered from lack of suitable drinking water. One of the most significant impacts during flood season is isolation of the whole area when Khor Elhalgi is full of water. The director of services at Aldamar locality emphasized the need for looking for flood control measures for short, medium and long run. He preferred measures that depend on scientific approach and considering the advantages and disadvantages for different options. For the short term measures, he mentioned the strengthening of the terraces and for medium term the need for resettlement at safe areas and provision of needed services, while for long term controlling of water in Atbara River and establishment of dam. Engineer Omer Mohamed pointed to the need of studying the irrigation of flood plains in the area in addition to maintenance of terraces and canal clearance at Delta Elingaz basin to reduce flood impacts. Also, he mentioned the necessity of investigating the climate at Atbara River and studies the environmental degradation at the River.

Annex 4 Orientation Workshop for FPEW Stakeholders

Workshop Participants: The workshop has been attended by representatives from all project stakeholders.

VENUE: Ministry of Irrigation and Water Resources, Khartoum

Date: 24/July /2008

The Workshop started by an opening speech from the representative of the Ministry of Irrigation and Water Resources, followed by a speech from National Flood Project Coordinator who explained the purposes of the workshop and its program, then the Flood Project Regional Coordinator delivered a speech introducing the Nile Basin Initiative and its objectives and projects and institutions. He further explained the flood preparedness and early warning project as fast track project, its objectives, phases and the current pilot phase I of the project. Also, he mentioned that before this workshop many meetings have been held with four selected flood prone communities (Toti Island and Wawsi village at Khartoum State and Alabka and Sidon at River Nile State) as pilot to be increased to eight communities next year. At these meetings the selected communities have been informed about the project phase and the need for piloting to involve the communities in the project implementation plan that might help to come out with appropriate institutional and implemenational arrangements for the second phase of the project which will cover 196 flood prone areas in Sudan.

The flood project national consultant presented the four selected communities action plans. He explored the plans objectives, strategy, components, activities and the proposed institutional and implementing arrangements. Also, he presented the communities proposed budgets for implementing the project for the coming flood season.

The representative of the Sudan meteorological Authority explained the rainfall forecasting system and how they forecast climate factors and that they are in direct contact with the regional and international climate forecasting institutions and satellites. He mentioned that they established a center for short run forecast by support from the flood project and the lab is ready to provide five days forecast which will assist all flood related institutions and communities to in their preparedness for floods. Also, he emphasized that their forecast indicated that this rainfall season would be above the average which entail proper

preparedness and that they are ready to communicate with all communities and avail their climate forecast and data.

The Sudanese Red Crescent society representatives have explained the society roles and flood activities that the society branches are used to carry out each flood season in all flood prone areas. They illustrated that they have emergency response committee in addition to their volunteers which estimated to be around 400 volunteer in all of the states. The Khartoum state engineering department representative delivered speech about the state experiences with floods and the shortcomings that affect their seasonal plan and that there is a hydrological study of the state rivers banks. He mentioned the efforts that have been made up to now to prepare for floods and rainy season.

The representatives of the four selected communities discussed their floods situations and their needs and requirements for preparedness for the coming flood season.

At the end of the workshop and after a thorough discussions and deliberations, the following output and recommendations have been agreed upon:

1. It is a very fruitful opportunity for all flood stakeholders to gather and discuss their issues and preparedness for floods and how to reduce flood impacts and benefits from flood season
2. The workshop gave a chance to have realistic estimates about communities required volume of work for flood preparedness and response and the estimated budgets that the project can help to avail.
3. There is a great need for each community to establish a community flood committee that would be important implementing agency for the project activities.
4. Information is considered an essential component in the project plan and that now every flood stakeholder has been in access with each other through the provided addresses and telephones.(Annex 5)

Annex 5 Pilot Community Early Warning Circle

S.No.	Name	Location	Contact
1	Omer El bashier Ahmed	Tuti Island	Mobile: 0122633156
2	Hamid El Rashid Ahmed	Tuti Island	Fix/ phone: 0183747097 Fax: 0183747109 e-mail: hamid@naife.org
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4	Moustafa Saed Mohamed	Sidon	Mobile: 0122023780
5	Hassan Abd Al Magid	Sidon	Mobile: 0126218879
6	Ali El Sheikh Ali	Al Abakah	Mobile: 0121286716
7	Abd Al Magid Ibrahim	Al Abakah	Mobile: 0919555281
8	Sami Mahdi Adam	Sudanese Red Crescent Society	Mobile: 0122236389 e-mail : samimahdii@yahoo.com
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