Regional Summary of Multi-Agency Flood Impact Assessment of 2006

Early Warning Department (EWD)

Federal Disaster Prevention and Preparedness Agency (DPPA)

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Flood Impact Assessment in 2006 by Region

Acronyms

PSNP - Productive Safety Net Program
URTI - Upper Respiratory Track Infection
FDPPA - Federal Disaster Prevention and Preparedness Agency
WFP - World Food Progamme
USAID - United States Agency for International Development
FEWSNET - Famine Early Warning System Network
OCHA - Office for Coordination of Humanitarian Assistance
NGOs - Non Governmental Organizations
WVI-E - World Vision International - Ethiopia
ERCS - Ethiopian Red Cross Society
FHI F - Food for the Hungary International
HHs - Households
DPP - Disaster Prevention and Preparedness
DPPB - Disaster Prevention and Preparedness Bureau
DDT - Dicchlorodi Phenyltrichloroethane
IDP - Internally Displaced Persons
DDRS - Dire Dawa Red Cross Society
SNNPR - Southern Nations Nationalities and Peoples Region
ITNs - Insecticide Treated Nets
EWS - Early Warning System
BOLSA - Bureau of Labor and Social Affairs
DPPD - Disaster Prevention and Preparedness Department
ITNs - Insecticide Treated Nets

Executive Summary

The findings of the flood impact assessment of 2006 main rain season indicate critical conditions in most of the areas visited. Initial estimates show that 478,505 people in 472 localities of 64 woredas of 34 zones throughout the country excluding the October/November flood in Somali Region were affected. Of these 205,621 were displaced. Significant loss of life was recorded in the worst affected areas of South Omo Zone and Dire Dawa where 371 and 256 fatalities were reported respectively.

Further flooding during Deyr season occurred between the last week of October and mid-November 2006 particularly affecting Mustahil, Kelafo, and West Gode. The floods affected 361,620 people of whom 125,000 were displaced. The affected areas were made inaccessible by the floods hampering the distribution of humanitarian assistance to populations in need.

The up dated figure including the late flood occurrence in Somali Region on impact of the floods at national level shows 478 localities were hit by the flood disaster with varying degrees of severity. In these localities 698,275 people were affected out of whom 251,605 were displaced. With respect to property, 58,587.1 hectares of cultivation, 760 granaries and 15,630.2 quintals of stored grain were either destroyed or damaged. (See Table: 1)

Intervention by the DPPA and other humanitarian organizations in emergency relief supply and rehabilitation began in the wake of the disasters at different levels in the affected areas. At national level 80, 22.5, 252.8, 503.57 and 780.2 MT of cereals, oil, supplementary food and pulse respectively were distributed by DPPA to needy population in Affar, SNNP,Amhara, Oromiya, Tigray, Dire Dawa, Somali, Gambella and Harari Regions during August – November 2006. (See Table: 2)

In Dire Dawa the displaced were receiving dry food rations. Approximately 5,530 of them were provided shelter at temporary resettlement sites. Some common latrines and shower rooms were constructed and are in use while additional ones were under construction.

In the SNNP region too, similar assistance had been under way. Among other things, efforts were made to supply the affected population with safe drinking water.

In Afar Region, initially a total of 215 MT of grain, 19 MT of supplementary food, 6.5 MT of oil and 20 rolls of plastic sheeting were delivered to the 26,000 most affected people. Furthermore, about 10 MT of wheat flour was given to Dulecha Woreda. Medical personnel were dispatched to monitor and contain opportunistic diseases should they start to attack the victims. Flood task forces were also

formed both at the regional and woreda levels to manage the emergency situation. In Amhara Region Health teams from the respective visited woredas had moved to the affected areas to treat the flood victims free of charge. The Regional/Woreda Health Office and an NGO (MSF) operating in the area provided medical services including provision of drugs free of charge to all flood affected woredas. Mosquito nets were also distributed to some of the flood affected people on time besides other emergency supplies.

Overall, in view of the extent of devastation of the floods, mitigation and rehabilitation are needed in both the short and long term.

Table 1: Effect of the Flood Disasters at National Level (compiled by the teams and EWD)

Region	Affected PAs	Population		Crop damaged(ha)	Granaries damaged	Grain lost(qt)
		Affected	Displaced			
Afar	27	56,300	26,000	2,655	0	0
SNNP	86	106,800	47,507	6,426	760	7,326
Amhara	51	107,286	37,982	18,000	0	5,004.2
Oromiya	106	20,156	3,392	8,100	0	3,300
Tigray	5	2,697	2,697	406	0	0
D. Dawa	23	9,027	9,027	257.6	0	0
Somali	149	361,619	125,000	22,300	0	0
Gambella	27	30,915	30,915	0	0	0
Harari	4	3,475	0	442.5	0	0
Total	478	698,275	251,605	58,587.1	760	15,630.2

Table: 2 Allocation and distribution of food to flood affected people (Aug.-Nov.)

Region	No of zones	Beneficiary	Emergency food aid(MT)				Total
			Cereals	Oil	Sup. Food	Pulse	
Oromiya	4	19,205	88.7	2.8	20.7	5.8	118
Dire Dawa	1	10,000	310	19.5	40.4	0	370.4
Affar	2	26,000	211.5	6.5	19.00	3.3	240.3
Tigray	2	1172	26.4	0.9	2.8	2.7	32.8
Gambella	2	32,541	488.1	14.7	2.6	48.7	554.1
SNNPR	8	79,717	1197.70	35.50	107.57	85.80	1426.57
Somali	1(God e)	313,648	4704.70	141.10	494.4	528.20	5,868.4
Amhara	6	75,708	995.40	31.80	116.10	105.70	1249
	Total 26	557,991	8,022.5	252.8	503.57	780.2	9,639.57*

*****50 cans of canned fish, 300 cans of marmalade20MT of flour and 165 tins of milk powder are not included in this table.

Table: 3 Distribution of non-food items to flood affected people by DPPA (August – November 2006)

Region	No of zones	Blanket	Kettle	Jog	Mattresses	Plastic bag
Oromiya	4	1,800	0	1,400	0	4000
Dire Dawa	1	4,000	150	0	1150	0
Affar	2	0	0	0	0	0
Tigray	2	278	0	139	0	0
Gambella	2	0	0	0	0	0
SNNPR	8	1,434	250	467	0	78,000
Somali	1(Gode)	0	0	8,000	0	0
Amhara	6	6,079	918	0	0	0
Total 26		13,591	1,318	10,006	1,150	82,000

Table: 4 Distribution of non-food items to flood affected people by DPPA (August – November 2006)

Region	Zones	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)	Tent
Oromiya	4	0	14,390	14,390	2,200	0	363	446	123
Dire Dawa	1	50	10,000	10,000	1150	2000	2010	25	255
Affar	2	0	0	0	0	0	0	0	0
Tigray	2		0	582	582	139	0	13	0
Gambella	2	0	0	0	0	0	0	2	0
SNNPR	8	0	4,019	4,019	467	20	1,750	35	5
Somali	1(Gode)	0	46,500	46,500	8,100	8,000	8,000	635	0
Amhara	6	0	7,432	7,432	1,578	0	918	125	0
Total 26		50	82,923	82,923	14,484	10,020	13,041	1,301	383

Introduction

The flood occurrence during the major rainy season (summer) in Ethiopia in 2006 had been of extremely wide coverage. Almost the entire country with the exception of Benshangul Gumuz Region and Addis Ababa had flood incidents of a certain proportion even though the damage may have been less in relation to other areas. The abnormal occurrence sparked alarming signal to all concerned to ponder over the matter. The big concern has been preparation for intervention under the urgent issue of saving life and in due course rehabilitate livelihood. Apparently efforts aimed at dealing with the disaster both under emergency situation and long term task began.

It has become necessary to have some kind of early warning system though it is difficult. It is possible to have a sort of prior warning about imminent local flash floods and river floods in Ethiopia according to study by Teferi Bekele (Flood Vulnerability in Ethiopia and Needs for Preparedness, 1997). The study identifies shots from some higher ground for flash floods and prior information to flood prone areas in the lowlands on the increase of the level of rivers in their upper courses as some of the means to warn the population about eventual floods.

With the aim of arriving at some kind of preparedness, a Task Force with members from different agencies led by the DPPA was set up to prepare ground work to study impact of the current disaster. Then a multi agency assessment teams were organized and dispatched to areas affected by the floods. The objective of the mission was to study impact of the disaster in terms of extent and severity of damage/distraction (death, displacement, destitution) to human population, crops, livestock, infrastructure and others; identification of responses/interventions until the assessment period, and gaps in relief and/or rehabilitation needs of the affected population.

The assessment was done in Somali, Amhara, SNNP, Afar, Gambella, Oromiya, Dire Dawa, Harari and Tigray in the order of severity. (The assessment in Tigray was separately conducted ahead of dispatch of the teams while in Gambella too a multi agency assessment was conducted prior to the program).

The method used by the teams in conducting the assessment was meeting with sector bureaus for briefing, visiting the temporary shelter and flood affected community. Reports of the teams thus organized were initially compiled on regional basis by the respective teams. And then it was compiled at national level making the necessary edition. This report is categorized in to Summary; Background: Overall Negative Impacts and other Findings; Interventions and Coordination; Overall Food Security Situation; and Recommendations.

1.Dire Dawa

1.1 Summary

In Dire Dawa city, the devastating flood of August 6, 2006 caused the death of 256 people and displacement of 9,956. Out of the displaced people, 5,524 were in temporary shelter while 4,432 living with their relatives and friends**.** The flood has inflicted huge damages on urban infrastructure including roads, bridges and houses. Electric poles, water pipes and sanitation facilities were also damaged. Investors, small and petty traders lost an estimated 30,054,275 ETB in property.

In the surrounding rural areas, 10,809 people were affected by the floods in 17 kebeles. An estimated 258 hectares of farmland, six houses and infrastructure such as irrigation schemes were destroyed.

Since the onset of the flood, Government, UN Agencies, NGOs and the local community have been engaged in providing food and non-food assistance, medical supplies, water and sanitation interventions.

Assessments were made to estimate the damages caused by the flood and to propose recovery and rehabilitation actions. The reconstruction and protection costs for urban infrastructure (houses, bridges, crossings, retaining walls), urban water and sanitation, rural soil and water conservation, agriculture, rural water and irrigation schemes was estimated to be 89,203,262 ETB, 1,941, 004.31 ETB, 1,912, 494.903 ETB, 1,271, 655 ETB, respectively.

1.2 Background: Description of the Flood Affected Areas

During the night of 6 August a flash flood of the Dechatu, seasonal steam that flows for hardly a week in a year, and which passes through the centre of the city spread out for up to 200 meters away from the banks on either side, sweeping homes, trees, live fences and all in the way of the floods. In some places entire buildings and concrete fences were wiped out. On various occasions the Dachatu flooded causing damage to life and property. The flood damage has increased in recent years due to increased vulnerable populations that have settled near the banks as well as to deforestation of natural catchments.

Five of Dire Dawa's nine kebeles (9, 6,5,3 and 2) were affected by the flood. In addition, 17 kebeles in the surrounding rural areas were also affected. All together approximately 20,809 people were directly affected by the flood. Of these 10,000 were affected in the city of whom 9,956 were displaced and 256 died. The death toll was largely due to the fact that the flooding took place in an urban area at night, when people are normally asleep. During the assessment, approximately 5,524 displaced people were living in temporary resettlement sites near the Dire Dawa airport and a further, 4,432 were living with their relatives and friends in the city. Roughly, 5,500 of the displaced are female, 4,456 are male and 1,500 are children under the age of five. In addition to the displaced there

are currently 5,000 people living in high risk flood prone areas. This population needs to be resettled.

In the surrounding rural areas, more than 1,827 households (10,809 persons) were affected in 17 kebeles. Rural livelihoods were damaged. About 21 livestock were washed away, 257.6 hectares of farm land with crops were destroyed and six homes swept away by the flood.

1.3 Overall Negative Impacts and other Findings

The flood significantly damaged the livelihoods of 9,956 displaced in Dire Dawa city, washing away their homes and significantly damaging individual assets such as shops, private enterprises and market stalls. Approximately 2,685 households were reported to have lost their homes. An additional 1,000 homes were also damaged by the flood waters. The damage to livelihood assets had been assessed by the Dire Dawa Investment Bureau, the Dire Dawa Small and Micro Enterprise Agency and the Trade and Industry Office of Dire Dawa. The Investment Bureau found that ten investors lost an estimated 13,162,981 ETB from property damage by the flood. The Dire Dawa Small and Micro Enterprise Agency assessment reported that 882 people incurred losses of 6,697,992 ETB and the Trade and Industry Office also reported the loss of 10,193,302 Birr incurred by 116 traders.

Infrastructure was also severely damaged including roads, the Dechatu River main bridge which cost 2.4 million ETB, Taiwan and Halfkat Irish Crossing and the retaining wall of the Dechatu. In addition, several electric and telephone utility lines and poles were destroyed resulting in a black out in parts of kebeles 05, 06, 07 and 09 for several days. The damage was reported to have incurred the electric and telephone sectors estimated loss of Birr 500,000 and Birr 6,098.36 respectively. On top of these infrastructure damages, all roads found within a 40ms radius from the river were completely covered with silt. Its removal and clearance cost about ETB 517,100.

In the surrounding rural areas of Dire Dawa, approximately 257.6 hectares of crops (cereals, vegetables, fruits, and cash crops), in 17 kebeles were damaged and six houses were washed away. Soil and water conservation infrastructure in all these kebeles, water schemes in 7 kebeles and irrigation schemes in five kebeles were significantly damaged.

Despite a history of endemic malaria and meningitis outbreaks, there has been no disease epidemic since the onset of the floods. Malnutrition screening in the IDP shelters, however, has found 28 children with moderate malnutrition and 2 with severe acute malnutrition.

1.4 Interventions, Coordination and Gaps

Government and humanitarian partners have been engaged in providing food and non-food assistance, medical supplies and water and sanitation interventions since the onset of the disaster.

The displaced people were initially sheltered in six school sites. At the commencement of the academic year approximately 5,530 displaced were relocated from the schools to alternative temporary resettlement sites. About 4,440 displaced opted to stay with relatives and friends. The displaced people have been receiving dry food rations once a month. Approximately 1,750 tents of various sizes (i.e. 4*4=1640, 10*20=5, and 5*10= 100) have been supplied as a temporary housing solution and four 5,000 liters water bladders have been used for the supply of clean water. UNICEF has also provided seven communal latrines (98 seats) and fourteen shower rooms at a cost of 60,896 ETB. Additional latrines, shower services and washing facilities were under construction.

Health interventions include the establishment of a clinic in the resettlement sites that provides 24 hour service to the displaced free of charge. It is run by the Regional Health Bureau (RHB) with the support of CARE. Sixteen additional health workers from two other regional health bureaus, a UN agency and an NGO and 72 volunteers from the Dire Dawa Red Cross Society (DDRS) have supplemented the existing health human resources.

Coordination mechanisms were established early. At the regional level a crisis management committee chaired by the head of the Dire Dawa City Council and a joint government and humanitarian partner emergency and rehabilitation coordination team chaired by the head of Agriculture and Rural Development Bureau were set up. The Dire Dawa City Council Administration in collaboration with UN agencies and NGOs formed the following five taskforces to coordinate activities and identify needs and gaps: Food, Non-Food and Logistics, Health, Nutrition and Sanitation, Infrastructure (shelter, water supply, road and micro-enterprise), Protection and Education and Information and communication.

1.5 Recommendations

Recommendations focusing on long term works include rehabilitation of the damaged rural water supply systems and reconstruction of small scale irrigation schemes; reconstruction of water and soil conservation structures in 5 sub-watersheds of the Dechatu River; support for displaced people in income generating schemes; construction of permanent houses for the displaced persons; replacing the existing crossings with load bearing bridges; construction of water retaining walls along the remaining parts of Dechatu and Goro watersheds; resettle the 5,000 people living in high risk flood prone areas to safer ground; and treatment of the Dire Dawa watershed to protect Dire Dawa and its surroundings from future devastating floods were recommended.

Table: 5 Flood affected population and other damages in Dire Dawa

The city and surrounding	Affected PAs	Population			Crop damaged(ha)
		Affected	Displaced	Died	
The city	5	9,050	9,050	256	0
Surrounding	17	10,800	o	0	258
Total	22	19,850	9050	256	258

Table: 6 Distribution of food to flood affected people in Dire Dawa City Council and Surrounding (August-November 2006)

Dire Dawa	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
Dire Dawa	10,000	200	10.5	40.4	0	250.9
Dire Dawa(2)		110.5	9	0	0	119.5
Total		310.5	19.5	4.40	0	334.4

Table: 7 Distribution of non-food items to flood affected people in Dire Dawa City Council by DPPA (August – November 2006)

Dire Dawa	Blanket	Kettle	Jog	Mattresses	Plastic bag
Dire DAwa	4,000	150	0	1150	0
Dire Dawa(2)	0	0	0	0	0
Total	4,000	150	0	1150	0

Table: 8 Distribution of non-food items to flood affected people in Dire Dawa City Council Region by DPPA (August – November 2006)

Dire Dawa	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)	Tents
Dire Dawa	50	10,000	10,000	2,000	2,000	2,010	250	255
Dire Dawa(2)	0	0	0	0	0	0	0	0
Total	50	10,000	10,000	2,000	2,000	2,010	25	255

2. SNNPR

2.1 Summary

Widespread floods and a landslide affected 56,105 people, displaced 33,665 among them and reportedly killed 374 people in 17 woredas of Southern Nations Nationalities and Peoples Region (SNNPR). The worst flood affected areas were Dasenech and Nyangatom woredas of South Omo Zone where 370 people died and 21,523 people were affected of whom 15,000 were displaced. In addition, more than 3,000 animals were killed and 15 villages were totally destroyed. Houses, infrastructure, and agricultural crops were wiped out. In most affected areas, the economic and livelihood activities were disrupted.

The government in collaboration with humanitarian partners responded immediately to address the emergency needs of the affected people in South Omo Zone. Boats and trained personnel were deployed for search and rescue, food and non food items were distributed to the flood victims. The emergency operation was well coordinated in South Omo Zone but less coordinated in other areas. With the exception of some signs of measles in Ngangatom Woreda due to poor vaccination coverage, there were no major health problems in most affected woredas.

2.2 Background: Description of the Flood Affected Areas

The affected areas, Dasenech and Nyangatom woredas are located in the southwestern part of SNNPR in the delta of the Omo River. As there is no bridge over the Omo River, 70 % of the area is not accessible by road. Both woredas have poor infrastructure and public facilities.

The woredas have a total population of 70,704 people (46,862 in Dasanech and 23,842 in Nyangatom). Of the total population of Dasenech Woreda, nearly 50% live along sides of the Omo River while the rest in the 14 small islands.

The other flood and landslide affected areas are located in the densely populated central and northern parts of the region. These are Kemba Woreda of Gamogofa Zone, Humbo Woreda of Wolaita Zone, Hula, Dale, Shebedino woredas and Awassa town in Sidama Zone and Shashigo Woreda in Hadiya Zone, Alicho Woriro, Dalocha, Lanfaro, Siltee, Sankura in Silitee Zone, Decha Woreda, Bonga town Keffa Zone, and Alaba Special Woreda. People in the affected areas are settled in high risk areas which are prone to landslides and erosion due to the shortage of farm land and population pressure.

2.3 Overall Negative Impacts and other Findings

The Omo River flooding affected 21,523 people in Dasenech and Nyangatom woredas. Dasenech woreda was the most severely affected when the flood water formed fourteen isolated islands in its delta and inundated six kebeles either side of its banks. Approximately 16,230 people lost their assets and were dependent on humanitarian assistance, 12,150 were displaced and moved to resettlement

sites. The death toll was particularly high in Dasenech resulting in the loss of 364 lives mainly women, children and elders.

Six kebeles were also devastated by the flood waters in Nyangatom Woreda resulting in the displacement of approximately 967 households with a total population of 5,229.

Apart from South Omo Zone, in Wolaita, Gamo Gofa, Hadiya, Alaba, Gurage and Sidama 34,590 people were affected resulting in the further displacement of 16,230 people.

With respect to impact on Infrastructure, the few existing public facilities such as schools and clinics in the woreda capitals (Omorate, Kangaten) located near the banks of the Omo River were either damaged or made inaccessible. One elementary school, one veterinary post and one clinic were flooded in Loyere kebele and public facilities at Kangatom and Toltale were surrounded by the flood waters. The road to Korongate, Bubua, Toltale estimated to be 120km was destroyed rendering access to these areas even more difficult.

According to woreda officials in Dasenech, more than 3,500 houses and 1,463 grain stores (each with an average of 300kg of grain) were washed away. The livelihoods of agro-pastoralists in the region were greatly disrupted; as many as 15,600 livestock were lost to the floods; and large areas of grazing land were inundated reducing the availability of fodder.

Some flood prevention activities were also carried out during the initial phase of the disaster to minimize further flooding of new areas, particularly around urban areas such as Omorate. However, this activity was discontinued following the decrease in the level of Omo River in September.

In addition, the floods created favorable conditions for mosquito breeding and waterborne diseases. Malaria is endemic to Nyangatom and Dasenech woredas. Measles outbreak was initially reported in Toltale resettlement site spreading throughout Dasench Woreda in August. As the result 600 cases were identified. It also claimed the lives of six. By October, four cases of measles were reported in Kangata, Nynagatom Woreda and by November eleven new cases were reported in Loyere, Dasench Woreda.

Education also suffered as a result of the floods. Seven schools were affected and the Education Bureau estimates that 3,880 students were displaced resulting in poor school attendance. The discontinuation of the school feeding programme in January 2006 has also negatively impacted on school attendance in the area.

2. 4 Interventions, Coordination and Gaps

The Federal and Regional Governments in collaboration with UN agencies, NGOs, and other humanitarian partner mounted an immediate relief operation in

the affected areas. The relief operation included search and rescue efforts, the provision of food and non-food assistance, water and sanitation interventions and healthcare**.**

Health interventions include the distribution of approximately, 18,270 Insecticide Treated Nets (ITNs) to the affected population. Anthropometric measures (height and weight) were routinely taken in both health centers (Omorate and Kangaten) but no malnutrition rates were recorded. The main problems facing the health response were regular shortage of essential drugs such as vaccines and other medical supplies, the lack of motorcycles which are required for vaccination campaigns, lack of supervision and motivation of health personnel and the regular shortage of Enhanced Outreach Strategy/Therapeutic Supplementary Feeding budget allocated to the area.

The affected populations traditionally use untreated water from the Omo River as their main water source. Efforts were made, however, to supply the affected population with safe drinking water. Water pumps were requested from the Regional Water Bureau to pump the water directly from the river to treat. However, the water pumps were not forthcoming. A disinfectant agent, wuh agar, was distributed to households instead. The affected population, however, refused to drink the treated water disliking its taste and odor as something unusual to them.

Rehabilitation is also needed and should be based on the livelihood system existing in the affected areas and consider the damage caused by the flooding. The flood washed away roads, houses, public infrastructures and livestock. It also disrupted normal social, economic and livelihood activities of the community. Thus the rehabilitation need includes social, economic and livelihood recovery interventions.

The pastoralists are poorly organized; the kebele structures are very weak; and the distinction between the kebeles is not clearly delineated; which make need assessment and recovery planning very difficult. Thus, strengthening the kebele structure, should be given due attention.

Coordination: At regional level a coordination body composed of the regional cabinet members (bureau heads) chaired by the head of Agriculture and Rural Development Bureau was established. At onset of the emergency, the committee was meeting every evening to make decisions on operational issues. Under the regional coordination mechanism there were two sub-committees - the Life Saving and Rehabilitation Committee and the Fundraising and Public Relations Committee.

Zonal and woreda level coordination was only organized in South Omo. There is no coordination in all other affected zones and woredas. In South Omo, one overall coordination committee and four taskforces were established and they were operational during the assessment. The task forces include a technical task

force (health, water and livestock groups), logistics committee, a transport task force and a security task force. There were also relief coordination teams in each re-location site. They reported every two days to the zonal coordination committee and the coordination committee reported daily to the region. However, record keeping at relocation site was very poor.

2.5 Overall Food Security Situation

Dasenech and Nyangatom are agro-pastoralists who normally consume milk, blood and sorghum. They were forced to abandon their livestock and cereal in the flood affected areas and moved to the resettlement sites. Consequently, the affected and displaced people had to depend on emergency food aid. The emergency food aid includes cereal, oil, pulses and CSB. The absence of milk and other parts of their normal diet was a great shock to the displaced people. They were continuously asking for milk. The affected people were unfamiliar with pulses and refused to consume them.

2. 6 Recommendations

Recommendations are given under medium and long term. Restocking based on detailed assessment, construction of flood prevention mechanisms for high risk flood prone areas; rehabilitation of damaged houses; support to fishing activities such as fishing boats, nets and accessories; develop public infrastructure; rehabilitation of damaged roads; strengthening early warning systems; development of water points; and building the capacity of woreda human resources, communications and facilities should be given consideration.

Table: 9 Flood and landslide affected population and other damages in SNNP Region

Zone	Affected PAs	Population			Crop damaged (ha)	Granaries damaged	Grain lost(qt)
		Affected	Displaced	Died			
Wolaita	6	5,400	1,415	0	724	0	0
Hadiya	18	44,200	8,358	0	8,358	0	7,326
Sidama	15	28,800	16,224	0	105	0	0
Gurage	6	400	322	0	0	0	0
Keffa	2	500	0	0	0	0	0
South Omo	14	21,600	17,441	369	0	760	0
Gamogoffa	11	1,800	2,205	5	428	0	0
Alaba	8	4,100	1,542	0	105	0	0
Total	80	106,800	47,507	374	6,428	760	7,326

Table: 10 Distribution of food to flood affected people in SNNP Region (August-November 2006)

Zone	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
South Omo	45,357	680.3	20	53.07	36.1	789.47
Wolaita	3,647	17	1.70	5.80	5.6	30.1
Keffa	115	3.6	0.10	0.40	0.4	4.5
Hadiya	7,600	211.5	6.30	22.20	21.2	261.2
Sidama	10,720	137.7	4.90	16.90	11.2	170.7
Alaba	2520	37.9	1	4	3.8	46.7
G.Gofa	3038	45.6	1.40	4.80	2.3	54.1
Guraghe	220	3.3	0.1	0.40	0.3	4.1
Total	73,217	1197.7	35.50	107.57	80.9	1190.17

Table: 11 Distribution of non-food items to flood affected people in SNNP Region by DPPA (August – November 2006)

Zone	Blanket	Kettle	Jog	Mattresses	Plastic bag
South Omo	1,000	250	250	0	78,000
Wolaita	0	0	0	0	0
Keffa	0	0	0	0	0
Hadiya	0	0	0	0	0
Sidama	0	0	0	0	0
Alaba	0	0	0	0	0
G.Gofa	434	0	217	0	0
Guraghe	0	0	0	0	0
Total	1,434	250	467	0	78,000

Table: 12 Distribution of non-food items to flood affected people in SNNP Region by DPPA (August – November 2006)

Zone	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)	Tents
South Omo	0	2,500	2,500	250	20	11,750	30	5
Wolaita	0	0	0	0	0	0	0	0
Keffa	0	0	0	0	0	0	0	0
Hadiya	0	0	0	0	0	0	0	0
Sidama	0	0	0	0	0		0	0
Alaba	0	0	0	0	0		0	0
G.Gofa	0	1519	1519	217	0		5	0
Guraghe	0	0	0	0	0		0	0
Total	0	4,019	4,019	467	20	363	35	5

3. Somali Region

3.1 Summary

Flood occurrences in Somali Region during late August 2006 were devastating affecting big population. Yet those that occurred during October/November 2006 were more devastating. It claimed many lives; destroyed or damaged properties and the already little infrastructure; disrupted livelihoods. Survivors were also exposed to the risk of several types of diseases.

A total of about 361,620 people were affected from all flood affected zones (Gode, Afder, Kelafo and Shinile) of whom about 125,000 people were reportedly displaced. Particularly Mustahil, Kelafo and West Gode areas were worst hit. A high level government delegation visited the area and witnessed the severity of the problem. It was finally found out that about 80 people and 3,300 livestock died; 65 water pumps and over 5,300 quintals of grain washed away; a total of over 22,300 ha of crop/pasture land damaged. Although several mitigation activities were ongoing there was huge gap in emergency food and non-food assistance.

3.2 Background: Description of the Flood Affected Areas

Seasonal floods do normally occur in many lowland areas of Somali Region and are usually beneficial for both pastoralists and agro-pastoralists. The floods were caused by the unusual coincidence of the rain in the Ogaden and the highlands run-off coming at the same time. In normal years, the flooding of down steams of the Wabe Shebelle River particularly around Imi, Kelafo, Mustahil and Ferfer can be attributed to the intensity of the rain in the Chercher highlands. Those floods have predominantly had positive impact in the past in terms of rehabilitating water sources, regenerating pasture and browse as well as for recessional agriculture particularly for populations residing along the major rivers.

Particularly the area along Wabe Shebelle River faces recurring floods. In 1961 in Kelafo and Mustahil areas about 10,000 houses were destroyed and about 15,000 people rendered homeless. The same area suffered property damage in 1968. Kelafo woreda in particular was attacked by consecutive flooding in 1984 and 1985 and over 5,000 people were affected in the latter year. In 1995, four areas were hit by floods and as a result in Kelafo 30,300, in Mustahil 38,500, in Ferfer 15,000, and in Burko 10,000 people had been affected (according to a study made by Teferi Bekele in 1997).

3.3 Overall Negative Impacts and other Findings

Floods that occurred during late August and early September 2006 were damaging. The floods were abnormal/uncommon in nature and frequency, damaging in magnitude and intensity. Overall impact of the floods was threatening to life and livelihood. The most recent floods (October/November) that hit Gode area were more devastating. It claimed many human lives, resulted

in huge loss of livelihoods and left survivors at the risk of several types of diseases and hunger.

In the order of severity of impact of the floods, the worst affected zone is Gode followed by Afder and Shinile zones. Findings showed that 6 Kebeles in Erer and 1 Kebele in Shinile weredas of Shinile Zone; Mustahil (17 Kebeles), Kelafo (4 kebeles), Denan (Denan town and 2 kebels) from Gode Zone; Chereti (12 Kebeles), Hargele (16 kebeles) from Afder Zone were critically affected. Except in few places, all flood occurrences were during the night repetitively for more than 4 times in most areas. Occurred in August covered several woredas of southwestern Somali Region (Lower Wabe Shabele River and Weyb River) and some woredas in Shinile Zone due to heavy rains in the highlands.

Floods that occurred several times in Mustahil, Kalafo, Hargele, and Charati woredas made it impossible to cultivate for a long period of time. The repeated floods left stagnant water on the farmland that disrupted the seasonal cropping pattern of the farmers and the normal growth of pasture for livestock. This has an abnormal impact on food security in the areas. The entire flood affected woredas were already badly hit by the prolonged drought that seriously eroded the livelihood of the people and their traditional coping mechanism. Furthermore, a great change is taking place in terms of flood frequency, level of food production and people's ability to cope. The combined effect of drought and flood has consequently put these flood prone woredas under condition of food insecurity.

During the summer flood a total of about 105,000 people were affected from all flood affected zones (Gode, Afder and Shinile). Out of these about 55,000 people were reportedly displaced. Moreover, the whole picture has been changed to the worst particularly in Mustahil, Kelafo and West Gode areas due to the most devastating floods that occurred between the last week of October and mid-November 2006. A high level government delegation also visited the area and witnessed the severity of the problem. The latest figure shows about 361,620 population affected; about 80 persons and 3,300 livestock died; 65 water pumps and over 5,300 quintals of grain washed away; and a total of over 22,300 ha of crop/pasture land damaged and infrastructure destroyed.

People displaced - the poorest fringe of the population (the wealthier can rebuild quickly) - were living in high grounds or with relatives. The most vulnerable people in many cases (poor, women, children, elderly) were among the displaced still without shelter. In Mustahil and Kelafo woredas, people displaced in some cases were still in nearby villages few kilometers from their original villages.

Report from Mobile Health and Nutrition Team in Mustahil Woreda identified major diseases that include Bilharzias (no action taken), Malaria, Eye infection (conjunctivitis), Anemia, Diarrhea (watery in some cases), UTI, URTI / LRTI and other animal health problems further aggravated by the floods.

Affected people were trying to cope with the situation by taking several copping strategies that include: affected families selling some animals in order to get cash to purchase food and other needs; collection of wild food in Mustahil and Kalafo (water lily, a kind of wild root in the water, locally known as *domal*). Affected families also depend partly on support from relatives and solidarity within the community.

3.4 Interventions, Coordination and Gaps

Few kebeles in Mustahil and Kelafo woredas of Gode had prior warning about the flood. All other woredas did not get such early warning information as there were no Early Warning System (EWS) in almost all of the weredas of Gode, Afder and Shinile zones. In the aftermath of the flood disaster, community, kebele and woreda flood management committees were established to facilitate food and non-food relief activities and to support evacuation operations in affected weredas such as Mustahil and Kelafo of Gode. These committees were also coordinating rehabilitation and maintenance activities in few affected weredas.

Regarding non-food items (NFIs), UNICEF in collaboration with the regional DPPB, BOLSA and zonal DPPDs allocated a total of 1,530 kits for Mustahil and Kelafo woredas of Gode Zone and Hargele Woreda of Afder Zone. Similarly, UNICEF together with RHB distributed 4,100 ITN for only Mustahil. Health related interventions were started by MSF-B, OWDA and CCM in few kebeles of the affected woredas that are relatively far away.

Islamic Relief was undertaking nutrition program and distribution of tablets for water purification so far in Cheriti and Hargele weredas of Afder Zone while other seriously affected areas did not yet receive similar assistance from anyone.

Emergency operations being implemented by the Government and other humanitarian agencies face constraints due to the remoteness of the affected areas and communication problems. Roads were destroyed and most areas still muddy virtually transportation of food and other requirements facing challenge.

3.5 Recommendations

In the lower Wabe Shebele River, livelihood of local communities is based on flood recession agriculture. Apparently, flood is not a new phenomenon in terms of benefit to the agro-pastoralists. This beneficial aspect of floods - agriculture by which the communities sustain their livelihood - can be hampered by cumulative negative impacts of same.

Officials of local administration say that frequency of floods had been increasing for the past few years. Before, strong floods used to occur every 3 years but now strong floods occur nearly every season.

Ways of minimizing the negative impact of the floods: Increasing awareness on protection of assets is one way of risk minimization. In some woredads the EWS information on imminent risk of floods reached on time (5 to 7 days before floods occurred) but the communities didn't take adequate action to protect their assets. It is strongly believed that if woreda administrations and local communities become more pro active, taking precautionary measures based on EWS information indicating high potential for floods, assets (livestock, irrigation pumps, household material, food stock…) can be saved or loss can be minimized.

The other way is provision of support coping mechanisms. Many residents in flood prone areas have a second house in the nearby flood safe villages (few km away) where they can take refuge when their residential village is flooded. Some other residents take refuge with their relatives or build temporary shelters in the same flood safe villages. This is a usual/traditional coping mechanism. Thus, supporting the poorest families to have a second house in these villages may help as coping mechanism.

On the other hand, local administrations reported that residents start to have storage facilities in order to minimize the impact of the floods. This trend can be supported through raising awareness level and technical support.

Construction of dykes in order to protect the villages and eventually protect the assets can be implemented by local communities as yet another mechanism. Material support (tools), technical support, awareness and social mobilization/organization are necessary to achieve this kind of infrastructure work.

On the other hand, large scale infrastructure work (diversion canal, irrigation canals) that involves big machinery (bulldozer and the like) can also be conducted after proper studies. Feeder and alternative roads need to be constructed or maintained in all affected areas for future evacuation, preparedness and response operations.

Floods lead to increase in malaria prevalence and occurrence of unusual disease like bilharzias. Adequate training of local health workers and pre-positioning of drugs is necessary in order to avoid increase in morbidity and mortality caused by such diseases during and after the floods.

Table: 13 Flood affected population and other damages in Somali Region

Zone	Affected PAs	Population			Water pumps lost	Livestock killed
		Affected	Displaced	Died		
Gode	0	256,200	122,500	75	0	904
Afder	88	104,600	2,500	15	68	120
Korahe	41	900	0	0	1	0
Total	129	361,700	125,000	90	69	1024

Table: 14 Distribution of food to flood affected people in Somali Region (August-November 2006)

Zone	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
Gode	313,648	4,704.7	141.1	494.4	528.2	5,868.4
Total	313,648	4,704.7	141.1	494.4	528.2	5,868.4

Table: 15 Distribution of non-food items to flood affected people in Somali Region by DPPA (August – November 2006)

Zone	Blanket	Kettle	Jog	Mattresses	Plastic bag	Bed Sheets
Gode	0	0	8,000	0	0	5,000
Total	0	0	8,000	0	0	5,000

Table: 16 Distribution of non-food items to flood affected people in Somali Region by DPPA (August – November 2006)

Zone	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)
Gode	0	46,500	46,500	8,100	8,000	8,000	635
Total	0	46,500	46,500	8,100	8,000	8,000	635

4. Amhara

4.1Summary

In Amhara Region, six zones were covered under the flood impact assessment: North Gonder (Dembia woreda), South Gonder (Dera, Libokemkem and Fogera Woredas), West Gojam (Bahir Dar Zuria Woreda),North Shoa (Efratana Gidem and Antsokia Gemza woredas), Oromiya (Dawa Chefa and Kemissie woredas) and North Wollo (Kobo woreda) zones.

Between mid-June and August 2006, the prolonged heavy rains caused flooding in most parts of the Region. In all visited woredas, severe flooding occurred from 1st of August up to 1st week of September 2006. It is estimated that about 108,000 people were affected by the flood out of whom about 38,000 were displaced and a great deal of assets destroyed or damaged in the visited woredas. The displaced people were relocated to temporarily shelters and received emergency assistance (food and non food, health, water, seed, etc.) up to end of September 2006. Many displaced people were repatriated to their original places from their temporary shelters during late September 2006. In Dawa Chefa Woreda, however, about 250 people were living in temporary shelters during the assessment period. In Antsokia Woreda about 110 people displaced by land slide that occurred immediately after the floods sheltered in a health post.

Emergency food assistance for about 25,000 flood affected people of Antsokia Gemza, Dawa Chefa, Kemisse, Bahir Dar Zuria and Libo Kemkem of Amhara Region was recommended for the period of 3 to 5 months. The emergency seed needs of the flood affected people were adequately addressed by different NGOs (WVI-E, CARE, ERCS, American Joint Distribution and FHI). All NGOs and ERCS accessed the fund to purchase the seeds from HRF - OCHA and the Netherlands Embassy.

Generally, an observed lack of flood early warning, emergency preparedness and coordination in the region made the emergency response effort difficult during occurrence of the flood. However, the regional government in collaboration with NGOs working in the area and UN agencies made considerable efforts to support emergency coordination mechanism in order to effectively respond to the needs of flood affected people.

4.2 Background: Description of the Flood Affected Areas

The team assessed impact of the flooding in six zones: in North Gonder (Dembia woreda), in South Gonder (Dera, Libokemkem and Fogera woredas), West Gojam (Bahir Dar Zuria Woreda), in North Shoa Zone (Efratana Gidem and Antsokia Gemza woredas)**,** in Oromiya Zone (Dawa-chefa Woreda and Kemisse town) and North Wollo Zone (Kobo Woreda).

In all visited woredas, severe flooding occurred from 1st of August up to 1st week of September 2006. Although the magnitude and the extent of damages vary, all visited woredas experienced flooding every year. Unlike the previous years the magnitude of the flooding was above normal and caused damages to lives and livelihoods. It was reported that similar flooding was experienced in 1994 and 1996 in most visited woredas and in 2000 in Bahir Dar Zuria Woreda. The flooding this was believed to be caused by the prolonged rainfall that resulted in the rise of level of Lake Tana and Gumara and Erib Rivers to break their banks.

4.3 Overall Negative Impacts and other Findings

In Anstokia Gemeza Woreda of North Shoa Zone about 17 households with 87 family members (104 people) were displaced in Washa Nigat Kebele due to land slide on 14th of August 2006. Landslide also damaged 22 hectares of farmland.

With the exception of Libokemekem (South Gonder Zone) and Bahir Dar Zuria woredas where there had been reports of death of 2 persons due to floods, there were no other casualties reported from the remaining woredas. In addition to about 600 animal deaths, a total of 18,000 ha of land was affected and damages on infrastructure and private properties were reported.

The impact of flood on health situation at the time of the flooding and in the aftermath when many displaced persons were in temporary camps was relatively mild. However, Acute Watery Diarrhea (AWD), a transmittable disease reported to have spread in to the area from the Sudan prevailed as of mid August 2006. Several AWD cases including 12 deaths were reported from east Amhara bordering Afar Region. The disease was spreading to most other woredas of the region during the assessment.

In addition to polluting the water sources, the flood caused heavy damage on both protected water points, traditional hand dug wells and springs. One hand dug well was out of use in Dembia woreda of North Gonder Zone. In Libo Kemkem Woreda of South Gonder Zone 15 protected water points were reported to have been damaged. In Fogera Woreda of North Gonder Zone 45 hand dug wells were reported damaged by the flood, and there were no protected water sources and no water purification chemicals/techniques used/provided in all flood affected kebeles.

There were displaced people living with their relatives and temporary shelters during the assessment. In Tuche Kebele of Dawa Chefa Woreda of Oromiya Zone, 49 Households (HHs) of 245 people were living in temporary shelter, (tents and plastic sheets). No sanitation facilities do exist; pit latrines were not constructed. The visited woredas had shortage of stock of the necessary emergency water treatment chemicals that easily prevent the high transmission of diseases like AWD and other water borne disease. Since at the time of flood and after the flood there is high risk of contamination of the water sources; there is a need to pre position the required chemicals.

Considerable amount of public and individual asset losses were reported due to flood. It was reported that serious damages were inflicted on rural road networks, bridges, irrigation canals, school and health facilities, communal water points and storage facilities. It was very difficult to access some flooded areas to let the flood victims evacuate the flooded sites to safer places/temporary shelters. Some flooded areas, especially those bordering Lake Tana were even inaccessible by vehicles during the assessment period and were only accessed either by boat or on foot. Public facilities including schools along with their internal facilities, and water points and health facilities were also damaged in Dembia, Libokemkem, Fogera and Dera woredas. Likewise, it was reported that the bridge on Amedeshir River was partially damaged and two irrigation canals worth 3.2 million Birr was completely destroyed in Antsokia Woreda of North Shoa Zone.

4.4 Interventions, Coordination and Gaps

Displaced people have received temporary shelters. They have also been provided with food and non food assistances throughout their stay in the temporary shelters. Regardless of some irregularities, they received food assistance in the camp for two months (August and September). It was also observed most of the displaced returned to their localities during late September 2006.

In the wake of the flood, the health teams from the respective visited woredas had moved to the affected areas to treat the flood victims free of charge. The Regional/Woreda Health Office and MSF provided medical services including provision of drugs free of charge to all flood affected woredas. Mosquito nets were also distributed to some of the flood affected people on time.

The regional authorities reported that all collaborating agencies (government bodies at all levels, NGOs, UN agencies and donors) and the community groups responded to the needs of the flood victims timely. The seed requirements of the flood affected woredas in western zones (North and South Gonder and West Gojjam) were adequately addressed by different NGOs (WVI-E, CARE, ERCS, American Joint Distribution and FHI). All NGOs and ERCS managed to access fund to purchase the seeds from UN-OCHA and the Netherlands Embassy.

Lack of emergency preparedness and absence of emergency coordination mechanisms for floods at regional and woreda levels made the emergency response effort difficult. Lack of coordination was mainly due to the non-functional sectoral task forces at regional level (food and logistic; health and nutrition; water and sanitation; agriculture and livestock; and HIV and education task forces). The regional office in collaboration with other humanitarian partners made a considerable effort to establish a coordination mechanism in order to effectively respond to the needs of the flood affected people. Functional woreda level task forces were found to be extremely useful in mitigating the impacts of the crisis.

It has been observed in some visited woredas that relief assistance sent had not been distributed on time. For example, in Antsokia woreda of North Shoa zone, the team observed non-distributed blankets, mosquito nets, other household items and 80 quintals of biscuits. The reason attributed to this was that emergency assistance to flood victims stopped since end of September.

The team observed that the normal life of the affected people has been disrupted because of damaged public services in western zones of the region. Two irrigation canals of estimated cost of 3.2 million birr, and a bridge in Majete, in Eastern Zones of Amhara Region, both of which were partially damaged need immediate rehabilitation services.

There were no major flood prevention and mitigation activities in all visited woredas. In most woredas, officials indicated that the woredas are of low capacity to conduct study and take appropriate mitigation measures.

Despite lack of prevention measures, some woredas tried to prevent and mitigate the impacts of floods. For instance, Bahir Dar Zuria woreda was getting prepared to relocate around 95 households from flood affected areas to the newly identified safe areas within the woreda/. Meanwhile, in one PA of Dembia woreda, community groups were able to prevent the risk of floods by constructing dykes using sand filled sacks as the team observed.

4.5 Overall Food Security Situation

It was reported that most farmers in the flood affected areas lost their assets (e.g. livestock, grains, planted crops) due to the flooding. Apparently, particularly due to loss of grains at stock and livestock, quantity, quality and frequency of most household consumption has been changed. The trend is expected to continue until the coming harvesting season.

Food shortage has already been manifested in Dawa Chefa, Antsokia Gemza and Kemisse Woredas where food assistance has been requested for 3-5 months (October 2006 – February 2007) for 2,645, 104 and 952 flood affected people, respectively. In Libokemekem and Bahir Dar Zuria woreda officials requested for additional food assistance for 20,211 and 456 people, respectively for three months (October-December 2006). In Kobo Woreda it was agreed to include the flood victims into the Productive Safety Net Program. Landslide victims in Antsokia Gemza woreda need food assistance too.

4.6 Recommendations

Recommendations have been given in two categories as medium term and medium to long-term activities as indicated below. With respect to medium, rehabilitation and maintenance of the damaged health, water, sanitation, education facilities, irrigation canals, roads and bridge is required based on further technical assessment.

Under medium to long-term, woreda and regional early warning system and emergency response capacity need to be improved by integrating quick onset disaster; proper study should be conducted and appropriate flood mitigation measures should be taken to prevent future risks; degraded areas need catchments treatments with various biological and mechanical measures (soil and water conservation structures); planning of permanently resettling people out from very vulnerable woredas in any appropriate areas in the region is recommended.

Table: 17 Distribution of food to flood affected people in Amhara Region (August-November 2006)

Zone	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
S.Gonder	54,271	747.3	22.5	88.6	80	938.4
N.Gonder	11,175	167.6	5	17.6	16.7	206.9
W.Gojam	943	10.5	0.3	1	1.1	12.9
Oromiya	5,713	42.9	1.6	6	5.1	55.6
N.Shewa	3,606	27.1	0.8	2.9	2.8	33.6
Total	75,708	995.4	30.2	116.1	105.7	1247.4

Table: 18 Distribution of non-food items to flood affected people in Amhara Region by DPPA (August – November 2006)

Zone	Beneficiary	Blanket	Kettle	Jog	Mattresses	Plastic bag
S.Gonder	54,271	4547	0	0	0	0
N.Gonder	11,175	0	918	0	0	0
W.Gojam	943	0	0	0	0	0
Oromiya	5,713	1,532	0	0	0	0
N.Shewa	3,606	0	0	0	0	0
Total	75,708	6079	918	0	0	0

Table: 19 Distribution of non-food items to flood affected people in Amhara Region by DPPA (August – November 2006)

Zone	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)
S.Gonder	0	2036	2,036	650	0	0	65
N.Gonder	0	2,000	2,000	918	0	918	15
W.Gojam	0	0	0	0	0	0	0
Oromiya	0	0	0	0	0	0	20
N.Shewa	0	0	0	0	0	0	20
Total	0	4,036	4,036	1,568	0	918	120

Table: 20 Flood affected population and other damages in Amhara Region

Zone	Affected PAs	Population		Crop damaged(ha)	Granaries damaged	Grain lost(qt)
		Affected	Displaced			
W.Gojam	8	3,300	500	970	0	1,640
S. Gonder	12	71,400	23,700	10,141	0	726
E.Gojam	1	300	0	9	0	0
Oromiya	16	6,700	5,700	1,589	0	61
N.Gonder	6	9,200	4,300	2,258	0	2,407
N.Shewa	4	4,600	3,600	505	0	61
S.Wello	1	900	0	135	0	0
N.Wello	1	100	100	44	0	109
W.Hamra	1	1,500	100	109	0	0
Total	50	98,000	38,000	15,760	0	5,004

Table: 21 Seed requirement, amount allocated and distributed in flooded areas of Amhara Region

Seed	Dembia	L/kemkem	Fogera	Dera	B/Zuria	Dewa Chefa	Kemissie	Artuma Fursi
Vetch	16	750		438	208			
Lentils	68.65	136.11		134	129			
Chickpeas	1344.4	1736.7		400	320			
Wheat	91	182		655.5	-			
Abesh	270.44	205.14		-	-			
Aja	-	80.5		-	-			
Barely	-	41.8		250	-			
Maize	-	-		6.72	-			
Teff	-	-		7.8	-			
Total	1790.45	3132.25	2839	1892.02	657	166	101	60

Note: Except the three woredas of Oromia Zone, the rest received the required amount of seed.

Table: 22 Damaged Infrastructure

Woreda	**Public schools**	**Water points**
Dembia	-	1
Libokemkem	10	15
Fogera	20	45
Dera	4	3
Total	**34**	**64**

5. Afar

5.1Summary

In Afar Region a total of 27 kebeles in five drought prone woredas were visited to assess impact of flood that occurred between the 4th week of July and the 3rd week of August 2006. In terms of impact of the flood on human population, it was reported that about 56,300 people were affected. Of these about 26,000 people were severely affected; some of them were cut-off from markets and other social facilities and also lost some household properties. These severely affected people required immediate emergency assistance amounting to 215 MT of grain, 19 MT of supplementary food, 6.5 MT of oil and 20 rolls of plastic sheeting.

With respect to effect to property, the flood reportedly wiped out 169 cattle, 215 shoats, 10 donkeys and seriously damaged farmlands - about 2,655 hectares of cash crop lands usually of cotton, sesame and banana as well as 33,305 hectares of waste/grazing lands were inundated and waterlogged. Areas that are on the main course dykes of the Awash River and the irrigation canals, which are located mainly in the middle Awash woredas were the hardest hit requiring huge rehabilitation investment. Serious flood impacts on infrastructures were observed in many areas, including the Awash River main course dykes that were broken and over-flown at a number of points; most of the irrigation canals along the river seriously damaged; about 32 kms of feeder roads, 5 health posts, 2 vet posts and 1 school were slightly damaged in the affected woredas.

Despite the serious damages, the rains in the region were beneficial in terms of pasture and water regeneration that has alleviated shortages in this respect.

As to the issue of preparedness and mitigating the impacts of the flood once it happened, early warning and coordination at each administrative level and the use of Productive Safety Net Program (PSNP) resources were found to be crucial. Therefore, flood impacts in the region were limited and no additional flood emergency food assistance required during the assessment time except some rehabilitation assistance to households whose livelihood disrupted due to damaged public facilities. More works also need to be done to consolidate the Awash River dykes, water ways and canals so that such mishaps will not reoccur.

5.2 Background: Description of the Flood Affected Areas

Awash River has remained to be the main source of water for the people and the animals in Afar region, which is endowed with huge potential for irrigation and agricultural investment. All the flood-affected woredas are located within the Awash Basin. Aysaita is situated in the lower Awash, the other woredas, Gewane, Buremudaitu, Amibara and Dulecha are located in the middle part of the basin. Despite the variation in intensity, these areas, which are located in a

typical low land flat area, are always affected by floods, virtually flood prone and vulnerable to other water related problems.

The inhabitants of the flood affected woredas are mostly pastoralists who usually move with their animals in search of water and pasture. Members of some households stay a relatively longer periods in a given location, particularly in areas near the Awash River where water is easily found. Given this situation, it has been reported that the regional government had warned people in advance to move to nearby higher and safer grounds to avoid the negative impact of flooding in 2006.

The situation was aggravated by the break up of the dykes at a number of points and the high precipitations in up lands and the increased rate of discharges from tributary rivers including Gelealo that give Awash additional impetus at Buremudaitu and Gewane areas. Moreover, Arso and Serget rivers increase the potential of the Awash River waters at around Buremudaitu and Kesem; Kebena River accelerates force of the river around Dulecha Woreda. The releases of huge volume of waters from Koka Dam have also been causing serious problems in these flood prone woredas of Afar.

5.3 Overall Negative Impacts and other Findings

A total of 27 kebeles of the five woredas were severely inundated 2006 due to the Awash River overflow and break up of the dykes at a number of points. There were also some other kebeles that were slightly affected. It is estimated that more than 2,655 hectares of cotton, sesame, tomato, banana etc farmlands, both private and commercial and mostly planted ones were affected by the flooding. More than 33, 305 hectares of plain grazing lands were also affected.

No major health related epidemics or high caseloads or deaths due to floods were reported by the woredas except the slight increments in incidents of malaria, URTI, and other water-borne diseases that were mainly observed in Buremudaitu and Dulecha woredas. As precautionary measures, almost all woredas reach out the flood victims with anti malaria drugs and some mosquito nets that were provided by some NGOs at earlier times, especially in water logged kebeles. No deterioration or significant negative changes due to floods were also observed on the sanitation conditions of the people, who normally live in poor and less hygienic situation.

Areas that are on the main course of dykes of the Awash River and the irrigation canals, which are located mainly in the middle Awash woredas are the hardest hit areas requiring huge rehabilitation investment. About 32 kms of road that connects Dulecha (Bolohamo kebele) to Awash Sheleko of Amibara Woreda and that of Buri to Haledebe kebeles of Amibara were seriously damaged thus cutting off physical communication with adjacent areas and towns as well as access to markets. A number of informal dry weather road networks connecting woreda

towns with some of their rural kebeles were also damaged due to the water logging observed during the assessment in October in most of the affected areas. Meanwhile, no serious shelter problems were encountered largely due to the prior advises that enabled people to move out of the danger zone and prepare traditional shelters of their own.

Furthermore, about 3 health as well as 2 vet posts of Sibule, Dengel Gita and Derebtu kebeles of Buremudaitu Woreda were affected and ceased to function at least temporarily. Medicines and medical equipments of the latter kebeles were also reported to have been spoiled. In addition, 2 health posts of Galifage kebele of Aysaita Woreda and Beeda kebele of Gewane as well as 1 primary school in the latter kebele were also damaged hampering the resumption of proper functions.

Although the damages were limited on lives and livelihoods of the community, particularly vis-à-vis the huge threat, unconfirmed deaths of about 185 cattle, 215 shoats and 10 donkeys were reported in four woredas. Moreover, the floods washed away some traditional and temporary huts as well as few household items of some families mainly in Bolohamo kebele of Dulecha and Gelsa kebele of Amibara. In spite of livestock death reports that are sometimes very difficult to substantiate, the prior warning/notification by the regional officials for people to be ready and evacuate to higher and safer grounds was reported to have been very vital to minimizing losses of individual assets and properties.

5.4 Interventions, Coordination and Gaps

In addition to the early warning activities undertaken by the regional, federal and other partner agencies, emergency resources were channeled to the affected areas to curb the impacts of the floods. Accordingly, a total of 215 MT of Grain, 19 MT of supplementary food, 6.5 MT of oil and 20 rolls of plastic sheeting were delivered by FDPPA/WFP and distributed to the 26,000 most affected people as emergency rations for fifteen days. Furthermore, about 10 MT of wheat flour were given to Dulecha Woreda by International Islamic Relief (IIS) – NGO operating in the area. As part of the emergency responses, some woredas like Buremudaitu, Amibara and Dulecha woredas also dispatched medical personnel as well essential drugs to monitor and contain opportunistic diseases should they start to attack the victims. However, those people in different woredas that were cut-off to markets mainly due to some broken roads and bridges were reported to have been temporarily faced with limited food shortages particularly before the arrival of the food aids.

In coordinating this particular hazard, flood task forces were formed both at the regional and woreda levels to manage the emergency situation. The task force at the regional level consisted of sectoral bureau heads as well as other partner governmental and non-government agencies and enterprises chaired by the Deputy President of the Region. On the other hand, the task forces at the woreda levels were composed of the woreda administrator, the chairperson, heads of

sectoral government offices, representatives of government development enterprises, defense forces and NGOs working within the respective woredas. Both task forces exerted concerted efforts to create adequate awareness on the situation during the early warning period and then to contain the negative impacts of the Awash River over flooding. The overall coordination effort at all levels was found to be not only provided early warning information and did some mitigation measures, but also helped to contain the flood impacts in affected areas.

5.5 Overall Food Security Situation

The food security situation of the flood affected people looked to be generally stable during the assessment period in October owing to coordinated emergency assistances to the most affected people, 26,000, combined with the continued supports from the PSNP resources, improved livestock conditions due to favorable rains, and relatively higher prices of livestock. This stable condition is expected to remain the same or improve in the foreseeable future should the PSNP and the conditions of the livestock continue to perform well.

5.6 Recommendations

Recommendations focusing on medium term activities rehabilitation of infrastructures and public facilities need to be given utmost importance; maintenance and reinforcement of the dykes and excavations of the silt along the Awash River need to be expedited; more awareness creation works need to be done on the protection and proper use of the dykes, irrigation canals and water resources; monitoring of early warning indicators should continue.

In the long term more, strong and lasting dykes should be constructed on both sides of the Awash River. Silt excavation works also need to be consolidated; the watershed management system needs to be improved; those people at the lowest grounds of the Awash Valley should be resettled at higher and safer but nearby areas; effective systems should be devised to protect and make effective use of the dykes and irrigation canals; Early Warning System should be strengthened at all levels taking into consideration the existing indigenous mechanisms.

Table: 23 Flood affected population and other damages in Affar Region

Zone	Affected PAs	Population		Crop damaged(ha)	Grazing lands	Granaries damaged
		Affected	Displaced			
One	5	16,100	4,100	1280	16920	0
Three	22	26,000	4,100	1575	16385	760
Total	27	52,100	8,200	2855	33305	760

Table: 24 Distribution of food items to flood affected people in Affar Region by DPPA (August – November 2006)

Zone	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
Zone Three	26,000	211.5	6.5	19.00	3.3	240.3
Total	26,000	211.5	6.5	19.00	3.3	240.3

6. Gambella Region

6.1 Summary

Flooding in Gambella Region is a normal phenomenon and often times useful for recessional agriculture. However, there are years like the 2006 when flooding becomes unusually damaging. The major rivers in the region had over flown due to heavy rains and floods occurred that affected significant portion of the population and forced about 31,000 people to leave their localities. According to the findings of assessments conducted in the region external food and non-food assistance is urgently required for both the displaced people as well as those affected but remained within their areas. Recommended assistance is required until the end of 2006. Detailed figures and types of assistance is presented in the regional assessment report.

6.2 Background: Description of the Flood Affected Areas

Gambella is flood prone area. Flood is the most common disaster in the region. If we observe the last five years flood trend except in 2002 when rivers were not over flooded due to drought, in the other years many people had been displaced, died, many properties damaged and livelihood disrupted due to the over flow of big rivers such as *Baro,Gilo, Akobo, Jikow,Alwero, Gnandera and Koikoye*. In 2001, 12 people, 49 cattle, 85 shoats and 284 hen died as a result of the over flow of big rivers.

The overflow of Baro, Akobo and Jilo rivers in Gambella has been experienced in low-laying areas of the region. In 1993 maize crops on 4000 ha of land was destroyed completely. According to compiled data from DPPC, 84,000 people in 1993 and 140,583 people in 1995 residing in the six weredas of the region were affected. Moreover, floods occurred in 1996 in the region had killed 21 people.

6.3 Overall Negative Impacts and other Findings

According to the regional flood task force the overflow of Baro, Alwero, Gillo, Akobo, and other tributaries which occurred at the end of June, displaced 30,915 people, and killed 2 people in Lare woreda. About 1245 livestock died and significant hectares of land with crops were damaged in 27 Kebeles in 8 woredas namely Jor, Gog, Lare, Jikawo, Akobo, Itang, Wantoha and Dimma. The total population in these affected woredas is 189,060. The regional Task Force conducted an assessment in the affected woredas at the end of August. The Federal DPPFSA together with DPPB and UN partners conducted a re-assessment of flood affected areas from 19 to 27 September 2006.

The major rivers such as *Baro, Gilo, Akobo, Alwero, Jikaw and Gnyander* over flooded and affected many people living along these river banks. According to the information obtained from regional DPFS Bureau and the visited woreda authorities in *Lare* woreda *Tendar and kalkich* villages' two people died due to the floods. Many people were displaced and settled in relatively dry areas in *Lare*

and Itang weredas. Substantial number of hectares which was covered by maize and sorghum was also reported damaged.

Six flood affected woredas were not visited due to inaccessibility and insecurity. According to the regional flood assessment report, many people have been displaced and crops damaged. The flood impact on infrastructure was not adequately reported. The team observed some residential houses submerged by floods in Itang town. Some people who were displaced during high flood time had begun to return back to their original places in Lare woreda. There is neither reported case of loss of household property, nor disruption of social structures and physical infrastructures. It was reported that most of the herders escaped to the upland areas of the woredas with their cattle. There was no much change observed in livestock market prices in relation to the impact of floods.

6.4 Interventions, Coordination and Gaps

Various organizations have been involved in provision of relief resources. The DPPA in collaboration with WFP have provided the necessary food items including grain, oil, pulses and CSB. Delay of distribution in distribution of food to the affected community in some woredas due to delay of screening of the most vulnerable was a constraint at the beginning of the operation. UNICEF provided some non-food items like 600 blankets, 318 Jerricans, 2000 pieces of soaps, 900 plastic plates, 99 pots, and 125 rolls of plastic sheeting for the flood affected victims of *Gog* and *Jog* woredas.

Awareness raising activities on flood early warning issues have also been made by the regional and woreda DPPA offices based on the National Metrological agency information to evacuate people from the flood prone areas during the flood disaster.

MSF Switzerland actively involved in provision of medicines and health service in Itang. It has adequate medicine and better preparedness even if health outbreak may be occurred in the woreda. ACCORD Ethiopia had trained some volunteers in livestock health care, but the trainees were not giving the proper service due to some request of incentives as reported by beneficiaries.

There was no disease in outbreak form in human health as a consequence of the flood .According to the information obtained from the visited woreda there was a slight increasing trend of malaria and diarrhea cases since the beginning of September. However, during this period the usual peak season for malaria and other water borne diseases and no uncommon trend observed from the previous years.

The livestock health was in normal condition however due to the occurrence of the flood there has been reports of diseases (*pasteurelosis, foot and mouth*). Many herders have been reported to escape to the upland areas of the woredas. This may cause a risk of spread and therefore requires attention in terms of

treatment. There were also concerns of absence of veterinarian professionals and inadequate supply of drugs.

6. 5 Recommendations

Most people living along the river banks lost most of their planted crops before they harvested. Thus they needed to get food aid at least for some time. It was also important to provide these people with fast growing indigenous variety seeds to plant immediately through the moisture recession farming (about 250 quintals of maize and sorghum seeds were required). Other non-food items like blanket, cooking pots, plastic cups, plastic sheeting and plates were vital to those displaced from their original places. Some sanitarian materials like soap were also important to keep clean themselves and household cooking utensils and cloths.

There was no outbreak reported in human health though there was potential fear for Malaria and water borne disease outbreaks in the flood affected areas. There were concerns of poor supply of potable water especially in the rural areas and which needs due attention.

There were significant reports of livestock disease such as *Pasteuralosis* and *Foot and Mouth* disease. In view of this there was a need to intervene in provision of drugs and deployment of livestock health assistants to address these problems.

Table: 25 Flood affected population in Gambella Region

Zone	Affected PAs	Population	
		Affected	Displaced
Nuer	17	16,400	16,400
Itnag Sp.Woreda	7	12,250	12,250
Agnuak	3	2,300	2,300
Total	27	30,950	30,950

Table: 26 Distribution of food to flood affected people in Gambella Region (August-November 2006)

Zone	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
Nuer	17,996	269.9	8.1	2.6	25.8	306.4
Agnewa	14,545	218.2	6.6	0	22.9	247.7
Total	32541	488.1	14.7	2.6	48.7	554.1

Table: 27 Distribution of non-food items to flood affected people in Somali Region by DPPA (August – November 2006)

Zone	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)
Nuer	0		0	0	0	0	0
Agnewa	0		0	0	0	0	2
Total	0		0	0	0	0	2

7. Oromiya

7. 1 Summary

In all visited areas the year 2006 flood was reportedly unusual and unprecedented. Flooding in most visited woredas occurred between 23rd of July and 28th of August 2006. The main causes of the floods were reported to be overflow of rivers, runoffs, lake expansion and change of river courses induced by accumulation of silt in river beds.

The extent of damage due to the disaster varied from place to place depending on the severity of the flooding. The shock had generally impacted the livelihoods of most affected people negatively. However, the communities in most places struggled to manage with the problem using different coping mechanisms.

Despite their struggle, there were about 10,000 people in two woredas of East Hararghe Zone who were not able to cope and required immediate relief food assistance for 3 months. There had also been reports of damages on public infrastructures and facilities and individual and communal assets or livelihoods. Assistance of about 4,500 quintals of different types of seeds was requested by different woredas in order to recover from the impact of flood-induced disaster.

The overall, health status of flood-affected population was normal and no disease outbreak reported. Nonetheless, some cases of malaria and upper respiratory tract infection were observed in Dugda Bora Woreda of East Shewa Zone. Availability and access to potable water in most places was normal except few cases of reported shortage of water in areas where water pumps and other water sources were damaged.

To save lives and livelihoods of the affected population, intervention measures were taken both by government and non-governmental organizations. The overall coordination efforts in few woredas were strong while rated as poor in most woredas.

7.2 Background: Description of the flood affected areas

In all visited areas flooding was common phenomena, although it was not as severe and destructive as the year 2006. For instance, in Gola Oda, similar floods happened some 30 years ago while in Boset 25 years back. Moreover in Mieso and Jarso similar incidence was recorded, 10 and 8 years ago, respectively.

The main causes of the floods were reported to be overflow of rivers, runoff, lake expansion (Dugda Bora) and change of river courses induced by accumulation of silt in rivers beds. The root cause for the runoffs is mainly deforestation of highlands and absence of conservation measures.

Flooding in most woredas visited occurred between 23rd of July and 28th of August. Some affected woredas experienced two to three rounds of severe flooding. It should be underscored that, the flooding primarily affected low land areas.

7.3 Overall Negative Impacts and other Findings

The extent of damage due to the flood disaster varied from place to place based on the severity of the flooding. Due to the flooding, a total of about 22,000 households and 112,000 people were affected in 106 Kebeles of the visited woredas. There had been reports of death of 13 people and displacement of about 2,400 households of 12,000 people.

The overall health status of flood-affected population was normal and no disease outbreak reported. Nonetheless, some cases of malaria and upper respiratory tract infection were observed in Dugda Bora Woreda of East Shewa Zone. Woreda health offices in collaboration with other line departments have conducted preparedness measures on different contagious diseases, such as educating different groups of people, indoor spray and distribution of mosquito nets. Nevertheless, most woredas expressed their concerns that outbreak of malaria and other diseases could erupt following the retreat of the flood. Besides, insufficient supply of essential drugs was reported by most flood-affected woredas.

Availability and access of potable water in most places was normal except few cases of reported shortage of water in areas where water pumps and other water sources (including water pipes) were affected by floods. On the other hand, need for bacteriological and chemical test of dug wells was stressed. Besides, lack of shelters for displaced people was cause for disease outbreak.

As a result of the hazard 2 schools, 1 irrigation dam, 1 Kebele water pipe line, about 70 km of feeder roads and 11 water schemes were damaged in the region. Due to this, different social activities were interrupted in flood-affected areas. Thus in areas where schools were damaged teaching and learning processes were interrupted for limited time.

A total of 8,100 ha of cropland and about 220 houses and other household items were destroyed. Additional 225 livestock died as a result of the flood. This incidence affected food security situation of some segment of the affected population.

7.4 Interventions, Coordination and Gaps

To save lives and livelihoods of the affected population, intervention measures were taken both by government, non-governmental organizations and civil servants and community members. Accordingly, as soon as the disaster occurred, particularly in flood-affected areas of west and southwest Shewa zones, the first action taken by the government was to make boats available in order to evacuate the community that was encircled by water. Food ration, water tanker, clothing and other non-food items like tents, household utensils, replacement seeds and medicaments were supplied in addition to rescuing of the population surrounded by flood.

At Woreda level, administration offices and other concerned bodies tried to coordinate the emergency activities and solve problems caused by the flood disaster. However, due to absence of DPP offices in formal structures of some woredas and lack of experience in the area of flood emergency intervention, the overall coordination efforts of most woredas was rated as poor while in few woredas it was strong.

Different woredas requested for emergency seed (mainly vegetables) assistance that would be planted using moisture residues and irrigation. Hence, a total of about 4,500 quintals of different types of seeds were requested.

Conservation measures like construction of bunds were underway in most affected woredas. However, large-scale water shade development works aimed to avert the impact of destructive floods similar to the recent one were not implemented.

7.5 Overall Food Security Situation

The extent of damage due to the disaster varied from place to place depending on the severity of the flooding. The shock had generally impacted the livelihoods of most affected people negatively. However, the communities in most places struggled to manage with the problem using different coping mechanisms.

Despite this struggle, there were about 10,000 people in two woredas of East Hararghe Zone who were not able to cope and required immediate relief food assistance for 3 months. There had also been reports of damages on public infrastructures and facilities and individual and communal assets or livelihoods. Assistance of about 4,500 quintals of different types of seeds was requested by different woredas in order to recover from the impact of flood-induced disaster.

7.6 Recommendations

Recommendations that require medium and long term works have been pointed out as follows: water shed development activities on hilly areas to avert risk of flood disaster should be undertaken; education for community on land use planning and management should be given; flood Early Warning System should be established; and family planning program should be strengthened.

Table: 28 Flood affected population and other damages in Oromiya Region

Zone	Affected PAs	Population		Crop damaged(ha)	Granaries damaged	Grain lost(qt)
		Affected	Displaced			
N.Shewa	1	800	0	0	0	0
S. W. Shewa	12	6,500	1,000	0	0	0
W.Shewa	14	6,500	1,000	0	0	0
E.Hararghe	7	4,900	0	0	0	0
Bale	3	1,400	1,400	896	0	3,300
Jimma	3	200	0	0	0	0
Total	40	13,800	3,400	896	0	3,300

Table: 29 Distribution of food to flood affected people in Oromiya Region (August-November 2006)

Zone	Beneficiary	Emergency food aid(MT)			
		Cereals	Oil	Sup. Food	Pulse
S.W.Shewa	9,443	62.3	1.9	8	3.2
E.Shewa	7,000	0	0	10	0
E.Hararghe	762	11.4	0.4	1.2	1.1
Bale	2,000	15	1.5	1.5	1.5
Total	19,205	88.7	3.8	20.7	5.8

Table: 30 Distribution of non-food items to flood affected people in Oromiya Region by DPPA (August – November 2006)

Zone	Blanket	Kettle	Jog	Mattresses	Plastic bag
S.W.Shewa	1,800	0	0	0	0
E.Shewa	0		1,400	0	4,000
E.Hararghe	0	0	0	0	0
Bale	0	0	0	0	0
Total	1,800	0	0	0	4,000

Table: 31 Distribution of non-food items to flood affected people in Oromiya Region by DPPA (August – November 2006)

Zone	Soap	Cup	Plate	Jerrican	Ladle	Cooking pot	P. Sheeting (roll)	Tents
S.W. Shewa	0	7,390	7,390	800	0	363	25	100
E.Shewa	0	7,000	7,000	1,400	0	0	418	23
E.Hararghe	0	0	0	0	0	0	3	0
Bale	0	0	0	0	0	0	0	0
Total	0	14,390	14,390	2,200	0	363	446	123

8. Tigray Region

8.1 Summary

Floods occurred in August 2006 in Tigray Region had minimal impact in all aspects. Pocket areas in Humera Woreda of West Tigray Zone and Raya Azebo and Alamata weredas of South Tigray Zone were affected to some extent. About 3,000 people were moderately affected and some of them displaced temporarily. Assessment findings indicated that there was no need for external assistance for the affected population as they had already been taken care of by the regional DPPB. Although there was high malaria risk within the affected areas, the region and weredas had put the necessary preparedness measures in place.

8.2 Background: Description of Flood Affected Areas

According to historical documentations the region is less prone to flood disasters. However, Central and Western zones of the region have had some bad flood-related experience in the past. The most significant floods had occurred in 1995 and affected both zones. The flash floods that hit some woredas in Central Tigray Zone had resulted in a total damage of crops planted on 110 ha land. Similar floods associated with landslides had killed 112 people and 15 animals and damaged property worth of about Birr 14,000, according to a study made by Teferi Bekele in 1997. Since then there were either no such huge flood problems in the region or have been poorly documented.

8.3 Incidence of Floods In 2006 (Areas and population affected*)*

Regional assessment reports indicate that residential areas along the Tekeze River in Humera town and one village in Adigoshu Kebele in Humera Woreda of West Tigray Zone were flooded. Moreover, from South Tigray Zone, one Kebele in Raya Azebo Woreda and 3 Kebeles in Alamata Woreda were affected by flooding coupled with hailstorm in August.

The reports state that some 450 households have been initially affected by the floods in Humera Woreda, but as the flood quickly subsided, nearly all of them went back to their areas after receiving some assistance. In Raya Azebo and Alamata woredas, a total of 584 people were affected by the floods. The displaced people from these woredas lived with their relatives for sometimes and some others were provided with temporary shelters built by the local authorities of Waja town and all returned back to their places after few weeks.

8.4 Impact of the floods on food, health, water and other damages

As the major source of income of the population in all the three flooded woredas was not seriously affected, there was no significant change in consumption patterns. Nevertheless, the regional DPPB provided 30 plastic sheets, 44 blankets and 7 MT of wheat to the flood victims (those temporarily displaced) in Raya Azebo Woreda. The region has also established both the food and non food requirements so that the region itself can address the immediate needs of the affected areas.

Except the risk of malaria outbreak following the floods, there were no other health related problems and interventions mentioned in the assessment reports. Sufficient amount of mosquito nets and DDT (Dicchlorodi Phenyltrichloroethane) were reportedly available in the woredas to take care of the potential malaria risk. Since some of the displaced were living with their relatives and friends, shelter and water were not indicated as major problems.

In Humera Woreda, crops planted on 406 ha of land owned by 256 households were damaged. About 13 houses were either totally or partially damaged and 110 houses filled with mud. From Raya Azebo and Alamata woredas 5 households lost all their household food stocks while 584 people partially lost their food stocks.

8.5 Interventions, Coordination and Rehabilitation

The regional DPPB provided 30 plastic sheets, 44 blankets and 7 MT of wheat to the flood victims in Raya Azebo. Three bulldozers were also provided by the region to improve the flow of the river along its normal course. People were being mobilized to work on protective measures like building of walls of sand bags to protect themselves from future floods and improve drainage system around homesteads that are vulnerable to flooding. Committee has been formed within the affected woredas to respond to the needs of the affected population. No serious damages occurred that need rehabilitation activities.

8.6 Recommendations

According to assessments conducted by the region and other humanitarian agencies, there was a general agreement that affected households residing within the affected areas could adequately cope with the problem as their main livelihoods were not been affected significantly. However, close monitoring of the affected population was recommended. Malaria preventive measures were needed as flooding in the currently affected areas occurs frequently and permanent solution should also be sought. As a prevention mechanism against malaria and other epidemic diseases, malaria prone woredas have to mobilize community members to drain the flood and build dry pit latrines.

Table: 32 Allocation and distribution of food to flood affected people in Tigray Region (August – November 2006)

Zone	Beneficiary	Emergency food aid(MT)				Total
		Cereals	Oil	Sup. Food	Pulse	
Western	495	14.9	.5	1.6	1.5	18.5
Southern	677	11.5	0.4	1.2	1.2	13.3
Total	1,172	26.4	0.9	2.80	2.7	32.80

Table: 33 Distribution of non-food items to flood affected people in Tigray Region by DPPA (August – November 2006)

Zone	Beneficiary	Blanket	Kettle	Jog	Mattresses	P.Bag	Bed sheets
Western	495	226	113	o	0	0	0
Southern	677	52	0	26	0	0	0
Total	1,172	278	113	26	0	0	0