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**Republic of Zambia**



## **FLOODS RECOVERY ACTION PLAN**

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## **Acronyms**

DDMC	District Disaster Management Committee
DMMU	Disaster Management and Mitigation Unit
ITNs	Insecticides Treated Nets
IOM	International Organisation for Migration
MCDSS	Ministry of Community Development and Social services
MoE	Ministry of Education
MEWD	Ministry of Energy and water Development
MoH	Ministry of Health
NGO	Non Governmental Organization
RDA	Road Development Agency
UN	United Nations
ZA	Zambia Army
ZMD	Zambia Meteorological Department
ZNS	Zambia National Service
ZVAC	Zambia Vulnerability Assessment Committee

## **EXECUTIVE SUMMARY**

The Zambia Vulnerability Assessment Committee (ZVAC) undertook the In-Depth Vulnerability and Needs Assessment in seventeen (17) districts following reports of flooding and/or dry spells. The assessment report has proposed recommendations necessary to mitigate the effects of floods and /or dry spells in the affected districts. These recommendations have been translated into a Recovery Action Plan with specific activities and costing.

The Recovery Action Plan is divided into various sections. The required sector specific interventions and costing are discussed focusing on Education, Health, Nutrition, Infrastructure, Human Settlement and Shelter, Water and Sanitation.

It is important to note that recommended interventions reflect sector needs in short, medium and long-term perspectives. The financial requirements per sector are also discussed.

The summary of the financial requirements per sector is reflected in the table below:

**Table 1: Summary of Financial Requirements for Sectors**

<b>Name of Sector</b>	<b>No. of activities</b>	<b>Net Financial Requirements (ZMK)</b>	<b>Net Financial Requirements (US\$) @ K5,000<sup>1</sup></b>
Education	4	<b>3,518,000,000.00</b>	<b>703,600.00</b>
Health	4	13,247,644,000	2,649,529
Nutrition	4	5,373,776,850.60	1,074,755.37
Infrastructure	4	96,996,209,146.32	19,399,241.83
Human Settlement and Shelter	3	663,000,000.00	132,600.00
Social Protection	3	4,627,500,000.00	925,500.00
Water and Sanitation	8	3,256,376,000	651,275.20
10% Contingency		12,270,848,599.69	2,454,169.72
<b>Grand Total</b>		<b>139,953,354,596.61</b>	<b>27,990,671.12</b>

The Implementation of the action plan is to be done with full participation of all stakeholders such as relevant Government agencies, donors, UN System, private sector and NGOs. The NGOs in conjunction with the district and satellite disaster management committees will be the front line implementers at the district level. The timeframe for the implementation of interventions is projected to be twelve (12) months beginning in August 2010.

The Disaster Management and Mitigation Unit (DMMU) will spearhead coordination and monitoring of the implementation of the action plan with the support of the core coordination team, drawing membership from Government, UN, and NGO agencies.

Monitoring and evaluation of the Recovery Action Plan will be based on sector specific performance indicators that form part of this action plan document.

<sup>1</sup> The Bank of Zambia Foreign Exchange rate used in this document is US\$ 1 = ZMK 5,000

## **1. INTRODUCTION**

The 2009/10 rainfall season was characterised by heavy rains in most parts of the country. The extreme southern parts of the country experienced a late start while the rest of the country experienced normal start. Overall, most parts of the country received normal to above normal rainfall which led to excessive rains that culminated into flash flood in low lying areas and water logging in plateau areas. The excessive rainfall experienced resulted into varying impacts on key sectors of the economic.

Furthermore, following reports from the District Disaster Management Committees (DDMC) on negative effects the floods and/or dry spells, the Zambia Vulnerability Assessment Committee (ZVAC) undertook an in-depth assessment in seventeen (17) districts in Central, Eastern, Lusaka, North Western, Southern and Western Provinces.

To ensure a speedy and coordinated response, the Government of the Republic of Zambia has provided a general framework within which all stakeholders will undertake all interventions related to floods. The plan defines the scale of the problem and the rationale for the implementation of the recommended interventions. It brings out the general response strategy and outlines sector based interventions in short and medium to long-term perspectives. Implementation, reporting, monitoring and coordination arrangements are also spelt out.

## **2.0. SCALE OF THE PROBLEM**

The country has in the recent past experienced floods which have resulted in damage to Infrastructure mainly roads, culverts and bridges and to some extent Crops. These floods have generally exposed the affected Population to the risk of outbreak of waterborne diseases. The damage to crops has resulted into food insecurity problems in very few districts despite an increase in production in most

of the sampled districts. In order to mitigate the impact of the floods and/or dry spells, Government will need to implement short to medium and long-term interventions in all the seven (7) sectors identified to have been affected.

### **3.0. RATIONALE FOR THE IMPLEMENTATION OF RECOMMENDED INTERVENTIONS**

In order to mitigate the effects of the floods and/or dry spells, the Government should as a matter of urgency address the negative effects thereof by implementing sector specific interventions which range from short term needs to those that seek to address medium to long term needs. The interventions will help mitigate negative effects in the identified sectors such as prevention of water borne diseases, maintain economic viability and reduce if not prevent increase in the levels of malnutrition among affected communities through provision of relief. The interventions will also help rehabilitate damaged infrastructure.

### **4.0 GENERAL RESPONSE STRATEGY**

The government's strategy is to mobilize all available human, financial and material resources and redirect these to areas that were affected. This strategy also entails cooperate approach by involving all relevant Government, Donor community, UN System, Private sector and NGOs agencies (both local and international).

### **5.0 REQUIRED INTERVENTIONS**

As reflected in the 2010 In-Depth Vulnerability and Needs Assessment report, the required interventions involve seven (7) sectors with activities ranging from those of short to medium and long term. The main sectors involved are those that the assessment established as having been severely affected by the floods. These are Health and Nutrition, Water and Sanitation, Infrastructure, Human settlement and Shelter, Education, Agriculture and Food Security.



These interventions are based on the fact that there is some level of response going on in each of these sectors. This level of response however, falls short of meeting the demands/needs in the floods affected districts. What is required therefore is the scaling up of the interventions so as to make them more effective and responsive to the needs of the affected districts. The required interventions are as summarised in the **sector by activity** in table 2 below:

**Table 2: Sector by Activity**

SECTOR	ACTIVITY
<b>1. Education</b>	Carryout rehabilitation works on all school infrastructure damaged by floods, Identify schools in disaster prone areas, and conduct sessions in disaster risk reduction , upgrade temporal classrooms into permanent school infrastructure (Classrooms, Teachers' houses, VIP latrines) at identified sites
	Procurement and Pre-positioning of school in a box and recreational kits
<b>2. Health</b>	Disease surveillance, prevention and management
	Health Promotion
	Procurement of essential drugs and other non-medical supplies
	Rehabilitation of Health Infrastructure
<b>3. Nutrition</b>	Supportive visits and continuous monitoring and evaluation of floods on nutrition.
	Training of community volunteers in Active Case Finding of malnourished in the flood affected areas.
	Training in management of severe malnutrition in the flood affected districts both for hospital and community management
	Procurement of supplementary and therapeutic feeds (HEPS, F 75 and F100, RUTF) for both malnourished U 5 children and adults
<b>4. Human Settlement and Shelter</b>	Consultations with local leadership (traditional and district administration) on identification of safer lands [Identification of Safer Lands for Displaced persons - <b>Phase I</b> ]
	Acquisition of land to resettle the communities vulnerable to flooding
	Conduct a survey among the concerned communities to determine their willingness to relocate to higher lands and educate them on possible livelihood sources [Identification of Safer Lands for the Displaced Persons - <b>Phase II</b> ]
	Site preparation and development of new settlement - Water Supply Development in Phases I and II

SECTOR	ACTIVITY
<b>5. Infrastructure</b>	Repairs to Washed Away and construction of new Bridges
	Repair Works to Damaged Culverts/Drifts and Installation of New Culverts/Drifts
	Reinstatement of washed/eroded embankments and stone pitching
	Reinstatement of washed/eroded road sections
<b>6. Social Protection</b>	Repairs to Washed Away and construction of new Bridges
	Awareness Raising
	Empowerment of Families
	Psychosocial support
<b>7. Water and Sanitation</b>	Provision of safe water to affected communities (Household Chlorine, HTH Chlorine)
	Provision of water (boreholes) and sanitation (latrines) infrastructure (rehabilitation and sinking/digging of new ones)
	Provision of water storage containers, soap and hand washing facilities.
	Improvement of water sources
	Hygiene promoters and V-WASHE committees
	Water quality & quantity monitoring, proper usage of home chlorination and HTH, management of water and sanitation facilities and safe excreta disposal.
	Proper garbage handling and disposal

## **6.0 IMPLEMENTATION PLAN**

In order to ensure maximum participation of all stakeholders and at the same time ensure that Portfolio institutions and agencies take up their responsibilities as we scale-up the operation, the affected sectors in conjunction with relevant UN, NGO and Private sector agencies will be responsible for the implementation of their activities based on the sector needs as per attached sector specific annexes. Satellite Disaster Management Committees in conjunction with NGOs will be front line implementers while District Disaster Management Committees will be the overall district supervisors.

### **6.1 Current level of response**

As mentioned earlier, it is important to recognize that a lot has already been done by Government in collaboration with its co-operating partners in terms of response interventions.

The implementation of this action plan should therefore be seen within the context of scaling up of the existing interventions and not necessarily kick-starting of the recovery operation.

### **6.2 Scaling Up**

In order to scale up the level of current response and make the operation more effective and responsive to the needs of the affected populations, it is important that the sector-based interventions are implemented as recommended (***see Annexes 1 to 8 for more details***).

## **7.0 ROLES AND RESPONSIBILITIES**

The major stakeholders such as the Ministries of Education, Health, Agriculture, Works and Supply, Department of Water Affairs, Local Government and Housing, Community Development, Finance and Donor community, the UN system, Private sector including NGOs both local and international will play an important role to

ensure that the planned programmes are timely and efficiently implemented in order for the programme to be effective and responsive enough to achieve the programme objectives. Each Ministry/Department will nominate a dedicated officer who will be part of the coordination core team to oversee the implementation of the recommended interventions. Satellite Disaster Management Committees in conjunction with NGOs will be the front line implementers of the interventions while District Disaster Management Committees (DDMC) will have the district overall supervisory responsibilities.

## **8.0 TIME FRAME**

The activities will be implemented within twelve (12) months beginning in August 2010. This period will cover the implementation of short to medium and some long-term interventions.

## **9.0 REPORTING ARRANGEMENTS**

All implementing agencies will generate progress reports and submit them to DMMU through the National Coordinator on monthly basis. DMMU will in turn consolidate the sector reports in one document and submit it to Government and other stakeholders for decision-making and information sharing.

## **10.0 COORDINATION**

The coordination of the implementation of the rehabilitation plan (short to medium and long term) will be spearheaded by DMMU supported by the Coordination Core Team with representation from Government, Donors, UN system, private sector and NGOs.

## **11.0 MONITORING AND EVALUATION**

Monitoring of the implementation of interventions will be based on the indicators as brought out in the monitoring and valuation indicators table (***Refer to Table 3***) and will be done at different levels namely: through reports, field trips involving a combined team of main stakeholders or individual institutions and organizations. Political leadership at national, provincial and local levels will be critical in ensuring that the objectives of this recovery action plan are achieved in line with its rationale.

Effectiveness of the interventions will be evaluated in terms of outcomes and impact on the target population and districts. A final impact assessment will be conducted. The report will be presented to Government and shared with other stakeholders for important reflections on the response and recovery programme.

**Table 3: Monitoring and Evaluation Indicators**

SECTOR	RESPONSIBLE INSTITUTION	ACTIVITIES	OUTPUT INDICATORS	OUTCOMES
1.Education	MoE	<ul style="list-style-type: none"> <li>• infrastructure, teachers' houses and construct VIP latrines</li> <li>• Document schools in disaster prone areas.</li> <li>• Conduct training of Trainers in disaster risk reduction</li> <li>• Conduct disaster reduction measures in these schools</li> <li>• Procurement and Pre-positioning of school in a box and recreational kits.</li> <li>• Upgrade temporal school infrastructure into permanent</li> </ul>	<ul style="list-style-type: none"> <li>• No. of school infrastructure and teachers' houses rehabilitated</li> <li>• No. of pit latrines constructed</li> <li>• No. of schools in disaster prone areas identified.</li> <li>• Disaster risk reduction measures conducted.</li> <li>• Formation of disaster Reduction committees in schools and communities</li> <li>• No. of community schools upgraded</li> <li>• No of school in a box kits procured and pre-positioned</li> </ul>	<ul style="list-style-type: none"> <li>• Improved school Infrastructure</li> <li>• Improved teachers' accommodation</li> <li>• Improved sanitary facilities</li> <li>• Improved school attendance</li> <li>• Continuous learning during flooding</li> <li>• Predictable evacuation patterns</li> </ul>
2. Health	MoH	<ul style="list-style-type: none"> <li>• Disease prevention and treatment</li> <li>• Health promotion</li> <li>• Monitoring and evaluation</li> <li>• Rehabilitation and maintenance of Health infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• No. of ITNs distributed to children under five and pregnant women</li> <li>• No of estimated cumulative cases of acute diarrhoea</li> <li>• Estimated average rate of acute diarrhoea deaths</li> <li>• % of population with access to primary health care services</li> <li>• No. of Health Infrastructure maintained and rehabilitated</li> </ul>	<ul style="list-style-type: none"> <li>• Improved child and women health</li> <li>• Improved disease management</li> <li>• Improved access to primary health care services</li> <li>• Improved hygiene practices and waste disposal</li> <li>• Improved Health infrastructure</li> </ul>

SECTOR	RESPONSIBLE INSTITUTION	ACTIVITIES	OUTPUT INDICATORS	OUTCOMES
3. Nutrition	MoH/NFNC	<ul style="list-style-type: none"> <li>• Support mitigation of nutritional impact of floods on health through growth monitoring</li> <li>• Training of community volunteers in Active Case Finding of malnourished in the flood affected areas</li> <li>• Training in management of severe malnutrition in the flood affected districts both for hospital and community management</li> <li>• Procurement of therapeutic feeds (HEPS, F 75 and F100) for both malnourished U 5 children and adults and provides nutrition education during distribution sessions.</li> </ul>	<ul style="list-style-type: none"> <li>• Estimated % of children under 5 covered by nutritional surveillance in the affected areas</li> <li>• Amount of therapeutic feeds procured.</li> <li>• Number of officers trained in infant and child feeding.</li> <li>• Number of nutrition education conducted</li> </ul>	<ul style="list-style-type: none"> <li>• Improved Nutrition status</li> </ul>
4. Human shelter and Settlement	DMMU, DEPT.OF RESETTLEMENT, HABITAT, IOM	<ul style="list-style-type: none"> <li>• Identification of land for relocation in flood prone areas</li> <li>• Consultation with local leadership</li> <li>• Community sensitization</li> <li>• Human settlement</li> </ul>	<ul style="list-style-type: none"> <li>• No. of flood prone districts visited to identify safer land</li> <li>• No. of pieces of land identified</li> <li>• No. of consultative meetings held with local leadership</li> <li>• No. of sensitization meetings held</li> <li>• No. of cartographic equipment procured</li> <li>• No. of persons resettled on safer land</li> </ul>	<ul style="list-style-type: none"> <li>• People's lives secured</li> <li>• No. of houses collapsing reduced</li> <li>• Improved habitations</li> </ul>
5. Infrastructure	RDA,ZNS.ZA	<ul style="list-style-type: none"> <li>• Repairs to Washed Away and construction of new Bridges</li> <li>• Construction of New Bridge</li> </ul>	<ul style="list-style-type: none"> <li>• No. of bridges/culverts/drifts reinstated/constructed</li> </ul>	<ul style="list-style-type: none"> <li>• Improved accessibility</li> </ul>



SECTOR	RESPONSIBLE INSTITUTION	ACTIVITIES	OUTPUT INDICATORS	OUTCOMES
		Structure (Permanent) <ul style="list-style-type: none"> <li>• Repair Works to Damaged Culverts/Drifts</li> <li>• Installation of New Culverts/Drifts</li> </ul>		
6.Social Protection	MCDSS, MoH NGOs		<ul style="list-style-type: none"> <li>• No of awareness campaigns done on children's and women's rights in the communities</li> <li>• No of prevention measures put in place Initiate and promote family and community level safety (prevention)</li> <li>• No of Psychosocial counseling sessions done</li> </ul>	<ul style="list-style-type: none"> <li>• protective environment for children and their families created</li> </ul>
7.Water and Sanitation	MEWD	Repair Works to Damaged Culverts/Drifts and Installation of New Culverts/Drifts	<ul style="list-style-type: none"> <li>• No. boreholes drilled</li> <li>• No. of hand pumps installed</li> <li>• No. of water committees trained</li> <li>• No. of sanitary facilities constructed</li> <li>• No of Hygiene promoters and V-WASHE committees members trained</li> </ul>	<ul style="list-style-type: none"> <li>• Improved child and women health</li> <li>• Improved water supply</li> <li>• Increased access to safe water</li> <li>• Improved disease management</li> <li>• Improved sanitary facilities</li> </ul>
		Reinstatement of washed/eroded embankments and stone pitching	•	•
		Reinstatement of washed/eroded road sections	•	•

## **ANNEXES**

### **Annex 1: EDUCATION**

#### **Problem statement and rationale**

The Education Sector was not spared from the effects of the floods that occurred during the 2009/10 rainfall season. Arising from that, learning was disrupted as School Infrastructure got submerged and damaged resulting in some schools being closed and others were operating at half capacity.

The Ministry of Education has assessed the impact of the floods and prioritized interventions as medium and long term to rehabilitate the damaged infrastructure upgrade temporal infrastructure and preposition school kits.

#### **Activities**

The activities to be implemented in the medium term and long term are mainly rehabilitation works on all school infrastructure damaged by floods, upgrading of infrastructure (Classrooms, Teachers' houses, VIP, latrines) that is built from temporal materials, to make it resilient to floods, mapping of schools in flood prone areas, train school Heads and communities in disaster risk reduction (DRR) measures, and procurement and Pre-positioning of school in a box and recreational kits.

#### **Targets**

Carry out rehabilitation works at 32 schools in 12 districts in 5 provinces.

#### **Implementing Agency**

Ministry of Education will be the lead-implementing Agency and will be assisted by Cooperating Partners.

**Immediate Financial Requirements: ZMK 3,518,000,000.00 (US\$703,600.00)**

**Table 4: Education Activity Budget**

	<b>Activity</b>	<b>Resource required ZMK</b>	<b>Resource available ZMK</b>	<b>Net resource required ZMK</b>	<b>Net resource required USD</b>
1	Site selection and planning of infrastructure for upgrading	41,000,000	0	41,000,000	8,200
2	Identify implementation partners	1,000,000	0	1,000,000	200
3	Mapping of schools in disaster prone areas,	25,000,000	0	25,000,000	5,000
4	Defining criteria for rehabilitation, conduction of disaster reduction sessions	15,000,000	0	15,000,000	3,000
5	Procurement and Pre-positioning of school in a box and recreational kits	300,000,000	0	300,000,000	60,000
6	Training on site planning and management , Training of trainers for disaster risk reduction	200,000,000	0	200,000,000	40,000
7	Assess the needs and design solutions	25,000,000	0	25,000,000	5,000
9	Provide necessary equipment and materials for infrastructure upgrading	50,000,000	0	50,000,000	10,000
10	Construct temporal classrooms and latrines	200,000,000	0	200,000,000	40,000
11	Assess how the plan is working and make necessary changes to improve the situation	40,000,000	0	40,000,000	8,000
12	Periodical monitoring to review situation on the ground to make corrections if need be	54,000,000	0	54,000,000	10,800
13	Evaluation of the implementation plan	41,000,000	0	41,000,000	8,200
14	Carryout rehabilitation works on all school infrastructure damaged by floods	2,526,000,000	0	2,526,000,000	505,200
	<b>TOTAL</b>	<b>3,518,000,000</b>	<b>0</b>	<b>3,518,000,000</b>	<b>703,600</b>

**Table 5: Cost Breakdown of Item 14 in the activity table above**

<b>Districts</b>	<b>Name of School</b>	<b>Activity</b>	<b>Resource required ZMK</b>	<b>Resource available ZMK</b>	<b>Net resource required ZMK</b>
<b>Serenje</b>	Gibson Basic	construction of latrines	60,000,000	0	60,000,000
	Mpelembe Basic	Roof repairs , and minor works to walls, paintworks construction of latrines, roof repairs to houses, purchase of desks	85,000,000	0	85,000,000
<b>Kafue</b>	Chanyanya Basic	Paintworks to staff houses and latrines	15,000,000	0	15,000,000
<b>Chavuma</b>	Lukolwe Basic	construction of latrines	60,000,000	0	60,000,000
<b>Sinazongwe</b>	Malabali Basic	Mending of cracks and paint works to classrooms and staff houses	35,000,000	0	35,000,000
	Muuka Basic	Mending of cracks and paint works to classrooms and staff houses	35,000,000	0	35,000,000
<b>Kalabo</b>	Kuuli Basic	Mending of cracks and paint works to classroom blocks and staff houses	35,000,000	0	35,000,000
	Lyoke West Basic	Roof repairs , and minor works to walls of classrooms and houses, paintworks, construction of latrines,	78,000,000	0	78,000,000

<b>Districts</b>	<b>Name of School</b>	<b>Activity</b>	<b>Resource required ZMK</b>	<b>Resource available ZMK</b>	<b>Net resource required ZMK</b>
	Ndoka Basic	Mending of cracked walls of staff houses	15,000,000	0	15,000,000
	Sitululu Basic	Construction of 1x3 classroom block Staff house Roof construction	220,000,000	0	220,000,000
	Mukola High	Construction of staff houses	80,000,000	0	80,000,000
	Dongwe Basic	Roof repairs , and minor works to walls, paintworks, construction of latrines	75,000,000	0	75,000,000
	Likulu Basic	Roof repairs , and minor works to walls, paintworks, construction of latrines	75,000,000	0	75,000,000
	Lupuz Basic	Mending of cracks and paint works	38,000,000	0	38,000,000
	Anaganga .Com	Roof repairs , and minor works to walls, paintworks, construction of latrines Purchase of desks	85,000,000	0	85,000,000
	Sikaunze Basic	construction of latrines, paintworks to staff houses	80,000,000	0	80,000,000
<b>Lukulu</b>	Siumbwa Basic			0	
				0	
<b>Kazungula</b>				0	
				0	
<b>Namwala</b>	Mokotoolo Basic	Construction of 1x3 classroom block	220,000,000	0	220,000,000
				0	

<b>Districts</b>	<b>Name of School</b>	<b>Activity</b>	<b>Resource required ZMK</b>	<b>Resource available ZMK</b>	<b>Net resource required ZMK</b>
<b>Mongu</b>	Kataba Basic	Paint works to walls	15,000,000	0	15,000,000
	Itema Community	construction of latrines,	60,000,000	0	60,000,000
	Malabo Basic	construction of latrines, purchase of furniture	75,000,000	0	75,000,000
	Litabwa Basic	construction of latrines,	60,000,000	0	60,000,000
	Namalungu Basic	Purchase of furniture	15,000,000	0	15,000,000
<b>Senanga</b>	Matongo Basic	construction of latrines, mending of cracked walls for staff houses	80,000,000	0	80,000,000
	Mumbula Basic	construction of latrines,	60,000,000	0	60,000,000
	Nzilu Basic	construction of latrines,	60,000,000	0	60,000,000
	Sabilo Basic	Construction of 1x3 classroom block	220,000,000	0	220,000,000
	Sikana Basic	Rehabilitation to classroom block, houses and latrines	75,000,000	0	75,000,000
	Silowana Basic	Construction of 1x3 classroom block and latrines, Purchase of furniture	75,000,000	0	75,000,000
	Sunda Basic	Construction of 1x3 classroom block and latrines	220,000,000	0	220,000,000
	<b>Shangombo</b>	Nzilu Basic	construction of latrines,	60,000,000	0
<b>Sesheke</b>	Silumbu Basic	Construction of 1x3 classroom block and	220,000,000	0	220,000,000

<b>Districts</b>	<b>Name of School</b>	<b>Activity</b>	<b>Resource required ZMK</b>	<b>Resource available ZMK</b>	<b>Net resource required ZMK</b>
		latrine, purchase of furniture			
		<b>TOTAL ESTIMATE</b>	<b>2,526,000,000</b>	0	<b>2,526,000,000</b>

**Table 6: Education Implementing Schedule**

ACTIVITIES	Year 2010					Year 2011							
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	Jul	Sep
<b>MEDIUM TERM</b>													
Identify damaged school sites and develop bills of Quantities and schedule of materials	■	■											
Mapping of schools in flood prone areas of Zambia		■	■										
Identify small contractors and enter into labour contract for the rehabilitation of classrooms, teachers' houses and construction of VIP latrines at the schools affected by the floods			■	■									
Draw up teaching training material for disaster risk reduction ,	■	■											
Training of trainers at zonal centers in disaster risk reduction activities		■	■	■	■								
Conduction of disaster risk reduction in schools and communities				■	■	■	■	■	■	■			
Rehabilitation of School Infrastructure and Teachers' houses and construction of VIP Latrines at schools affected by the floods.				■	■	■	■						
Procurement and Pre-positioning of school in a box and recreational kits.				■	■	■							



## **Annex 2: HEALTH**

### **PROBLEM STATEMENT**

The heavy rains and floods that the country experienced in the 2009-2010 rainy season had a significant impact on the health sector. From the 2010 In Depth Assessment, the major challenges were:

- High disease burden as demonstrated by the number of households reporting a sick member and the high frequency of occurrence of infectious diseases such as malaria, diarrheal diseases and Acute Respiratory Infections (ARI). This puts a strain on limited healthcare facilities as well as on healthcare providers.
- Suboptimal childhood immunization coverage in some areas particularly for measles vaccine. These conditions are favorable for the occurrence of disease outbreaks.
- Poor sanitation and exposure to contaminated drinking water perpetuating the occurrence of diarrheal diseases such as cholera and dysentery
- Destruction of health infrastructure

### **ACTIVITIES**

- Disease surveillance, prevention and management
  - Epidemic prone diseases : Malaria, diarrheal diseases
  - Strengthen Immunization activities
- Health Promotion
  - Development , procurement and distribution of IEC materials
  - PA System, Radio and television
- Procurement of essential drugs and other non-medical supplies
- Rehabilitation of Health Infrastructure

**Financial Requirements: ZMK 13,247,644,000 (US\$ 2,649,529)**

**Table 7: Health Activity Schedule**

ACTIVITY	RESOURCE REQUIRED	RESOURCES AVAILABLE	GAP	TIME FRAME 2010						COMMENT
				Jul	Aug	Sep	Oct	Nov	Dec	
<b>1. Sub-activity: health (Disease surveillance, Prevention and Management)</b>										
Support the procurement and distribution of essential drugs, vaccines and supplies	175,325,000	0	175,325,000							
Support the sustained delivery of essential health services such as immunization, child, maternity, HIV/AIDS, TB including through outreach where appropriate.	205,700,000	0	205,700,000							
Staff refresher training for prevention and control of flood related medical conditions (emergency triage,	176,000,000	0	176,000,000							

diarrhoeal diseases, plague etc										
Support integrated disease surveillance and reporting (IDSR) especially measles, polio and cholera surveillance.	264,600,000	0	264,600,000							
<b>2. Sub -activity: health promotion</b>										
Health education to communities (on good hygiene practices, disinfection of water and waste disposal, etc).	440,000,000	0	440,000,000							
3. procurement of essential drugs and None Medical supplies	156,019,000	0	156,019,000							
4. Rehabilitation Health infrastructure	11,830,000,000		11,830,000,000							
<b>GRAND TOTAL</b>										
			<b>ZMK 13,247,644,000</b>							

**Table 8: Essential Drugs and Supplies**

<b>NO.</b>	<b>ITEM</b>	<b>QUANTITY</b>	<b>UNIT PRICE(K)</b>	<b>TOTAL COST(K)</b>
1	Insecticide Treated Nets	1500	50000	75000000
2	ORS	7500	2500	18750000
<b>3</b>	<b>Anti-malarials</b>			
	Arthemeter- lumefantrine (coartem)[20/120] 18's & 12's	12	250000	3000000
4	Sulfadoxine- pyrimethamine tabs(pac 1000)	30	1800	54000
	Quinine 300mg tab (pac100)	350	2400	840000
	Quinine injection (300mg/ml) 2ml ampoules (boxes)	150	8500	1275000
<b>5</b>	<b>Anti-bacterials</b>			
	Metronidazole(250mg) Pac	75	52000	3900000
	Cotrimoxazole (pac)	150	25000	3750000
	Ciprofloxacin(250mg)pac	250	2000	500000
<b>6</b>	<b>Intravenous fluids</b>			
	Ringers lactate 500mls W/gse (Boxes)	50	140000	7000000
	5% dextrose w/gset(Boxes)	30	120000	3600000
	50% dextrose (10ml bottles(Boxes)	200	20000	4000000
	Normal saline 500mls W/gset(Boxes)	20	130000	2600000
<b>7</b>	<b>Canulae</b>			
	14G	600	1500	900000
	16G	600	1500	900000
	18G	1200	1500	1800000
<b>8</b>	<b>Syringes</b>			
	2ml (pack 100)	2500	1000	2500000
	5ml(pack 100)	5000	2000	10000000
	10ml(pack 100)	500	2500	1250000
	Cotton wool(500g)	400	15000	6000000
	Methylated spirit 2.5litres	300	20000	6000000
	Plaster/strapping	200	12000	2400000
	Total			<b>156,019,000</b>

**Table 9: Repair of Damaged Health Infrastructure**

<b>District</b>	<b>Health Facility</b>	<b>Activity</b>	<b>Resource Required ZMK</b>	<b>Resource Available ZMK</b>	<b>Net Resource required</b>
Lukulu	Mbanga RHC	Repair of Maternity	85000000		85000000
Mongu	Liyolelo RHC	Repair of Maternity	85000000		85000000
Senanga	Nambwae Upper PHC	Repair of Maternity	85000000		85000000
Senanga	Kataba	Repair of Maternity	85000000		85000000
	Luiwanyau	Repair of Maternity	85000000		85000000
	Nanjaka RHC	Repair of Maternity	85000000		85000000
			510000000	0	510000000
Mongu	Liyolelo RHC	Repair of MCH	850000000		850000000
Senanga	Kataba	Repair of MCH	850000000		850000000
	Luiwanyau	Repair of MCH	850000000		850000000
	Nanjaka RHC	Repair of MCH	850000000		850000000
			3400000000	0	3400000000
Chavuma	Nyantanda Health post	Repair of incinerator	970000000		970000000
Senanga	Kataba	Repair of incinerator	970000000		970000000
	Luiwanyau	Repair of incinerator	970000000		970000000
	Nanjaka RHC	Repair of incinerator	970000000		970000000
			3880000000	0	3880000000

Chavuma	Nyantanda Health post	Repair of Mothers shelter	860000000		860000000
Senanga	Kataba	Repair of Mothers shelter	860000000		860000000
	Luiwanyau	Repair of Mothers shelter	860000000		860000000
	Nanjaka RHC	Repair of Mothers shelter	860000000		860000000
			3440000000	0	3440000000
Chavuma	Nyantanda Health post	Repair of Lab	750000000		750000000
Mongu	Liyolelo RHC	Repair of Lab	750000000		750000000
Senanga	Kataba	Repair of Lab	750000000		750000000
	Luiwanyau	Repair of Lab	750000000		750000000
	Nanjaka RHC	Repair of Lab	750000000		750000000
			3750000000	0	3750000000
Chavuma	Nyantanda Health post	Drilling of Borehole	450000000		450000000
Mongu	Liyolelo RHC	Drilling of Borehole	450000000		450000000
Senanga	Kataba	Drilling of Borehole	450000000		450000000
	Luiwanyau	Drilling of Borehole	450000000		450000000
	Nanjaka RHC	Drilling of Borehole	450000000		450000000
			2250000000	0	2250000000
	GRAND TOTAL				<b>11,830,000,000</b>

## **Annex 3: NUTRITION**

### **Problem Statement**

Floods are likely to cause numerous health and nutritional problems in the country. An anticipated increase in levels of food and nutrition insecurity and diseases related to overcrowding is inevitable. The broad nutrition sector challenges include the following:

- Disruption of preventive health and nutrition services such as inaccessible health facilities and inadequate Growth Monitoring and promotion service points and the resulting surge in demand at other service delivery points is likely to result in shortages of essential medicines and nutrition supplies and over-stretched health staff.
- Resultant household food and nutrition insecurity will lead to malnutrition and increased susceptibility to infectious and immunizable diseases such as measles.

### **Activities**

The mitigation measures for Nutrition fall under the broad categories as shown in table1 below.

**Financial Requirements: ZMK3,323,765,850.60(US\$664,753.17)**

**Table 10: Nutrition Activity Schedule**

ACTIVITY	Resource required	Resource Avail	Gap	Timeframe (2010)				Comment
				Q1	Q2	Q3	Q4	
Support to mitigation of nutritional impact of floods on health (Supportive visits and continuous monitoring and evaluation).	500,000,000	0	500,000,000					Assistance with transport will be required
Training of community volunteers in Active Case Finding of malnourished in the flood affected areas.	250,000,050	0	250,000,050					
Training in management of severe malnutrition in the flood affected districts both for hospital and community management	300,000,050	0	300,000,050					
Procurement of supplementary and therapeutic feeds (HEPS, F 75 and F100, RUTF) for both malnourished U 5 children and adults	2,823,765,751	0	2,823,765,751					Currently what is available in the country is for routine therapeutic services (therapeutic feeding for non-complicated cases)
<b>GRAND TOTALS</b>	<b>3,873,765,851</b>		<b>3,873,765,851</b>					



**Target**

This plan targets the districts moderately or severely affected by floods. The classification is based on reports sent to DMMU, field reports, key informant interviews and the in-depth vulnerability assessment.

**Implementing Agency**

The National Food and Nutrition Commission, the Ministry of Health and its various Cooperating partners operating in the field of nutrition sectors will implement this plan.

## **Annex 4: HUMAN SETTLEMENT AND SHELTER**

### **Problem Statement**

During the 2009/10 rain season, a total of 17 districts experienced floods which led to the displacement of a number of households in 15 districts.

The vulnerability of the affected households was worsened by the fact that households' settlements were located in the flood prone areas coupled with the weak housing structures due to weak building materials used which are mainly pole, mud and grass.

Although the impact of floods on human settlements was low in terms of the number of households affected, there is need to reduce such vulnerability and the impact of floods by realigning the settlements located in low lying areas prone to flooding to higher and safer land.

ds.

Furthermore, there is need to sensitize the vulnerable communities on the dangers of settling in flood water channels and the benefits of building better structures on higher and safer lands as a permanent solution.

### **Activities**

1. consultations with local leadership (traditional and district administration) on identification of safer lands
2. acquisition of such safe lands to resettle the communities vulnerable to flooding
3. conduct a survey among the concerned communities to determine their willingness to relocate to higher lands and educate them on possible livelihood sources
4. site preparation of the new settlement
  - a. boundary delineation
  - b. plot demarcation
  - c. road clearing
  - d. borehole drilling
  - e. plot allocation
  - f. resettling of the new settlers

The action plan will be implemented in two phases. The affected districts by order of severity are as follows: -

### **Phase I**

In phase 1, districts along the Zambezi River catchments are targeted. These are

- i. Shangombo'
- ii. Senanga
- iii. Mongu
- iv. Sesheke

## **Phase II**

In this phase, the following districts are targeted;

- i. Lukulu
- ii. Namwala
- iii. Sinazongwe

### **Implementation Agency**

- a. The Department of Resettlement in conjunction with the Department of Physical Planning and Housing, UN-HABITAT, IOM, District Councils, Red Cross etc.
- b. DMMU will coordinate the implementation

**Financial Requirements:** An estimated budget total of ZMKK663, 000,000 or (US\$132,600.00) will be required to undertake the above alluded to activities in both phases one and two.

The tables below show the budgets for the implementation of the various activities and the activity matrix that shall guide the implementation of those activities in terms of time frame.

After the implementation of both phases one and two, the department of Resettlement together with other sector partners shall under the coordination and funding by the DMMU relocate the affected and targeted households.

**Table 11: Human Settlement and Shelter Activity Based Budget**

	<b>Activity</b>	<b>Resources Required</b>	<b>Resources Available</b>	<b>Resource Gap</b>
<b>A</b>	Identification of Safer Lands for Displaced persons <b>[Phase I]</b>			
1	Hand Tools	4,800,000		4,800,000
2	Protective Wear	2,300,000		2,300,000
3	Survey and Mapping	5,400,000		5,400,000
4	Printing of Maps	9,500,000		9,500,000
6	Allowances	25,000,000		25,000,000
7	Petrol Oil and Lubricants	16,000,000		16,000,000
	<b>Total For Land Identification</b>	<b>63,000,000</b>	<b>0</b>	<b>63,000,000</b>
<b>B</b>	Identification of Safer Lands for the Displaced Persons <b>[Phase II]</b>			
	Allowances	30,000,000		30,000,000
	Petrol Oil and Lubricants	15,000,000		15,000,000
	Community Sensitization on Relocation	30,000,000		30,000,000
	<b>Total For Land Identification</b>	<b>75,000,000</b>	<b>0</b>	<b>75,000,000</b>
<b>C</b>	Resettlement of Displaced Persons and Road Infrastructure development			
	Road Pegging and Clearing	90,000,000		90,000,000
	Road Formation	240,000,000		240,000,000
	Monitoring and Evaluation	30,000,000		30,000,000
	<b>Total For Resettlement of Displaced Persons Road Infrastructure Development</b>	<b>360,000,000</b>	<b>0</b>	<b>360,000,000</b>
<b>D</b>	Water Supply Development in Phases I and II			
	Borehole Tendering	15,000,000		15,000,000
	6 X Boreholes Sitting and Drilling	150,000,000		150,000,000
	<b>Total for Water Supply Development</b>	<b>165,000,000</b>	<b>0</b>	<b>165,000,000</b>
	<b>Grand Total</b>	<b>663,000,000</b>	<b>0</b>	<b>663,000,000</b>

**Table 12: Human Settlements and shelter Activity Matrix**

ACTIVITY MATRIX	Phase One [01]					Phase Two [02]					
	Districts	Shangombo and Senanga	Mongu and Sesheke				Lukulu, Sinazongwe and Namwala				
Activity Details	Aug	Sep	Oct	Nov	Dec	Apr	May	Jun	Jul	Aug	Sep
Identification of Safer Lands											
Community Sensitization											
Procurement of Hand Tools											
Surveying Area Boundary											
Layout Planning											
Plot Demarcation											
Road Pegging and Clearing											
Road Formation											
Borehole Sitting											
Borehole Drilling											

## **Annex: 5. INFRASTRUCTURE**

### **Problem Situation:**

Road infrastructure, such as embankments, bridges and culverts, were damaged in some parts of the country due to heavy rains experienced during the 2008/9 and 2009/10 rainfall season. The hardest hit areas were Eastern, Northern, Western, Lusaka and Copperbelt provinces of the country. This has impacted negatively on the social service delivery and economic development.

### **Rationale**

To develop road infrastructure sector reinstatements to the affected road infrastructure in order to restore accessibility to the affected areas. Therefore, there is need to carryout urgent repairs to ensure that:

- Access to health centers, schools, market places and agricultural areas is restored;
- The much-needed relief supplies are delivered to the affected communities.

### **Activities**

The proposed intervention measures are outlined below:

- Repair and installation of washed away culverts;
- Reinstatement of washed/eroded embankments and stone pitching the embankments;
- Replacement of rotten timber bridges;
- Reinforcing the existing bridge decks;
- Reinstatement of washed away bridges with permanent structures;
- Provision of vented drifts to allow for overtopping; and
- Heavy dredging works using specialized machinery for the clearing and construction of channels.

### **Target**

The target is to reinstate the following 344 road and drainage structures in the 66 districts which experienced severe floods:

- Thirty four (34) Bridges;
- Two hundred and Ninety (290) Culverts;
- Fifteen (15) Embankment structures; and
- Five (05) road sections that have experienced severe erosion.

### **Implementing Agency**

- a. Road Development Agency
- b. Zambia National Service
- c. Zambia Army
- d. Rural Roads Unit under Buildings Department.

**Table 13: Summary of the Number of damaged structures - 2008/09/2009/10**

No.	Name of Province	No. of Structures Assessed				Total No. of Structures Assessed	Estimate Cost Reinstatement (ZMK)
		Bridges	Culverts/Drifts	Road Sections	Embankments		
3	Central	1	12	0	0	13	2,900,000,000.00
5	Copperbelt	5	41	0	2	48	4,497,000,000.00
6	Eastern	15	95	0	0	110	19,758,000,000.00
2	Luapula	0	14	0	0	14	3,231,067,546.32
9	Lusaka	0	15	0	0	15	6,790,141,600.00
1	North-Western	6	37	3	5	51	5,915,000,000.00
4	Northern	2	53	0		55	16,055,000,000.00
7	Southern	2	15	2	1	19	29,894,000,000.00
8	Western	3	8	0	7	18	7,956,000,000.00
<b>Total</b>		<b>34.0</b>	<b>290.0</b>	<b>5.0</b>	<b>15.0</b>	<b>344.0</b>	<b>96,996,209,146.32</b>



**Table 14: Activity Costs of Infrastructure per Province**

No.	Name of Province	Cost. of Structures Assessed				Estimate Cost Reinstatement (ZMK)
		Bridges	Culverts/Drifts	Road Sections	Embankments	
3	Central	200,000,000	2,700,000,000	-	-	2,900,000,000
5	Copperbelt	600,000,000	3,805,000,000	-	92,000,000	4,497,000,000
6	Eastern	3,800,000,000	15,958,000,000	-	-	19,758,000,000
2	Luapula	1,202,000,000	2,029,067,546	-	-	3,231,067,546
9	Lusaka	-	6,790,141,600	-	-	6,790,141,600
1	North-Western	885,000,000	4,275,000,000	170,000,000	585,000,000	5,915,000,000
4	Northern	1,160,000,000	13,645,000,000	-	1,250,000,000	16,055,000,000
7	Southern	25,300,000,000	4,044,000,000	350,000,000	200,000,000	4,894,000,000
8	Western	1,340,000,000	1,835,000,000	-	4,781,000,000	7,956,000,000
<b>Total</b>		<b>34,487,000,000</b>	<b>55,081,209,146</b>	<b>520,000,000</b>	<b>6,908,000,000</b>	<b>96,996,209,146</b>

**Table 15: Infrastructure Activity Matrix**

<b>Type of Structure</b>	<b>Activity</b>	<b>Resources Required (ZMK)</b>	<b>Resources Available (ZMK)</b>	<b>GAP (ZMK)</b>
<b>Bridges</b>	Repairs to Washed Away and construction of new Bridges	34,487,000,000.00	-	34,487,000,000.00
<b>Culverts</b>	Repair Works to Damaged Culverts/Drifts and Installation of New Culverts/Drifts	55,081,209,146.00	-	55,081,209,146.00
<b>Embankments</b>	Reinstatement of washed/eroded embankments and stone pitching	6,908,000,000.00		6,908,000,000.00
<b>Road Sections</b>	Reinstatement of washed/eroded road sections	520,000,000.00		520,000,000.00
<b>GRAND TOTAL</b>		<b>96,996,209,146.00</b>		<b>96,476,209,146.00</b>

**Total Financial Requirement: ZMK 96,476,209,146.00**

**NOTE**

The Annual Work Plan 2010 for the RDA allowed for an amount of 3.549 Billion Kwacha for emergencies which has since been used and exhausted for other major emergencies on the Maamba – Batoka road in Southern province and reinstatement of culverts in Western, Northern, Lusaka, Central and North – western Provinces.

The projects were listed in order of priority from all the districts. The first three were taken as priority 1, 2, and 3 if the district had more than three projects the process was repeated for the remaining ones until all projects were classified.

**Table 16: Infrastructure Priority Cost List Per Province**

No.	Province	Bridges		Culverts/Drifts	Overall Cost (ZMK)
		Priority 1	Priority 2	Priority 3	
7	Central	1,740,000,000.00	680,000,000.00	480,000,000.00	2,900,000,000.00
2	Copperbelt	2,140,000,000.00	1,167,000,000.00	1,190,000,000.00	4,497,000,000.00
5	Eastern	5,907,000,000.00	6,004,000,000.00	7,847,000,000.00	19,758,000,000.00
6	Luapula	1,128,727,108.74	1,373,167,763.66	729,172,673.92	3,231,067,546.32
8	Lusaka	2,210,000,000.00	2,828,764,000.00	1,751,377,600.00	6,790,141,600.00
1	North-Western	1,865,000,000.00	2,385,000,000.00	1,665,000,000.00	5,915,000,000.00
4	Northern	5,925,000,000.00	6,150,000,000.00	3,980,000,000.00	16,055,000,000.00
3	Southern	2,300,000,000.00	1,796,000,000.00	798,000,000.00	4,894,000,000.00
9	Western	5,146,000,000.00	2,310,000,000.00	500,000,000.00	7,956,000,000.00
<b>Cost Per Activity</b>		<b>53,361,727,108.74</b>	<b>24,693,931,763.66</b>	<b>18,940,550,273.92</b>	<b>96,996,209,146.32</b>

**Table 17: Infrastructure Implementation Schedule**

Activity No.	Activity	2010					2011											
		Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	
1	Repairs to Washed Away Bridges	■	■	■	■													
2	Construction of New Bridge Structures (Permanent)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	Repair Works to Damaged Culverts/Drifts	■	■	■	■													
4	Installation of New Culverts/Drifts	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
5	Reinstatement of washed/eroded embankments and stone pitching	■	■	■	■													

## **Annex 6: SOCIAL PROTECTION**

### **Problem statement and rationale**

The assessment established that the communities were affected by the disasters and this compounded their vulnerability and poverty situation. The supportive mechanisms on which the families depend on were affected and there were reported cases of gender based violence and child abuse during the disaster among the assessed districts. Further, the communities reported that the existing institutions and NGOs were not with the vicinity to report cases of gender based violence and child abuse.

Social protection should ideally seek to reduce people's vulnerability and poverty as well as prevent and put an end to violence, exploitation and abuse against children, women and other vulnerable groups during an emergency. This should be done by strengthening the ability of individuals and families to protect themselves from future threats thereby laying the foundation for lasting security and stability. Individuals and families will only be able protect themselves if all stakeholders and child protection workers endeavor to create a protective environment which will warrant protection in emergency situations.

### **Activities**

The mitigation measures for the Protection sector will include the following:

- Prevention - Initiate and promote family and community level safety
- Awareness raising on children's and women's rights
- Psychosocial support
- Empowerment of families

All activities will be centered on creating a protective environment for children and their families.

## **Implementing Agencies**

- Ministry of Community Development and Social Services
- Ministry of Local Government and Housing
- Ministry of Health
- Ministry of Home Affairs
- Ministry of Labour and Social Security
- Gender in Development Division
- Cooperating Partners
- Private Sector
- Non Governmental Organizations

**Financial Requirements: K4, 627,500,000.00 (US\$ 925,500)**

**Table 18: Social Protection Activity Budget**

Province	District	Affected Population	Awareness raising	Empowerment	Psychosocial support	Total (ZMK)
			cost	cost	cost	cost
<b>Central</b>	Serenje	192,858	120,000,000.00	130,000,000.00	60,000,000.00	310,000,000.00
<b>Lusaka</b>	Kafue	213,020	150,000,000.00	90,000,000.00	75,000,000.00	315,000,000.00
	Luangwa	29,514	50,000,000.00	60,000,000.00	25,000,000.00	135,000,000.00
<b>North Western</b>	Chavuma	40,962	150,000,000.00	110,000,000.00	75,000,000.00	335,000,000.00
<b>Eastern</b>	Mambwe	66,374	185,000,000.00	150,000,000.00	90,000,000.00	425,000,000.00
<b>Western</b>	Kalabo	149,203	140,000,000.00	170,000,000.00	75,000,000.00	385,000,000.00
	Mongu	214,953	175,000,000.00	140,000,000.00	90,000,000.00	405,000,000.00
	Lukulu	93,874	70,000,000.00	150,000,000.00	25,000,000.00	245,000,000.00
	Senanga	141,625	120,000,000.00	130,000,000.00	40,000,000.00	290,000,000.00
	Sesheke	102,025	150,000,000.00	140,000,000.00	40,000,000.00	330,000,000.00
	Shang'ombe	92,653	90,000,000.00	120,000,000.00	60,000,000.00	270,000,000.00
<b>Southern</b>	Kazungula	98,475	110,000,000.00	100,000,000.00	75,000,000.00	285,000,000.00
	Gwembe	49,568	150,000,000.00	80,000,000.00	37,500,000.00	267,500,000.00
	Sinazongwe	120,375	70,000,000.00	110,000,000.00	75,000,000.00	255,000,000.00
	Namwala	127,735	175,000,000.00	120,000,000.00	80,000,000.00	375,000,000.00
<b>Total</b>			<b>1,905,000,000.00</b>	<b>1,800,000,000.00</b>	<b>922,500,000.00</b>	4,627,500,000.00

**Table 19: Social Protection Implementation Schedule 2010 - 2011**

Activity	Months											
	Jan 1	Feb 2	Mar 3	April 4	May 5	Jun 6	July 7	Aug 8	Sept 9	Oct 10	Nov 11	Dec 12
Awareness Raising												
Capacity building of Stakeholders												
Empowerment of Families												
Psychosocial support												
Construction of One stop Centres												
Monitoring of Protection Activities												



## **Annex 7: WATER AND SANITATION**

### **Problem Statement and Rationale**

During the 2009/10 floods, 13.4% of the protected water sources commonly used for domestic purposes was affected by the floods resulting in communities drawing water from unprotected water sources as the alternative. Those that continued to use the affected protected water sources were still drawing unsafe or potentially unsafe water as the quality of the water these affected sources produced went significantly down.

From the assessment, it is also revealed that 40.6% of the latrines in the affected areas collapsed due to the floods. Only 47.6% of the communities wash their hands with soap. This is assumed to have resulted in contributing to the increased occurrence of water borne diseases

It is therefore necessary that the damaged water facilities are urgently rehabilitated. Furthermore, the affected communities should be sensitized on hand washing with soap, water treatment and proper hygiene practices. It is also necessary to provide chlorine for treatment of drinking water.

### **Activities**

The sector will address household level and community water safety and awareness raising on improved sanitary disposal and hygiene practices. Apart from a few minor alterations as explained in the report, very little was done during the 2008/09 floods on the work plan and the identified mitigating measures. Most of the identified measures are still not adequately addressed, therefore the mitigation measures for Water & Sanitation save for a few additions are as shown in the table below;

<b>SECTOR</b>	<b>ACTIVITY</b>
<b>Water and sanitation</b>	<b>Water and Sanitation</b>
	Provision of safe water to affected communities (Household Chlorine, HTH Chlorine)
	Provision of water (boreholes) and sanitation (latrines) infrastructure (rehabilitation and sinking/digging of new ones)
	Provision of water storage containers.
	Improvement of water sources
	Improvement of sanitation facilities
	<b>Training and Sensitisation</b>
	Hygiene promoters and V-WASHE committees
	Water quality & quantity monitoring, proper usage of home chlorination and HTH, management of water and sanitation facilities and safe excreta disposal, hand washing with soap.
	Proper garbage handling and disposal
	Monitoring and Evaluation

The activities will include supply of chlorine for treatment of domestic water, granular chlorine for communal water sources and strengthening community sensitization programmes on public health and hygiene, drilling and rehabilitation of water facilities to ensure access to safe drinking water and promotion of construction of adequate sanitary facilities and hand washing with soap.

### **Implementing Agencies**

- Ministry of Local Government and Housing
- Ministry of Energy and Water Development
- Cooperating Partners
- Private Sector
- Non Governmental Organizations

**Financial Requirements: ZMK 3,256,376,000** (approx US\$680,000)

**Table 20: Water and Sanitation Activity Budget and Schedule 2009 – 2010 (Requirements by District)**

	Affected Population	Water		Sanitation		Water Quality					
		Boreholes with handpumps 10% of need	Total Cost	Ordinary Pit Latrines 10% of need	Total Cost	Chlorine (bottles)	Chlorine cost (K1000/bottle)	Granular Chlorine (HTH) (50Kg)	HTH cost (K800,000/50Kg)	20litre Containers	Container cost (K20,000/cont)
Serenje	3,258	1	30,000,000.00	50	25,000,000.00	675	675,000.00	1	800,000.00	1,629	24,435,000
Mambwe	9,800	4	120,000,000.00	160	80,000,000.00	330	330,000.00	3	2,400,000.00	4,900	73,500,000
Kafue	1,373	1	30,000,000.00	20	10,000,000.00	45	45,000.00	1	800,000.00	686.5	10,297,500
Luangwa	2,380	1	30,000,000.00	35	18,500,000.00	66	66,000.00	1	800,000.00	1,190	17,850,000
Chavuma	2,445	1	30,000,000.00	40	20,000,000.00	81	81,000.00	1	800,000.00	1,222.5	18,337,500
Gwembe	4,748	2	60,000,000.00	80	40,000,000.00	150	150,000.00	2	1,600,000.00	2,374	35,610,000
Kazungula	6,300	2	60,000,000.00	100	50,000,000.00	210	210,000.00	2	1,600,000.00	3,150	47,250,000
Namwala	631	2	60,000,000.00	1	500,000.00	100	500,000.00	1	800,000.00	315	4,725,000
Sinazongwe	7,345	3	90,000,000.00	120	160,000,000.00	264	264,000.00	2	1,600,000.00	3,672	55,080,000
Kalabo	4,634	2	60,000,000.00	80	40,000,000.00	151	151,000.00	1	800,000.00	2,317	34,755,000
Lukulu	10,267	4	120,000,000.00	180	90,000,000.00	342	342,000.00	4	3,200,000.00	5,133.5	77,002,500
Mongu	6,997	3	90,000,000.00	150	75,000,000.00	233	233,000.00	2	1,600,000.00	3,498	52,470,000
Senanga	4,728	2	60,000,000.00	80	40,000,000.00	151	151,000.00	2	1,600,000.00	2,364	35,460,000
Sesheke	4,575	2	60,000,000.00	80	40,000,000.00	148	148,000.00	2	1,600,000.00	2,287.5	34,312,500
Shangombo	3,258	1	30,000,000.00	40	20,000,000.00	110	110,000.00	1	800,000.00	1,629	24,435,000
<b>TOTALS</b>	<b>72,739</b>	<b>31</b>	<b>870,000,000</b>	<b>1,216</b>	<b>889,000,000</b>	<b>3,056</b>	<b>3,456,000</b>	<b>26</b>	<b>34,400,000</b>	<b>36,368</b>	<b>545,520,000</b>

### **Additional Budget for the affected areas**

<b>Activity</b>	<b>Cost</b>
Rehabilitation of water infrastructure*	<b>664,000,000</b>
Rehabilitation of sanitation infrastructure*	<b>160,000,000</b>
Training and Sensitization	<b>60,000,000</b>
Monitoring and Evaluation	<b>30,000,000</b>
<b>Total</b>	<b>914,000,000</b>

\*Rehabilitation of approximately 1328 water points and 1600 latrines

The estimated Total Budget for Water and Sanitation for the period (July 2010 to June 2011) is **ZMK 3,256,376,000**

Note: The estimate for chlorine is for **1 month only** thereafter it is hoped that the households will be able to buy the chlorine on their own.

**Table 21: Water and Sanitation Activity Schedule**

S/N	Activity	Time Frame											
		month 1	month 2	month 3	month 4	month 5	month 6	month 7	month 8	month 9	month 10	month 11	month 12
1	Training of V-WASHE												
2	Training of hygiene Promoters												
3	Delivery of Materials (containers, chlorine)												
4	Chlorine promotion sensitization												
5	Construction and equipping of boreholes												
6	Construction of Pit Latrines												
7	Rehabilitation of water and sanitation facilities												
8	Monitoring and Evaluation												