



GHANA PLAN OF ACTION ON DISASTER RISK REDUCTION (DRR) & CLIMATE CHANGE ADAPTATION (CCA)

NATIONAL DISASTER MANAGEMENT ORGANISATION (NADMO)

SUPPORTED

BY

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

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Preface

Ghana is situated in one of the world's most complex climate change regions, affected by tropical storms and the climatic influence of the Sahel and two oceans. Conclusions of various models and projections vary enormously, but they show clear signs of climate change and confirm Ghana's vulnerability. First, there are clear signals of warming in all models. An increase of 1°C has been seen over the past 30 years. One recent projection estimates temperature increases of 1.7°C to 2.04°C by 2030 in the northern Savannah regions. Second, there is uncertainty on rainfall – it may increase, or it may decrease. Ghana's climate is highly variable and the country can expect more intense weather events, such as torrential rains, excessive heat and severe dry winds as a result of climate change.

For example, floods have become a recurrent phenomenon in Ghana. In 2007, floods affected more than 300,000 people in the country, resulting in loss of life, infrastructure, livelihoods and food security. The 2007 floods were believed to have required more than \$25 million for emergency response, and to have resulted in more than \$130 million worth of direct damage.

Ghana has become a lower-middle income country, but there is a broad recognition that climate change and natural disasters constitute a significant development challenge. Ghana has made major progress on poverty reduction in recent decades, although results are mixed, especially in the north, and it is the poorest people who bear the brunt of climate change and disasters. A north-south poverty divide is exacerbated by climatic stress in northern regions where temperatures are already relatively high. Lower agricultural productivity and flooding are only increasing the pressure to migrate to the southern part of the country.

There has been high-level commitment from government to shift the national agenda from a disaster response approach to disaster prevention and risk reduction approach. The development of the Ghana Plan of Action on Disaster Risk Reduction (DRR) constitutes a milestone in this process.

The Plan, articulated according to the 5 pillars of the Hyogo Framework of Action, represents a coordinated national framework which will guide the interventions of the Government of Ghana with the overall objective of

making the country resilient to natural and man-made disasters. It entails policy change, advocacy and awareness creation, substantive investments in infrastructure and in general the development and implementation of strategies to change systems and prevent disasters from happening.

2.0 Executive Summary

2.1 Disaster Risk Profile

2.2 Hazard Risks

Ghana ranks high amongst African countries most exposed to risks from multiple weather-related hazards.

Ghana is exposed to floods and droughts, particularly in the Northern Savannah belt. Epidemics, pests infestations and wildfires occur across the country. There are risks of landslides, urban hazards, and coastal hazards (e.g. storms, storm surges, and coastal erosion). Coastal erosion has become more pronounced, especially along the Eastern coastline. Seismic hazards are most pronounced in areas around Accra, including the Akosombo Dam.

The catastrophic floods in the North in 2007 affected more than 300,000 people with close to 100,000 requiring assistance in various form to restore livelihoods. The 2007 floods followed immediately after a period of drought that damaged the initial maize harvest indicating high variability in climate and hydrological flows in Northern Ghana. Estimate of damage exceeds \$130 million. Between 1991 and 2008 the country experienced six major floods; the largest number of people affected being in 1991. 2.0 million people. The floods revealed weaknesses in the disaster preparedness and emergency response system, and exposed the vulnerability of people, land use systems and infrastructure.

2.3 Vulnerability and Exposure to Hazards

Current development dynamics and demographic changes put more people at risk of disasters in Ghana, related to increasing rural poverty, rapid urbanisation, growth of informal urban and coastal neighbourhood, poor urban governance, and declining ecosystems. The high dependence on natural resources in rural areas (more than 60 percent of Ghana's 24 million people depend directly on agriculture), lack of secure livelihoods, and limited informal and formal social safety nets add to these vulnerabilities. Moreover, there are widespread epidemic diseases, often in combination with HIV/AIDS and malaria. The impacts of localised disasters (droughts, local floods, epidemics and wildfires) are likely to have accumulated impacts on rural

livelihoods over time as a result of climate change in communities in the North in particular.

To this end, the severity and depth of poverty is highest in the three Northern Regions (Northern, Upper West and Upper East). Out of 18 percent of the total population that live in extreme poverty, 54 percent live in Northern Ghana. Poverty is highest among food crop farmers. Northern Ghana, especially, Upper East Region is also most exposed to land degradation and soil erosion. Land degradation accelerates run off, reduces soil productivity, and capacity of ecosystems to provide critical functions and services, including regulation of floods in key watersheds and resilience to climate variability.

Rapid population growth and pressure on land resources are often accompanied by unsustainable agricultural intensification, including expansion of (shifting) cultivation, deforestation, and depletion of vegetation cover due to overgrazing.

The majority of rural households depend on small-scale agriculture for their livelihoods, while they often lack access to markets and infrastructure necessary to improve farming practices, diversify livelihoods, and build up their assets and coping capacity. Hence, many households engage in non-farm income generation, urban migration (temporary or permanent), or become dependent on formal or informal safety nets through family or neighbours.

2.4 Climate Change

Overall, there is evidence that the agriculture sectors (including fisheries, cocoa, cereals, and root crops), and water resources sectors as well as human health and women's livelihoods will be negatively impacted by climate change; the poor being most vulnerable. Moreover, climate change may also contribute to accelerated storm surges and coastal erosion, to which Ghana is particularly vulnerable (World Bank et al. 2006, Dasgupta et al 2009). Coastal fisheries are undergoing severe changes due to change in sea temperature and currents combined with overfishing and non-functioning resource regimes. Similar issues face Lake Volta, with important implications for the lake ecology and livelihoods of fishermen.

Disaster risk and poverty are strongly linked in Ghana, and are in turn intertwined with the reality of climate change. Climate change is expected to expose people to higher rainfall variability, water stress, drop in agricultural yields, and depletion of resource-based livelihoods. This would increase the risk of drought periods, increase evaporation and reduce agricultural productivity (10% lower rainfall is expected by 2050; IPCC 1997). Moreover, climate change will probably result in rising temperatures (1.4-1.6 higher temperature is expected by 2050; IPCC 1997), potentially increasing the risk of forest and bushfires. At the same time, Ghana's economy and rural population depend on sustainable growth in these climate-sensitive sectors.

The impacts of climate risks are likely to magnify the uneven social and spatial distribution of risk in Ghana, and possibly amplify poverty in the North. At the same time, the links between disaster risk and poverty in a changing climate means that reducing disaster risk can help reduce rural and urban poverty, sustain development, growth and improve adaptation to climate change.

2.5 Past and Current National Response to Natural and Man-Made Disasters

Against this backdrop, the Government of Ghana has initiated actions on several fronts in order to develop strategies and strengthen institutional capacity in disaster risk management with increasing donor support. Disaster risk reduction has its main institutional home within the *National Disaster Management Organization (NADMO)* in the Ministry of the Interior. NADMO was established in 1996 under a National Security Council, chaired by the President of the Republic of Ghana. NADMO functions under a National Secretariat, ten Regional Secretariats, one hundred and sixty-eight District/municipal Secretariats and nine hundred Zonal offices. The NADMO Committees at National, Regional and District levels implement the policies, and are supported by Technical Advisory Committees. NADMO has a dual objective of i) to manage disasters by coordinating the resources of Government institutions and non-governmental agencies, and ii) developing the capacity of communities to respond effectively to disasters and improve their livelihood through social mobilization, employment generation and poverty reduction projects.

Ghana is a signatory to the *Hyogo Framework for Action (2005-2015)*, which aims at substantially reducing disaster losses by 2015 by building the resilience of nations and communities to disasters. Under this framework, NADMO and the Government of Ghana have contributed considerably to the management of disasters across the country.

Below is a (non exhaustive) list of key actions undertaken by national institutions in the past few years:

- Development of National Policy on DRR.
- Creation of National Platform and 10 Regional Platforms on DRR.
- Development of tools and trainings to integrate DRR and climate change into national and district development plans.
- Country-wide hazard mapping.
- Public awareness creation campaigns.
- Development of National Contingency Plan.
- Simulation exercises to strengthen disaster preparedness.
- Constant response to disasters and emergency situations.
- Restoration of livelihoods of disaster victims.

This notwithstanding, a number of challenges has been observed, including:

- Weak co-ordination of DRR activities, leading to missed opportunities for forging synergies among different partners and maximising their efforts.**
- The focus of NADMO and national institutions has been-until recently-mostly on disaster response rather than on long term proactive actions to reduce risks.**
- Capacity and budgetary constraints vis-a-vis the magnitude of work required to make the country resilient to disasters.**

2.6 The Ghana Plan of Action on DRR (2011-2015)

It is in this context that NADMO has initiated a process to design a **multi-sectoral integrated Plan of Action for 2011-2015**. It represents a coordinated national framework which will guide the interventions of the Government of Ghana with the overall objective of **minimizing disaster risks and reduce vulnerability to disasters**. Additionally, it serves as a resource mobilization

tool in order to fill the current budgetary gaps.

The Plan of Action is articulated according to the five priorities of the Hyogo Framework for Action:

2.6.1 Priority Action 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

Countries that develop policy, legislative and institutional frameworks for disaster risk reduction, as well as able to develop and track progress through specific and measurable indicators have greater capacity to manage risks and to achieve widespread consensus for engagement in, and compliance with disaster risk reduction measures across all sectors of society.

2.6.2 Priority Action 2: Identify, assess and monitor disaster risk and enhance early warning.

The starting point for reducing disaster risk and for promoting a culture of disaster resilience lies in the knowledge of the hazards and the physical, social, economic and environmental vulnerabilities to disasters that most societies face, and of the ways in which hazards and vulnerabilities are changing in the short and long term, followed by action taken on the basis of that knowledge.

2.6.3 Priority Action 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

Disasters can be substantially reduced if people are well informed and motivated towards a culture of disaster prevention and resilience, which in turn requires the collection, compilation and dissemination of relevant knowledge and information on hazards, vulnerabilities and capacities.

2.6.4 Priority Action 4: Reduce the underlying risk factors.

Disaster risks related to changing social, economic, environmental conditions and land use, and the impact of hazards associated with geological events, weather, water, climate variability and climate change are addressed in sector development planning and programmes as well as in post-disaster situations.

2.6.5 Priority Action 5: Strengthen disaster preparedness for effective response at all levels.

At times of disaster, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management

3.0 Institutional Arrangements

The National Disaster Management Organization (NADMO) shall be responsible for the coordination of the implementation of the Plan of Action.

Stakeholders involved in the development of the plan included various government Ministries Department and Agencies with technical support from UNDP. As the lead agency responsible for Disaster Risk Reduction activities, NADMO will coordinate with various stakeholders to implement the Ghana plan of Action through meetings and establishing an appropriate reporting system to regularly monitor progress and achievement.

In line with this, a National Committee for Ghana Plan of Action chaired by the National Coordinator of NADMO shall be established. The National Coordinator shall also delegate a focal person for the Plan of Action who will regularly maintain functional linkage among various government agencies, UN agencies and NGOs for successful implementation of programmes and activities.

The UN System under the leadership of UNDP shall offer technical guidance in collaboration with NADMO and to attract financial support from various donor agencies to implement the plan of action.

GHANA PLAN OF ACTION FOR DRR AND CLIMATE CHANGE ADAPTATION 2011-2015

HFA 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.					
OUTCOME 1: National authorities are better familiarised with DRR/CCA concepts and as a result have reinforced national legislation and policies for DRR and CCA, have established national and district levels strategies, actions plans and co-ordination mechanisms to address DRR and CCA, and ensure regular funding for DRR and CCA in the national budget.					
Outputs	Activities	Lead agency	Supporting partners	Required funds (\$)	Pledged funds
1. National legislation for DRR and CCA reviewed and reinforced.	1. Review Act 517 and propose amendments for strengthening it for effective DRR and CCA.	MINT/NADMO	-MEST/EPA, Gmet WRC, GNFS, MOFA, AGO	52,000	GoG 20'000C, IGF 90'000C
	2. Ensure passage of the revised amendment bills	-Do-	Parliamentary Select Committee On Defense & Interior, UNDP	10,000	
2. National DRR and CCA policy reviewed and adopted.	1. Review policies on DRR and CCA for effective disaster response	NADMO	-NDPC, MINT, AGO MOEP, MEST/EPA G-Met, WRC, GNFS, MOFA	49,250	GoG 30'000C, NREG 40'000C GFDRR 200'000USD
	2. Validate DRR and CCA policy	NADMO	-MINT, PSCDI, MOFEP, MEST, NP	144,451	
	3. Publish DRR and CCA policy and ensure wide dissemination			100,000	
3. DRR and CCA strategies and subsequent action plans exist at national and district levels.	1. Prepare National DRR and CCA Strategies	NADMO	-NP, Key stakeholders and partners	107,451	GoG 40'000C, NREG 220'000C, IGF 100'000C GFDRR 200'000USD
	2. Prepare National framework for DRR and CCA under which the various existing DRR/CCA plan of action will be realigned	MEST, NADMO	MINT, NDPC, MLGRD, MWRWH	65,802	
	3. Provide technical support to district authorities to draft and disseminate their DRR and CCA action plans in line with national DRR and CCA policies and strategies	NADMO	MLGRD, MOFEP, NDPC, MINT, UNDP, MMDAs, RCC, LGS	1,267,048	

<p>4. National co-ordination mechanisms for advancing DRR, CCA and Environmental sustainability in place at national, regional and local levels and are continuously reinforced.</p>	<p>1. Assess the existing multi-level inter-ministerial (national, regional and District) co-ordination mechanisms for CCA and sustainable development</p>	MEST	-NADMO, NDPC, Gmet, MLGRD, MMDAs, RCC, LGS	92,175	<p>Gog 40'000C, NREG 80'000C GFDRR 50'000USD</p>
	<p>2. Develop proposals for different institutional co-ordination options for CCA following a consultative multi-stakeholder workshop to consider institutional options for CCA co-ordinating structures</p>	MEST /MINT	-MOFA, MOH, EC, NADMO, WRC	120,000	
	<p>3. Establish an Inter-Ministerial co-ordination mechanism for DRR CCA and ES to advocate for mainstreaming DRR, CCA and ES into policies and sectoral development plans</p>	MEST/ NADMO	-Do-	40,000	
	<p>4. Review/set up agreed multi-stakeholder co-ordination mechanisms for DRR and CCA at National, Regional and District levels</p>	-MINT	-MWRWH, NADMO, MEST, Gmet, Friends of the Earth(NGO), UNDP,	50,000	
	<p>5. Reinforce the capacities of NADMO for co-ordination of the DRR National Platform</p>	NADMO	MINT, MOFEP, UNDP	100,000	
	<p>6. Establish DRR district platforms in all districts (following the ongoing establishment of 10 Regional Platforms)</p>	NADMO	MINT, MOFEP, UNDP, National, Regional Platforms	1,700,000	

<p>5. National authorities familiarized with DRR and CCA concepts, show public commitment for DRR and CCA and contribute to regional partnership.</p>	<p>1. Define systematic and ongoing process of high-level awareness raising and training events on DRR and CCA new policy directions at national and district levels</p>	NADMO /MEST	-MOFEP,MLGRD , UN Agencies, MWRWH, NGOs	1,000,000	
	<p>2. Organise a national event on DRR/CCA with participation of the UNISDR SRSG and all concerned line Ministers, Parliamentarians, and civil society organisations</p>	MINT/NADMO	-UNDP, UN Agencies, MMDAs UNISDR , Mo FARI	70,000	
	<p>3. Organise a yearly one-day event for Mayors and their technocrats to discuss Urban Risk and for joining the UNISDR “Safer Cities” campaign. This is expected to raise interest in DRR/CCA and to foster experience sharing and collaboration</p>	NADMO /MLGRD	-MINT, MLGRD, MMDAs UNDP	200,000	
	<p>4. Undertake exchange programmes and visits to other countries with strong DRR and CCA programmes</p>	MINT/NADMO	-MoFARI, MOFEP, ECOWAS Secretariate, UNDP MEST	150,000	
	<p>5. Strengthen networks with sub-regional organisations: participate in ECOWAS yearly consultation meetings.</p>	MoFARI	- MINT, MOFEP, ECOWAS Secretariate, UNDP, NADMO	100,000	
<p>6. National Management Fund established to undertake DRR/CCA activities.</p>	<p>1. Ensure permanent funding for DRR and CCA.</p>	MINT /MEST	MOFEP, Parliament, NP on DRR & CCA	35,000	

HFA 2: Identify, assess and monitor disaster risk and enhance early warning					
OUTCOME 1: Based on sound legislation, developed competencies and adequate tools for disaster, climate and environmental risks assessment, Ghana has completed its national disaster risk profile and has built proper early warning mechanisms to inform communities of possible disaster, climate and environmental hazards					
Outputs	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
1. A framework for risk assessment and early warning is in place.	1. Ensure regular risk assessments at national, regional and district levels, and the establishment of a national risk observatory.	NADMO	-EPA, GMet, MINT WRC,FC, MLGRD, MMDAS, MEST/EPA, AGO Office, GSD and CERSGIS	45,000	
2. A tool developed for national disaster and climate risk assessment in Ghana.	1. Develop a tool for disaster and climate risk assessment for Ghana (with the integration of climate information and climate change projections into the risk assessment)	GMet	Consultancy - UNDP, MEST/EPA,	300,000	GFDRR 400'000USD
	2. Adopt methodology and implementation arrangements for disaster and climate hazard/risk/vulnerability profiling at district level (pilot flood risk assessment in some selected areas of the country)	NADMO	NADMO -GMet, UNDP MEST/EPA, NDPC, WRC MWRWH/ HSD	250,000	
3. Competencies developed at National, Regional and District levels for conducting disaster and climate risk assessments.	1. Organise training for Disaster and climate risk assessment at the National, Regional level for NADMO and other relevant stakeholders at all level.	NADMO	Consultancy, UN Agencies, NGOs, GRCS, GMet, MMDAs, MLGRD, MEST/EPA, RCC	500,00	GFDRR 200'000USD
	2. Organise training in Disaster and climate risk assessment at district level.	NADMO	UN Agencies NGOs, GRCS EPA	850,000	
	3. Develop and implement a strategy for community based participatory approach to local hazard and vulnerability analyses in 5 districts in each region.	NADMO	NDPC, MEST EPA, DVGs, UN Agencies, NGOs, GRCS, GMET, MMDAs, MLGRD	50,000	

<p>4. Disaster and climate risk assessment completed at National, Regional and District levels and are regularly updated.</p>	<p>1. Conduct a study on Indigenous and Traditional knowledge for Early Warning systems</p>	NADMO	-GMet, MOFA MOH, UN Agencies, NGOs, Consultant, MLGRD,MMDAs	50,000	
	<p>2. Produce/Review/Update existing hazard/risk/vulnerability assessments and maps for priority hazards.</p>	NADMO	-GSD, HSD, SD, MOFA, MOH / G H S,GAEC, GNFS, GMet	180,000	
	<p>3. Map out an overview of key infrastructure and assets threatened by hazards</p>	NADMO	Consultant/ GNFS, WRC, GSD, GMet	65,000	
	<p>4. Conduct pilot exercise in urban hazard mapping and urban governance (based on City Primer)</p>	NADMO	-Consultant	30,000	
	<p>5. Conduct disaster risk and climate risk assessments at National, Regional, and District levels.</p>	NADMO/ MEST	-Consultant, UN Agencies, NGOS, MMDAs, MDAs, COP	150,000	
	<p>6. Conduct country Vulnerability and risk analysis and mapping capacity for health, including health facility safety (WHO support)</p>	MOH	-WHO, NGOS NADMO, DHMT Directorate of Vet. Services	400,000	
	<p>7. Revise bi-annually results of the various assessments in collaboration with various technical agencies.</p>	NADMO	-Consultant, Technical Agencies	150,000	

5. An effective hazard monitoring and early warning Systems with sound scientific and technological basis established, contingency planning using the results of the national risk assessments and updated regularly.	1. Support the development of the legal and policy framework for prioritising early warning	NADMO	-GMet, MEST, GSD, MOFA, AGO, CERSGIS, NMIMR	160,000	GoG 30,000. IGF, 80,000
	2. Undertake an inventory of Early Warning Systems (EWS)	NADMO	GMet, MOFA, HSD, GHS, GSD, GNFS, MEST, GAEC, GNPC, DVGs	55,000	
	3. Design a multi-hazard EWS with identification of key areas of focus and collaborating institutions and initiatives	NADMO	-Do-	20,000	
	4. Develop a capacity building strategy for EWS and contingency planning for all stakeholders	NADMO	GMet, MOFA, HSD, GHS, GSD, GNFS, MEST, GAEC, GNPC, DVGs, UN Agencies, NGOs	80,000	
	5. Procure EWS materials	NADMO	-DO-	4,000,000	
	6. Provide infrastructure and communication equipment to facilitate exchange of risk information	NADMO	MOC, MOFEP, UN Agencies, NGOs, MC, ECOWAS Secretariat	2,000,000	
	7. Train staff of GMet on the use and maintenance of EWS equipment	GMet	ECOWAS Secretariat, UN Agencies, AAP	100,00	
	8. Review and update existing contingency plans at Regional, District, and community levels using risk assessment results	NADMO	MLGRD, UN Agencies, MMDAs, NGOs,	150,000	
	9. Establish a communication and implementation mechanisms for disseminating the information through radio, TV, cell phones, and other forms of EWS communication to ensure that communities take precautionary measures to avert the impact of disasters.	MINT	MC, NADMO, MINT, ISD, MOC, MMDAs, Trad. Authorities, Tech. Agencies, GMet	100,000	
	10. Establish EWS on environmental calamities at district levels	NADMO	MEST/EPA, CBOs	1,000,000	
	11. Establish protocols for integrating, where possible, Regional and cross boarder warning systems	MOI/MOFARI	ECOWAS, NADMO, WRC, MOFA, VRA, GHS	40,000	

OUTCOME 2: Ghana has reinforced its technical institutions (GMet, Seismological Institutions etc.) and has established a National Risk Observatory to facilitate access to information on disasters, EWS, and climate and environmental risks for decision makers.					
Outputs	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
1. Enhance the capacity of the GMet, WRC, GSD and other Seismological institutions to provide adequate data on trends of disaster and climate risk.	1. Ghana Meteorological Services and other research stations to build their capacity for predicting climate-related disasters such as droughts and floods.	GMet	-MOFA, NADMO AAP, UN Agencies, NGOs SARI, ECOWAS, SADA HSD, WRC	55,000	GoG 20'000C, IGF 80'000C
	2. Support GMet capacity building: training staff, renovate weather stations, and establish a numerical weather prediction service.	GMet	-MOFEP, NADMO AAP, UN Agencies	7,500,000	
	3. Enhance the development of the institutional capacity of Geological Survey Department.	GSD	MOFEP, Dept of Earth Science (University of Ghana)	7,000,000	
	4. Undertake research on key environmental issues such as climate change and health	NADMO	MEST/EPA, UN Agencies, NGOs, NMIMR, MOH, GHS, IESS, Teaching Hospitals	55,000	
2. A National Disaster Risk Observatory, including various information management systems established	1. Establish systematic, standardized process to collect, assess and share data, maps and trends on hazards and vulnerabilities	NADMO	MOFEP, MOH, MOFA, GMet, AAP, UN Agencies, NGOs, SD, LC, CERSGIS	100,000	
	2. Establish GIS based information management system on climate change induced disaster and natural hazard risk information	NADMO	GMet, NDPC, AAP, MOFA, Dept. of Earth Science (UG), CERSGIS	4,000,000	

HFA 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

OUTCOME 1: A national strategy developed for raising public awareness in DRR, CCA and ES. As a result, various actors and influencers trained on DRR, CCA and ES concepts; regular campaigns are conducted at National, Regional and District levels; schools and academic institutions gradually incorporated DRR, CCA and ES into their regular curricula or extra curricula activities.

Outputs	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
1. A National strategy drafted and mechanisms established for public awareness on disaster, climate change and environmental risk	1. Develop a strategy for national public awareness on DRR/CCA/ES, which will include effective use of media (radio, newspaper and TV).	NADMO	-Mol/ISD, Technical Agencies, Media	170,000	
	2. Consult with key stakeholders and establish national knowledge platform for climate change at National, Regional and District levels.	NADMO	Key Stakeholders	200,000	
2. Competencies of various actors and potential influencers (politicians, judiciary, police, financial institutions, architects, etc) in DRR, CCA and ES developed at National, Regional and District levels.	1. Design and conduct various DRR, CCA and ES training using learning in action programmes at National, Regional and District levels, with a focus women's participation.	NADMO	-MOWAC, UN Agencies, NGOs, MEST/EPA	250,000	GoG 70'000C, IGF 180'000C GFDRR 300'000USD
	2. AAP Regional Specialists to conduct Leadership for Results Programme for capacity building.	UNDP	-NADMO, NGOs, Private, Sector	130,000	
	3. Organise training for policy makers and professional bodies on DRR/CCA	NADMO	MOFEP, NGOs, UN Agencies, Association of Eng, Arch, Doc, MMDAs, AI, Private Sector, MC	55,000	
	4. Organise training for journalists and media on DRR, CCA and ES	NADMO	-Do-	55,000	
	5. Organise joint trainings for NGOs and other IO engaged in DRR, CCA, ES	NADMO	UN Agencies, NGOs, GRCS, ECOWAS	55,000	

<p>3. Regular public awareness campaigns on DRR, CCA and ES (TV, radio, brochures, posters, leaflets, etc.) conducted at National, Regional and District levels.</p>	<p>1. Design/Prepare advocacy and knowledge sharing materials in disaster, climate change environmental hazards and risks</p>	<p>MOI/ NADMO</p>	<p>-GMet, ISD, EPA, Media Houses, MDAs</p>	<p>350,000</p>	<p>GoG 70'000C, IGF 700'000C</p>
	<p>2. Identify a few DRR champions in Ghana among celebrities, political figures, artists, etc., who could advocate and demonstrate/promote practical DRR/CCA/ES cases.</p>	<p>MOI, NADMO</p>	<p>UN Agencies, PSCDI, MUSIGA</p>	<p>20,000</p>	
	<p>3. Organise annual campaigns/events/ public relations on DRR, CCA and ES using "international days" of celebration (floods, drought).</p>	<p>MOI, NADMO</p>	<p>UN Agencies, MDAs, NGOs, DVGs, MMDAs</p>	<p>150,000</p>	
	<p>4. Equip regions and selected districts with communication and outreach equipment</p>	<p>MLGRD, NADMO</p>	<p>GMet, MEST UN Agencies MDAs, MOC, ISD Private Sector</p>	<p>200,000</p>	
	<p>5. Organise durbars and outreach programmes for vulnerable groups and civil society organisations</p>	<p>MLGRD, MMDAs</p>	<p>UN Agencies, MMDS, CSOs, Private Sector, Traditional Authorities, CBOs, NADMO</p>	<p>80,000</p>	
	<p>6. Carry out community -based outreach programmes</p>	<p>NADMO</p>	<p>-Do-</p>	<p>120,000</p>	
	<p>7. Carry out public education on DRR, CCA and environment issue in national and local media</p>	<p>MMDAs</p>	<p>Media, EPA ISD, NADMO, UN Agencies</p>	<p>3,000,000</p>	
<p>4. DRR/CCA/ES integrated into regular programmes or extra curricula activities of schools and various academic institutions.</p>	<p>1. Develop and distribute handbooks/text books on DRR/CRM/ES to educational institutions</p>	<p>MOE/GES</p>	<p>MEST/EPA, UNICEF, NADMO</p>	<p>250,000</p>	<p>GoG 20'000C, IGF 60'000C</p>
	<p>2. Adopt for Ghana tools and best practices already developed in other countries for the education system.</p>	<p>MOE,</p>	<p>GES, NADMO, UNICEF, UNDP, NDPC, IESS</p>	<p>40,000</p>	
	<p>3. Collaborate with tertiary institutions to develop or provide courses in DRR/CRM</p>	<p>MOE, NADMO</p>	<p>-Do-</p>	<p>145,000</p>	
	<p>4. Integrate DRM in tertiary training institutions curricula, including health training institutions</p>	<p>MOE, NADMO</p>	<p>GES, GNAT, MOH, UNICEF,</p>	<p>70,000</p>	
	<p>5. Stimulate environmental education in formal and non- formal education systems.</p>	<p>MOE NADMO</p>	<p>-Do-</p>	<p>160,000</p>	

HFA 4: Reduce the underlying risk factors					
Outcome 1: Following the further development of national competencies in mainstreaming DRR and CCA into environmental and natural resource management , social and economic development practices, land-use planning and other technical sectors, effective programmes implemented at national, district and community levels to enhance resilience to natural hazards, with particular focus on the North of Ghana.					
Outputs	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
Output 1: The technical personnel of ministries and local government trained on environmental and natural resources management as a result environmental projects that contribute to building community resilience initiated.	1. Adapt the training tool on “DRR and Ecosystems” to the Ghana context	MLNR	-NADMO, GNFS MOFA, MEST/ EPA, GMet, UNDP, NGOs, MLGRD, MWRWH	60,000	NREG 70'000C, IGF 70'000C
	2. Organise training in DRR and Management of Ecosystems for various concerned Ministries, Agencies and other Technical personnel.	NADMO	- MLNR, MEST/EPA, MLGRD, MWRWH	50,000	
	3. Engage with key sector programs including NREG on how to integrate elements of DRR and CCA into environment, forestry and mining. Initiate projects on climate change, desertification, biodiversity, wetlands, e-waste, etc...	MEST, NADMO	-EPA, MOFA -MLNR, NGOs, UN Agencies, Mining Companies , Private Sector	50,000	
	4. Stimulate community environmental initiatives and programmes starting by supporting school clubs to implement practical environmental action programmes.	NADMO, MOE	-GES, UNICEF MEST/EPA, NGOs, GNFS, MLNR, MOWAC	60,000	

<p>Output 2: The technical personnel of concerned ministries and district/local governments trained on how to integrate DRRT/CCA/ES into Social and economic development practices and as a result effectively adapted their strategies, action plans and budgets.</p>	<p>1. Develop specific tools for integrating DRR/CCA/ES into various development sectors (water management, agriculture, health, tourism, energy, etc).</p>	<p>MEST, NADMO</p>	<p>-NDPC, EPA -Consultant</p>	<p>120,000</p>
	<p>2. Organise gender sensitive training on how to integrate DRR/CCA/ES into various development sector planning processes</p>	<p>MOWAC NADMO</p>	<p>UNDP, NGOs, CSO, MDAs</p>	<p>75,000</p>
	<p>3. Establish focal points in all sector agencies (MDAs) and encourage/accompany key sector ministries and districts/local governments to prepare sectoral DRR/CRM/ES strategies, plans and integrate them in programmes.</p>	<p>NADMO</p>	<p>-NDPC, UNDP MLGRD, MEST, MMDAs, MDAs,OHCS</p>	<p>50,000</p>
	<p>4. Revitalise the Technical Advisory Committees (TACs)</p>	<p>NADMO</p>	<p>-MOI, MOFEP UNDP, RCC, MMDAs</p>	<p>35,000</p>
	<p>5. Identify and sensitise women on DRR/CRM/CCA/ES</p>	<p>MOWAC NADMO</p>	<p>-MMDAs, MEST UNDP, NGOs</p>	<p>75,000</p>
	<p>6. Train and resource women in vulnerable communities in viable economic activities to build assets and coping mechanism and capacity</p>	<p>MOWAC NADMO</p>	<p>MMDAs, MEST, NBSSI NVTI, MASLOC, Financial Institution, NGOs, MESW</p>	<p>200,000</p>
	<p>7. Train and resource youth groups and other community based organisations (CBOs)</p>	<p>MoYS NADMO</p>	<p>-Do-</p>	<p>120,000</p>
	<p>8. Conduct in depth review of all sectoral development plans and identify the funding that already supports DRR/CCA. Identify the existing financial mechanism in national sectoral budgeting that could support further DRR/CCA</p>	<p>NDPC NADMO</p>	<p>-MOFEP -MEST -Consultant, EPA, ISSER, IEA -UNDP</p>	<p>45,000</p>
	<p>9. Build on existing interventions for enhanced economic analysis of climate change adaptation needs, and budgeting</p>	<p>NDPC NADMO</p>	<p>-Do-</p>	<p>50,000</p>
	<p>10. Assist key stakeholders to develop climate resilient investment plans</p>	<p>MEST/ NADMO/MLGRD</p>	<p>EPA, NDPC, GMet, NP for DRR & CCA, UNDP</p>	<p>30,000</p>
	<p>11. Sensitise Private Sector to fund DRR and CCA</p>	<p>NADMO</p>	<p>MEST/EPA, NDPC, MEST/EPA, NDPC, MDAs, UNDP, AGI, Media</p>	<p>20,000</p>
	<p>12. Facilitate the introduction of disaster and climate insurance schemes</p>	<p>NADMO, MOFA</p>	<p>UNDP, MEST, NP on DRR, GIZ, NIC, NGOs, MOFEP, NDPC, Media</p>	<p>50,000</p>

<p>Output 3: The technical personnel of concerned ministries and district/local governments competencies reinforced in Land-use planning and other technical measures and as a result building codes reviewed, concrete measures taken to effectively reinforce key infrastructures and building resilience to natural hazards</p>	<p>1. Train key technical partner organisations (Architects, Surveyors and Engineers on building designs, etc.) in construction to better integrate CCA and DRR into their areas of expertise.</p>	MWRWH	-GIE, GIS, GIA NADMO, UNDP MLGRD,	140,000
	<p>2. Establish and strengthen DRM within the Ministry of Health.</p>	MOH, NADMO	-MWRWH, GHS, Teaching Hospital, WHO MDAs	45,000
	<p>3. Review national building codes in relation to risks posed by various natural hazards</p>	MWRWH	-NADMO, GSB MLGRD, GIA, GIE	200,000
	<p>4. Establish and enforce mechanism for inspection of compliance of building codes</p>	MWRWH	-NADMO, ECG MOFA, MEST, MLGRD, SADA, GWCL, MMDAs	40,000
	<p>5. Review the national land use planning and ensure the integration of retention basins.</p>	MWRWH		80,000
	<p>6. Build infrastructure for capturing water (multipurpose storage reservoirs, aimed also at generating electricity and provide water for irrigation during the dry season) and other infrastructure for mitigation (river bank reinforcement, forestation, "Regular cleaning and reinforcement of water evacuation channels in cities located in flood prone regions...").</p>	MLNR	-NADMO, FC, MMDAs, RCC UNDP, LC.	30,000,000
	<p>7. Conduct campaign on Safer Schools: establish ID cards for Schools compliance to minimum safety to various natural hazards and prepare a plan of action for physical reinforcement of schools most at risk in high natural disaster risk prone areas.</p>	MWRWH	-MOFA, MEST ECG,NADMO SADA, GWCL,VRA	100,000
	<p>8. Conduct campaign on Safer Hospitals: establish ID cards for Hospitals compliance to minimum safety to various natural hazards and prepare a plan of action for physical reinforcement of hospitals most at risk in high natural disaster risk prone areas.</p>	MOE, NADMO	GES, UNICEF, GET FUND, UNDP, NGOs.MOI, ISD	120,000
	<p>9. Establish ID card for all public buildings and critical infrastructure following criteria for resilience to natural disasters.</p>			50,000
	<p>10. Support the ongoing resettlement programmes in the North as part of disaster risk reduction measures. (WB project for the North following floods risk assessment of September 2011).</p>	MOH, NADMO	- GHS Teaching Hospitals, MOFEP, WHO, UN Agencies, MOI, ISD	100,000
		MWRWH	NADMO,MMDAs, MOFEP, NGOs, , UN Agencies.GNFS,EPA	
			-SADA, RCC MMDAs, MDH UN Agencies,	

Outcome 2: The resilience and the capacity to recover from disasters (drought and floods) of populations in the North of Ghana enhanced due to the implementation of the SADA programme.					Pledged funds
Outputs	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
<i>Environmental and natural resources management</i>					
1.Reduce the impact of future floods through Community Resource Protection	1.Plant trees and protect the vegetative cover along the banks of main drainage systems (rivers, dams, streams) in the north for developing and protecting watersheds and other communal water resources in line with the Buffer Zone Policy.	MLNR/ SADA	-NADMO, MOFA, FC, GNFS, GHD, Traditional Authorities, UN Agencies, CBOs, MMDAs, WRC, NGOs	500,000	
<i>Social and economic development practices</i>					
2. Wetlands developed for agriculture and ecotourism	1.Develop and use of wetlands for agricultural and ecotourism purposes as the opportunities arise (Such initiatives will be community-managed to ensure shared ownership and stakes in the preservation of the wetlands)	MLNR	-MOFA, MMDAs, MoT/GTB, Traditional Authority, NGOs, DVG, FC	700,000	
3. Regular development planning and management initiatives of state and non-state institutions to mainstream disaster risk reduction and CCA	1. Map out disaster risk zones in the north.	NADMO, SADA	-RCCs MDAs, MMDAs,CERSGIS	250,000	
	2. Establish common protocols for mainstreaming disaster risk reduction initiatives in all development planning and management processes.	NADMO/ SADA, NDPC	RCCs, MLGRD -MDAs -MMDAs -UNDP -NGOs	60,000	
4. Risk reduction measures in the agricultural sector regularly promoted and farmers' resilience enhanced for drought and other hazards due to guidance and technical support for better food production.	1. Develop and propagate drought resistant varieties of local food and cash crops to mitigate the impact of droughts.	SADA/ MOFA	- SARI NADMO Agricultural research	100,000	
	2. Support farmers cultivating in flood plains with water management interventions, to enable them control and manage flood waters to enhance production and productivity.	MOFA /NADMO	-MWRWH, SADA, -MMDAs, Department of Cooperative, CBOs	200,000	

5. The resilience of the Most Vulnerable Population in the North enhanced through Direct Food & Nutrition Assistance.	1. Support initiatives that improve the entitlements of poor and most vulnerable households to food and good nutrition (widows, orphans, sick, especially people living with HIV, etc) either directly or through a voucher system.	NADMO	-MMDAs, WFP MEST, Traditional Authorities, RCC, UNICEF, MOH MOFA, MOE MOWAC, NGOs, CBOs	340,000	
6. Community Resilience and Livelihoods Rebuilding Initiatives launched in order to accelerate the recovery of populations affected by the 2007 floods	1. Provide seeds, inputs, financial assets, and facilitate access to productive resources resulting from the floods of 2007 and the aftermath of other disasters such as droughts, floods, or conflicts. (The initiative will aim at stimulating the rebuilding of livelihoods and economic growth as the most viable ways of increasing community resilience, poverty reduction and wealth creation in the north.)	MOFA/ SADA	-MOFA, FAO RCC, MMDAs SARI, Traditional Authorities, Financial Institution, WFP	100,000	
7. Strategic Food Reserve Initiatives promoted	1. Support the development and effective management of strategic food reserves in selected production zones across the north to further enhance financial capacity of poor households to access food throughout the year.	SADA/ MOFA	-BSC, FAO, NADMO UNDP, NGOs RCC, MMDAs SARI	1,000,000	
<i>Land-use planning and other technical measures</i>					
8. Development and management of flood control systems promoted	1. Construct flood water diversion ducts and catchment reservoirs along flood plains to control surface run-offs and over spillage.	RCCs/ SADA	- MWRWH, MOFA/GIDA, VRA, MMDAs, NADMO, MLGRD/ DACF	3,000,000	
9. Local Capacities in terms of proper construction techniques developed	1. Build local capacity for Improved Housing (enabling households that lost all or part of their housing infrastructure during the 2007 floods to rebuild more flood)	SADA / DRH, NADMO	- MWRWH, GIE, GIA, GSB, UN Habitat, UN Agencies	290,000	
10. Appropriate Housing and Infrastructure Development promoted	1. Launch an Improved Rural Housing Development Initiative to promote the development of structured and robust housing scheme that harnesses local human and material resources to provide structurally improved, culturally appropriate, and financially affordable housing in the north.	MMDAs/ MWRWH	GIE, GIA, GSB, UN Habitat, NADMO SADA, UN Agencies, DRH, MMDAs	300,000	

HFA 5: Strengthen disaster preparedness for effective response at all levels.					
OUTCOME 1: Sound legal base and institutional arrangements established in order to ensure efficient leadership and coordination for natural and environmental emergency preparedness and response.					
Output	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
1. Roles and responsibilities of different national actors for emergency response clarified.	1. Map Ministries, Departments, Agencies to ensure predictability and accountability in national response to emergencies.	NADMO	-MOI, NGOs, UN Agencies, NCCE, MDAs	50,000	
	2. Define stakeholders' role and responsibilities especially complementarities between coordination and operation role in emergency response.	NADMO	MOI, UN Agencies, NGOs, NDPC, MOD, MMDAs	60,000	
	3. Promote greater coordination among disaster preparedness and response organisations operating in disaster prone areas especially in the north in order to develop more rapid and co-ordinated response mechanisms.	NADMO	-SADA, RCCs, MMDAs, Traditional Authorities, UNDP, NGOs	80,000	
	4. Review (if necessary) existing legal documents to clarify roles and responsibilities of various government sectors in DM.	MINT/ NADMO	RCCs, NDPC, AGO, MMDAs, Parliament	90,000	
2. NADMO's capacity and competencies reinforced in order to provide operational leadership and coordination.	1. Clarify roles and responsibilities within NADMO on co-ordination and emergency response by organising separate units, for example technical committees!.	NADMO	MINT, NDPC, UNDP, MLGRD, MMDAs, Platforms	30,000	
	2. Assess NADMO's capacity to perform the functions of co-ordination and implementation. Once determined, it should be able to delegate as appropriate to other institutions. If otherwise, it should work at ensuring that those specific capacities lacking are revamped.	NADMO	-Consultant, MINT, UNDP, NGOs	45,000	
	3. Prepare a plan of action of NADMO's capacity development and provide adequate funding for addressing immediate internal institutional operational capacities (buy boats, trucks, helicopters and employ more staff in the field etc.).	NADMO	MINT, MOFEP NDPC, UNDP, DACF	55,000	

3. National Disaster Management Strategy and Emergency Preparedness/Response policy and Framework adopted and disseminated.	1. Review and update the current integrated national disaster management strategy with an effective framework of legal provisions, response plans, standard operating procedures and templates owned by national, regional and district level actors of all sectors.	NADMO	-MINT, AGO RCCs, NDPC, MMDAs, MLGRD UNDP, NP on DRR & CCA	65,000	
	2. Disseminate the strategy and other documents to NADMO staff (possibly in regional, district, community-level workshops) and other stakeholders.	NADMO	MINT, RCC, NDPC, MMDAS, MLGRD, UNDP	200,000	
	3. Select 3 districts per year from each most at risk region for training. Ensure linkage of environmental programmes, disaster risk management and climate change to Emergency Preparedness programmes.	NADMO	NP on DRR & CCA, MEST, GMet, MINT, RCC, NDPC, MMDAS, MLGRD, UNDP	48,000	

OUTCOME 2: Competencies of NADMO personnel and various agencies working in DM enhanced through a ToT programme and various trainings are conducted as part of the implementation of the training strategy.					
Output	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
1. Training strategy prepared, existing DM training tools revised and adapted to the strategy, and new training tools developed.	1. Develop training strategy to address gaps relevant to Regions/Districts specific hazards (natural, man-made, health, food security, HazMat, etc...)	NADMO	MOFEP, MINT UN Agencies, Consultant, RCCs, MMDAs, MOFA, CRS, GHS,CI	200,000	
	2. Revise training modules and adapt existing training tools to different contexts and needs of vulnerable populations	NADMO	MOFEP, MINT, UN Agencies, Consultant, KAIPC, GHS, MOFA, C Int.	50,000	
	3. Develop new training manuals to ensure consistency with the training strategy.	NADMO	Consultants KAIPC, GIMPA, MOFEP,EPA, CSIR, GHS,	80,000	
	4. Get additional modules from the former UN DMTP (including Health DRM training) Print and disseminate training modules	NADMO	UN Agencies	100,000	
2. Well selected resource persons trained as trainers to implement the training strategy (including simulations) in collaboration with various national agencies, NGO, IO, etc., at national, regional, district and community levels.	1. Establish proper criteria for selection of trainers	NADMO/EPA	-MOI, NDPC, UN Agencies, CRS, MOFA,GHS,Care Int.	20,000	
	2. ToT yearly workshop in DM including food security in each of the 10 regions	NADMO	RCC, MOFA WFP, UNDP SADA	95,000	
	3. Organise training on Data Processing & GIS to enhance NADMO's capacity in the utilisation of geo-information with emphasis on preparedness and rapid response.	NADMO	-GSS, GIMPA, UN Agencies, KNUST, GMet, EPA	2,000,000	
	4. Maintain a proper database of all trained resource persons	NADMO	MOI, UNDP,	20,000	
	5. Identify and maintain internationally trained personnel database as trainers and first responders to emergencies i.e. UNDAC trained	NADMO	MOI, UNDP	40,000	

	6. Encourage inter-agency joint training considering the limited capacity of organisations especially at regional and district levels (selection of participants should follow specific criteria in order to maximise the impact of trainings).	NADMO	MOFEP, UNDP, Private Sector, All Stakeholders	250,000	
	7. Provide specific trainings at district level for authorities in Recovery including Post disaster needs assessments that will include Damage and Loss Assessment (DALA) tool and the Human Recovery Needs Assessment (HRNA) tool	NADMO	MLGRD, UNDP, UN Agencies Consultant, MMDAs, MDAs, RCCs	200,000	
	8. Organise trainings in Humanitarian Logistics Management in Emergency Situation	NADMO	UNISDR, MINᄁ, GRB, UNHCR, SS	45,000	
	9. Simulation exercises/drills conducted annually to test the contingency plan and the Disaster Co-ordination Structures	NADMO	-MMDAs, UN Agencies,	250,000	
	10. Conduct 3 simulation exercises per year in 3 different regions with NADMO regional offices	NADMO	MMDAs, UN Agencies, ECOWAS, NGOs, Bilateral Organisations, RCCs, CBOs	450,000	
	11. Identify and assess various community level trainings of CBOs/NGOs	NADMO	NDPC, MDAs, UN Agencies, MOI, NGOs	250,000	
	12. Establish formal partnerships with NGOs and civil society organisations that are already implementing Community Based Disaster Risk Management programmes for trainings at community level: offer its expertise, training modules, cost sharing, community participation, etc. Establish Community Information Exchange programmes through which communities can meet and exchange information/experiences on implementation of disaster risk management initiatives-based on regional/district disparities.	NADMO	-MDAs, UN Agencies, NGOs	40,000	
	13. School curriculums and extra-curricular activities in primary and secondary schools to include preparedness elements such as fire drills, evacuation exercises and first aid to prepare and provide all necessary information/ dissemination materials to NADMO regional offices in order to organise awareness campaigns at district level).	NADMO	-MOE, GNFS, GES, GRCs GCA, CRS, MDAs, CSIR, GSD	250,000	
	14. Conduct in each region exercises/drills for 3 schools per year with the participation of various stakeholders.	NADMO	-Do-	200,000	

OUTCOME 3: Disaster preparedness and response planning/working/monitoring tools developed, response equipment and emergency response funding available at national regional and district levels to ensure rapid and efficient emergency response and recovery.

Outputs	Activities	Leading agency	Supporting partners	Required funds	Pledged funds
1. Emergency Preparedness and Response Packages created to include Minimum Preparedness Measures, Emergency Readiness Measures, Standard Operating Procedures (SOPs) for First 24-48-72-hour response that are regularly tested.	1. Review National Regional and District Contingency Plans yearly	NADMO	-MDAs, MMDAs, Private Sector, UN Agencies, Bos, NGOs, IOs	150,000	GoG 90'000C, NREG 360'000C, IGF 110'000C
	2. Establish and test emergency response plans for oil spills , floods, climate change related disasters	NADMO	-MEST, GMet, WRC,HSD, VRA, OMEC, GNPC, TOR MDAs, GMA GPHA, GAF, NS, ECOWAS, EPA, MOH, GNFS, OMEC	90,000	
	3. Circulate the existing SOP to all relevant partners (normally included in the CP) Both hard and Softcopies	NADMO	-Do-	30,000	
	4. Review annually, Hazard vulnerability assessment and mapping (see also HFA2) Agree on Needs Assessments(Pre and Post) Template.	NADMO	-Do-	60,000	
2. Easily accessible database for centralizing information created and regularly updated to contain various key reference documents, templates, reports, plans and information.	1. Update and consolidate relevant baseline and vulnerability data (including mapping)	NADMO	-EPA, MDAs, UN Agencies, NGOs, CERSGIS, UNFPA, GSS	125,000	
	2. Create Information Management (IM) repository on EPR		-Do -	60,000	
	3. Establish directory of useful emergency contacts (Govt., UN, NGO and donors)	NADMO	MDAs, CSOs, NGOs, Private Sector	50,000	
	4. Establish standby partner liaison arrangements between Govt. and other humanitarian partners	NADMO	MINT, MOFA, UN Agencies, IOs, NGOs, MDAs, Private Sector	40,000	
	5. Agree on Minimum Standards of ensuring staff safety and security during emergencies		MINT, NP on DRR and CCA, AGO, LC, NGOs, UN Agencies	30,000	
	6. Prepare draft EMOPs/project proposals-to be worked on quickly as per need.		MINT, NDPC, MDAs	35,000	

	<p>7. Agree on a standard reporting template (to be used by all NADMO offices to harmonise information).</p> <p>8. Establish a strategy for dealing with the Media and other public information tools.</p>	NADMO	-MDAs, UN Agencies, NGOs	40,000	
		NADMO	UN Agencies, MINT, ISD, NMC	30,000	
3. Capacity assessment in terms of logistics and telecommunications completed. As a result, adequate response equipment procured, tailored trainings organised, and partnerships with the resulting stand-by agreements included into disaster response plans.	1. Undertake joint assessment mission covering all zonal offices to review emergency telecom capacities, emergency backup power supply systems, ICT training.	NADMO	-WFP, UN Agencies, MDAs, MMDAs, NGOs, GRCs MoE/ECG, GIFEC, MOC, Telecom Companies	40,000	
	2. Develop joint comprehensive and strategic implementation plan in consultation with other stakeholders.	NADMO	-Do-	30,000	
	3. Standardise and harmonise communication equipment between NADMO and potential stakeholders	NADMO	-Do- & Consultant	40,000	
	4. Procure logistics and equipment. (To be budgeted by NADMO).	NADMO	-MOFEP, PPA, UN Agencies, Parliamentary Select Committee on Defense & Interior	40,000	
	5. Organise annual trainings in logistics: for NADMO regional staff in Accra	NADMO	-Consultant, WFP, Private Sector, OMCS		
	6. Establish stand-by agreements with the private sector to ensure logistics capacity for NADMO for emergency response, evaluation and monitoring (emergency SOPs for boats, ambulances, communication equipment with oil drilling/phone/healthcare companies, etc.).	NADMO	-Private Sector, UN Agencies, MOI, MOT, MOH, NAS		
		NADMO			

<p>4. Operational Co-ordination centres reinforced at National, Regional and Districts levels.</p>	<p>1. Set up procedure to train Operation Center personnel to facilitate situation analysis, decision-making, and coordination in support to local authorities.</p>	NADMO	-MMDAs, MDAs, RCCs, UN System, IOs, MLGRD, NDPC, NS, GAF	55,000	
	<p>2. Organise joint training (National, Regional and District level EOCs) with SimEx</p>	NADMO	-Do-	200,000	
	<p>3. SOP for first 24-48-72 hour response (SimEx at each stage)</p>	NADMO	Do & GAF	85,000	
	<p>4. Organise information management workshop.</p>	NADMO	ECOWAS, UN Agencies, NGOs, MDAs	30,000	
	<p>5. Develop Standard Operating Procedures and business continuity plans.</p>	NADMO	-MMDAs, MDAs, RCCs, UN System, IOs, MLGRD, NDPC	90,000	
<p>5. Emergency early warning systems developed and communities trained on disseminating early warning.</p>	<p>1. Develop communication and dissemination systems for emergency EW in collaboration with stakeholders</p>	NADMO	-GMet, Mol, MOC/ISD, HSD, ISD, GSD, MOFA, MMDAs	40,000	
	<p>2. Develop, train and equip community level institutions for *dissemination and communication of emergency early warning in 3 pilot areas.</p>	NADMO	-Do-	220,000	
	<p>3. Assess community response capacity in 3 pilot areas, and develop and implement community and volunteer education and training programmes in the 3 pilot areas.</p>	NADMO	-Do-	75,000	

<p>6. Adequate financial resources allocated for both first-line emergency services and disaster management programmes in the form of a common fund within budgets of various Ministries and other institutions at national, regional and district levels. The budgets will also include provisions for assistance to victims of disasters.</p>	<p>1. Enforce the 5% quota of district common fund to be allocated to emergency preparedness and response at national regional and district levels.</p>	NADMO	-MLGRD, MMDAs, RCC, DACF, PSCF SC, MOH	20,000	
	<p>2. Encourage key ministries such as health and water to include contingency fund for emergencies within their annual work plans.</p>	NADMO	MOFEP, UNDP, NP on DRR & CCA MOH , MDAs,	30,000	
	<p>1. Establish disaster response fund to ensure that people affected by disasters in the regions get the minimum help they need as soon as possible.</p>	NADMO	SADA, MOFEP MINT, UN Agencies, RCC, MMDAs, MMDCEs, Community Leaders	60,000	
	<p>4..Encourage the use of voucher systems for providing assistance to people in need (eg. in the North) as a means of putting the decision making power in the hands of disaster victims.</p>	NADMO	UN Agencies, GRCs, NGOs Donor, Community leaders	135,000	

Total Budget: USD 87,336,177

Color Code:

Red : UNDP & NADMO

Green : African Adaptation Program

Blue : World Bank

Purple : National Environmental Protection Strategy (Ministry of Env.)

Black : SADA Project

ACRONYMS

AAP	Africa Adaptation Programme
AG	Attorney General's Office
AI	Academic Institution
Arch.	Architects
BO	Bilateral Organisation
CBOs	Community Based Organisations
Consultancy	Consultancy
CSOs	Civil Society Organisation
DACF	District Assembly Common fund
DC	Donor Community
Dept C	Department of Cooperatives
DHMT	District Health Management Team
Doc.	Doctors
DVGs	Disaster Volunteer Groups
DVS	World Health Organisation
DES	Department of Earth Science (Univ. of Ghana)
EC	Energy Commission
LC	Lands Commission
MOH	Ministry of Health
MOWAC	Ministry of Women and children Affairs
MWRWH	Ministry of Water Resources, Works and Housing
NGOs	Non-Governmental Organisation
SARI	Savannah Agriculture Research Institute
TH	Teaching Hospital
ECG	Electricity Company of Ghana
ECOWAS Sect	Forestry Commission
Eng.	Engineers
EPA	Environmental Protection Agency
ERGIS	Centre for Remote sensing and Geographic Information Services
FAO	Food and Agricultural Organisation
FC	Forestry Commission
FI	Financial Institutions
GAEC	Ghana Atomic Energy Commission
GAF	Ghana Armed Forces
GCA	Ghana Civil Aviation

GES	Ghana Education Service
GetFund	Ghana Education Trust Fund
GHS	Ghana Health Service
GIA	Ghana Institute of Architect
GIE	Ghana Institute of Engineers
GIFEC	Ghana Investment for Electronic Communication
GIMPA	Ghana Institute of Management and Public Administration
GIS	Ghana Institute of Surveyors
GIZ	German International Cooperation
GMA	Ghana Maritime authority
GMet	Ghana Meteorology Service
GNAT	Ghana National Association of Teachers
GNFS	Ghana National Fire Service
GNPC	Ghana National Petroleum Commission
GPC	Ghana Peace Council
GPHA	Ghana Port and harbor Authority
GRB	Ghana Refugee Board
GRCS	Ghana Red Cross Society
GSB	Ghana standard Board
GSD	Geological Survey Department
GTB	Ghana Tourist Board
GWCL	Ghana Water Company Limited
HSD	Hydrological Service Department
IEA	Institute of Economic Affairs
IOs	International Organisations
ISD	Information Service Department
ISSER	Institute of statistic, Social and Economic Research
KAIPC	Kofi Annan International Peacekeeping Centre
KNUST	Kwame Nkrumah Institute of Science and Technology
MASLOC	Medium and Small
MC	Mining companies
MDAs	Ministries Departments and Agencies
ME	Ministry of Energy
MEST	Ministry of Environment Science and Technology
MESW	Ministry of Employment and Social Welfare
MH	Media Houses

MI	Ministry of Information
MLGRD	Ministry of Local Government and Rural Development
MMDAs	Metropolitan, Municipal and District Assemblies
MNR	Ministry of natural Resources
MOC	Ministry of Communication
MOD	Ministry of Defense
MOE	Ministry of Education
MOH	Ministry of Health
MOFA	Ministry of Food and Agricultural
MOFARI	Ministry of Foreign Affairs and Regional Integration
MOFEP	Ministry of Finance and Economic Planning
MOI	Parliamentary Select Committee on Defense
MOT	Ministry of Tourism
MoTrans	Ministry of Transport
MUSIGA	Musician Association of Ghana
NBSC	National Buffer Stock Company
NBSSI	National board for Small Scale Industries
NDPC	National Development Planning Commission/Committee
NIC	National Insurance commission
NLC	National Labour commission
NMC	National Media Commission
NMIMR	Nugochie Memorial Institute of Malaria Research
NP	National Platform
NREG	Natural Resource and Environmental Governance
NS	National Security
NVTI	National Vocation Training Institution
OC	Oil Companies
PPA	Public Procurement Authority
PS	Private Sector
PSCD	Parliamentary Select Committee on Defense
PSCDI	Parliamentary Select Committee on Defense and Interior
RCC	Regional Coordinating Council
RCC	Regional Coordinating Council
SADA	Savannah Accelerated Development
TA	Technical Agencies
TC	Telecommunication companies
TOR	Tema Oil Refinery

Trad. A	Traditional Authority
UNDP	United Nations Development Programme
UNH	United Nations Habitat
UNICEF	United nations
UNISDR	United Nations International strategy for Disaster Reduction
UNS	United Nations System
VRA	Volta River Authority
WB	World Bank
WHO	World Health Organisation
WRC	Water Resource commission