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**UNITED NATIONS DEVELOPMENT PROGRAMME GHANA**

**PROJECT DOCUMENT**

**Project Title:** **Community Resilience through Early Warning (CREW)**

**Expected UNDAF Outcome:** Outcome 3: National systems and existing institutional arrangements for climate change mitigation and adaptation and for disaster risk reduction, as defined in the Hyogo Framework for Action at the district, regional and national level are functional

**Expected UNDAF Outputs:** Output 3.2: Adaptation and mitigation strategies and practices integrated into climate resilient development policies, plans and programmes

Output 3.4: National policies and strategies on disaster risk reduction (DRR), with emphasis on budget allocation to disaster prone districts, are in place and operationalized by 2014.

Output 3.6: The institutional capacities (assessment, coordination and information management) of NADMO and other MDAs are reinforced for preparedness and response to man-made and natural disasters

**Ghana Plan of Action for DRR and CCA:** Priority 2: Identify, assess and monitor disaster risk and enhance early warning

Priority 4: Reduce the underlying risk factors

**Implementing Partner:** National Disaster Management Organization (NADMO)

**Responsible Party:** United Nations Development Programme (UNDP)

Ghana Meteorological Agency (GMet)

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| **Summary**  Disaster Risk Reduction (DRR) is an urgent and significant development issue in Ghana. Recognizing the importance of strengthening DRR capacities in achieving sustainable development and poverty reduction in Ghana, this project aims to build capacities within the country to reduce disaster risk by putting in place an integrated early warning system that is both scientific and people-centered. The proposed project is designed in a way that it aligns with the Hyogo Framework of Action and the Ghana Plan of Action for DRR and CCA, and leads to tangible results in both the national and community levels. Through the implementation of hazard mapping, early warning, and vulnerability assessment and reduction, the project aims to achieve 1) a reduction of economic and human losses and damages from priority disasters, and 2) establishment of effective early warning and communication for priority hazards to reduce disaster risks in the 10 pilot sites by 2015. |

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| Project Period: 2012 - 2015  Atlas Award ID: TBD  Start Date: 1st December 2012  End Date: 31 December 2015  LPAC Meeting Date: 20th November 2012  Management Arrangements: National Implementation |  | Total resources required: US$ 5,162,667  Total allocated resources: US$ 5,162,667  Norway: US$ 5,162,667  Government of Ghana: In kind  UNDP: TBD |

Agreed by NADMO

Kofi Portuphy, NADMO Coordinator Date

Agreed by UNDP:

Kamil Kamaluddeen, UNDP Ghana Country Director Date

# ACRONYMS

CCA Climate Change Adaptation

CSM Cerebral spinal menengitus

DFID Department for International Development (United Kingdom)

DRR Disaster Risk Reduction

EWS Early Warning System

FEWSNET Famine Early Warning Systems Network

GFDRR Global Facility for Disaster Reduction and Recovery

GDP Gross Domestic Product

GIZ German Society for International Cooperation

GMet Ghana Meteorological Agency

GoG Government of Ghana

HFA Hyogo Framework for Action

HSD Hydrological Services Department, Ghana

JICA Japan International Cooperation Agency

MDA Municipal and District Assemblies

MoC Ministry of Communication, Ghana

MoFA Ministry of Food and Agriculture, Ghana

M&E Monitoring and Evaluation

NADMO National Disaster Management Organization

SOP Standard Operating Procedure

UNDAF UN Development Assistance Framework

UNDP United Nations Development Programme

WG Working Group

WRC Water Resources Commission, Ghana

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# 1. SITUATION ANALYSIS

### Introduction

Development and disaster risk reduction (DRR) are inherently linked; Capacities for DRR are significant factors for development, as recurrent natural disasters can undermine the significant investments and improvements made through the development process. Simultaneously, development, especially sustainable development, strengthens DRR capacities, providing governments and communities with policies, infrastructure, systems, and knowledge to build their resilience.

In Ghana, strong economic growth over the past two decades has led to a dramatic reduction in poverty and a shift to middle income status as a country. However, it remains to be seen whether recent economic progress will lead to systematic reduction of disaster risks. Some have even warned that economic development could increase the exposure of economic assets to hazards, and hence increase in disaster damage. Despite the drastic decrease of the number of people living below the poverty line over the past few decades, the depth of poverty has worsened and expanded into urban areas, resulting in significant regional differences (north vs. south) to persist. With the vulnerable population becoming more vulnerable, Ghana still faces a situation where small, manageable hazards impact the vulnerable population as large-scale disasters, resulting in unnecessary losses of social and economic capital.

It is in this backdrop that DRR is an urgent and significant development issue in Ghana. Recognizing the importance of strengthening DRR capacities in achieving sustainable development and poverty reduction in Ghana, United Nations Development Programme (UNDP) has worked closely with the Government of Ghana (GoG) in providing technical and financial support in this area. UNDP has assisted the National Disaster Management Organization (NADMO) design a multi-sectoral integrated Plan of Action for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) 2011 – 2015 in achieving Ghana’s commitments under the Hyogo Framework for Action (HFA). Building on this partnership, UNDP is continuing to work with GoG to implement various DRR and CCA initiatives as well as supporting them to mobilize funds to take the plan into action.

In line with this effort and in response to the request from GoG, UNDP carves out a multi-year strategy for the Norwegian Government to partner with UNDP in its effort to support GoG actualize the Ghana Plan of Action for DRR and CCA. Although some projects are already taking place in the field of DRR in Ghana through the support provided by various donor agencies (UK/DFID, Government of Japan/JICA), multilateral organizations (World Bank/GFDRR, UNDP), and civil society organizations (World Vision, Care International, etc.) most support provided until this day have been fragmented and highly specialized. Therefore there is a significant need and opportunity for a comprehensive and strategic support to be provided in order to enable DRR efforts to be implemented effectively.

The project outlined below illustrates a way in which the Norwegian Government may provide both comprehensive and targeted support to GoG in delivering some of the key components from the Ghana Plan of Action for DRR and CCA. The project’s strategy is to build capacities within the country to reduce disaster risk by putting in place an integrated early warning system that is both scientific and people-centered. NADMO will be the key actor, while the implementation will build upon partnership with non-government actors, particularly with community-based NGOs and universities. The proposed project is designed in a way that it aligns with the HFA and the Ghana Plan of Action for DRR and CCA, leads to tangible results in both the short-term and long-term, and avoids duplication but instead enhances coordination.

### 1.2 Context and Global Significance

The Hyogo Framework of Action 2005-2015 – the major international agreement on disaster risk reduction – identifies risk and early warning as one of its five priority areas for action. The HFA noted that “[r] isk assessment and early warning systems are essential investments that protect and save lives, property and livelihoods, contribute to the sustainability of development, and are far more cost-effective in strengthening coping mechanisms than is primary reliance on post-disaster response and recovery.”[[1]](#footnote-1)

There is a growing international movement to improve early warning systems in developing countries. In developing Asian countries, the effort to establish an early warning system for tsunami, following the December 2004 tsunami, is being used as an opportunity to establish a multi-hazard early warning system, i.e. a system that covers that only geological hazards but hydro-meteorological hazards as well.

There are a number of recognized EWS efforts in Africa. Following the second Sahelian famine in 1984-1985, major investments were made to establish early warning systems in the continent. These systems were designed to provide timely warnings and vulnerability information to decision makers in order to anticipate and forestall food crises. The Famine Early Warning Systems Network (FEWSNET)[[2]](#footnote-2) is one of such systems. Based on a systematic monitoring and analysis of relevant data and information on emerging food security issues, FEWSNET provides decision support products to help decision makers mitigate food insecurity.

There are also ongoing efforts to establish health early warning systems for major public health epidemics, such as cerebral spinal meningitis (CSM), cholera, and malaria using environmental and meteorological data as predictors.[[3]](#footnote-3)

There is a growing consensus at the international level that early warning systems should be comprehensive - covering risk assessment, technical monitoring and warning, dissemination, and local preparedness. Hence it is further recognized that efforts to establish technical monitoring and warning information capacities (which is usually the responsibility of the national hydrometeorological services) should be established alongside capacity development in risk assessment, efficient and effective warning dissemination with the least lag time, and local preparedness.

Despite the increasing recognition of the need to pro-actively reduce disaster risks, such as through early warning systems, efforts to establish national early warning systems for climate and hydrometeorological hazards in Africa are yet to gain significant traction. Reasons for this include the lack of appreciation of the strategic importance of this undertaking resulting in historically low investments in weather and climate observation and monitoring stations. A recent (2011) assessment of Africa’s climate observing networks and data reveals that “the quality of data i.e., the continuity and the distribution of meteorological stations in Africa are not dense enough for applications such as weather and climate forecasting, climate studies and climate projections.”[[4]](#footnote-4) At the same time, there is a weak and in most cases, non-existent grassroots movement to organize and establish community-based early warning systems.

### 1.3 National Context

#### National socio-economic and development context

Ghana’s track record in achieving economic and social development is notable by regional standards but some contradictions remain. While the country has managed to graduate from a low income to a middle-income economy, leading to overall increase in GDP per capita, the averages is masking the deepening inequalities amongst different people and also between northern and southern parts of the country.

The same contradictions characterized Ghana’s social performance. The country has successfully reduced the overall levels of poverty especially in the southern part but poverty in northern Ghana has increased. While primary school enrolment rate has increased and is one of the highest rates in West Africa, the disaggregated figure by gender shows that the enrolment rate for females is still lower than those for males. Consequently, while the adult literacy rate in Ghana was 65% (2007), only 58.3% of the female adults were literate, with males at 71.7%.

The structural fundamentals of the economy are skewed, particularly when viewed from the perspective of job creation and inclusive growth. Manufacturing – the sector with high potential to create employment - has decreased, while agriculture that has the potential to engage the majority of the poor has been overtaken by service sector. However, more than half of the population remains dependent on agriculture. Sixty percent of foreign direct investment goes to extractive industries, notably oil and mining – economic activities where value addition is almost non-existent and the environmental impacts are enormous.

In Ghana, there is a strong link between poverty reduction and disaster risks. In the urban context for instance, the settlement history of Accra shows that slum communities that are highly exposed to flooding events are created by economic migrants (mostly from the poor northern regions of the country) who had to find accommodation in the informal housing sector in the fringes of the city where rent is less expensive and construction of houses is poorly regulated.[[5]](#footnote-5) To identify the populations at risk to flooding in Accra, a recent study commissioned by UN HABITAT (2011) tried to predict which drainage channels would overflow given a certain amount of rainfall. The findings indicate that a large of portion of the population that are most exposed to flooding tend to be those living in areas with high slum index.[[6]](#footnote-6) The poor state of housing and infrastructure in these areas, as well as the encroachment of dwellings into the waterways, all contribute to increasing the risk of flooding.

#### Disaster Risk Profiles and Impacts

The disaster history of Ghana suggests that three hazards – floods, drought and earthquakes – are the main precursors of disasters. While flooding disasters tend to be more visible and attract the attention of mainstream media, slow-onset disasters, such as drought and in extreme cases, desertification, are also equally alarming.

The absence of a system for managing disaster data precludes a systematic analysis of the human and economic cost of disasters in Ghana. However a few disaster events could be cited to illustrate the human and economic consequences of the relevant hazards affecting Ghana.

* In September 2007, widespread flooding occurred in the three Northern regions and in some parts of the Western region. The flooding, which occurred immediately after a period of prolonged drought, affected nearly 300,000 people and killed 20 people.[[7]](#footnote-7) What is even more alarming is the indication that the flooding in the Northern regions is becoming more frequent. In September 2012, another flooding struck the three Northern regions affecting a total of 35,485 people and destroying close to 2,000 hectares of farmlands. Four deaths were linked to the flooding. Road infrastructures also sustained significant damage. (UN Country Team Situation Report in Northern Ghana, 28 September 2012).
* Similarly, Accra has periodically flooded. The most recent flooding occurred in October 2011 and was triggered by an extreme rainfall event. Two days of incessant rains brought as much rain as what is normally received during the entire wettest month of the year (June).
* In 2007, the water level of Lake Volta, which normally supplies 60 percent of Ghana’s energy needs, dropped to an all-time low - below the storage level needed for power generation – due to drought. This created a 300 MW power shortfall and has resulted in long hours of load shedding.

The projections for the future climate of Ghana – particularly with respect to rainfall and temperature – are consistent with the projections for other regions. It is projected that the wet seasons will get wetter while the dry season will get drier. In line with the projections for other regions (caused primarily by the intensification of the hydrological cycle), it is expected that the proportion of total annual rainfall that falls in heavy events will increase. On the other hand, there is a projected trend towards a decrease in the dry season rainfall (January-June).[[8]](#footnote-8) If risk mitigation measures are not put in place, these trends suggest that there will be an increase of drought and flooding risks in Ghana.

#### Early Warning System: Status and Framework

Since increased disaster risk is expected in a warming world, investment in developing a credible early warning system, embedded within a disaster risk reduction system from national to local levels and coupled by systematic vulnerability reduction efforts, is critical for saving lives and protecting livelihood assets.

Rainfall spells events can be predicted at least 3-5 days in advance. With the aid of monitoring systems, the skill in estimates of the intensity of rainfall can be also improved to provide reasonably accurate rainfall forecasts to issue early warning. Institutions like the National Disaster Management Organization (NADMO) and Accra Metropolitan Assembly need warning information about abnormally high or untimely rainfall to enable them to mobilize in advance. If communicated and understood properly, early warning system could help make contingency planning and evacuation more precise and therefore, put people and potentially economic/livelihood assets out of the harm’s way. However it has to be noted that early warning should be coupled with efforts to systematically address underlying causes of vulnerability in communities.

NADMO, located in the Ministry of the Interior, and the Ghana Meteorological Agency (GMet), are the key actors in the early warning in Ghana. NADMO is mandated to (i) manage disasters by coordinating the resources of Government institutions and non-governmental agencies, and (ii) develop the capacity of communities to respond effectively to disasters and improve their livelihood through social mobilization, employment generation and poverty reduction projects.[[9]](#footnote-9) GMet, on the other hand, is responsible for monitoring hydrometeorological and climate events and for issuing forecast. The two agencies are linked through GMet’s membership in NADMO’s technical committee on hydrometeorology.

The ambition of the Ghana Action Plan for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) is to foster a transition from reactive (baseline) to a more anticipatory and systematic disaster risk management in the country. The current framework for early warning system in particular, and disaster risk reduction in general, is evolving and needs technical and budgetary support to contribute to the realization of the plan. The key barriers that prevent this shift in the baseline are as follows:

##### Inadequate understanding of hazard risks and their incidence

The success of risk reduction efforts depend to a large extend on a good understanding of the evolving nature of the spatial/geographical range and incidence of disaster risk. NADMO, planning agencies, and district assemblies should have a good knowledge of the nature of hazard, their geographical range and incidence, the changes that are expected to occur relative to physical (e.g. climate change) and social changes, and the population who will be most affected by the hazard.

While there is an understanding of the physical exposure of different parts of Ghana to hazards (e.g. rainy season flooding in Accra, erosion and sea level rise in coastal zones, floods and droughts in the northern regions); the level of understanding the nexus between the physical and social factors is still sketchy and incomplete.

Experiences in other countries reveal that social status, gender, and race affect the way people experience or not experience disasters. However, the social and economic characteristics of the population at risk at a dis-aggregated level are poorly understood in Ghana. This impedes the development of disaster risk management strategies that are targeted to the needs of a certain group of population. While hazard maps are already available for selected districts in the country, the fast changing nature of population dynamics, coupled with the changes in the manifestation of climatic and hydro-meteorological hazards due to climate change, are not yet fully captured in these maps. In addition, there is no system for a continuous hazard risk monitoring. Available maps are static and there is no strategy for updating them on a regular basis (for example, every five years or so depending on the hazard).

##### Weak institutional systems for issuing and communicating early warning system for hazards, such as floods and droughts

Warning of an extreme weather event provided with a lead-time of five days or more would be beneficial for preserving assets and livelihoods. The current equipment and technical capacity limitations of GMet do not allow them to issue information with significant lead-time. In addition, even considering that GMet would be able to provide this information, it does not necessarily mean that at-risk communities would be forewarned of impending hazards. Technical early warning information from GMet needs to be translated into potential impacts and advisories at the local level by warning dissemination agencies, such as NADMO, and to sectoral agencies Ministry of Food and Agriculture, Department of Community Water and Sanitation, to be useful. For example, if NADMO forecasts that there will be intense rainfall over northern regions in a given time period, decisionmakers need to know what the impacts would be for people living in different areas (e.g. downstream vs. upstream) or for different livelihood groups (e.g. pastoralist, farmers, miners). Currently, translation of technical warning information into potential impacts at the local level is also a major constraint for NADMO and other relevant agencies that deal with weather and climate-sensitive sectors.

At present, there is no well-established channel for communicating early warning information to communities. Hence even assuming that there is perfect early warning information for impending hazards, there could still be a significant lag time between the issuance of information and information reaching the communities, and the actual response. NADMO’s presence at the local level through its officers and community volunteers is not yet leveraged in disseminating early warning information.

In Ghana, there is a wealth of indigenous knowledge related to anticipating the onset of disasters. They have been mapped (under the Africa Adaptation Programme) and the challenge now is to how to incorporate indigenous knowledge into an early warning system that is predominantly technical and scientific in nature.

##### Efforts to understand underlying vulnerability in communities are not systematic and there is no methodology for scaling-up successful interventions that aim to systematically reduce vulnerability

The extent of the vulnerability of a population to hazards has spatial, economic, and social dimensions. Similar to any disaster management system that is predominantly emergency response driven, Ghana has not yet carried out a national exercise of identifying the vulnerability of different population groups and their livelihoods and identifying ways to systematically address them. Ideally this exercise should input into the country’s development plan and into district development plans to make sure that the effort to develop reduce – rather than exacerbate - exposure to hazards. There are incipient efforts to mainstream vulnerability reduction into development plans but what is lacking is a tested methodology for scaling up successful interventions. Currently there are no readily available toolkits and body of practices that one can use for implementing or scaling up vulnerability reduction efforts.

# 2. STRATEGY

### 2.1 Goals and Expected Results

Within the hazards discourse, disaster risks are defined as below:

***Disaster Risks = Hazard x Vulnerability / Capacity***

Therefore, reducing hazard risks can be understood as a function of efforts towards better understanding hazards, reducing vulnerability to identified hazards, and enhancing the capacity to prepare and respond to these hazards.

Building on the above definition of disaster risks, the goals of the proposed project are:

***To reduce disaster risks through better understanding hazard risks, reducing vulnerability to hazards, and enhancing capacities for disaster risk reduction***

In order to achieve these goals, the project aims to achieve the following objectives:

***To develop hazard maps, enhance systems and coordination capacities for early warning, and implement disaster risk reduction projects in 10 pilot sites***

As a result, the proposed project is designed to achieve the following results:

* ***Economic and human losses and damages from priority hazards (i.e. floods and droughts) are reduced in the 10 pilot sites by 2015***: The appropriate rate of reduction will be determined through the project inception process.
* ***Successful early warning is issued and communicated for priority hazards to the 10 pilot sites by 2015:*** The term, “successful early warning” will be defined through the inception process of the Early Warning Activity.

### 2.2 Scope

The proposed timeframe of project is three years. In three years, the project intends to make significant contribution to enhancing the resilience of Ghana through achieving the above goals. Project efforts will be made in all four elements of early warning system: risk knowledge, monitoring and warning service (i.e. technical capacity to monitor hazards and issue warning), dissemination and communication, and response capability of those at risk, in order to enhance disaster prevention, mitigation, and preparedness efforts in Ghana.

The geographical focus of the project is the entire country of Ghana, because although there may be some geographical differences in terms of inherent vulnerabilities to disasters such as poverty, disasters can happen anytime, anywhere. However, a typological distinction of disaster types based on hazards, as well as whether it occurs in an urban or rural environment can determine the level of exposure to hazards, vulnerabilities and capacities to manage hazard risks. For this reason, this project will focus both on urban and rural contexts with a conscious effort to understand their similarities and differences in regard to DRR. Based on the result of hazard mapping (outcome 1), top disaster hotspots (five urban and five rural) will be selected to serve as demonstration sites to showcase how disaster risks can be effectively reduced through enhanced early warning system and broader vulnerability reduction. The urban disaster hotspots will most likely be the most populous cities as population could be taken as a proxy for disaster exposure. The determination of rural hotspots is not as straightforward and hence, has to be decided once outputs from hazard mapping are available. Rural vulnerability depends on a host of factors, including complex livelihood elements.

Furthermore, the proposed project will focus on the issue of gender in order to highlight its differentiated effects on DRR vulnerability and capacities.

### 2.3 Alignment with Government Priorities

The implementation of the proposed project will contribute to the efforts of the GoG in achieving the following components within the Ghana Plan of Action for DRR and CCA.

*AP/HFA 2: Identify, assess and monitor disaster risk and enhance early warning*

Outcome 1: Proper early warning mechanisms built to inform communities of possible disaster, climate and environmental hazards[[10]](#footnote-10)

Outcome 2: Ghana has reinforced its technical institutions and has established a National Risk Observatory to facilitate access to information on disasters, EWS, and climate change and environmental risks for decision makers

*AP/HFA 4: Reduce the underlying risk factors*

Outcome 2: The resilience and the capacity to recover from disasters (drought and floods) of population enhanced[[11]](#footnote-11)

The below table describes how the proposed outcomes and activities align with the Ghana Plan of Action for DRR and CCA in more detail.

|  |  |  |
| --- | --- | --- |
| Proposed Project | Activities | Corresponding AP/HFA Outputs |
| Outcome 1: Hazard Risks Understood | Hazard mapping | AP/HFA 2 Outcome 1, Output 4;  Outcome 2, Output 2 |
| Outcome 2: Capacity for EWS for Priority Hazards Enhanced | EWS baseline assessment | AP/HFA 2 Outcome 1, Output 5 |
| EWS system design | AP/HFA 2 Outcome 1, Output 5 |
| EWS hardware and software procurement | AP/HFA 2 Outcome 1, Output 5 |
| Entrepreneurship for new EWS communication technologies | AP/HFA 2 Outcome 1, Output 5 |
| Outcome 3: Urban and Rural Vulnerabilities to Disasters Reduced | Vulnerability mapping | AP/HFA 2 Outcome 1, Output 4; Outcome 2, Output 2 |
| Implementation of proposed measures to reduce vulnerabilities in urban and rural pilot districts | AP/HFA 4 Outcome 2, Outputs 4, 5, 6, 8, 9, 10 |

### 2.4 Alignment with UN Development Assistance Framework (UNDAF) 2012 – 2016 Priorities

DRR is a priority area of focus for UN Agencies working in Ghana; Upon request from the GoG, UN Agencies are committed to support the Government and people of Ghana enhance its capacity for disaster risk management and reduction. The significance of GoG and UN partnership in DRR has been outlined in the UNDAF 2012 – 2016. Therefore, project is in line with the coordinated Development Assistance Framework that has been agreed upon between the GoG and UN Agencies in Ghana. Therefore, the implementation of the project directly leads to the achievement of the following UNDAF Outcome and Outputs.

*UNDAF Outcome 3:* National systems and existing institutional arrangements for climate change mitigation and adaptation and for disaster risk reduction, as defined in the Hyogo Framework for Action at the district, regional and national level are functional

Output 3.2: Adaptation and mitigation strategies and practices integrated into climate resilient development policies, plans and programmes

Output 3.4: National policies and strategies on disaster risk reduction (DRR), with emphasis on budget allocation to disaster prone districts, are in place and operationalized by 2014.

Output 3.6: The institutional capacities (assessment, coordination and information management) of NADMO and other MDAs are reinforced for preparedness and response to man-made and natural disasters

### 2.5 Alignment with Previous and Pipeline Efforts Related to DRR

The project will complement and build upon various projects that UNDP has supported various government agencies implement in the field of disaster risk reduction. Most particularly, lessons learned and results from final evaluation of the Africa Adaptation Programme (AAP) will be seriously analyzed and taken into consideration for the selection process of the pilot sites.

The below table provides an overview of relevant previous and pipeline efforts and lessons learned that will inform activities and implementation of the Project.

| Project Name | Year | Project Focus/ Alignment | Key Lessons |
| --- | --- | --- | --- |
| Africa Adaptation Programme  (Ongoing) | 2010 - 2012 | * Programme objective is to enhance leadership and capacities for climate change adaptation in Ghana * One key focus is initiating the process to establish an early warning system (EWS) for Ghana * Through this effort, AAP has procured 8 AWS and a High Speed Computer * Developed hazard maps in 5 pilot districts * Developed and plot tested EWS warning communication mechanisms | * In order to set up an EWS, interagency coordination mechanism needs to be set up as EWS requires coordination of NADMO, GMet, Hydromet, and EPA |
| Recovery Project  (Completed) | 2009-2012 | * The goal of the project is to strengthen national disaster response/recovery mechanisms in Northern Ghana. * One key focus is restore livelihoods of flood affected communities and build a disaster resilience culture | * In order to reduce disaster risks, it is necessary the enforcement of the laws and regulations is ensured. * Many community members are willing to adopt change to build their resilience to disasters, but information does not always reach them leading to knowledge gap hence higher vulnerabilities to disasters |
| Institutional Support to integrate DRR into National Development Plans  (Ongoing) | 2006-2012 | * UNDP has provided support through annual work plans with the overall objective of reinforcing the institutional capacities of NADMO to better coordinate and implement DRR, preparedness, and response initiatives * Developed a country-wide hazard map | * The focus of NADMO had so far been mostly on disaster response. The need to shift focus from emergency response to risk reduction has been recognized |
| Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods  (The proposal is under consideration by the Adaptation Fund Board) | 2013-2017  (Expected) | * Main objective is to enhance the resilience and adaptive capacity of rural livelihoods in the northern regions of Ghana to climate impacts and risks on water resources * Focus is anticipatory management of disaster risks | * Not applicable. Implementation has not yet started |
| Enhanced Capacity for Coordinated Response to Floods in Northern Ghana  (Completed) | 2009-2010 | * Main objective was to strengthen coordinating mechanisms for emergency response to disasters * Supported development of National Contingency Plan | * Timely and effective implementation of the National Contingency Plan requires accurate and continuous collection of data and flow of information at different levels (district, regional, national) |
| Enhanced capacity for response to floods in Accra  (Completed) | 2011-2012 | * Main objective was to enhance the capacity to mobilize local communities and Disaster Volunteer Groups to timely respond to disasters and to create awareness on best practices for disaster prevention | * Involvement of local communities and mobilization of civil society is fundamental for preventing and responding to disasters. |

# 3. RESULTS AND RESOURCES FRAMEWORK

|  |  |  |  |
| --- | --- | --- | --- |
| Goal: To reduce disaster risks through better understanding hazard risks, reducing vulnerability to hazards, and enhancing capacities for disaster risk reduction | | | |
| Objective: To develop hazard maps, enhance systems and coordination capacities for early warning, and implement disaster risk reduction projects in 10 pilot sites | | | |
| Results: 1) Economic and human losses and damages from priority hazards (i.e. floods and droughts) are reduced in the 10 pilot sites by 2015  2) Successful early warning is issued and communicated for priority hazards to the 10 pilot sites by 2015 | | | |
| Outcomes | **Outputs** | **Implementation Level** | **Budget (USD)** |
| 1. Hazard risks understood | Updated and improved hazard maps at the national level and in 10 pilot sites | National and 10 pilot sites | 947,710 |
| Capacities built and lessons learned to better understand hazard risks | National | 18,360 |
| Hazard risks information communicated to various stakeholders | National and 10 pilot sites | 20,300 |
| Hazard risk activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground | National and 10 pilot sites | 138,300 |
| Quality of hazard risk activities assured to meet international standards and best practices | National and 10 pilot sites | 146,700 |
| Mechanisms to update and sustain hazard risk monitoring established | National and 10 pilot sites | 10,600 |
| 2. Capacity for EWS for priority hazards enhanced | Existing status, challenges, and opportunities for EWS in Ghana identified and assessed | National | 50,000 |
| EWS Master Plan developed for priority hazards | National | Budgeted within EWS assessment |
| A functioning EWS for priority hazards designed and established through a participatory process in the 10 pilot sites | 10 pilot sites | 829,040 |
| Capacities built and lessons learned to establish, improve, and sustain an effective EWS in Ghana | National | 18,000 |
| EWS information communicated effectively to relevant stakeholders | National and 10 pilot sites | 40,500 |
| EWS activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground | National and 10 pilot sites | 36,000 |
| Quality of EWS activities assured to meet international standards, best practices, and local context relevance | National and 10 pilot sites | 143,000 |
| Mechanisms to update and sustain EWS are in place | National and 10 pilot sites | 20,600 |
| 3. Urban and rural vulnerabilities to disasters reduced | Updated and improved vulnerability maps at the national level and in 10 pilot sites | 10 pilot sites | Budgeted within hazard mapping |
| Causes of disaster vulnerabilities, and measures to reduce vulnerabilities explored and understood | National and 10 pilot sites | 61,000 |
| Measures to reduce vulnerabilities tested and implemented in the pilot sites | 10 pilot sites | 1,078,300 |
| Capacities built and lessons learned to reduce disaster vulnerabilities in Ghana | National | 18,000 |
| Good practices on reducing disaster vulnerabilities communicated effectively to relevant stakeholders | National | 40,300 |
| Vulnerability reduction activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground | National and 10 pilot sites | 36,020 |
| Quality of vulnerability reduction activities assured to meet international best practices and standards | National and 10 pilot sites | 143,000 |
| Mechanisms to scale DRR efforts in urban and rural districts are identified | National and 10 pilot sites | 11,500 |
|  |  | **Subtotal** | **3,807,230** |
|  |  | Implementation Support | 808,600 |
|  |  | Project Inception Costs | 185,450 |
|  |  | General Management Service | 361,387 |
|  |  | **GRAND TOTAL** | **5,162,667** |

# 4. ACTIVITIES AND WORK PLAN

### 4.1 Proposed Activity Details

#### Project Inception

For effective implementation of the project, there is a need for certain project inception activities to take place. Information gathering for baseline setting is a crucial activity that will enable informed decision making for the pilot site selection and M&E framework development. In addition, relevant stakeholders must be engaged to seek for technical inputs to the Project Document as well as establish partnerships and networks necessary for project buy-in and implementation. The Community of Practice (COP) that will function as the key information sharing, collaboration, and knowledge-building forum will be initiated in this inception phase. Furthermore, the 10 pilot sites must be selected based on logical selection criteria. Finally, effective M&E plan with baseline, indicators, and tools must be developed and put in place.

Therefore, the following Project Inception Activity is proposed.

|  |  |
| --- | --- |
| PROJECT INCEPTION ACTIVITY | |
| Budget | US$ 185,450 |
| Stakeholders | * NADMO – Lead Agency * UNDP – Technical oversight and strategic support * Research/specialized organizations – Participation and implementation of baseline   analysis   * M&E specialized institutions – M&E plan and tools development * District Assemblies – Engagement for site selection * Civil Society Organizations – Participation in stakeholder engagement * Local Communities – Participation in stakeholder engagement * JICA, GIZ, DFID, etc. – Participation in stakeholder engagement |
| Proposed Sub Activities | * Data collection for baseline setting * Inception workshop at national and local levels * Selection of 10 pilot sites in view of typologies and scaling * Development of M&E Plan with baseline, indicators, and tools |
| Expected Outputs | * Rigorous baseline information gathered * Stakeholder engagement and Community of Practice (COP) establishment * Pilot sites determined * M&E Plan and tools developed |

#### Outcome 1: Hazard risks understood

A good understanding of the types of hazards and their risks that Ghana as a country face, as well as the characteristics of hazards that local governments, communities, and individuals must plan and prepare for, are essential components to enhance DRR.

Significant efforts to understand hazard risks have been made in Ghana to assess the hazard types and its potential risks at that national level over the past few years[[12]](#footnote-12). Furthermore, some initiatives have also kick-started the process of downscaling this information to district levels[[13]](#footnote-13) and watersheds[[14]](#footnote-14).

However, the information generated from these efforts are not coordinated and stored in a form that can be readily used for anticipating and responding to natural hazards. Hence there is a need for national level hazard data to be updated and systematized. Districts, being the front liner in responding to disasters, should be also assisted to have their own district-level information on hazard risks.

Therefore, the following Hazard Mapping Activity is proposed.

|  |  |
| --- | --- |
| HAZARD MAPPING ACTIVITY | |
| Budget | US$ 1,281,970 |
| Stakeholders | * NADMO – Lead Agency * UNDP – Quality assurance, M&E, and knowledge management support * Hazard mapping specialized institutions – Technical support * District Assemblies – Local counterparts * Civil Society Organizations – Facilitation/participation of community consultation processes * Local Communities – Participation in local consultation processes * JICA, GIZ, DFID, etc. – Coordination and information sharing of hazard mapping activities |
| Proposed Sub Activities | * Hazard mapping methodology development in conjunction with vulnerability mapping & EWS development * Gathering of existing hazard data * Hazard modeling and mapping (National and in 10 pilot districts) in conjunction with vulnerability mapping * Stakeholder consultation and community-based hazard mapping * Verification of hazard maps in pilot sites * Finalization and dissemination of hazard maps * COP: Participation in multi-stakeholder community of practice to share information and generate synergies and innovative solutions * Analysis of challenges, opportunities, and lessons learned * Development and dissemination of knowledge products (i.e. on hazard mapping process and methodology) * Communication: Designing, publishing, and disseminating hazard maps and knowledge products * M&E: Report on achievements, challenges, and recommendations for improvement/adjustments, next steps to be shared COP and reflected in work plan update * Technical oversight * Development & implementation of hazard data updating and scaling strategy |
| Expected Outputs | * Updated and improved hazard maps at the national level and in 10 pilot sites * Capacities built and lessons learned to better understand hazard risks through development of hazard mapping process methodology * Hazard risks information communicated to various stakeholders * Hazard risk activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground * Quality of hazard risk activities assured to meet international standards and best practices * Mechanisms to update and sustain hazard risk monitoring established |

#### Outcome 2: Capacity for providing multi-hazard early warning enhanced

Despite various efforts made until today to establish a functional and effective EWS, there is still much work to be done. This outcome will contribute to the overall effort of NADMO to build a National Risk Observatory that will monitor the evolution of hazards and issue appropriate warning to at-risk population, in partnership with the Ghana Meteorological Service in Ghana (GMet).

The baseline analysis, system design, and the hardware and software investments made by this project will lead to the development of, and will be transferred and sustained within, the National Risk Observatory that has been conceptualized within the Ghana Plan of Action for DRR and CCA. NADMO is currently constructing a new building that they envision to host the National Risk Observatory that will not only serve as a one-stop-shop for all information and data regarding national, regional, and local level hazard and vulnerability, but also as a centralized, multi-sectoral response centers for disaster events.

Therefore, the following Early Warning Activity is proposed.

|  |  |
| --- | --- |
| EARLY WARNING ACTIVITY | |
| Budget | US$ 1,137,140 |
| Stakeholders | * NADMO – Lead coordinating agency * GMet – Lead technical agency * UNDP – Quality assurance, M&E, and knowledge management support * International EWS specialized institutions – Technical support * Academic institutions – Technical support * District Assemblies – Local counterparts * Civil Society Organizations – Facilitation/participation of community consultation processes * Local Communities – Participation in local consultation processes * JICA, GIZ, DFID, etc. – Coordination and information sharing of EWS activities |
| Proposed Sub Activities | * EWS methodology development in conjunction with hazard & vulnerability mapping development * Existing EWS assessment and gap analysis * Multi-stakeholder EWS Master Plan development for priority hazards * Establish participatory multi-stakeholder EWS WG * Design and implement appropriate EWS communication system * Installation of EWS hardware in pilot sites * EWS software development * EWS system testing * Training and engagement of district stakeholders * Participation in multi-stakeholder community of practice to share information and generate synergies and innovative solutions * Analysis of challenges, opportunities, and lessons learned * Development and dissemination of knowledge products (i.e. on EWS methodology and SOP) * Communication: Designing, publishing, and disseminating EWS information and knowledge products * M&E: Report on EWS achievements, challenges, and recommendations for improvement/adjustments, next steps to be shared with COP and reflected in work plan update * Technical oversight * Develop and implement cost recovery business plan and policy development/ institutional reform * Development of sustainability and scaling strategy |
| Expected Outputs | * Existing status, challenges, and opportunities for EWS in Ghana identified and assessed * EWS Master Plan developed for priority hazards * A functioning EWS for priority hazards designed and established through a participatory process in the 10 pilot sites * Capacities built and lessons learned to establish, improve, and sustain an effective EWS in Ghana * EWS information communicated effectively to relevant stakeholders * EWS activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground * Quality of EWS assured to meet international standards, best practices, and local context relevance * Mechanisms to update and sustain EWS are in place |

#### Outcome 3: Urban and Rural Vulnerabilities to Disasters Reduced

Urban and rural vulnerabilities in Ghana have been assessed and tackled by government agencies, academic institutions, international development agencies, and civil society organizations. However, most studies in the past focus on poverty, health impacts, and other socio-political conditions, and thorough examination and understanding of vulnerabilities specific to DRR are lacking.

Furthermore, although reducing vulnerability to DRR is a public necessity, simultaneously it can create opportunity for innovation, creativity and entrepreneurship. Several countries, local governments, and entities around the world are starting to find innovative solutions to tackle the various vulnerabilities to disasters in both urban and rural settings. Therefore, creating opportunities for learning and contextualizing new ideas for reducing urban and rural vulnerabilities to disasters, as well as pilot testing these ideas in order to create new knowledge and measures can greatly benefit Ghana as well as the international DRR community.

Therefore, the following Vulnerability Reduction Activity is proposed.

| VULNERABILITY REDUCTION ACTIVITY | |
| --- | --- |
| Budget | US$ 1,388,120 |
| Stakeholders | * NADMO – Lead technical and coordinating agency * UNDP – Quality assurance, M&E, and knowledge management support * District Assemblies – Responsible agent for implementation * International community-based DRR institutions – Technical support * Academic institutions – Technical support * Civil Society Organizations – Facilitation/participation/coordination of community-level consultation and implementation * Local Communities – Participation in local consultation processes and implementation |
| Proposed Sub Activities | * Development of vulnerability mapping methodology in conjunction with hazard mapping & EWS development * Gathering of existing vulnerability data * Stakeholder consultation and community-based vulnerability mapping & assessment * Verification of vulnerability maps in pilot sites * Finalization and dissemination of vulnerability maps * Conduct a social behavioral analysis to understand the causes of disaster vulnerability in urban and rural Ghana (in 10 pilot districts)/joint fact finding * Vulnerability typology analysis for scaling of results to the national level * Participatory design of DRR activities in pilot sites * Implementation of proposed DRR measures to reduce vulnerabilities in urban and rural pilot districts * Participation in multi-stakeholder community of practice to share information and generate synergies and innovative solutions * Analysis of challenges, opportunities, lessons learned, and good practices * Development & dissemination of knowledge products (i.e. publishing and presentation of papers to international forums on CBVCA and implementation of DRR activities) * Communication: Designing, publishing, and disseminating maps, good practices & knowledge products * M&E: Report on achievements, challenges, and recommendations for improvement/adjustments, next steps to be shared with COP and reflected in work plan update * Quality assurance * Plan and initiate scaling and sustaining activities |
| Expected Outputs | * Updated and improved vulnerability maps at the national level and in 10 pilot sites * Causes of disaster vulnerabilities, and measures to reduce vulnerabilities explored and understood * Measures to reduce vulnerabilities tested and implemented in the pilot sites * Capacities built and lessons learned to reduce disaster vulnerabilities in Ghana * Good practices on reducing disaster vulnerabilities communicated effectively to relevant stakeholders * Vulnerability reduction activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground * Quality of vulnerability reduction activities assured to meet international best practices and standards * Mechanisms to scale DRR efforts in urban and rural districts are identified |

In the event of project support and implementation, proposed activities will be re-examined and refined with consultation, engagement, and leadership of NADMO and other relevant stakeholders.

### 4.2 Proposed Budget & Work Plan

| **Outcome** | **Outputs** | **Sub Activities** | **Responsible Party** | **Estimated Budget (USD)** | **Justification** | **Schedule** | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2013** | | | | **2014** | | | | **2015** | | | | | |
| **Q1** | **Q2** | **Q3** | **Q4** | | **Q1** | **Q2** | **Q3** | | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** |
| Outcome 1: Hazard Risks Understood | Updated and improved hazard maps at the national level and in 10 pilot sites | Hazard mapping methodology development in conjunction with vulnerability mapping & EWS development | NADMO | 150,450 | Expert consultation sessions (50K) and International Consultant (100K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Gathering of existing hazard data | NADMO | 10,650 | Satellite imagery and other relevant data (hydro met data, etc) purchase; data rescue if necessary |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Hazard modeling and mapping (National and in 10 pilot sites) in conjunction with vulnerability mapping | NADMO | 652,300 | Hazard & vulnerability mapping for 5 districts for AAP was about 200K. Therefore 400K for 10. National studies estimated at 100K. Purchase and training of hazard mapping hardware (high speed computers, 100K) and software (GIS) 50K). International consultant be hired to provide oversight and data analysis |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Stakeholder consultation and community-based hazard mapping | NADMO | 62,300 | 1 consultation meetings per pilot districts x 10 (1 WS and 10 consultation meetings) (1 consultant 5K, 2 rep from COP, plus lunch and T&T for 20 participants per meeting. DSA for 3 for 3 days each. 62K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Verification of hazard maps in pilot sites | NADMO | 72,010 | 2 National level workshops (5K per WS), 1 consultation meetings per pilot districts x 10 (1 WS and 10 consultation meetings) (1 consultant 5K, 2 rep from COP, plus lunch and T&T for 20 participants per meeting. DSA for 3 for 3 days each. 62K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Finalization and dissemination of hazard maps | NADMO | - | No additional costs; included in the hazard modeling and mapping activity |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Capacities built and lessons learned to better understand hazard risks | Participation in multi-stakeholder community of practice to share information and generate synergies and innovative solutions | NADMO | 8,060 | Quarterly meetings for 3 reps from this activity for 36 months (12 meetings) Lunch (10USD) and T&T (10USD). Training activities |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Analysis of challenges, opportunities, and lessons learned | UNDP | - | No additional cost; Programme Manager, M&E officer, technical assistants and COP participants will collectively conduct the analysis |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Development and dissemination of knowledge products (i.e. on hazard mapping process and methodology) | UNDP/ NADMO | 10,300 | Knowledge product development, and support to publication/presentation, travel to present at national and international forums |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Hazard risks information communicated to various stakeholders | Communication: Designing, publishing, and disseminating hazard maps and knowledge products | UNDP | 20,300 | 5K consultancy for designing. 10K for printing and publishing. 5K funds for updating. |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Hazard risk activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground | M&E: Report on achievements, challenges, and recommendations for improvement/adjustments, next steps to be shared with Community of Practice (COP) and reflected in work plan update | UNDP | 138,300 | Bi-annual M&E trips (implemented by M&E officer, to be combined with other activities) National level assessment x 6 times / District level assessments in 10 pilots 6 times in 3 yrs. Travel & DSA (1 PMU M&E officer and 1 NADMO staff) 1K x 10 pilots = 10K. 1/3 of M&E officer salary (26K). Midterm and Final Evaluation (100K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Quality of hazard risk activities assured to meet international standards and best practices | Quality assurance | UNDP | 146,700 | International and national technical staff 1/3 salary (52K + 91K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| 1,281,970 | Mechanisms to update and sustain hazard risk monitoring established | Development & implementation of hazard data updating and scaling strategy | NADMO | 10,600 | Pre-project and final project review report on scaling and sustaining. 2 consultancies 10K |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Outcome 2: Capacity for EWS for priority hazards enhanced | Existing status, challenges, and opportunities for EWS in Ghana identified and assessed | Existing EWS assessment and gap analysis | NADMO | 50,000 | 50K international consultancy. To be combined with Mapping & EWS methodology development sub activity |  |  |  |  | |  |  |  | |  |  |  |  |  |
| EWS Master Plan developed for priority hazards | Multi-stakeholder EWS Master Plan development for priority hazards | NADMO | - | No additional cost; To be combined with EWS assessment sub activity |  |  |  |  | |  |  |  | |  |  |  |  |  |
| A functioning EWS for priority hazards designed and established through a participatory process in the 10 pilot sites | EWS methodology development in conjunction with hazard & vulnerability mapping development | NADMO | - | No additional cost budget within Outcome 1 (150K) for Expert consultation sessions (50K) and International Consultant (100K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Establish participatory multi-stakeholder EWS WG | NADMO | 22,000 | Bi-annual meetings. 20 members including research institutions, donors, etc working on EWS. Lunch. 3 stakeholder meetings in Accra |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Design and implement appropriate EWS communication system | NADMO | 51,000 | Partnership with University or NGO; in conjunction with communication support services |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Installation of EWS hardware in pilot sites | GMet/ NADMO | 455,040 | AAP purchased 3 AWS for approx. 100K Euros = 120K USD. Therefore 10 AWS is approx.: 400K USD. Training 50K; or For example river sensors, communication dissemination prototyping and simulation exercises; River sensors in 5/10 pilot sites = 20K, Mobile Apps / software / 2 simulations per districts (7K for simulation) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| EWS software development | GMet/ NADMO | 100,000 | Customized flood & drought modeling software, data analysis software, data management software, visualization tools. Flood modelling software is 14000 total |  |  |  |  | |  |  |  | |  |  |  |  |  |
| EWS system testing | GMet/ NADMO | 100,500 | In 10 pilot sites |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Training and engagement of district stakeholders | NADMO | 100,500 | 1 training per districts to be followed up by other district visits (EWS system testing; hardware installation) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Capacities built and lessons learned to establish, improve, and sustain an effective EWS in Ghana | Participation in multi-stakeholder community of practice to share information and generate synergies and innovative solutions | NADMO | 8,000 | Quarterly meetings for 3 reps from this activity for 36 months (12 meetings) Lunch (10USD) and T&T (10USD). Training activities |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Analysis of challenges, opportunities, and lessons learned | UNDP | - | No additional cost; Programme Manager, M&E officer, technical assistants and COP participants will collectively conduct the analysis |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Development and dissemination of knowledge products (i.e. on EWS methodology and SOP) | UNDP/ NADMO | 10,000 | Knowledge product development, and support to publication/presentation, travel to present at and national and international forums |  |  |  |  | |  |  |  | |  |  |  |  |  |
| EWS information communicated effectively to relevant stakeholders | Communication: Designing, publishing, and disseminating EWS information and knowledge products | UNDP | 40,500 | Developing and printing of SOPs/Manuals |  |  |  |  | |  |  |  | |  |  |  |  |  |
| EWS activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground | M&E: Report on EWS achievements, challenges, and recommendations for improvement/adjustments, next steps to be shared with Community of Practice (COP) and reflected in work plan update | UNDP | 36,000 | Travel costs (10K). 1/3 of M&E officer's salary: 26K. |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Quality of EWS assured to meet international standards, best practices, and local context relevance | Quality assurance | UNDP | 143,000 | International and national technical staff 1/3 salary (52K + 91K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Mechanisms to update and sustain EWS are in place | Develop and implement cost recovery business plan and policy development/ institutional reform | NADMO | 15,300 | Consultancy and technical specialist |  |  |  |  | |  |  |  | |  |  |  |  |  |
| 1,137,140 | Development of sustainability and scaling strategy | NADMO | 5,300 | Consultancy |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Outcome 3: Urban and Rural Vulnerabilities to Disasters Reduced | Updated and improved vulnerability maps at the national level and in 10 pilot sites | Development of vulnerability mapping methodology in conjunction with hazard mapping & EWS development | NADMO | - | No additional cost budget within Outcome 1 (150K) for Expert consultation sessions (50K) and International Consultant (100K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Gathering of existing vulnerability data | NADMO | - | Budgeted within hazard mapping; Satellite imagery and other relevant data (hydro met data, etc) purchase; data rescue if necessary |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Vulnerability mapping (National and in 10 pilot districts) | NADMO | - | Budgeted within hazard mapping; Hazard & vulnerability mapping for 5 districts for AAP was about 150K. National studies estimated at 100K. |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Stakeholder consultation and community-based vulnerability mapping & assessment | NADMO | - | Budgeted within hazard mapping; 1 consultation meetings per pilot districts x 10 (1 WS and 10 consultation meetings) (1 consultant 5K, 2 rep from COP, plus lunch and T&T for 20 participants per meeting. DSA for 3 for 3 days each. 62K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Verification of vulnerability maps in pilot sites | NADMO | - | Budgeted within hazard mapping; 2 National level workshops (5K per WS), 1 consultation meetings per pilot districts x 10 (1 WS and 10 consultation meetings) (1 consultant 5K, 2 rep from COP, plus lunch and T&T for 20 participants per meeting. DSA for 3 for 3 days each. 62K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Finalization and dissemination of vulnerability maps | NADMO | - | Budgeted within hazard mapping; No additional costs; included in the hazard & vulnerability mapping activity |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Causes of disaster vulnerabilities, and measures to reduce vulnerabilities explored and understood | Conduct a social behavioral analysis to understand the causes of disaster vulnerability in urban and rural Ghana (in 10 pilot districts)/joint fact finding | NADMO | 30,500 | Consultancy or university partnership |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Vulnerability typology analysis for scaling of results to the national level | NADMO | 30,500 | International consultancy or collaboration of academic institutions (i.e. graduate students) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Measures to reduce vulnerabilities tested and implemented in the pilot sites | Participatory design of DRR activities in pilot sites | NADMO | 68,300 | 2 National level workshops (5K per WS), 1 consultation meetings per pilot districts x 10 (1 WS and 10 consultation meetings) (1 consultant 5K, 2 rep from COP, plus lunch and T&T for 20 participants per meeting. DSA for 3 for 3 days each. 62K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Implementation of proposed DRR measures to reduce vulnerabilities in urban and rural pilot districts | NADMO | 1,010,000 | 5 rural pilots are given 100K each. 5 urban pilots are given 100K each depending on the nature of intervention |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Capacities built and lessons learned to reduce disaster vulnerabilities in Ghana | Participation in multi-stakeholder community of practice to share information and generate synergies and innovative solutions | NADMO | 8,000 | Quarterly meetings for 3 reps from this activity for 36 months (12 meetings) Lunch (10USD) and T&T (10USD). Training activities |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Analysis of challenges, opportunities, lessons learned, and good practices | UNDP | - | No additional cost; Programme Manager, M&E officer, technical assistants and COP participants will collectively conduct the analysis |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Development & dissemination of knowledge products (i.e. publishing and presentation of papers to international forums on CBVCA and implementation of DRR activities) | UNDP/ NADMO | 10,000 | Finance studies, and support publication/presentation, travel |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Good practices on reducing disaster vulnerabilities communicated effectively to relevant stakeholders | Communication: Designing, publishing, and disseminating maps, good practices & knowledge products | UNDP | 40,300 | Publication of vulnerability maps, pilot site good practices, lessons learned and achievements. 10K consultancy for designing. 20K for printing and publishing. 10K funds for updating. |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Vulnerability reduction activities monitored, reported, and re-evaluated based on challenges and opportunities on the ground | M&E: Report on achievements, challenges, and recommendations for improvement/adjustments, next steps to be shared with Community of Practice (COP) and reflected in work plan update | UNDP | 36,020 | Travel costs (10K). 1/3 of M&E officer's salary: 26K. |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Quality of vulnerability reduction activities assured to meet international best practices and standards | Quality assurance | UNDP | 143,000 | International and national technical staff 1/3 salary (52K + 91K) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| 1,388,120 | Mechanisms to scale DRR efforts in urban and rural districts are identified | Plan and initiate scaling and sustaining activities | UNDP | 11,500 | Startup funds |  |  |  |  | |  |  |  | |  |  |  |  |  |
|  |  | **Sub Total 1** | **3,807,230** | | Outcome 1 - 3 |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Implementation Support | Sufficient Human Resources for Project Management are established | Project Manager | NADMO | 156,000 | UNDP NOB equivalent – sit in NADMO (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Chief Technical Officer | NADMO | 157,900 | UNDP NOB equivalent – sit in NADMO (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Project Financial Officer | NADMO | 102,000 | GS6 – sit in NADMO (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Project Administrative Assistant (50%) | UNDP | 52,400 | GS6 – sit in UNDP (50%) (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Project Officer | UNDP | 157,900 | UNDP NOB equivalent – liaise between UNDP and NADMO (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Project Driver | NADMO | 31,900 | SB (800\*36)/Site in NADMO but UNDP contract (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| M&E Officer (50%) | UNDP | - | Within project budget: 52K per year x 3 years x 50%: 78K (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Technical Specialist - National | UNDP | - | Within project budget: 52K per year x 3 years; 156K (spend 50% in NADMO, 50% in UNDP) (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Technical Specialist – International (50%) | UNDP | - | Within project budget:162K per year x 3 years x 50%: 273K (Pro Forma) |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Sufficient Tools for Project Management are in Place | Office Supplies | NADMO | 53,500 | Computers 2K x 7 / Desks printers etc. 10K / Monthly expenses 500 per month |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Communication (Internet/Phone/Website/Software) | NADMO | 9,500 | Internet 50USD/month, Phone 50USD/month = 3600 per year / website development 500 / maintenance 600 for 3 years / software 1000 = 5700 |  |  |  |  | |  |  |  | |  |  |  |  |  |
| 808,600 | Transportation (Vehicle/Transportation Budget) | NADMO | 87,500 | Vehicle: 50K / Fuel and Transportation 1000 per month |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Project Inception | Rigorous baseline information gathered | Data collection for baseline setting | NADMO /UNDP | 5,000 | DSA & traveling and/or consultation WS. Conducted by Programme Manager and M&E Officer |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Stakeholder engagement & COP establishment | Inception workshops at National and local levels | NADMO | 120,000 | National level workshop - inviting stakeholders (with potential evolution into COP) including key stakeholders from districts - 20K. Inception WS in 10 pilots (100K). COP convening, no cost |  |  |  |  | |  |  |  | |  |  |  |  |  |
| Pilot sites determined | Selection of 10 pilot sites in view of typologies and scaling | NADMO | 50,000 | Consultation plus site visits; scaling strategy |  |  |  |  | |  |  |  | |  |  |  |  |  |
| 185,450 | M&E Plan and tools developed | Development of M&E Plan with baseline, indicators and tools | UNDP | 10,450 | Consultancy and/or consultation for plan and tools development |  |  |  |  | |  |  |  | |  |  |  |  |  |
| **Sub Total 2** | | | **4,801,280** | | Outcome 1 - 3 + Implementation Support + Project Inception |  | | | | | | | | | | | | | |
| General Management Services (7%) | | | 361,386 | |  |  | | | | | | | | | | | | | |
| **GRAND TOTAL** | | | **5,162,667** | |  |  | | | | | | | | | | | | | |

# 5. MANAGEMENT ARRANGEMENT

An effective institutional framework to manage and implement the Project is proposed as below. Based on lessons learned from previous project implementation, we recommend that the Project Management Arrangement is set up in a way that it is integrated within existing government structures and strengthens the technical and administrative capacities of the institutions involved, rather than creating a dedicated project management unit.

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**a)** The **Steering Committee (SC)**, co-chaired by IP and UNDP, is responsible for providing strategic guidance to the Project. SC will meet once a year to serve where information regarding project activities and results are shared. SC will consist of key stakeholders from the Government, Donors, Research Institutions, and Civil Society organizations. The focus of the discussion and advice will be on how to achieve transformational policy and institutional change to enable the effective development and implementation of EWS in Ghana.

List of tentative SC participants are as follows:

* Representative, Ministry of Interior Chairperson
* UNDP Country Director Co-Chair
* NADMO Executive Secretary
* Representative, Government of Norway Member
* Representative, Ministry of Finance and Economic Planning Member
* Representative, Ministry of Environment, Science, and Technology Member
* Representative, Ministry of Communication Member
* Representative, National Development Planning Commission Member
* Representative, Ministry of Food and Agriculture Member
* Representative, Ministry of Local Government and Rural Development Member
* Representative, Ministry of Water Resources, Works, and Housing Member
* Representative, Center for GIS & Remote Sensing Application, Ghana Member
* Representative, Action Aid, Ghana Member

**b)** The **Project Executive Board (PEB)** consists of:

1. *Implementing Partner (IP)* – NADMO / GoG
2. *Responsible Party (RP)* – UNDP
3. *Donor* – Government of Norway

The IP has the overall responsibility to implement the project activities as per the Annual Work Plans agreed upon by IP, RP, and the Donor. The IP will call and chair the meetings of the PEB and facilitate agreement on decisions required for smooth implementation of project activities. The RP’s role is to ensure that project funds are allocated to those activities, which contribute to achieve the desired results of the project. The Donor has the right to request information from the IP and RP to make an informed decision as to whether funds are allocated are in line with their government policies and priorities. When PEB is convened, Donor will be informed and consulted, after which the Donor will make a decision regarding their participation.

c) **Quality Assurance and Support** will be provided by designated officers and experts from the UNDP Ghana Country Office. Although the PEB has the overall quality assurance role for the project, day-to-day activity planning, monitoring, financial management, implementation and technical support will be provided by the following designated staff:

* *Project Officer (PO)* (National staff: 100%) – Liaison and coordination between PM and UNDP; assist PM and PMT in project management, planning, implementation, and reporting
* *Technical Advisors (TA)* (National staff: 100% and International staff: 50%) – Work with PM and implementers to provide quality assurance and technical support to hazard/vulnerability mapping, EWS, vulnerability reduction, and scaling activities; develop and disseminate knowledge and communication products
* *M&E Specialist* (National staff: 50%) – Develop indicators, baseline, plans and tools for effective project M&E; work closely with PM to produce quarterly progress reports; provide M&E updates for UNDP reporting and on needs bases (for ROAR, ATLAS, etc). The position is planned to be cost shared with another project with NADMO on DRR (WB/GFDRR Project)
* *Project Administrative Assistant* (National staff: 50%) – Works with PM and PO to facilitate payment request processing and ATLAS recording and reporting; generate ATLAS reports every other week or upon request and share it with PMT and other relevant personnel. The position is planned to be cost shared with another project with NADMO on DRR (WB/GFDRR Project)

Furthermore, whenever necessary, UNDP, in consultation with NADMO will engage external experts to provide quality assurance and technical support to the project. These external experts may include, but not limited to international organizations, academic institutions, research agencies, civil society organizations, and consultants.

d) The **Project Management Team (PMT)** will be based within NADMO’s Research Division. The government will appoint an under secretary level staff on a full time basis to work as the project manager (PM) for the project. The PM will be supported by a team of staff, which will be recruited and sitting in NADMO. The key roles and responsibilities of PMT members are described below:

* *Project Manager (PM)* – Provide strategic planning and day to day decision-making necessary for project management and implementation support; responsible for financial and project management and reporting
* *Chief Technical Advisor (CTA)* – Placed within NADMO to provide technical support to enhance the overall capacity for DRR and EWS in NADMO
* *Financial Officer* – Work with UNDP Financial Officer and procurement department to lead the financial management, project contracting, personnel management, and travel, etc.

In principle, PMT will carry out activities according to the Annual Work Plan reviewed and agreed upon on a quarterly bases by the PEB. However, when necessary, the Project Document may be revised at any time by agreement among the signatories of the document (IP & RP) with the approval of the donor. The PM is expected to raise issues that may require substantive revisions[[15]](#footnote-15) to the project design in the Quarterly Progress Report communicated to the PEB, so that PEB can decide on how to improve the situation. PM is required to report any deviation of more than 20% of approved budget within the AWP to the RP. RP will review the proposed revisions, which will then be reviewed, agreed upon, and signed off by the PEB.

e) **Implementers** will be tasked to implement, or support the IP/RP implement, activities outlined in the AWP. Implementers will be authorized to provide goods and/or services on behalf of the project through contracts and Memorandum of Understanding (MoU) as appropriate. All contracts, MoUs, and ToRs will be developed in accordance with UNDP Rules and Regulations[[16]](#footnote-16) by PMT and reviewed and approved by UNDP PO.

# 6. MONITORING AND EVALUATION

### 6.1 Project Monitoring and Evaluation (M&E) Framework

Project M&E will be conducted in accordance with established UNDP procedures and will be provided by the IP (PMT) and UNDP (M&E Specialist). Throughout the course of the project, M&E activities will be carried out based on the following framework.

#### Monitoring

##### Project Inception Phase

* Information gathering for baseline setting
* Indicator development
* Monitoring tools development (risk log, templates, database, website, email lists, etc)
* M&E schedule development

##### Project Implementation Phase (Outcome 1 – 3)

*Quarterly:*

* Monitoring and update of Enhanced Results Based Management Platform
* Risk log monitoring and update in ATLAS.
* Generation of Project Progress Reports (PPR) in Atlas through the Executive Snapshot
* Monitoring and update of ATLAS lessons learned log
* Development of report and/or reporting of project progress for the quarterly PEB meetings

*Annually:*

* Development of Annual Review Reports (ARR) by PM and shared with PEB and SC
  + Progress made toward project objective and project outcomes - each with indicators baseline data and end-of-project targets (cumulative)
  + Project outputs delivered per project outcome (annual).
  + Lesson learned/good practice.
  + AWP and other expenditure reports
  + Risk and adaptive management
  + ATLAS Quarterly Progress Report
* Implementation of Annual Project Review is initiated by UNDP M&E Specialist and reported to the PEB. Based on the ARR, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the AWP for the following year. In the last year, this review will be a final assessment. This review is initiated by UNDP M&E Specialist and reviewed by PEB and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes and results.

*On a regular/needs base:*

* Monitoring visits
* Audits

#### Evaluation

* Conduct midterm and final project evaluation by external evaluators

### 6.2 M&E Strategy

Project M&E will be developed and implemented based on a comprehensive strategy to achieve transformational change. In doing so, the Project M&E will be set up in a way that it monitors and evaluates both qualitative and quantitative information and results at various levels.

#### M&E at Output Level: Was the project able to implement all the activities agreed upon in the AWP? Was the quality of the activities satisfactory (i.e. meet the intended quality indicator for the output)?

***M&E at Outcome, Objective, Goal, and Results Level:*** Did the achievement of outputs lead to the achievement of intended outcomes? Outcomes to objectives? Objectives to goals, and goals to results? Why or why not? Was the transformational change achieved?

#### Other Considerations

Equity: Did the project benefits/results reach vulnerable population such as women, children, and the poor? Were gender issues sufficiently addressed?

*Impacts and Efficiency:* How many people benefited from the project? How many people participated in the project? Was the financial inputs utilized most efficiently?

# 7. LEGAL CONTEXT

This document together with the UNDAF signed by the Government and UNDP which is incorporated herein by reference, constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA); as such all provisions of the UNDAF apply to this document. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner”, as such term is defined and used in the UNDAF and this document.

Consistent with the Article III of the Standard Basic Assistance Agreement (SBAA), the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP’s property in the Implementing Partner’s custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

assume all risks and liabilities related to the implementing partner’s security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner’s obligations under this Project Document [and the Project Cooperation Agreement between UNDP and the Implementing Partner][[17]](#footnote-17).

The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under/further to this Project Document”.

Procurement and contracting under this project will follow UNDP rules and procedures. However exceptions may be permitted upon discussion between UNDP and the Implementing Partner.

# ANNEXES

### ANNEX I: Benefits and Estimated Impacts

The entire country will indirectly benefit from the interventions under this project through reduced losses in GDP due to disasters. Other tangible benefits will also flow from minimized interruptions in food supply chain during disasters in food production centers and reduced spending on post-disaster rehabilitation.

The direct beneficiaries are the populations in the 10 demonstration sites (5 urban and 5 rural) that are currently at risk to disasters caused by natural hazards. For example in Accra, a UN Habitat (2011) study shows there are an estimated 172,000 residents at risk of a 10-year flood. But this is only for a single hazard and there could be more people at risk from slow-onset disasters apart from flooding. We do not have similar data for other cities but the population could serve as proxy for the number of beneficiaries. The indicative number of beneficiaries is estimated in the table below. The estimates will be refined once the results from hazard mapping are available.

|  |  |  |
| --- | --- | --- |
| Demonstration Sites | Population (Proxy for population at risk) | Sources |
| *Urban* |  | 2012 Estimates based on 2007 census.  <http://www.ghanadistricts.com/home/> |
| Accra | 2,291,352 |
| Kumasi | 1,989,062 |
| Tamale | 537,986 |
| Sekondi-Takoradi | 445,205 |
| Cape Coast | 217,032 |
| *Rural* |  | 5 districts x 90,000 (approx.) per district |
| 5 districts | 450,000 |
| TOTAL | 5,880,637 | Approximately 23% of Ghana’s total population |

In addition to the above socio-economic benefits and impacts to people, the proposed project will also bring about significant benefits to the natural environment. Much of the effort to reduce vulnerability, particularly in the rural area are expected to focus on efforts that enhance environmental resilience and sustainability, such as implementing sustainable land management practices, good agricultural practices, greening of riverbanks, decentralized renewable energy generation, green infrastructure development, etc.

### ANNEX II: Proposed Site Selection Criteria

Pilot sites for the Project will be selected in a way that informs the development of methodology for scaling and sustaining effective and sustainable local level DRR activities throughout Ghana beyond the 10 pilot sites. Therefore, the issue of scalability and sustainability will be critically explored and assessed throughout the demonstration activities implemented at the pilot sites.

For this reason, pilot sites will be selected utilizing a typological assessment of specific attributes and characteristics that represent the various types of communities that face disaster risks in Ghana. Below is a matrix of proposed site selection criteria. The criteria will be discussed and finalized during the project inception stage. Lessons learned and results from final evaluation of the Africa Adaptation Programme (AAP) will be seriously analyzed and taken into consideration for site selection process.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Major Economic Activity | Rural/Urban | Hazard Type | Extent of Exposure |
| Site 1 | Manufacturing | Urban | Flood, drought, fire, earthquake, storm surges, etc | % of economic assets exposed to be estimated |
| Site 2 | Commercial Agriculture |
| Site 3 | Tourism |
| Site 4 | Fishing |
| Site 5 | Finance/services |
| Site 6 | Pastoralism | Rural | Flood, drought, fire, earthquake, storm surges, etc | % of population exposed to be estimated |
| Site 7 | Fishing |
| Site 8 | Mining |
| Site 9 | Forestry |
| Site 10 | Subsistence Agriculture |

### ANNEX III: Project Risks

The following risks to the proposed project and associated mitigation measures have been identified.

|  | Risk | Mitigation | Likelihood | Impact | Risk Rating |
| --- | --- | --- | --- | --- | --- |
| 1 | Change of priority due to political change | Foster local level ownership; engagement of various stakeholders | Uncertain | Impact on project success and outcomes | Medium |
| 2 | Major disaster event | Create contingency plans | Uncertain | Impact on project implementation, success, and outcomes | Medium |
| 3 | Lack of baseline information | Prepare to conduct baseline study while avoiding duplications | Likely at the district/community level. It may also depend on the accessibility of household survey data | Impact on project success and outcomes | Low |
| 4 | Lack of local and national level interests/ownership | Engagement of key stakeholders in project development; alignment with existing mandates and priorities; institutionalize positive incentives | Preventable | Lack of project implementation, success, and outcomes | Low |
| 5 | Lack of transparency/ corruption | Implementation of stakeholder risk assessment; effective quality assurance and project management support provided by Responsible Party | Preventable | Termination of project based on Norway’s anti-corruption policy | Low |

### ANNEX IV: Stakeholder Analysis

| Agency | Mandate/Potential Contributions | Roles |
| --- | --- | --- |
| NADMO | Authorized disaster risk management organization in Ghana | Project Implementing Partner (IP), Steering Committee Chair  Member of Project Executive Board  Lead inception workshops and technical meetings/ Community of Practice on EWS |
| UNDP | International development agency with long experience in supporting GoG in DRR; supported NADMO in the development of the Ghana National Plan of Action for DRR and CCA | Responsible Party (RP) of the programme,will provide technical inputs to EWS development and hazard mapping by coordinating relevant UN agencies and international institutions, Steering Committee Co-Chair, Member of Project Executive Board, Co-lead inception workshops and technical meetings/ Community of Practice on EWS |
| Government of Norway | Donor Government | Steering Committee Member  Member of Project Executive Board |
| MoC/GMet | Agency mandated to collect and monitor climate and weather data in Ghana. Provides the technical and information inputs at the local and national levels for EWS | Steering Committee Member  Implementing partner for Outcome 1 and 2 |
| NDPC | Agency mandated for national planning and budgeting | Steering Committee Member |
| MEST/EPA | Agency mandated for climate change and environmental sustainability. Coordination with climate change adaptation activities and agendas | Steering Committee Member |
| MOFA | Agency working on agricultural policies and building farmers resilience at the district/community level | Steering Committee Member  Implementing partner for Outcome 3 |
| District Assemblies | Facilitate and lead pilot project implementation | Invited to technical meetings and/or relevant Community of Practice Activities |
| Hydro Meteorological Department | Generate hydrological forecasts for Ghana | Steering Committee Member and/or Community of Practice Member |
| WRC | Research institution with extensive experience on examining DRR and CCA issues in Ghana and supporting Government Agencies in this effort | Steering Committee Member and/or Community of Practice Member |
| World Bank | Working on EWS in White Volta | Invited to inception workshops and technical meetings/ Community of Practice on EWS |
| JICA | Working on EWS in northern Ghana | Invited to inception workshops and technical meetings/ Community of Practice on EWS |
| GIZ | Working on EWS through farmers insurance schemes | Invited to inception workshops and technical meetings/ Community of Practice on EWS |
| Civil Society Organizations (i.e. Ghana Red Cross, Action Aid, World Vision, or Oxfam etc.) | Working on community-based disaster risk reduction and DRR Advocacy | Steering Committee Member, Implementing Partner for Outcome 3 and invited to inception workshops and technical meetings/ Community of Practice on EWS |

### ANNEX V: Agreements

To be added upon signing of relevant agreements

### ANNEX VI: Terms of Reference

**TERMS OF REFERENCE**

**Position: *Project Manager***

**Duties and responsibilities**

The Project Manager (PM) will be responsible for the implementation of project activities under the guidance of the Project Executive Board (PEB). S/he will head the Project Management Team (PMT) and will be the primary liaison between NADMO and UNDP in relation to this project.

The key responsibilities of the PM include:

Partnership:

1. Mainstream the project into NADMO’s plans, programmes, and operations with a view of ensuring sustainability and ownership
2. Liaise and coordinate meetings and discussions amongst the various implementing agencies and partners involved in the project
3. Maintain close relationship with all key stakeholders, project consultants and relevant partners to ensure adequate information flow

Mobilization of technical inputs:

1. Coordinate project activities to ensure that the activities in each output area are timely, efficiently and effectively implemented in accordance with the project document and work plan
2. Coordinate with relevant members of PMT, consultants, and UNDP staff to ensure the technical robustness of project outputs;
3. Organize and facilitate stakeholder consultations and project review meetings as required, and;

Monitoring and Evaluation:

1. Monitor the procurement of goods and services for the project and ensure execution according to the rules and guidelines established by UNDP;
2. Monitor project implementation against established and agreed indicators in coordination with the M&E Specialist, and;
3. Prepare monitoring reports for submission to PEB/Steering Committee based on agreed timelines
4. Facilitate project evaluation exercises;
5. Ensure timely submission of project/progress reports to UNDP and to the donor

Management:

1. Manage the day-to-day operations of the budget, including the management of financial and other records to facilitate audits of the project;
2. Address challenges that might arise during project implementation;
3. Plan and coordinate project activities
4. Plan and arrange project-related meetings;
5. Prepare an annual work plan and associated budget in collaboration with the implementing agency, and present to the PEB for approval;
6. Ensure project visibility and communication of results to project stakeholders and the wider public
7. Undertake closing out activities for the project which include final financial and technical reports, and the handing over of documents as required, and;
8. Undertake any other activity that may be necessary for the effective management of the Project.

Reporting:

The Project Manager (PM) is accountable and reports to the Project Executive Board (PEB). S/he should consult and work closely with the UNDP PO responsible for providing quality assurance and oversight to the Project.

**Qualifications**

This position requires a strong background (at least at M.Sc.) in development with at least 5 years of relevant experience in disaster risk reduction in Ghana. The position will also require previous experience in project management and implementation.

The successful candidate will be expected to undertake field work. This position carries considerable responsibility and autonomy and requires good organizational capacity, good interpersonal and networking skills, and a willingness to work as part of a team. Core competencies and skills needed include:

* *Leadership*: Ability to lead processes by coaching, persuading and accommodating other opinions and positions with a positive attitude;
* *Management skills*: Ability to plan, monitor progress, administers budgets, and work effectively with counterparts to realize goals.
* *Facilitation skills*: Ability to effectively coordinate a multi-stakeholder project, facilitate meetings and processes effectively, compile complex and technical information in an understandable language to a wide variety of audiences.
* *Results-orientation*: Skill in achieving results through persuading, influencing and collaboration; *Conflict resolution skills*: Ability to dissipate and resolve conflicts as they arise
* *Analytical skills*: Ability to draw conclusions based on a contextual examination of facts and processes.
* *Communication skills*: Strong drafting, presentation and reporting skills;
* *IT literacy*: Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;

**Contracting modality**

The PM will be a senior civil servant working in NADMO. S/he will be a full-time NADMO staff member seconded to the Project from the Government for the entire duration of the project period, including any possible extension.

NADMO will be responsible for recruiting the PM using the government process. The salary scale will be set by NADMO based on its own rules and regulation provided the scale is in line with the UNDP rate for an equivalent position.

### ANNEXT VII: Project Overview and Process Diagrams



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1. Hyogo Framework of Action 2005-2015: Building the Resilience of Nations and Communities to Disasters [↑](#footnote-ref-1)
2. [www.fews.net](http://www.fews.net) [↑](#footnote-ref-2)
3. See for example, “Malaria gets early warning system for malaria epidemics.” Available at <http://news.bbc.co.uk/2/hi/health/1966020.stm> [↑](#footnote-ref-3)
4. UNECA. (2011). An Assessment of Africa’s climate observing networks and data including strategies for rescuing climatic data. Available at <http://new.uneca.org/Portals/acpc/documents/working_papers/WP3-Climate%20data%20network%20and%20rescuing%20draft%20final.pdf>. [↑](#footnote-ref-4)
5. Rain, David, et al (2011). Accra Ghana: A City Vulnerable to Flooding and Drought-Induced Migration. Case study prepared for Cities and Climate Change: Global Report on Human Settlements 2011. [↑](#footnote-ref-5)
6. Slum index, as used by UN-Habitat is composed of the following elements: inadequate access to safe water; inadequate access to sanitation and other infrastructure; poor structural quality of housing; overcrowding; and insecure residential status. (Rain, et al, Ibid.). [↑](#footnote-ref-6)
7. IRIN. (2007). “Ghana: Nearly 275,000 affected by floods in little-known disaster.” <http://www.irinnews.org/Report/74278/GHANA-Nearly-275-000-affected-by-floods-in-little-known-disaster>. [↑](#footnote-ref-7)
8. [World Bank. (2011). Ghana Climate Risk and Adaptation Country Profile. Available at http://sdwebx.worldbank.org/climateportalb/doc/GFDRRCountryProfiles/wb\_gfdrr\_climate\_change\_country\_profile\_for\_GHA.pdf](file:///C:/Users/shoko.takemoto/Dropbox/UNDP%20Ghana/02_E&E%20Projects/13_Norway/01_Proposal/04_Project%20Document/(World%20Bank,%202011,%20Climate%20Risk%20and%20Adaptation%20Country%20Profile.%20Available%20at%20http:/sdwebx.worldbank.org/climateportalb/doc/GFDRRCountryProfiles/wb_). [↑](#footnote-ref-8)
9. GFDRR Assessment [↑](#footnote-ref-9)
10. Original text in Action Plan for DRR and CCA states that, “Outcome 1: Based on sound legislation, competencies and adequate tools for disaster, climate and environmental risks assessment developed; Ghana’s national disaster risk profile completed; Proper early warning mechanisms built to inform communities of possible disaster, climate and environmental hazards” [↑](#footnote-ref-10)
11. Original text in Action Plan for DRR and CCA states that, “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 SADA programme” [↑](#footnote-ref-11)
12. See for example Rain, David, Ryan Engstrom, Christianna Ludlow and Sarah Antos. Accra Ghana: A City Vulnerable to

    Flooding and Drought-Induced Migration. Cities and Climate Change: Global Report on Human Settlements 2011. Available from <http://www.unhabitat.org/grhs/2011> ; NADMO (2010) [↑](#footnote-ref-12)
13. AAP has supported NADMO to implement hazard mapping in five pilot districts [↑](#footnote-ref-13)
14. World Bank is supporting NADMO to conduct hazard mapping in the White Volta Basin [↑](#footnote-ref-14)
15. A “substantive revision” is a formal change in the design of the project is called a substantive revision. UNDP NIM Manual, 2010. P 63. [↑](#footnote-ref-15)
16. UNDP NIM Guidelines, Manuals, etc. [↑](#footnote-ref-16)
17. Use bracketed text only when IP is an NGO/IGO [↑](#footnote-ref-17)