



PERFORMANCE AUDIT

OF

UNDP GHANA

COMMUNITY RESILIENCE THROUGH EARLY WARNING (CREW)
(Nationally Implemented Project No. 72067)

Report No. 1413

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Report on the audit of UNDP Ghana Community Resilience through Early Warning (Project No. 72067) Executive Summary

The UNDP Office of Audit and Investigations (OAI) conducted a performance audit of the UNDP Ghana Community Resilience through Early Warning (CREW) project (Project No. 72067) from 20 October to 12 November 2014. Performance auditing is an independent examination of a programme, function, operation, project, or the management systems and procedures of an entity to assess whether the entity is achieving economy, efficiency and effectiveness in the employment of available resources. The objective for this audit was to examine whether the CREW project was being managed effectively and efficiently in order to achieve its intended objectives. For assessing the audit objective, the audit focused on the following main audit questions:

- (a) Is the project proposal providing the best response to the country's needs as identified in the Country Programme Document, in terms of early warning and contribution to the resilience of local communities?
- (b) Does UNDP ensure that the project design is realistic and allows for the efficient and effective achievement of expected outputs?
- (c) Is the initial implementation of the project on track in order to safeguard that project outputs will be achieved?

The audit covered the project lifecycle starting from its inception in November 2012 to its implementation up to October 2014. Due to delays in project implementation, the project duration that originally spanned from 1 December 2012 to 31 December 2015 had been extended for one year, until 31 December 2016. Given that the project had not ended by the time of the audit, the purpose of the audit was to make an early assessment and provide feedback to the project in order to allow corrective actions to be taken where needed for the rest of the implementation process.

Overall audit rating

OAI assessed the management of the CREW project as **partially satisfactory**, which means, "Internal controls, governance and risk management processes were generally established and functioning, but needed improvement. One or several issues were identified that may negatively affect the achievement of the objectives of the audited entity/project." This rating was mainly due to shortcomings in the project design relating to the lack of coordination with other early warning system initiatives, lack of focus on communication of warnings, and lack of measures for scaling up and sustainability of project outcomes. Further weaknesses were noted in the project's justification, as no baseline and gap analysis were carried out before designing the project, no alternative project designs were envisaged, and budget estimates were not well founded. Finally, oversight and control was not carried out, as foreseen, in order to ensure effectiveness and efficiency of project implementation.

Key recommendations: Total = 3, high priority = 1

The three recommendations aim to ensure the following: (a) achievement of the organization's strategic objectives (Recommendations 1 and 2); (b) effectiveness and efficiency of operations (Recommendation 3);

For high (critical) priority recommendations, prompt action is required to ensure that UNDP is not exposed to high risks. Failure to take action could result in major negative consequences for UNDP. The high (critical) priority recommendation is presented below.

With regard to the question “Does UNDP ensure that the project design is realistic and allows for the efficient and effective achievement of expected outputs?” the following issue was noted:

The project was designed by the Country Office without support from UNDP Headquarters, which had experience with similar projects. The project document did not sufficiently establish links with other projects in Ghana that were related to early warning systems. The project document did not sufficiently address the communication of warnings to local communities, long-term maintenance or the safeguarding of equipment. Finally, the project document did not sufficiently explain how scaling up of the project outcomes would be achieved.

Recommendation: Revise and complement the project document in order to reflect changes made to the initial plan. In doing so, the Country Office should seek guidance and support from UNDP Headquarters, in particular from the Directorate of Climate Change and Disaster Risk Reduction within the Bureau for Policy and Programme Support. The revised project document should define actions needed to coordinate with other early warning system-related projects in Ghana, and reinforce developing coordinating mechanisms for early warning. It should also develop provisions and plans for maintenance and safeguarding of project equipment, and develop an exit strategy for scaling up the project outputs by also linking the CREW project with other early warning system-related projects and initiatives in Ghana.

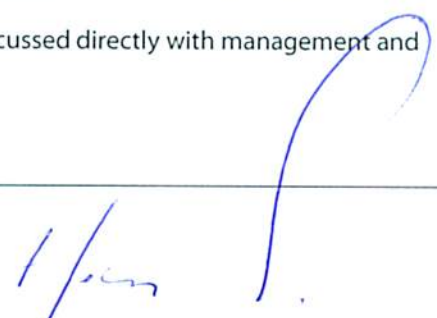
Good practices

The audit identified several good practices that may support empowering local communities, developing capacities at the national level and coordination of project implementation. In particular, consultative meetings that were held at regional and local levels for identifying the project pilot sites supported the involvement of local communities. Further, locating the Project Management Unit within the national agency for disaster management may facilitate knowledge transfer. Finally, establishing a multi-agency working group may support inter-agency coordination.

Management comments and action plan

The Resident Representative accepted all of the recommendations and is in the process of implementing them. Comments and/or additional information provided have been incorporated in the report, where appropriate.

Issues with less significance (not included in this report) have been discussed directly with management and actions have been initiated to address them.



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1. Introduction

1.1 Background and context of the CREW project

Natural disasters can lead to the loss of lives and to the loss of social, economic and environmental assets of communities and countries. They can also undermine investments and results already achieved through development activities. Disaster risk reduction refers to efforts made by governments and decision makers for systematically identifying, assessing and reducing the risks and impacts of disasters. Early warning is a major element of disaster risk reduction and aims at providing timely and effective information that enables people and communities to respond when a disaster strikes.

The Hyogo Framework for Action 2005-2015¹ is the internationally accepted framework that guides the work and efforts related to disaster risk reduction. It was adopted during the 'World Conference on Disaster Reduction' in Kobe, Hyogo, Japan from 18 to 22 January 2005. The expected outcome of the Hyogo Framework is to substantially reduce the loss of lives and assets during disasters within a timeframe of 10 years. Its strategic goals are to better integrate disaster risk considerations into development activities, strengthen institutions, mechanisms and capacities to build resilience to hazards and to incorporate risk reduction into emergency preparedness, response and recovery programmes. The Hyogo Framework proposes five priorities for action that will assist in achieving the expected outcomes and strategic goals. One of these priority areas is to "identify, assess and monitor disaster risks and enhance early warning."

UNDP Ghana's Country Programme Document 2012-2016 identifies as one of the national priorities the adaptation to the impacts and reduction of vulnerabilities to climate variability and change. Outcome 3 of the United Nations Development Assistance Framework Action Plan for Ghana 2012-2016 specifies the objective that "National systems and existing institutional arrangements for climate change mitigation and adaptation and for disaster risk reduction, as defined in the Hyogo framework...are functional." The Country Programme Document states that particular attention will be given to disaster monitoring and early warning systems.

In line with this goal, the CREW project aims at building capacities in Ghana to reduce disaster risks by establishing an early warning system. The aim of the early warning system is to provide the Government and decision makers with timely warnings and information regarding flooding and droughts in order to anticipate threats, prepare for an effective response, communicate early warning information to affected communities, as well as to take preventive measures to reduce the impact of disasters.

Prior to the CREW project, other UNDP projects/programmes already included and produced early warning-related outputs. The Africa Adaptation Programme (2009-2012) that was implemented in 20 African countries (including Ghana) had prioritized climate-resilient policies and measures in priority sectors. It foresaw developing hazard maps, procurement and installation of relevant hardware and equipment and development and testing of methodologies for communication of early warnings of floods and drought. Further back in 2007/2008, a project on 'Effective Disaster Risk Reduction in Ghana' aimed at increasing preparedness and coordination capacities of national institutions with regards to disaster reduction and early warning. Also, other international organizations such as the Japan International Cooperation Agency, the World Bank, and the German International Cooperation Agency (*Gesellschaft fuer Internationale Zusammenarbeit*) were involved in other early warning-related projects in Ghana.

¹ Hyogo Framework for Action 2005-2015, Building the Resilience of Nations and Communities to Disasters.

The CREW project is a pilot project. It aims to develop early warning capabilities in 10 pilot sites/districts of Ghana to set the foundation for an integrated nation-wide early warning system. Experience gained in the pilot phase is intended to allow scaling up the early warning system to the whole country, i.e. to all 216 districts of Ghana.

The project aims to achieve three outcomes. First, the project should assess and develop the basis for effective disaster risk reduction in Ghana by understanding hazard risks resulting from the two priority hazards of the project: floods and drought. For this purpose, hazard vulnerability and risk maps should be developed in the 10 pilot sites of the project. Second, it should enhance capacity for providing multi-hazard early warning, by designing an early warning communication system, installing hardware components for collection and communication of hazards, developing an early warning system master plan and building capacities. Third, it intends to reduce vulnerabilities in the rural and urban pilot districts by implementing specific measures in each location.

The project, with a total budget of \$5.2 million, is fully funded by the Norwegian Ministry of Foreign Affairs. The total expenditures as at November 2014 were \$1.1 million. The project is nationally implemented by the National Disaster Management Organization (NADMO). UNDP is a responsible party in charge of oversight, support and quality assurance.

1.2 Audit objectives

This audit examined whether the CREW project was managed effectively and efficiently enough to achieve its intended objectives. The audit focused on three main questions:

- (a) Is the project proposal providing the best response to the country's needs as identified in the Country Programme Document, in terms of early warning and contribution to the resilience of local communities?
- (b) Does UNDP ensure that the project design is realistic and allows for the efficient and effective achievement of expected outputs?
- (c) Is the initial implementation of the project on track in order to safeguard that project outputs will be achieved?

1.3 Audit scope and methodology

The audit reviewed the project's lifecycle, from its inception to its implementation up to the time of the audit. The assessment included how effectively the results and lessons learned from previous early warning system-related projects fed into the CREW project.

At the time of the audit, project implementation was significantly behind schedule due to delays in recruitment of project staff. The Project Manager was recruited in August 2013 and the international consultancy firm only started its work in March 2014. The implementation of project activities was thus at a very early stage. Most of the project milestones had not been implemented. As such, final project outputs and outcomes could not be reviewed. The audit therefore focused on assessing the project's inception, the project's design as reflected in the project document, and the implementation of individual project activities and the part of the work plan that was already finalized, in order to provide early feedback to the project and allow corrective measures to be taken where needed.

The audit gathered evidence for its assessment through documentary review and interviews. The fieldwork included a visit to 1 of the 10 pilot sites in Accra. Interviews were held with the donor (Norwegian Ministry of Foreign Affairs), NADMO, the Ghana Meteorological Agency as a responsible party, members of the Project Steering Committee (including the Hydrological Services Department of Ghana and the Water Resources Commission of Ghana), the consulting firm providing expertise and supporting the project's implementation, the Project Management Team, UNDP Ghana, and the CREW project staff.

1.4 Audit criteria

Audit criteria include policies, procedures and requirements against which facts can be assessed. For the purpose of this audit, the audit criteria included the international framework relating to disaster risk reduction, in particular the Hyogo Framework. The Hyogo Framework requires, among other things, to develop early warning systems that are people-centered and provide warnings that are understandable to those at risk. Further, it recommends, *inter alia*, developing mechanisms to engage the active participation and ownership of relevant stakeholders, including communities. In addition, the audit observations were assessed using UNDP Ghana's United Nations Development Assistance Framework and Country Programme Document. The national priority to better adapt to the impacts of climate change and to reduce vulnerabilities was specified in Outcome 3 of the United Nations Development Assistance Framework, which aimed at developing functional national systems and institutional arrangements for climate change mitigation and adaptation and for disaster risk reduction. It was expected that scalable initiatives would be tested and documented. The Hyogo Framework together with the Country Programme Document served as a basis for assessing, in particular, audit questions a and b (see paragraph 1.2). The UNDP project management policy and general good project management practices provided the criteria that were used for assessing the project design and its implementation (audit questions a, b and c). As such, it was expected that the project idea and design would be tested for assuring their relevance, feasibility, and sustainability. The project document highlighted the need to develop an integrated early warning system that comprises of other, so far fragmented and highly specialized projects, in the field of disaster risk reduction that were already taking place in Ghana. The audit criteria were discussed and agreed upon with UNDP Ghana prior to the audit fieldwork.

In addition, UNDP's Strategic Plan 2014-2017 sets out the goal to improve institutional effectiveness in supporting countries to achieve their development goals. It specifies, "Innovation, replication opportunities and lessons learned will be explicitly considered in programme development, management and review so that results achieved with assistance from UNDP can be sustained over the long term. Scaling-up strategies will be an essential aspect to ensuring better coverage and impact of development innovations. Together with the emphasis on sustainable results, this will not just mean designing successful projects to operate on a larger scale, but also strengthening, in parallel, national, regional and sub-regional policies, skills base, financing strategies and institutional capacities." This goal also served as a criterion for assessing the CREW project.

2. Good practices

OAI identified good practices as follows:

- Various stakeholders at national and local levels were involved in the initial phase of the project. In particular, regional consultative meetings were held to support identifying the pilot sites/hotspot districts for the project.
- The Project Management Unit is located on the premises of the government implementing partner. This may support knowledge transfer from the project to the national agency.

- A Research Technical Working Group was established and included representatives from different national agencies that provided technical support to the project and supported interagency coordination.

3. Audit observations

A. Is the project proposal providing the best response to the country's needs as identified in the Country Programme Document, in terms of early warning and contribution to the resilience of local communities?

During the initiation phase, the idea for the project is explored and elaborated. The goal of this phase is to examine the feasibility of the project with a focus on whether the project has the potential to contribute significantly to strengthening national capacities. This can be achieved through gathering information from previous natural disasters and their impacts on local economy and communities, to the extent that developing scenarios would provide the best possible solution in a given context and within given budgetary constraints. In addition, during the initiation phase, decisions are made concerning who is to carry out the project, which party will be involved and whether the project has an adequate support system.

The Hyogo Framework defines as a starting point for reducing disaster risks, the knowledge of hazards and the physical, social, economic and environmental vulnerabilities. This is done through data collection and gap analysis. Furthermore, according to UNDP's project policy, the initial phase of a project that aims at justifying whether it is the best response to the country's needs should use evaluations and reviews of similar work conducted in the same area, in order to assess the relevance of further interventions in this area. The UNDP project policy requires validation that the project proposal reflects national development priorities, as well as UNDP strategies and plans as identified in the Country Programme Document and Country Programme Action Plan or the United Nations Development Assistance Framework Action Plan. The policy does not require developing alternative project designs, but in OAI's view, aspects such as feasibility, cost-effectiveness, sustainability, and social impacts could be better assessed by developing alternative approaches to achieving the country's objectives and choosing the most suitable one. Finally, the project budget defines the required expenditures to produce the deliverables for each activity. The project budget is explicitly linked to project results through activities defined in the Results and Resources Framework. The estimation of costs for each activity in the project budget should be based on what is required to produce the results of that activity. Cost estimating should therefore be results-based (what is required to achieve the result) rather than input-based or based on available financial resources. Cost estimates should include all costs related to the achievement of project deliverables and outputs, whether direct or indirect.

The project document refers to other projects that are taking place in the field of disaster risk reduction and early warning systems in Ghana and states that they have so far been fragmented and are highly specialized. Further, the project document states that the CREW "project's strategy is...putting in place an integrated early warning system."

Overall, the analysis conducted during the initiation phase was not sufficient to design the CREW project on the basis of other early warning projects in Ghana, in order to avoid potential duplications and ensure complementary efforts.

In detail, OAI noted the following issues:

(a) Baseline and gap analysis

- The baseline information of Ghana's exposure to natural disasters from floods and drought at the national level and in the 10 pilot sites of the project was not available at the initiation phase of the project. The data on historic disaster events was collected after the start of the project. The historical data, especially relating to the newspaper reports on disasters, was collected by the CREW team with the assistance of a local consultant and the implementing partner's research unit. The international consultant only collected satellite data after the start of the project. This data, together with remote sensing data was needed for the model calculations of the early warning system. The unavailability of data and information affected the setting up of the project baseline information and the project targets.
- No detailed analysis was made at the initiation phase in order to identify which warning systems were already in place and what the CREW project needed to achieve in order to integrate systems and meet existing needs. The gap analysis of the CREW project was a deliverable that should have been completed by the international consultancy firm by January 2015. In order for the gap analysis to have provided meaningful input to the project and to guide the design of the CREW project, it would have been preferable to have conducted it at the project initiation phase.

(b) Alternative project designs

No alternative project designs were developed in order to select the best-suited solution to the country's needs and context. In particular, the following elements characterized the project design:

- There was a high dependency on external expertise and the project was built on complex technological solutions. This may increase dependency on external support in the long-run to sustain the project outputs. However, according to UNDP Ghana, on the basis of the terms of reference of the contract, the international consultant is requested to partner with local and national contractors, and to work together with national/local staff. In their view, this will help reduce dependency on international expertise after the project implementation.
- The project has a pilot site approach, i.e. the early warning system focused on 10 selected districts out of 216 districts nation-wide. The expectation was that the project outputs would be rolled out later to the entire country, yet no commitments and plans existed to indicate that that this would be financially supported. In addition, previous early warning system-related projects in Ghana used a pilot site approach, but these were not followed up on and scaled up after finalization of the projects. According to UNDP Ghana, given that the project is nationally implemented, sustainability and scaling up of the project outputs rests with the national partners, who may decide on allocation of funds after project finalization.
- The project covered a large scope of different project objectives and outcomes (understanding hazard risks, enhancing capacity for early warning and reducing vulnerabilities to disasters). Lessons learned from previous projects, in particular the Africa Adaptation Programme in Ghana that struggled to complete several project objectives, could have been used to better define and limit the spectrum of activities.²
- The project outputs required long-term ownership at the community level. However, ownership at the community level raised concerns about safeguarding and long-term maintenance of equipment spread

² See Final Project Review Report of the 'Africa Adaptation Programme on Climate Change in Ghana.'

out throughout the country (centrally and locally).

(c) Budget planning

The initial budget was not based on reliable cost estimates, but on experience from the Africa Adaptation Programme, even though the scope of the Africa Adaptation Programme was different from that of the CREW project. No market research, in the form of requesting quotes from consulting firms, was conducted in order to assess availability and costs of technical expertise needed for implementing the project prior to establishing the budget and initiating the tender process. As a result, the project budget largely underestimated the actual costs of the international consultancy firm that represented a key element of the project design. The costs of the international consultancy firm in the initial quote submitted amounted to \$2.9 million, i.e. 57 percent of the total project budget, compared to \$1.2 million that was planned for in the project document. The price finally agreed upon was \$1.8 million, representing 35 percent of the total project budget.

Given that the project design could not be changed substantially any more at this particular stage of implementation, the issues noted should be taken as lessons learned for future projects, and thus the recommendations are addressed to UNDP Ghana, rather than to the project.

Weaknesses during the project initiation phase (i.e. when justifying the project) could negatively impact the project's success in terms of feasibility, cost-effectiveness and sustainability of project outcomes.

Priority	Medium (Important)
Recommendation 1:	
Strengthen the analysis made during the initiation phase of projects in order to support relevance, feasibility, and sustainability of project outcomes. In doing so, include the following elements:	
<ul style="list-style-type: none"> (a) ensure that all elements that have an impact on the design of a project are available, in particular baseline, and gap analysis; (b) examine alternative solutions to country needs at the project initiation phase; and (c) ensure that budget estimates are well substantiated (i.e. based on reliable cost estimates), in particular when representing significant amounts of the project budget and when relating to key project activities/tasks. 	
Management action plan:	
<ul style="list-style-type: none"> (a) The baseline data is being collected, indeed at the beginning of the project, and will be updated. In addition, a project review will be conducted with the Steering Committee, technical group and guided by a consultant to review the project document. This will ensure that project results (outputs, outcomes and targets) are revised. (b) The recommendation is noted and will be reflected during the project review. It will also guide the design phase of future projects. (c) The project review will also incorporate the budget reviews to reflect the revised outputs 	
Estimated completion date: 28 February 2015	

B. Does UNDP ensure that the project design is realistic and allows for the efficient and effective achievement of expected outputs?

The purpose of the design phase of a project is to specify the detailed elements of a project (including work plan/activities, timeframe, management arrangements, etc.) that are reflected in the project document, to ensure that project objectives can be achieved in the most effective and efficient way, and that project outcomes can be sustained. This includes utilizing knowledge and experience that is available at UNDP Headquarters, and coordinating with previous projects and parallel initiatives where existing, and scaling up the project outputs to permit the entire country to benefit from the early warning system. Furthermore, the Ghana Action Plan for Disaster Risk Reduction and Climate Change Adaptation, which includes the CREW project, identified weak institutional systems for issuing and communicating early warnings for hazards as one of the key barriers towards a more anticipatory and systematic disaster risk management mechanism. The 'Programme and Operations Policies and Procedures' state that offices are required to ensure that a wide range of stakeholders participate in the formulation of projects. Stakeholders include any parties with an interest in the project, including target beneficiary groups, civil society organizations, government, donors, and technical experts (including in house experts). This participation promotes ownership, sustainability and commitment, without which the results are unlikely to be lasting. Furthermore, among the key considerations for quality programme and project formulation is the need to ensure the sustainability of the programme results by developing the following: exit strategies; financial support and mechanisms; individual and institutional capacities; and a sustainable resource management. The Hyogo Framework highlights that alert systems need to produce warnings that are understandable to those at risk, taking into account demographic, gender, cultural and livelihood characteristics. The CREW project document points out the objective to develop an early warning system that integrates with other projects that are already taking place in the field of disaster risk reduction in Ghana.

OAI noted the following:

(a) Technical expertise

UNDP Ghana did not consult with UNDP Headquarters for support on the project design (e.g. to obtain lessons captured by Headquarters units on similar projects) or for available expertise to contribute to drafting the project proposal.

(b) Coordination with other early warning system initiatives

The project document did not sufficiently establish links or align with other projects related to establishing early warning system initiatives in Ghana³ in order to support long-term sustainability of project outputs. Furthermore, the project document did not explain which outputs of the Africa Adaptation Programme were used as a basis for the CREW project and it did not explain why the hazard maps and the underlying methodology used in the Africa Adaptation Programme were not suitable to being used in the CREW project.

(c) Communication of early warnings

The focus of the CREW project document and the inception report of the international consultancy firm was on the communication link between NADMO headquarters and the regional NADMO levels in the pilot districts. The

³ Lessons learned from the early warning systems of the following: the Africa Adaptation Programme; the Japan International Cooperation Agency system in northern Ghana; the World Bank system in the White Volta region; and the German International Cooperation Agency system that focused on farmers' insurance schemes.

project document did not sufficiently address what needed to be done to establish timely communication/ dissemination of warnings/alerts to people in local communities and districts that were at risk.

(d) Maintenance and safeguarding plans

The project document did not address long-term maintenance and safeguarding (including storage, fencing off, ownership of local communities, maintenance inspections, etc.) of equipment that was purchased through the project (automated weather stations, river sensors, the Web Emergency Operation Centre) in order to support sustainability of project outcomes.

(e) Scaling-up strategy

The project document did not sufficiently explain how scaling up of the early warning system would be conducted, giving due consideration to financial, technological, long-term acceptance, ownership, and capacity aspects at the national and community levels. There was a large gap between the size of the CREW pilot project that covered 10 districts, and the total of 216 districts in Ghana that would eventually be covered by the early warning system. There was limited capacity and funding at the national level, no commitment from the donor beyond the duration of the CREW project, and limited coordination with other early warning initiatives in Ghana to support effective scaling up. However, according to UNDP Ghana, and as part of the agreed upon deliverables, the international consultant was expected to provide a strategy on how to sustain and scale up the early warning system to cover the entire 216 districts in Ghana.

If the project document does not provide plans and actions foreseen to coordinate with other early warning initiatives in Ghana, communicate to the recipients of warnings, maintain and scale up the project outputs, the long-term sustainability and effectiveness of the project outcomes might be at risk.

Priority	High (Critical)
Recommendation 2:	
Revise and complement the project document in order to reflect changes made by addressing the following elements:	
<ul style="list-style-type: none"> (a) seek guidance and support from UNDP Headquarters, in particular from the Directorate of Climate Change and Disaster Risk Reduction within the Bureau for Policy and Programme Support; (b) include in the project document activities relating to establishing coordination mechanisms with other early warning system-related projects in Ghana; (c) reinforce the project work plan with regard to developing communication mechanisms for early warning, in particular to the local/district levels; (d) develop provisions and plans for maintenance and safeguarding of project equipment beyond the project life-cycle; and (e) develop an exit strategy for scaling up the project outputs, by also linking the CREW project with other early warning system-related projects and initiatives in Ghana. 	
Management action plan:	
The recommendation will be implemented during the review of the project.	
Estimated completion date: 28 February 2015	

C. Is the initial implementation of the project on track in order to safeguard that project outputs will be achieved?

During the implementation phase, project activities should be carried out as defined and approved in the project document in order to achieve the expected project outputs. The project implementation phase includes monitoring and oversight activities, in particular with regard to project timelines, expenditures, and identification of project risks and reporting, which, given that the CREW project is implemented through government institutions, are key responsibilities of UNDP. UNDP's 'Programme and Operations Policies and Procedures' highlight that when projects are being implemented by other implementing partners (as is the case with the CREW project), UNDP's role is mainly to monitor the project's progress towards intended outputs (including maintaining the risk log). UNDP's role is to also monitor the appropriate utilization of resources and the sustainability and relevance of project outputs, and to participate in project management board meetings, which should be held on a regular basis.

The project document included the purchase of 10 automated weather stations as part of the early warning system hardware installation. The weather stations purchased would be used by the Ghana Meteorological Agency for automating the collection of weather data. Further, according to the work plan of the consultancy firm, they were expected to deliver a training and knowledge transfer programme to national personnel and NADMO staff.

In detail, OAI noted the following issues:

(a) Project implementation and work plan

The time needed to establish the project team, both for UNDP and for the implementing partner, was underestimated and led to delays in project implementation. UNDP Ghana decided not to fill the posts of Technical Advisors that were foreseen in the project document, after facing difficulties in finding suitable candidates. According to UNDP Ghana, not filling the vacant positions could be offset by using in-house specialists. In addition, the lengthy negotiation process with the consultancy firm led to further delays in the implementation of the project.

Almost two years after the start of the project, most of the deliverables had not yet been completed.⁴ The project work plan had not been updated/revised even though project implementation was delayed and an extension of one year (until end of 2016) was agreed.

(b) Budget vs. actual expenditures

The budget had not been updated to reflect several significant changes compared to the initial budget. This included the budgetary impact of not filling the posts of the Technical Advisors in the UNDP project support team, actual cost of the international consultancy, the lower number of automated weather stations procured, the introduction of the Web Emergency Operation Centre to the project and the procurement of IT equipment.

The early warning system that was being developed by the international consultancy firm did not depend on the automated weather stations. It used remote sensing data (satellite data) and historic weather data for generating warnings. According to the consultancy firm, "this data can be used for all pilot sites and is more

⁴ The development of hazard, vulnerability, and risk maps, gap analysis of early warning systems already implemented in Ghana, the design of CREW early warning system, including installation of early warning hardware and development of a master plan, implementation of vulnerability reduction measures, and training and knowledge transfer.

stable compared to ground station information.” Thus, the link between the automated weather stations and the early warning system was not sufficiently clear, including whether the procurement of the weather stations was actually a necessary component in achieving the project outcome of providing a functioning early warning system to the 10 pilot districts.

(c) Project risks

The project risks identified in the project document did not include key risks related to project implementation and its outcomes, such as risks regarding establishing the project team, sustainability and scaling up the project, risks relating to technological solutions, delivery and maintenance of equipment. The project risk log in Atlas (enterprise resource planning system of UNDP) did not capture the risks indicated in the project document, and the risk log had not been updated in order to reflect the existing status of risks and the effectiveness of mitigating actions.

(d) Oversight

The oversight function had not been effectively carried out. The Steering Committee (focusing more on strategic oversight) had not yet convened at the time of the audit and the Project Executive Board (responsible for operational decision-making) had not met for the last two quarters of 2014. In addition, having two levels of oversight seemed inefficient and were not required by the UNDP ‘Programme and Operations Policies and Procedures.’

(e) Training and knowledge transfer

For the scaling up and sustainability of project outcomes, it was crucial to transfer knowledge and capacities effectively from the international consultancy firm to the implementing partner staff working on the CREW project and further to the wider organization. The training and knowledge transfer programme was not in place at the time of the audit, due to delays in the submission of deliverables by the consultancy firm.

Weak oversight and monitoring of project implementation may put at risk the effective and efficient achievement of project outputs.

Priority	Medium (Important)
Recommendation 3:	
Revise the oversight functions of the project and improve monitoring by focusing on the following elements:	
<ul style="list-style-type: none"> (a) update the project work plan by reflecting the current status and changes of project implementation and the remaining work steps until completion of the project; (b) revise the project budget plan by reflecting changes that were made in the project implementation; (c) ensure that all risks included in the project document are managed and recorded in Atlas, and update the risk log on a regular basis, which may also include adding new risks; (d) assess whether the two levels of oversight (Steering Committee and Project Executive Board) can be merged and ensure that the oversight bodies meet according to plan; and (e) reinforce training, knowledge transfer and capacity building in the work plan and ensure that planned activities are effectively carried out. 	

Management action plan:

The project risks log has been updated and will be regularly monitored to ensure that project outputs are not at risk. The project work plan and budgets are being reviewed by the team. On the knowledge transfer and capacity building of the implementing partner staff, a detailed programme has been developed by the international consultants in collaboration with the CREW team to effectively transfer and build the capacities of the national staff working in the area of disaster risk reduction. In addition, the consulting team is made up of local, national and international staff. It is envisaged that by the end of the consulting period, the national/local would have gained the knowledge and skills necessary to be able to carry out similar assignments in the future without having to rely heavily on international expertise.

Estimated completion date: 28 February 2015

Definitions of audit terms - ratings and priorities

A. AUDIT RATINGS

- **Satisfactory** Internal controls, governance and risk management processes were adequately established and functioning well. No issues were identified that would significantly affect the achievement of the objectives of the audited entity.
- **Partially Satisfactory** Internal controls, governance and risk management processes were generally established and functioning, but needed improvement. One or several issues were identified that may negatively affect the achievement of the objectives of the audited entity.
- **Unsatisfactory** Internal controls, governance and risk management processes were either not established or not functioning well. The issues were such that the achievement of the overall objectives of the audited entity could be seriously compromised.

B. PRIORITIES OF AUDIT RECOMMENDATIONS

- **High (Critical)** Prompt action is required to ensure that UNDP is not exposed to high risks. Failure to take action could result in major negative consequences for UNDP.
- **Medium (Important)** Action is required to ensure that UNDP is not exposed to risks that are considered moderate. Failure to take action could contribute to negative consequences for UNDP.
- **Low** Action is desirable and should result in enhanced control or better value for money. Low priority recommendations, if any, are dealt with by the audit team directly with the Office management, either during the exit meeting or through a separate memo subsequent to the fieldwork. Therefore, low priority recommendations are not included in this report.