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# eSINGLE FORM FOR HUMANITARIAN AID ACTIONS

## 2015/00342/RQ/01/03

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### REFERENCES

#### *HIP/Decision Reference*

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#### *Action type*

Non-emergency action

#### *Document type*

Request

#### *Submission date*

20/03/2015

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## 1. GENERAL INFORMATION

### *1.1 Name of Humanitarian organisation*

UNDP-USA

### *1.2 Title of the Action*

Strengthening resilience and coping capacities in the Caribbean through integrated early warning systems

### *1.3 Narrative summary*

This Action represents another step in the focus of UNDP on strengthening community and national resilience through improving the early warning systems (EWS) across the region. This focus started through the EU-funded Regional Risk Reduction Initiative (R3I), which as one of its components developed a Common Alerting Protocol (CAP) based EWS in four Overseas Countries and Territories. Through the ECHO-funded Community Alerts Project 2013-2014, UNDP Barbados and the OECS expanded the countries with CAP-based EWS by three to include Dominica, Grenada and St. Vincent and the Grenadines. This current Action therefore seeks to create an enabling environment that can facilitate the adoption of CAP EWS by other countries in the region through systemisation of the process, add two (Barbados and Saint Lucia) additional territories to the Caribbean network of established all-hazard CAP-based EWS, and upscaling to end-to-end automated CAP systems.

This Action therefore seeks to reduce the vulnerability of communities facing multiple natural hazard risks in Caribbean small islands by helping communities become better informed about natural hazards and their vulnerability, with a system being implemented to allow the automated receipt of hazard notifications and dissemination of alerts via an integrated Common Alerting Protocol (CAP)-based all-hazard EWS. One of the strengths of the CAP lies in its ability to be adaptable. Ultimately the system can be expanded and improved with time as local and national capacities strengthen and confidence in the system continues to grow.

The specific results of this Action include:

Result 1: Regional harmonisation and knowledge sharing for EWS

Result 2: Knowledge of risk and vulnerability enhanced in communities to improve preparedness and response

Result 3: Framework for CAP-compliant all-hazard early warning systems integrated at national and

community levels

## 1.4 Area of intervention

<u>World area</u>	<u>Country</u>	<u>Region</u>	<u>Location</u>
America	BARBADOS	St Lucy	Sherman's
America	BARBADOS	St. John	Martin's Bay
America	SAINT LUCIA	Dennerly	North Dennerly
America	DOMINICA	St. Peter	Dublanc
America	DOMINICA	St. Peter	Colihaut
America	SAINT VINCENT AND THE GRENADINES	Charlotte	South Rivers-Park Hill-Colonarie watershed
America	SAINT VINCENT AND THE GRENADINES	St Andrew	Vermont Valley-Buccament Bay watershed

## 1.5 Dates and duration of the Action

### **Start date of the Action**

01/05/2015

### **Duration of the Action in months**

18

### **Start date for eligibility of expenditure**

01/04/2015

### **Justify the duration of the eligibility period before the start date**

Based on the just-concluded DIPECHO Action the delay in contracting of the Project Coordinator resulted in a late start to substantive implementation of the activities. The eligibility period plus advanced preparation by UNDP, which has already been initiated, would therefore be used to launch and select the Project Coordinator who will be guiding the implementing of this Action. This period will also be used to sensitise the country focal points and key stakeholders about the project and expectations, as well as consolidate arrangements for synergies with other actors and projects in an effort to minimise project implementation delays.

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## 2. HUMANITARIAN ORGANISATION IN THE AREA OF INTERVENTION

### 2.1 Presence in the area

UNDP has been providing support to the region in disaster management continuously since the 1990s, supporting the recovery in Montserrat post volcanic eruptions in the late 1990s, and shaped by the response to the impact of Hurricane Ivan on Grenada in 2004. Work during the current programme period 2012-2016 is aligned with the Barbados and the OECS United Nations Development Assistance Framework (UNDAF) and Sub-regional Programme Document (SPD) outcomes, developed based on priorities as articulated by the countries and UN Sub-regional Team. This work is also aligned to the global Hyogo Framework for Action (HFA) 2005-2015 and regional Comprehensive Disaster Management (CDM) Strategy 2014-2024 led by the Caribbean Disaster Emergency Management Agency (CDEMA). It focuses on building resilience to the impacts of climate change and anthropogenic hazards, specifically enhancing the integration of disaster risk reduction into development planning, and improving disaster response and recovery. All of the countries served are also CDEMA Participating States.

Consistent with this strategic direction, projects implemented during this period include the following:

- UNDP is currently working to strengthen capacities across the region in the application of the Post-Disaster Needs Assessment (PDNA) methodology; and mechanisms for improving disaster loss databases in countries and using such information within risk assessments to strategically inform national investments and decision making, and thus improve their resilience (GFDRR).
- The Caribbean Risk Management Initiative (CRMI) Phase II is being implemented with a strengthened

focus on climate risk resilience and mainstreaming gender and South-South cooperation to facilitate experience sharing and replication of good practices.

- Supporting disaster recovery is also a key part of the Sub-regional Office's mandate. In Montserrat following the eruptions of the Soufriere Volcano from the late 1990s; in Grenada following Hurricanes Ivan (2004) and Emily (2005); in St Lucia following Hurricanes Dean (2007) and Tomas (2010); in Dominica following Hurricane Dean (2007); in Saint Lucia and St Vincent and the Grenadines following Hurricane Tomas (2010); and in Dominica, Saint Lucia and St Vincent after the Christmas floods (2013). For the latter, in addition to relief assistance and early recovery support, UNDP also coordinated the PDNA process, including training of national personnel in the methodology and articulating the Recovery and Reconstruction Strategy for two of the countries.

- UNDP supports the UN Humanitarian Country Team (HCT) and serves the Eastern Caribbean Development Partner Group on Disaster Management (ECDPDG/DM). The ECDPDG/DM is a multi-partner group supporting the sub-region for coordinated response and recovery to natural hazards. The group is co-chaired by the UN Resident Coordinator and CDEMA and is covered by an Operations Plan and Standard Operating Procedures (SOPs). The main objective of the group is to coordinate external assistance to ensure its effectiveness following the impact of a natural hazard.

- Recently UNDP implemented two projects relating to early warning systems, specifically the EU-funded Regional Risk Reduction Initiative (R3I) which as one of its components developed a Common Alerting Protocol (CAP) based EWS in 4 countries. Secondly the ECHO-funded Community Alerts Project 2013-2014 expanded the countries with CAP-based EWS to St. Vincent and the Grenadines, Dominica and Grenada.

## **2.2 Synergies with other actions**

This Action would create synergies with and complement several ongoing initiatives in the target countries.

Holetown in Barbados has long been noted as an area subject to flash flooding due to the convergence of many waterways from inland, high urbanisation and inadequate drainage. This has prompted investments by the Department of Emergency Management (DEM), USAID/OFDA, UNDP and other partners into addressing some of the causative factors contributing to this vulnerability, improving the resilience of the infrastructure, and implementing early warning systems for the safety of the community. In October, Barbados submitted national Tsunami Protocol and Standard Operating Procedures (SOPs) for early warning.

The Caribbean Institute for Meteorology and Hydrology (CIMH) is currently engaged in reconstruction activities in Dominica which will see improvement of instrumentation of monitoring hydromet phenomena, in addition to their ongoing work programmes relating to the same. CIMH has agreed to partner with UNDP on this initiative in strengthening hazard monitoring and tying it into the national CAP servers as well as the DEWETRA platform to complete the end-to-end systems. DEWETRA is a real-time data and information integration system for hydro-meteorological risk forecasting, environmental monitoring and disaster risk mitigation. The information on this platform will feed into the CAP server to strengthen secondary alerts. Incorporating regional outputs like the DEWETRA into alert messaging will maximise their impact and use at national and community level.

Regionally, CDEMA and the Caribbean Tsunami Information Centre (CTIC) continue to have ongoing programmes for public education around natural hazards, with which this Action directly link e.g. CDEMA's school safety programme, CTIC's TsunamiReady programme and Tsunami Smart.

The Action is also aligned to the new UNDP Strategic Plan (Output 5.4: Preparedness systems in place to effectively address... natural hazards... by government and community), and Outcome 4 of the Comprehensive Disaster Management (CDM) Strategy 2014-2024 specifically to Output 4.3 "Community EWS integrated, improved and expanded." Linkages are also expected with outputs 1.2 and 4.4. The post-2015 global framework for disaster risk reduction is likely to be adopted at the Third United Nations World Conference on DRR in March 2015. The Action is aligned to priorities articulated in the Zero Draft: Preparedness for response, recovery and reconstruction; and understanding disaster risk.

Where applicable this Action will utilise the tools, reports, guides and methodologies developed by partners and collaborate with other Actions under this HIP. Specifically, liaising with the IFRC and the National Red Cross Societies for conducting Vulnerability and Capacity Assessments (VCA) and

systemising experiences in EWS in the region; UNDP Cuba in the possible extension of the national Hazard, Vulnerability and Risk study methodology (already replicated in 5 Caribbean countries), and with UNISDR and UNDP Cuba in examining integration of gender in EWS.

Sharing and documentation of experiences will also be an integral part of this Action. CDEMA, UNISDR, and IFRC will be key partners in this, through knowledge platforms and regional activities.

Collaboration with Google will be explored around disseminating early warnings from authoritative sources via Public Alerts (<http://www.google.org/publicalerts>) which has been implemented in several countries around the world. Where feasible, joint activities with the UNDP GFDRR initiatives will be undertaken.

Using established regional structures and mechanisms will increase sustainability of the Action with the highlighted synergies preventing overlap between donors and double funding.

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## **3. NEEDS ASSESSMENT**

### ***3.1 Needs and risk analysis***

#### ***3.1.1 Date(s) of assessment***

2009-2015

#### ***3.1.2 Assessment methodology***

The needs to strengthen disaster preparedness and Early Warning Systems in particular has been long been assessed through the UNDP programmatic context. For the respective beneficiary countries the following assessment documents were used:

Barbados

- Initial assessment of EWS capacity (under USAID/OFDA-funded project), 2015
- Country Document for DRR, 2014 (UNISDR methodology outlining hazard risk, vulnerability and capacities, DIPECHO 2013-2014)
- Vulnerability and Capacity Assessment (IFRC methodology) for Sherman's, St Lucy, 2012
- Vulnerability and Capacity Assessment for Martin's Bay, St John, 2010

DOM

- Office of Disaster Management Assessment, 2015
- Community Alerts Project Evaluation Report, 2014
- Country Document for DRR, 2014 (UNISDR methodology)

SLU

- PDNA Report, 2014
- Country Document for DRR, 2014 (UNISDR methodology)
- Vulnerability and Capacity Assessment for Dennery, 2009

SVG

- Community Alerts Project Evaluation Report, 2014
- Country Document for DRR, 2014 (UNISDR methodology)
- PDNA Report, 2014

#### ***3.1.3 Problem, needs and risk analysis***

## **Hazards**

The communities targeted under the present action are particularly vulnerable to rapidly forming hydrometeorological events generating flood from rainfall and coastal hazards such as storm surges. Landslides and slippage are also common. Changing climatic conditions are increasing the severity and frequency of extreme events. Tsunamis are also a threat which tends to be overlooked in this region prone to seismic activity, including earthquakes, submarine landslides and underwater volcanoes (Kick 'em Jenny), which are all potentially tsunamigenic.

Dominica like most of its Caribbean neighbours is vulnerable to multiple hazards, some of which could occur simultaneously. Among the most common are hurricanes, landslides, flooding, fires, seismic and volcanic activity and associated tsunami threats.

Over the past 2 years St. Vincent and the Grenadines has experienced 4 episodes of severe flooding, with 3 major weather systems in the past 4 years costing the country in excess of XCD560 million and 12 lives. The targeted communities were significantly impacted by the 2013 trough event, with rivers flowing directly through the villages making them highly susceptible to flooding.

The identified fishing communities in Barbados are susceptible to storm surges and flooding because of their location, as well as isolation in an emergency with vulnerable access routes.

The combination of the steep topography and young volcanic soils, constantly subjected to seasonal high rainfall, make Saint Lucia very susceptible to soil erosion, flooding and landslides.

## **Vulnerabilities**

Socioeconomic and physical:

Economic exposure is often high, with concentration of assets and infrastructure in coastal areas. The densely clustered low income housing in many of these communities is very vulnerable to being structurally compromised, particularly where built on the edges of drainage channels and reclaimed land. Homes, roads and bridges can often be severely impacted by small and medium scale events, whose true immediate and cumulative impacts are not adequately reported or captured. In some instances, the main artery for transportation is also at high risk, with adverse implications for emergency response operations. In other areas, some residences are inaccessible by vehicles under normal conditions, far less in an emergency situation.

Many communities are also characterised by high proportions of elderly members, low income earners, and persons with disabilities. The compounded effects of small hazard events is often a contributory factor inhibiting emergence from or causing regression to a state of poverty or indigence for many households.

Further, anthropogenic factors exacerbate local vulnerabilities, e.g. slash and burn agriculture upstream increasing soil erosion and siltation of watercourses and drainage channels; dumping of solid waste in and poor maintenance of these channels; improper construction practices and limited enforcement of land use regulations.

Dominica: The Office of Disaster Management identified that the majority of the targeted communities are dependent on farming and fishing for their livelihood but lie below the 30m tsunami line. Additionally, rivers run through or near the communities.

SVG: Vulnerability is compounded by its geography, geology and narrow economic base. The watersheds selected have rivers flowing directly through the villages making them susceptible to the flooding threat.

Barbados: With small size, a densely populated low-lying coastal zone and an undiversified tourism-based economy, hazards typically put a large proportion of produced capital at risk and often affect the entire territory and economy.

Saint Lucia: Large segments of the population are located along the coastal belt, where lowland agriculture and coastal resources are the main sources of livelihood. Poor practices relating to disposal of waste, deforestation and land use also contribute to hazard risk and low resilience.

## **Needs**

Organisational:

Alerting and mass evacuation for sudden impact hazards is a critical consideration in many of these locations, however preparation capacities remain weak and limited, generally due to lack of human resources, technical skills and equipment at national and community levels.

Communication at the national level, and even more so between national disaster offices (NDOs) and communities, is not sufficiently efficient nor robust, lacking the necessary redundancy to support emergency situations. This has implications for effective preparation for and response to hazard events and related disasters.

Communication and information:

National authorities currently face several challenges in the dissemination of effective, redundant, integrated and timely alerts to community members. While the CAP EWS concept is gaining acceptance among countries, automated end-to-end systems are still absent, although monitoring and forecasting capacities are being reinforced e.g. the DEWETRA platform. Much remains to be done to achieve complete risk information flow from forecaster to population at risk through a coordinated national mechanism.

The needs of vulnerable and special groups (e.g. persons with disabilities, minority groups, foreign language speakers, etc.) are not adequately considered by usual media such as the radio broadcast.

Dominica's 2014 Country Document for DRR speaks to enhancing the coordination and implementing capacity of agencies in disaster management as well as of monitoring and EWS. There is a need for upscaling of the current CAP-based EWS in Portsmouth to engender a greater sense of preparedness and the capacity for early warning and evacuation at the community level.

SVG's 2014 PDNA points to the need for a review and implementation of EWS. The 2014 Country Document also highlights implementation of an end-to-end warning system, community exercises and training as priorities for communities and by extension the country.

Recent assessments have revealed that Barbados has started the process for the development of a CAP EWS. However, the critical aspect of "how" these warnings would be delivered to the most vulnerable still remains unanswered.

One of the key strategic elements for DRR identified in Saint Lucia is the expansion and enhancement of EWS including forecasting, dissemination of warnings, preparedness measures and reaction capacities. Additionally, it is imperative that the island continues the process of vulnerability assessments. The implementation of key processes such as community training and exercises is a key underlying recommendation.

Coping capacities of the communities:

Generally there is a district/sub-national disaster management structure in place which supports the NDO in public education, coordination and disaster response across several communities. Unfortunately, these organisations (generally volunteers) are often under-resourced and lack certain technical capacities.

Nevertheless, many of the communities are actively trying to improve their preparedness and reduce their vulnerability, with several having developed Preparedness and Response Plans following vulnerability assessments. Some tangible actions have been taken, such as training of Community Disaster/Emergency Response Teams (CDRTs/CERTs). However risk perception and sharing of risk information still proves challenging in some aspects.

The needs assessment found that each country lacks some elements of a robust, comprehensive and integrated EWS, which result in a reduced capacity for preparedness, protection of the livelihoods and reaction. Additionally, there are limited feedback mechanisms for communities to inform authorities on the effective receipt of disaster risk information and their state of readiness.

### **3.1.4 Response analysis**

UNDP continues to work with countries in the Eastern Caribbean to strengthen their resilience to natural hazards in a region of highly vulnerable small island developing states, in alignment with Outcome 5 of the Strategic Plan "Countries are able to reduce the likelihood of conflict and lower the risk of natural disaster, including climate change". This level of capacity building ranges from mitigation through strengthening risk assessment in public investment and planning to preparation through EWS and CERTs to response through disaster relief and post-disaster needs assessment (PDNA).

Within the framework of this Action, with the understanding that early warning is one of the most cost effective solutions for reducing disaster losses, and a critical need in vulnerable communities with high exposure and limited coping capacities, UNDP is endeavouring to apply the lessons recently learned in a more effective expansion and upscaling of Common Alerting Protocol (CAP) based EWS in the region, coherent with Output 4.3 of the CDM Strategy.

Strategically, this will seek to improve resilience in vulnerable communities through bettering their understanding of the hazard risks faced and enhancing the mechanisms for more effective hazard monitoring and disseminating alerts to communities so they are better able to respond. Through these coordinated actions it is expected to drive better decision making at an individual and household level, which will at the very least not increase the level of vulnerability, and increase the amount of time that persons have to prepare and respond to a pending threat to reduce potential losses. The approach will see increasing knowledge and understanding of the multi-hazard scenario at local level; upscaling EWS to integrated end-to-end systems, articulated and coordinated at territorial and institutional level with timely and accurate information about hydro-meteorological and geological hazards through innovation and technology for improving local alert capacities; and capturing of experiences and processes to create a duplicable template that can be adopted by other countries in the region.

### **1: Regional harmonisation and knowledge sharing for EWS**

Based on the successes and lessons learned during the implementation of the Regional Risk Reduction Initiative (R3I) during 2009-2012 and the Community Alerts Project during 2013-2014, the countries have agreed that a Common Alerting Protocol (CAP) EWS is an effective tool for rapid dissemination of alerts to the population, with consistent messaging expected to reach the largest possible portion of the target population. This is especially important for rapid onset hazards where a coordinated approach to implementing preparedness and resilience to the "last mile" of the population is required.

This has therefore prompted the countries and UNDP to strengthen the integration of CAP EWS as a comprehensive tool for hazard notification and public alerting, and involve the communities in the definition of a system that would best inform them.

Systemisation of this process is critical to its adoption and replication throughout the region. The proposal intends to document a Toolkit giving guidance across the entire implementation process, including template protocols, equipment specifications, identification of capacities needed, etc. Sharing of this tools and associated experiences in implementation will be a coordinated effort with CDEMA and IFRC, with development of case studies, advocacy during the CDM Conference, and development of an online forum for continued interaction between DRR/EWS professionals using the systems in the region.

### **2. Knowledge of risk and vulnerability enhanced in communities to improve preparedness and response**

The Action will seek to address the gaps in public perception and understanding of risk and vulnerability, especially in relation to rapid onset hazards such as flash floods and landslides. This will encourage more effective preparedness actions by households.

After conducting Knowledge Attitude and Perception (KAP) surveys to assess current levels of knowledge, a communication strategy will be developed and rolled out which will focus on the nature of the natural hazards faced, factors contributing to vulnerability within the communities and actions that community members can take to reduce their vulnerability. It will also encompass what an EWS is, how the CAP EWS works and how it benefits the community in helping to improve their resilience capacities.

### **3: Framework for CAP-compliant all-hazard early warning systems integrated at national and community levels**

Where not existing (Saint Lucia), the policy and procedural framework for CAP-compliant all-hazard

EWS would be integrated to strengthen the existing national architecture. This will see reinforcement of policy and operational guidance, reviewing and updating protocols and standard operating procedures as needed, with associated training for national authorities (e.g. NDOs, meteorological service, other authorised agencies such as police or fire departments) in realising a trusted all-hazard alerting system. This includes using and maintaining the hardware components (e.g. CAP server) and interacting with the software to disseminate alert messages. This will also entail assessment of the early warning needs within target communities to be able to appropriately design a system that is most responsive to their needs.

The Action will seek to strengthen, with CIMH, hazard monitoring systems (e.g. rain and water level gauges, soil moisture and soil movement detection) and integrating these into the CAP system as well as DEWETRA to improve notification and forecasting capabilities. Simultaneously, new communities will be equipped with the technological capacity to more effectively receive alert messages. National authorities are then able to distribute a single alert message from the CAP server to multiple dissemination tools (e.g. RDS receivers, TV interrupt, radio interrupt, email, SMS, etc) simultaneously based on notifications received. This will enable authorities and communities to make more timely and effective decisions in their response. Of necessity this will include training for the use and maintenance of the systems as well as designing strategies for their long-term sustainability and improvement.

### **3.1.5 Previous evaluation or lessons learned exercise relevant for this Action**

Yes

#### **3.1.5.1 Brief summary**

The Community Alerts Project recently underwent a project evaluation from which several recommendations and lessons can be gleaned, specifically:

1. Using established networks - networks with already established structures and methodologies will allow easier completion of objectives and outputs. This methodology was achieved under the previous DIPECHO Action
2. Collaboration between National Disaster Offices (NDO) and Red Cross Societies - this Action will facilitate further collaboration between the NDO and RCS. The previous Action would have started the process which will be continued during this initiative. Although every element did not work as planned both actors are important in the national disaster mechanism, and it is important that all parties agree and understand their roles and responsibilities in the national context
3. Involvement of key decision makers - Although the relevant agencies were involved early in the project implementation stage, in some cases the key decision makers in these agencies were not involved in the process causing some delays in implementation. This is one area which will be sought to remedy as part of the current Action.
4. Time considerations - The late start of the previous Action caused some activities to be somewhat compressed. As a result and as part of the current Action the start date for the eligibility of funding was requested before the proposed start date of the Action. The eligibility period would be used to launch and select the Project Coordinator who will be implementing this Action. This period will also be used to further sensitise the country focal points and key stakeholders about the project and expectations in an effort to minimise project implementation delays.

Additionally the recommendations from the evaluation report have been incorporated in the activities of this current Action.

### **3.2 Beneficiaries**

#### **3.2.1 Estimated total number of direct beneficiaries targeted by the Action**

##### **Individuals**

10.700

##### **Organisations**

30



**3.2.2 Estimated disaggregated data about direct beneficiaries (only for individuals)**

	<u>Estimated % of target group</u>	<u>% of female (F)</u>	<u>% of male (M)</u>
Infants and young children (0-59 months)	5 %	48 %	52 %
Children (5-17 years)	30 %	50 %	50 %
Adults (18-49 years)	45 %	52 %	48 %
Elderly (> 50 years)	20 %	55 %	45 %

**3.2.3 Does the action specifically target certain groups or vulnerabilities?**

Yes

**3.2.3.1 If yes, which groups or vulnerabilities?**

Children - Elderly - Disabled - Female

**3.2.4 Beneficiaries selection criteria**

Direct beneficiaries are represented by the populations of the communities. Since a criterion of success for an alerting system is to reach the largest proportion of the population, the project seeks to reach all community members, including vulnerable groups and minorities.

Vulnerable communities - and therefore direct beneficiaries - were identified in cooperation with NDOs. The vulnerabilities and hazard risk in these communities has already been highlighted and assessments completed evaluating the extent of the issues and existing capacities.

**3.2.5 Beneficiaries involvement in the Action**

This proposal was built in direct partnership between UNDP and NDOs. NDOs have ongoing partnership with communities through nationally-led programmes and actions. Many of the communities also have active engagement with the national Red Cross Society and, where applicable, have active community-level response structures that interface regularly with the NDOs.

NDOs, meteorological services and community disaster response groups are considered as beneficiaries and as partners in the implementation of the action. From a technical perspective, the NDOs and meteorological services, which are typically nationally Tsunami Warning Focal Points, will be among the strategic counterparts for training as key interlocutors in the roll out and sustaining operations of the EWS.

Further, the Action as described in this proposal gives an important role to the designing of the integrated alerting system by local stakeholders. This includes key stakeholders at national level as well as at community level (heads of schools, shelter managers, medical facilities, local government and NGOs). By designing and implementing some of the critical components of the EWS themselves, the Action seeks to ensure beneficiaries' ownership and awareness. Businesses and other private sector entities within and in the environs of the beneficiary communities will also receive benefits of being able to access the EWS, as well as the awareness of their staff of hazard risk, and potential actions they can adopt to increase the resilience of their operations.

**3.2.6 More details on beneficiaries**

Indirectly, the entire populations of St. Vincent and the Grenadines (110,000), Barbados (275,000), Dominica (72,000) and Saint Lucia (183,000) should benefit from the project, since the project will also aim to integrate the policy and structural framework for EWS at the national level.

While some communities only will be directly targeted by the action, the project will have the following results which may apply to the whole country, and the broader region:

- Introduction of the Common Alerting Protocol as an automated end-to-end solution
- Development of policy and protocols
- Capacity building at national level in maintenance, activation, etc
- Strengthening of communication strategies
- Capturing experiences through regional case studies
- Systemisation of implementation process for EWS through a toolkit
- Simulation exercises (will benefit the national system)
- Some alerting systems may apply for the entire island (e.g. radio broadcast interrupt)
- Some communication tools (e.g. website) would not be limited to the targeted communities

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## **4. LOGIC OF INTERVENTION**

### **4.1 Principal objective**

To reduce the vulnerability of communities facing multiple natural hazard risks in Caribbean small islands

### **4.2 Specific objective**

#### **4.2.1 Specific objective - Short description**

To strengthen national preparedness mechanisms through improved hazard monitoring and alert dissemination, targeting vulnerable communities and groups; and create regional framework for facilitating multi-hazard CAP EWS

#### **4.2.2 Specific objective - Detailed description**

The targeted communities will be better informed of the hazards they face, their vulnerability, and therefore better prepared to respond. This will include expanding their knowledge of hazard risk and understanding their perception of how this risk affects them. The education process will also include effective preparation and responses to various hazards; as well as on the EWS itself - how it works, how they can interface, and how they should respond when hearing a warning message.

The aim of EWS is, fundamentally, to detect a possible hazard with as much lead time as possible, ascertain the level of threat, and to inform the communities of pending threats with the view to ensure personal security and minimise loss of assets and livelihoods. Warnings are inseparable from background recommendations on preparedness and protective actions, which shall be relevant to the specific context of communities. Warnings, associated systems tests and simulation exercises work also as reminders and incentive for long term effort to preparedness.

Integration into the policy and operational mechanisms for alerting are central to the operationalisation and sustainability of the all-hazard EWS. This allows the EWS to fulfil its scope of functions in terms of providing risk information, public alerting, public awareness and emergency response coordination. The reasonable investment and maintenance costs provide good prospects of sustainability as long as the technology is trusted, reliable and adapted. Education, testing and maintaining the integrity of the authentication of messages is key to building public trust in the system.

Community engagement is needed from the outset. The choice of technologies shall be a result of a

process of review of hazard exposure, coordination and consultation with the beneficiaries, and cost analysis. Specific attention will be brought to the sustainability (operation and maintenance) of the chosen technologies. Also critical is the enhancement of linkages between the community and national institutions, particularly the NDOs and meteorological services. Further, there is a need for integration from the regional technical centres e.g. CIMH to relay their outputs and expertise to reach through to national and community levels.

CAP is an internationally recognised standard for automated receiving of hazard notifications, and sharing alert messages with affected populations and emergency response teams. Its main strengths include allowing input and output from a centralised terminus, and dissemination of the same message across multiple media (e.g. radio, tv, email, siren) at the same time from a single point. CAP is also adaptable. Thus, dissemination tools of many types can be CAP-automated and incorporated into the system, depending on what may be most effective in reaching the population. Alerts may be diffused at minor cost and with a great level of intelligible details through internet, pop-ups, email, radio systems (like the marine radio), radio or TV broadcast, RDS messaging, smartphones applications, SMS or cell broadcast. Moreover, messages can be incorporated for all hazards, including rapid and slow onset, natural hazards (flood, landslide, earthquake, tsunami, etc) technological hazards (e.g. chemical and oil spills) and other emergency incidents (e.g. missing persons, mass crowd events, fire). The response advice is also customisable (e.g. evacuate, shelter in place) and there are capabilities for geographic targeting and adjustment of the nature of the alert message (based on certainty, urgency and severity). Ultimately the system is able to be expanded and improved with time as local and national capacities strengthen and confidence in the system continues to grow.

#### **4.2.3 Specific objective - Indicators**

##### **4.2.3.1 Specific objective indicator (1/3)**

###### **Description**

% of targeted beneficiary population know and are able to identify EWS alert messages and respond in an understandable and timely way

###### **Target value**

at least 75%

###### **Source of verification**

- test reports and feedback logs from system - site visit and site surveys - simulation exercise reports

##### **4.2.3.2 Specific objective indicator (2/3)**

###### **Description**

Number of end-to-end CAP EWS functioning in communities and managed by national authorities, developed using a systematised regional framework

###### **Target value**

3

###### **Source of verification**

- test reports and feedback logs from system - monitoring protocols - site visit and site surveys - simulation exercise reports - DEWETRA data logs - regional CAP EWS toolkit

##### **4.2.3.3 Specific objective indicator (3/3)**

###### **Description**

Best practices, tools and experiences for implementing CAP-based EWS articulated and disseminated through regional online platform

###### **Target value**

1

###### **Source of verification**

- Toolkit developed and available through online platform - Number of downloads of toolkit from online platform - EWS case studies available through online platform

## 4.3 Results

### Result (1/3) - Details

**Title**

Regional harmonisation and knowledge sharing for EWS

**Sector**

Disaster Risk Reduction / Disaster Preparedness

**Sub-sectors**

Local disaster management components

Institutional linkages and advocacy

Information, education, communication

**Estimated total amount**

125.000,00

### Result (1/3) - Beneficiaries

**Estimated total number of direct beneficiaries targeted by the Action**

Individuals	10.700
Organisations	30
Households	-
Individuals per household	-
Total individuals	-

**Beneficiaries type**

Population

**Does the Action specifically target certain groups or vulnerabilities?**

Yes

**Specific target group or vulnerabilities**

Children - Elderly - Disabled - Female

**More comments on beneficiaries**

Includes populations of the beneficiary communities, the NDO and meteorological services in the CDEMA Participating States, CDEMA and CIMH. Indirect beneficiaries would extend to the populations of all communities/countries where the practice is eventually implemented.

### Result (1/3) - Indicators

#### Result 1 - Indicator 1

**Type**

Custom

**Reference**

-

**Description**

Comprehensive regional process articulated for implementing CAP EWS based on experiences

**Baseline**

0,00

**Target value**

1,00

### **Source of verification**

- completed EWS toolkit available online

### **Comments**

This activity shall result in the capturing the experiences which are key to the systemisation, sustainability and expansion of the experience: testing procedures and assessments, multilingual CAP message templates, warning policy and SOP templates, technical specifications, public education approaches, lessons and challenges, etc.

## **Result 1 - Indicator 2**

### **Type**

Custom

### **Reference**

-

### **Description**

Number of new EWS case studies developed and shared on active regional knowledge platform

### **Baseline**

3,00

### **Target value**

7,00

### **Source of verification**

- template developed - documented case studies - number of downloads

### **Comments**

Existing case studies developed through the R3I relate to various aspects of implementation e.g. public awareness strategy, integrating alerting systems. However, they do not capture the experience of an end-to-end implementation perspective. Collaboration will be sought with IFRC and UNDP Cuba for a common approach to this systemisation.

## **Result 1 - Indicator 3**

### **Type**

Custom

### **Reference**

-

### **Description**

Number of countries in the region which recognise the integrated EWS model and commit to its adoption in the future

### **Baseline**

9,00

### **Target value**

15,00

### **Source of verification**

- letters of commitment - activity work plans - project proposals

### **Comments**

-

## **Result (1/3) - Indicators comments**

### **Additional comments on indicators**

-

## **Result (1/3) - Activities**

### **Result 1 - Activity 1**

#### **Short description**

Development of regional EWS technical and knowledge sharing mechanisms

#### **Detailed description**

An introductory workshop will present the concept and benefits of CAP EWS to the wider region, as well as sharing of some of the experiences to date. The target audience includes met offices, NDOs and National Telecommunications Regulatory Commission (NTRC) or equivalent.

It is proposed to develop an online forum for continued technical and experience sharing, ideally as a space on CDEMA's website that allows group discussions, posting questions, sharing documents (e.g. toolkit), sharing when national EWS are activated and successes/challenges. This can be part of a broader technical DRR interactive space.

Systemisation of case studies to share experiences from countries implementing end-to-end EWS will be conducted in conjunction with UNDP Cuba and IFRC. These can be hosted on various platforms, including CDEMA and DIPECHO LAC. Additionally this activity will be closely aligned to that of the IFRC which looks at "Sharing of Community Early Warning Systems (CEWS) system tools and methodology" which will outline the methodologies, best practices and lessons learnt from the CEWS experiences. The information gathered and discussed will be a part of the toolkit development as outlined in Activity 3 of this result.

It is important to engage with the wider regional DRR constituency to share the evolution of these experiences. The CDM Conference will be a key avenue for exploring continued advocacy. Furthermore, efforts will be made to coordinate with other DIPECHO partners who will have related activities with which synergies can be built and beneficiaries can expand their knowledge and skills base. These include regional DIPECHO meetings, UNISDR activities on gender and EWS, and UNDP Cuba learning and sharing activities relating to hydro-meteorological hazards.

### **Result 1 - Activity 2**

#### **Short description**

Regional harmonisation of EWS policy and protocols

#### **Detailed description**

This activity will address one of the recommendations of the CAP evaluation report which speaks to advocacy between national authorities being enhanced, in order to ensure the integration of the CAP approach and the project results into public policy.

Standardisation of national EWS policy and protocol documents for use in the region (some are already available - CDEMA and CTIC protocol templates, R3I warning policy templates, etc.). These templates will be modified by countries for their specific use and for various hazards. The project will support this adaptation in the target countries where they currently do not exist or need to be strengthened to incorporate CAP.

### **Result 1 - Activity 3**

#### **Short description**

Systemisation through creation of a CAP EWS Toolkit

#### **Detailed description**

Development of comprehensive toolkit for guiding implementation of CAP EWS in the Caribbean, to be available on the CDEMA website, DIPECHO LAC and other relevant regional platforms. This will be based on guidance documents developed during the Regional Risk Reduction Initiative (R3I) e.g. CAP technical specifications, public awareness programme and materials, review of technologies; as well as the project evaluation of the Community Alerts Project implemented under DIPECHO HIP 2013-2014. It may also include relevant documents developed by other DIPECHO partners under this current HIP.

Contents will include:

- template policies and protocols

- sample technical specifications for CAP servers and dissemination tools
- sample tools for assessment of EWS capacities
- guidance on hazard monitoring
- guidance on developing public awareness programmes
- identification of roles of actors in the EWS and capacities needed
- identification of possible key stakeholders
- potential challenges and mitigation actions

### **Result (2/3) - Details**

#### **Title**

Knowledge of risk and vulnerability enhanced in communities to improve preparedness and response

#### **Sector**

Disaster Risk Reduction / Disaster Preparedness

#### **Sub-sectors**

Local disaster management components  
 Institutional linkages and advocacy  
 Information, education, communication  
 Livelihoods and economic assets protection

#### **Estimated total amount**

162.000,00

### **Result (2/3) - Beneficiaries**

#### **Estimated total number of direct beneficiaries targeted by the Action**

Individuals	10.700
Organisations	5
Households	-
Individuals per household	-
Total individuals	-

#### **Beneficiaries type**

Population

#### **Does the Action specifically target certain groups or vulnerabilities?**

Yes

#### **Specific target group or vulnerabilities**

Children - Elderly - Disabled - Female

#### **More comments on beneficiaries**

-

### **Result (2/3) - Indicators**

#### **Result 2 - Indicator 1**

##### **Type**

Custom

##### **Reference**

-

##### **Description**

% of beneficiaries in the target communities know the risks of the hazards faced and know the contingency measures to adopt in case of disaster

**Baseline**

0,00

**Target value**

75,00

**Source of verification**

- KAP surveys - interviews of key stakeholders - simulation exercise report

**Comments**

This indicator will measure the increase in hazard knowledge and preparedness. The KAP surveys will form the initial baseline with the measure of the change be made through subsequent KAP surveys and the simulation exercise report. The education programme that will be structured will be designed based on the KAP and EWS assessment findings, and be tailored to use mechanisms that are culturally appropriate in the local context.

**Result 2 - Indicator 2**

**Type**

Custom

**Reference**

-

**Description**

% increase in beneficiary participation in simulation exercises in countries with previous CAP EWS experience

**Baseline**

0,00

**Target value**

20,00

**Source of verification**

- adapted communications strategies based on lessons learnt - simulation exercise reports - After Action Review (AAR)

**Comments**

-

**Result (2/3) - Indicators comments**

**Additional comments on indicators**

Risk knowledge is the first element of an EWS. A community's understanding of the risks they face contributes to their level of vulnerability. It is important that they be able to consider the dynamic nature of hazards, particularly in a multi-hazard context, and the vulnerabilities that arise from social and environmental factors and changes around them e.g. urbanisation, environmental degradation. They are also able to make connections to historical events and identify patterns in hazards and impacts over time. Further, risk assessment and mapping help to motivate people to act, prioritise EWS needs and guide preparations for disaster prevention and response (UNISDR, 2006).

Secondly, education is necessary on the purpose, implementation and how to use the EWS. Community members will be engaged for their input in how the system will reach them, but must also understand the general principle by which it works and how it will benefit them. Thus, the Action, will seek to enhance all stakeholders' knowledge and capacities about what an integrated alerting system is, and how the Common Alerting Protocol helps in this regard.

**Result (2/3) - Activities**

**Result 2 - Activity 1**



### **Short description**

Community assessment of vulnerability and capacities

### **Detailed description**

In coordination with national disaster offices (NDOs) and IFRC, Vulnerability Capacity Assessments (VCAs) will be conducted in the communities where there is no existing or an outdated VCA. Capacity building of national actors in this tool is also anticipated, through application of the tool by the St. Vincent RC as part of their community flood risk reduction programme. This Action will collaborate with the French Red Cross and IFRC relating to this methodology. This training will precede the development of the VCA in St. Vincent and the Grenadines, led by the St. Vincent RC. This will be paired with a short survey to assess EWS capacities in the communities, previously applied in the Community Alerts Project.

The assessment process will specifically have a focus on engaging and capturing needs relating to gender, children, the elderly and special groups (e.g. persons with disabilities, the poor). Technical expertise, particularly on gender and EWS, will be sought from UNDP Cuba, UNISDR and UNWOMEN. A database should be created/updated to capture information on vulnerable persons to facilitate future preparedness and response measures.

Community consultations will also aim to gather:

- Additional details about community specificities
- Existing disaster management practices, capacities and initiatives at community level
- Opportunities for the implementation and sustainability of the project: active engagement of national champions, community leaders, youth organisations, local expertise, civil society and local committees, etc.

Partnerships will be sought with community-based organisations and NGOs already active in the communities who can lend their knowledge and expertise, and who already have established rapport with the communities e.g. Red Cross Societies, District Emergency Organisations (DEOs) in Barbados. Modalities of assessment will also be transferred/adapted where they have been similarly applied.

With UNDP Cuba, opportunities will be explored for sharing the Hazard, Vulnerability and Risk (HVR) study methodology ([http://crmi-undp.org/documents/documentos/Libro%20Metodolog%C3%ADa%20Riesgo\\_AMA.pdf](http://crmi-undp.org/documents/documentos/Libro%20Metodolog%C3%ADa%20Riesgo_AMA.pdf)) as a more comprehensive tool of quantitatively examining risk at the community level. This may involve training for national agencies by Cuba's Environment Agency, and piloting the methodology in at least 1 community.

## **Result 2 - Activity 2**

### **Short description**

KAP surveys

### **Detailed description**

Knowledge Attitude and Perception (KAP) surveys will be conducted in communities to assess current levels of knowledge on the nature of the natural hazards faced, factors contributing to vulnerability within the communities and actions that community members can take to reduce their vulnerability. Based on the findings a communication and education strategy will be developed and rolled out. The KAP survey will be re-applied toward the end of the project to assess the impact and effectiveness of the education programme.

## **Result 2 - Activity 3**

### **Short description**

Risk awareness programme

### **Detailed description**

Building on the KAP survey and existing public awareness strategies, a communication strategy will be designed for each country aimed at engaging the communities in the roll out of the project and in building knowledge. The methodologies depend on initial assessment, communities' inputs and expert technical advice.

The actualisation of the education programme may adopt many formats, such as synergies with youth, group presentations, community events, or any other method appropriate to the local context. The engagement of community stakeholders themselves is critical in providing the human resources necessary

to reach out to the entire community. An important stakeholder in this process will be the Government Information Services and the private media houses, which play key roles in information dissemination nationally, especially in times of emergency. Where businesses and schools exist in the communities they will also be important stakeholders to target and involve. This component will also have strong interaction with CDEMA, CTIC, where public awareness form a strong part of their activities and they have already developed a body of materials that may be applied e.g. "Tsunami Smart"; and the Seismic Research Centre (SRC) of the University of the West Indies which has previously supported efforts in public education on seismic hazards.

Advisory support from a communication specialist will be provided to ensure strategic input to frame, shape, and monitor the communication strategies of the project. From local and technical knowledge, and for the Action's objectives, the expert will then assist with the implementation, in particular by interfacing technically with media or visual production companies. On-site missions and direct meetings with key stakeholders are an integral part of this work. This role will also provide support to interaction with audiences external to the project e.g. CDEMA's non-beneficiary Participating States, other small island developing states (SIDS), other DIPECHO partners.

The programme will be further augmented through implementation of the "TsunamiReady" programme which is currently being implemented by CTIC under the Intergovernmental Coordination Group for the Caribbean and its Adjacent Regions (ICG/CARIBE EWS) of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific, and Cultural Organisation (UNESCO/IOC). This will reinforce capacities around risk knowledge, alerting, response and testing specifically around tsunamis. Attention to this particular hazard is critical in these coastal communities in a seismically active region. This programme requires communities to be re-certified every 3 years. This process includes a re-evaluation of testing activities, inspection and maintenance of installations and equipment as well as continued public awareness and education activities within the intervening certification periods. The programme will be especially strongly pushed during hurricane seasons when the population is generally more alert to hazard information.

At the national level community education will also be facilitated through local community response teams e.g. DEOs, CDRTs/CERTs or other knowledgeable and respected groups as appropriate. It is intended that this activity will be able to build on other initiatives such as the regional training facilitated by CTIC/UNESCO examining how Tsunami Warning Focal Points and Tsunami National Contacts can help sensitise communities about the risk. This Action will also specifically utilise the planned CERT training and development in the northwest districts of Dominica to promote risk awareness on the hazards in these particular communities.

## **Result 2 - Activity 4**

### **Short description**

EWS education

### **Detailed description**

The design of these elements of the education programme will recognise local assets, the documented lessons learned from the R3I STAY SAFE campaign (see <http://www.bb.undp.org/regional-risk-reduction-initiative>) and the educational strategies deployed under the just-concluded Community Alerts Project, as well as ongoing work with the Caribbean Tsunami Information Centre (CTIC), and will provide some useful elements in the design of the strategy. It will focus on how the EWS works, how community members can register and access information, and how they should respond to various alerts. Where businesses exist in the communities they will also be important stakeholders to target and involve, as well as the mass media. Strategies for strengthening risk communication by the mass media will be examined in cooperation with UNDP Cuba.

The communication strategy is not only intended as a short term measure to communicate and engage communities around the project, it shall also be designed as a long term strategy, enabling national disaster offices and national institutions to communicate with the communities as disaster management capacities and early warning systems evolve.

This programme will be especially strongly pushed during hurricane seasons when the population is more attuned to hazard information.

As part of the scaling-up of the previous CAP activities in Dominica and St. Vincent and the Grenadines will be more targeted communications/public awareness activities. Although these are still to be defined, the use of Education Coordinators in Dominica was seen as a best practice under the previous Action and this

can be continued in additional communities. St. Vincent and the Grenadines may consider using the education coordinators as part of their communications programme noting the success in Dominica. This will complement the current work of the Communications Officer in the national disaster office.

### **Result (3/3) - Details**

#### **Title**

Framework for CAP-compliant all-hazard early warning systems integrated at national and community levels

#### **Sector**

Disaster Risk Reduction / Disaster Preparedness

#### **Sub-sectors**

Local disaster management components  
Institutional linkages and advocacy  
Information, education, communication  
Livelihoods and economic assets protection

#### **Estimated total amount**

378.000,00

### **Result (3/3) - Beneficiaries**

#### **Estimated total number of direct beneficiaries targeted by the Action**

Individuals	10.700
Organisations	9
Households	-
Individuals per household	-
Total individuals	-

#### **Beneficiaries type**

Population

#### **Does the Action specifically target certain groups or vulnerabilities?**

Yes

#### **Specific target group or vulnerabilities**

Children - Elderly - Disabled - Female

#### **More comments on beneficiaries**

N/A

### **Result (3/3) - Indicators**

#### **Result 3 - Indicator 1**

##### **Type**

Custom

##### **Reference**

-

##### **Description**

% of targeted population receiving alerts responding according to pre-established protocols and procedures

##### **Baseline**

0,00

##### **Target value**

75,00

### **Source of verification**

- installation reports - testing reports - simulation exercise reports - After Action Review (AAR)

### **Comments**

These contribute to verification of operational end-to-end CAP EWS being available in the respective communities, with associated capacities for use and maintenance, and education mechanisms for the public.

## **Result 3 - Indicator 2**

### **Type**

Custom

### **Reference**

-

### **Description**

Number of vulnerable communities with operational end-to-end CAP EWS, managed by trained national authorities

### **Baseline**

0,00

### **Target value**

3,00

### **Source of verification**

installation reports - testing reports - site visits and site surveys - DEWETRA data logs - simulation exercise reports - After Action Review (AAR)

### **Comments**

-

## **Result (3/3) - Indicators comments**

### **Additional comments on indicators**

-

## **Result (3/3) - Activities**

### **Result 3 - Activity 1**

#### **Short description**

Participatory system design and validation

#### **Detailed description**

Based on an initial EWS capacity assessment (for Saint Lucia) and the knowledge of existing capacities (in Barbados, SVG and Dominica), and decided harmonised tools, an integrated perspective on protocols and procedures as well as implementation guidelines will be drafted/updated. It is important to initiate engagement at the policy level early in the project, noting that it tends to be a lengthy process. Protocols and messaging must take into account the needs of special or vulnerable groups (e.g. persons with disabilities, single female-headed households, children, and the elderly). Technological solutions for detection and alerting based on the CAP will be proposed, guided by the EWS capacity assessment, community consultation and technical expert groups (including CIMH and UNISDR), working closely with the NDOs and UNDP. The draft design will be "integrated", noting the inter-related and interdependent nature of the policies, communication and technical aspects of the project. This activity will also involve community-driven choices for the alerting system solutions and specific inputs to be considered in the final design (technical, communication and policy final designs) as well as activation of informal and formal communication mechanisms between national entities and communities, as well as within communities themselves. There will also be involvement of national actors (Disaster Office, Meteorological Office, etc) in the process as the community system will be a part of the national system.

## **Result 3 - Activity 2**

### **Short description**

Installation, testing and training for alerting

### **Detailed description**

This activity surrounds acquisition of selected alerting technologies, installation and system testing and will be based on based on recommendations and lessons learnt from the previous CAP initiative. As part of the scaling-up of the previous activities in Dominica and St. Vincent and the Grenadines it will be necessary to engage other communities to enhance the EWS system previously developed. This may include procurement of additional warning dissemination technologies and more emphasis on additional training for the users (requesters, activators, approvers) and operators of the system in country.

The competitiveness of offers will be evaluated against criteria of price and expectations in terms of quality of the proposed solutions. The sustainability of the solutions proposed will also be integrated in selection criteria. Training of national operators on use and maintenance will be provided. Suppliers selected will deliver the technology and provide the necessary equipment and the following services:

- shipping and transport of all necessary equipment
- installation, optimisation and primary testing
- training on the equipment use
- technical documentation related to the equipment or technology (user manual)
- guarantees/warrantees
- maintenance contract (if applicable)

All technology provided shall be CAP compliant.

At national level, this activity period will provide an opportunity to reflect on a holistic nationally integrated EWS. Training will be provided with national authorities (Disaster Office, Meteorological Office, etc) who will be the requesters, activators and approvers of the CAP system as well as those who will be expected to manage and maintain the system. The following topics will be discussed, inter alia:

- the Common Alerting Protocol
- the role of activators
- what an integrated EWS is
- risk/crisis communication

Finally this activity will complement the repeater system project in Saint Lucia which will provide enhanced two-way communication and allow for amateur radio coverage in all communities. This project will consist of installing two repeater systems and the training of radio operators. The selected warning dissemination devices may be connected to these repeaters and some members of the radio operators will be trained in the use and maintenance of the CAP EWS.

## **Result 3 - Activity 3**

### **Short description**

Improvement and integration of hazard monitoring systems

### **Detailed description**

This activity will seek to address two recommendations highlighted in the Community Alerts Project evaluation report of the previous Action, specifically: promoting the articulation of the scientific and technical process of data acquisition, hazard modelling and forecasting with local resilience building actions; and promoting the enhancement of hazard information products for providing disaster and risk scenarios, with more practical applications in terms of planning, preparedness and response.

In order to enhance hazard monitoring capabilities to facilitate CAP-based end-to-end (detection, notification, alerting) EWS, monitoring stations will be upgraded and/or installed (e.g. water level and rain gauges, soil movement sensors) in locations vulnerable to landslides and flooding. As the entity with the relevant regional mandate, existing capacity and ongoing related programmes, CIMH will provide the services relating to hazard surveillance and the DEWETRA platform.

These stations will be set with alert triggers such that when the sensor detects the approached threshold, a notification is sent to the CAP server. Normal logging of data collected by the sensor will be transmitted to DEWETRA and a secondary site in-country (if determined). Maintaining data transmission, power and security will be important elements in designing and locating the systems.

Secondary notifications may be issued by CIMH on analysis of the data (threshold exceedance) received at DEWETRA, plus other observational and modelling data on the platform (e.g. satellite imagery (TRMM, GOES), radar, WFP Caribbean).

Capacities will have to be built within the relevant national institutions and the communities for the use and maintenance of the surveillance network. Cooperation will be sought with UNDP Cuba in this respect, and maximising the effectiveness of hydromet monitoring networks, noting that developed manuals can also form part of the toolkit under result 1. Linkages will also be sought with the flood risk reduction initiative in Dominica which is expected to enhance the capacity of the Government to better manage flood hazards through reconstruction activities, which will see improvement of instrumentation of monitoring hydromet phenomena, in addition to their ongoing work programmes relating to the same. CIMH is also an implementing partner in that regard.

### **Result 3 - Activity 4**

#### **Short description**

Simulation exercises

#### **Detailed description**

A specific focus will be placed on simulation exercises during the Action noting this as a recommendation from countries during implementation of the previous Action. Simulation exercises (live and/or desktop) will be conducted to evaluate the communities' ability to use and respond to the warning messages received. Data to be captured include the number of persons receiving and responding to messages, whether the correct action was taken and how quickly, response time of emergency personnel, compliance with SOPs and protocols, any challenges faced by participants, etc. The effectiveness of the notification process can also be tested by artificial inducement of a trigger, analysing the transmission time to the CAP server and any technical challenges.

There will be an accompaniment of the national institutions in the implementation of key processes in these exercises based on the recommendation from the evaluation report under the previous initiative. Simulation exercises will be collaborative with the other ECHO partners especially in the countries which are joint beneficiaries under the Actions.

### **4.4 Preconditions**

Consultations were conducted with NDOs, CDEMA and CIMH as main counterparts in implementation and for sustainability of the intervention, as well as UNISDR, UNDP Cuba and IFRC for operational and technical synergies, knowledge exchange, joint systemisation of tools and experiences. UNDP already has strong working relationships with these partners and aims to pursue a collaborative and participatory approach to implementation. The technical expertise of partners such as CIMH and IFRC will ensure strong capacity building for national agencies and communities, as well as future support and assistance. A Project Board will be established that will provide overall management guidance, monitoring and quality assurance for the project. This will include key stakeholders in the project, such as beneficiaries, the implementing agency and technical agencies

### **4.5 Assumptions and risks**

Assumptions Agreements are established early in project implementation with national partners relating to ongoing sustainability - maintenance, national budgeting, appointment and training of technical focal points. Training and capacity building activities will target both political and technical authorities and personnel as well as non-government agencies to ensure sustainability. Lessons learned during the implementation of the Community Alerts Project (DIPECHO 2013-2014) will be systematically applied to reduce implementation delays, improve project strategy and sustainability, and strengthen project effectiveness and impact. Consultants and agencies would be willing to engage with communities on evenings and weekends when participation is likely to be higher. The alignment of the Action with the CDM Strategy 2014-2024 will ensure continued buy in and commitment of the national partners to the process and to the continuation and future enhancement of project results. Primarily this relates to Output 4.3 Community EWS integrated, improved and expanded, but also to Outputs 1.2 and 4.4. Additionally, it aligns with the priorities for action under the Zero Draft of the post-HFA: Preparedness for response, recovery and reconstruction; and Understanding disaster risk. Risks Being exposed to multiple natural hazards, there is the possibility of an impact, particularly during the hurricane season which may delay or hinder implementation as government personnel and resources are diverted to response and recovery actions. Vulnerable persons may not be reached or may not feel free to voice their views and concerns. Projects currently ongoing in-country which have EWS components may not directly be engaging with NDOs to ensure a CAP-based approach is taken.

#### 4.6 Contingency measures

On the risk of the occurrence of a disaster during the project's implementation UNDP would reinforce its support to the countries through the Eastern Caribbean Development Partners Group for Disaster Management (ECDPGDM). In particular, UNDP would contact the local representative of DG ECHO to discuss the possibility of reorienting part of the project funds towards post-disaster assistance to the affected country. A hazard event would also provide the occasion to assess the efficacy of the EWS and draw lessons from the experience.

Support will be enlisted from community leaders, relevant NGOs and government agencies which can help to discuss or advocate on behalf of the vulnerable groups e.g. women's associations, support groups for persons with disabilities, associations of retired persons, etc.

Initiate engagement with implementing agencies and at a ministerial level immediately to facilitate buy in and adjustment of work plans to integrate projects' activities as soon as possible.

#### 4.7 Additional information on the operational context of Action

-

### 5. QUALITY MARKERS

#### 5.1 Gender-age markers

##### 5.1.1 Marker Details

- |   |                  |
|---|------------------|
| • <b>Does the proposal contain an adequate and brief gender and age analysis?</b>   | Not sufficiently |
| • <b>Is the assistance adapted to the specific needs and capacities of different gender and age groups?</b>                   | Yes              |
| • <b>Does the action prevent/mitigate negative effects?</b>   | Yes              |
| • <b>Do relevant gender and age groups adequately participate in the design, implementation and evaluation of the Action?</b> | Yes              |
| • <b>Partner Initial Mark in the Proposal</b>   | 1                |

##### 5.1.2 Additional comments and challenges

As with any disaster risk reduction activity with some social outreach, gender mainstreaming is critical. As part of the existing building blocks UNDP will further disseminate and use the CRMI-developed guide "Integrating Gender in Disaster Management in Small Island Developing States". Many recommendations can be applied from this guide. As a sample, hereunder are 2 questions extracted from the checklists (p. 35) and specific to EWS:

- Are appropriate media used to ensure all sections of the population are reached, especially women and children?
- Are the warning mechanisms sensitive to women's locations, needs and abilities?

The project precisely seeks to address these questions as an integral part of the specific objective.

Expertise will be sought from UNISDR, UNDP Cuba and UNWOMEN on gender analysis, and gender needs in EWS.

Specific needs of children will be addressed as a vulnerable group, referencing guidance specifically relating to child-driven DRR (e.g. "Children and Disaster Risk Reduction: Tacking stock and moving forward - Back et al, 2009). Youth also represent an asset, especially in terms of communication and community integration. The project will seek to maximise synergies with youth, for instance, in cooperation with the UNDP Youth-In project and its portal.

The engagement of the elderly, persons with disabilities and young people will receive concerted attention during the consultation, design and testing processes to ensure that their specificities are taken into account and needs met to ensure the EWS functions to their benefit.

## 5.2 Resilience

### 5.2.1 Marker Details

- |   |     |
|---|-----|
| • <b><i>Does the proposal include an adequate analysis of shocks, stresses and vulnerabilities?</i></b>   | Yes |
| • <b><i>Is the project risk informed? Does the project include adequate measures to ensure it does not aggravate risks or undermine capacities?</i></b> | Yes |
| • <b><i>Does the project include measures to build local capacities (beneficiaries and local institutions)?</i></b>                                     | Yes |
| • <b><i>Does the project take opportunities to support long term strategies to reduce humanitarian needs, underlying vulnerability and risks?</i></b>   | Yes |
| • <b><i>Partner Initial Mark in the Proposal</i></b>  | 2   |

### 5.2.2 How does the Action contribute to build resilience or reduce future risk?

The targeted communities are particularly vulnerable to flash flooding, coastal hazards such as storm surges, and geological hazards such as landslides, earthquakes and tsunamis. Economic exposure is often high, with concentration of assets and infrastructure in coastal areas. The densely clustered low income housing in many of these communities is very vulnerable to being structurally compromised, particularly where built on the edges of drainage channels and reclaimed land. Homes, roads and bridges can often be severely impacted by small and medium scale events, whose true immediate and cumulative impacts are not adequately reported or captured. In some instances, the main artery for transportation is also at high risk, with adverse implications for emergency response operations. In other areas, some residences are inaccessible by vehicles under normal conditions, far less in an emergency situation.

Alerting and mass evacuation for sudden impact hazards is a critical consideration in many of these locations, however preparation capacities remain weak and limited, generally due to lack of human resources, technical skills and equipment at both national and community levels. Communication at the national level, and even more so between national disaster offices (NDOs) and communities, is not



sufficiently efficient nor robust as there is not the necessary redundancy to support emergency situations.

The Action specifically tries to address the knowledge gaps related to vulnerability, by enhancing community knowledge of the potential hazard threats and the anthropogenic actions that can exacerbate these vulnerabilities. Education components will also include information about how to prepare and mitigate risk. By being able to appropriately respond to alert messages relating to hazards the intended outcome is that persons will be able to better safeguard themselves, families, businesses/livelihoods and possessions.

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## **6. IMPLEMENTATION**

### **6.1 Human resources and Management capacities**

The Action will be implemented by UNDP Barbados and the OECS using the teams and structures that currently exist. The Project Coordinator will be directly responsible for the day to day running of the project as well as for coordination and monitoring. In addition to the Project Coordinator the following UNDP staff members will support implementation of this initiative:

- the Deputy Resident Representative or their designate will ensure oversight and monitoring of the project.
- 1 Programme Assistant who will provide administrative and payment support to the Action
- 3 Finance Unit members who will ensure the effective processing of payments and will provide overall financial monitoring
- 3 UNDP staff members who will provide technical support in the fields of ICT, monitoring and evaluation and human rights.

Additionally the Director of the Caribbean Tsunami Information Centre (CTIC) will provide specialised implementation support for the tsunami-related awareness and community engagement activities.

Based on the just-concluded DIPECHO Action the delay in contracting of the Project Coordinator resulted

in a late start to substantive implementation of the Action. As part of this current Action UNDP will request the receipt of funds two months before the planned start date of the project to launch and select the Project Coordinator who will be guiding the implementing of this Action. This period will also be used to further sensitise the country focal points and key stakeholders about the project and expectations.

A few delays were experienced in equipment procurement. The related Terms of Reference will be strengthened to incorporate more explicit technical details which will result in less ambiguity on particular technical criteria. CIMH will also provide critical technical guidance in this area. This should reduce the time needed for clarifications on the technical criteria of submission of offers.

### **6.2 EU Aid Volunteers**

No

### **6.3 Equipment and goods**

Equipment and goods will generally be related to EWS components (hazard monitoring equipment, CAP server, alerting technologies, etc) and public awareness materials (e.g. posters, stickers, signage)

### **6.4 Use of HPCs**

No

### **6.6 Specific security constraints**

All islands and communities within the geographic scope are presently designated as Security Level 1 with no significant socio-political risk factors.

### **6.7.1 Are there Implementing Partners ?**

No

### **6.7.2 Implementing Partner added value**

-

### **6.7.4 Coordination, supervision and controls**

-

## **Implementing Partners**

### **6.8 Are there any subdelegates?**

No

### **6.8.1 Subdelegates explanation**

-

## **Subdelegates**

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## **7. FIELD COORDINATION**

### **7.1 Operational coordination with other humanitarian actors**

While the bulk of project activities will be coordinated by the project coordinator, field coordination will be supported of the national disaster managers. UNDP Barbados and OECS is implementing two projects under the GFDRR: Strengthening Capacity in PDNA in the Caribbean and Strengthening Public Investment in DRR and Climate Change Adaptation in the Eastern Caribbean. These two projects also cover the four targeted countries of the present proposal.

Many of the same key national stakeholders (National Disaster Offices etc) will play an active role in each of the projects which all seek to strengthen capacities in capturing hazard impact, and involve several national government entities, as well as raise awareness on potential hazards. Synergies will be sought where feasible in the probabilistic risk assessments that will be conducted if applicable at the community level, and any related training which may support implementation of the Action.

Consultations with IFRC and UNISDR has led to an initial matrix of identified areas for joint collaboration among these regional DIPECHO projects. UNDP will continue to work closely with UNISDR, which is also ongoing under the GFDRR projects. Opportunity for cooperation will be sought particularly to facilitate the dissemination of tools, products and methods available at UNISDR, in particular examining gender and EWS.

UNDP has identified potential areas for collaboration with IFRC, through their existing capacities as well as within their current Action proposal, including in applying VCAs and sharing EWS best practices and community resilience.

Collaboration will be seen with CDEMA throughout the Action e.g. their technical expertise in conducting the simulation exercises, which will also be facilitated through collaboration with the National Disaster Office and the national Red Cross Societies. CDEMA will also be key in the regional systemisation of the EWS process, development of the Toolkit, advocacy, and creating the knowledge sharing platform.

UNDP will ensure complementarity with other projects by actively seeking to avoid overlap and looking at sharing good practices and tested methodologies.

Several partners, including CDEMA and NDOs, will also be engaged in the general oversight of project implementation through the Project Board.

## **7.2 Action listed in**

### **UN Consolidated Appeal Process**

-

### **Flash Appeal**

-

### **Red Cross/ Red Crescent appeal**

-

### **Other**

No

### **Not applicable**

Yes

### **If other, please specify**

-

## **7.3 Coordination with National and local authorities**

This proposal was written with direct contributions from national disaster managers, acting country focal points for any UNDP-implemented disaster risk reduction project. Met offices, community leaders and community disaster response groups will also be key counterparts.

The Project Board will be a key mechanism for ensuring coordination, coherence and planning of activities across national and regional stakeholders with membership including that of CDEMA, country beneficiaries, community representatives and the national Red Cross Society. This methodology ensures that the perspectives and synergies of the partners are captured and that there is ownership, promotion of sustainability and coordination with regional and national strategies (CDM Strategy, national work plans). Additionally this Action will engage in regional fora such as the CDM Conference, the DIPECHO regional meetings and relevant websites for cooperation and sharing of information.

## **7.4 Coordination towards transition and/or exit strategy**

This Action supports the work programmes of the development partners mentioned previously and is in concert with the post-2015 HFA. Specificities of joint or complementary activities with DIPECHO partners in the region will be concretised during the initial DIPECHO planning workshop. An initial draft matrix of selected areas to determine further coordination (dates, countries, products expected) for UNDP, IFRC and UNISDR regional projects has been prepared and exchanged among the 3 regional projects as a basis for the discussion. UNDP Barbados has also discussed possible avenues for sharing experiences with UNDP Cuba, including in hazard monitoring and the use of the DEWETRA platform.

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# **8. MONITORING AND EVALUATION**

## **8.1 Monitoring of the Action**

The monitoring and evaluation will be carried out according to UNDP standard policies and procedures.

Monitoring will be carried out by Project Coordinator, who will produce quarterly and annual progress and financial reports.

UNDP staff and in particular the Deputy Resident Representative (or designate) will provide direct oversight of the work performed by the Project Coordinator and will participate in some site monitoring visits. UNDP also has an appointed M&E specialist who will ensure the quality of the M&E activities performed.

Locally, UNDP has dedicated focal points based in each country who facilitate periodic local monitoring.

An independent outcome-level evaluation will be conducted to ascertain how the Action has supported processes and building capacities that have contributed toward a transformational change. In doing so, the evaluation aims to identify which UNDP approaches have worked well and which have faced challenges, and to use lessons learned to improve future initiatives and generate knowledge for wider

use. The evaluation also serves the purpose of holding UNDP accountable for the resources invested in its work.

## **8.2 Evaluations**

### **Internal evaluation**

No

### **External evaluation**

Yes

### **External audit**

No

#### **8.2.1 If not annexed, please explain when Terms of Reference will be available**

An independent evaluation team will be contracted to interface with the UNDP office and beneficiaries in the country to assess the relevance, efficiency, effectiveness and sustainability of the Action. The TORs to be used in this evaluation are attached as an annex to this Action.

#### **8.3 Studies carried out in relation to the Action (if relevant)**

No

##### **Explain the content of these studies**

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## **9. COMMUNICATION, VISIBILITY AND INFORMATION ACTIVITIES**

### **9.1 Standard visibility**

#### **A. Display of EU Humanitarian Aid visual identity on**

##### **A1. Signboards, display panels, banners and plaques**

Yes

##### **A2. Goods and equipment**

Yes

##### **Please provide additional details on section A**

A communication strategy will be designed for each country aimed at engaging the communities in the roll out of the project and in building knowledge. The methodologies depend on initial assessment, communities' inputs and expert technical advice. The objective of the visibility and communication strategy will be to ensure that all the beneficiaries and external stakeholders are aware that the initiative is being undertaken with support from the European Commission.

Additionally it is planned that the following communications actions will be carried through:

- Public awareness at community level
- National workshops
- Participation in regional workshops

In terms of visibility on goods and equipment, UNDP will strictly adhere to the provisions of the FAFA, the General Conditions and "Joint Visibility Guidelines for EC-UN actions in the field". EU's logo will be made clearly visible.

#### **B. Written and verbal acknowledgement of EU funding and partnership through**

##### **B1. Press releases, press conference, other media outreach**

Yes

**B2. Publications, printed material (for external audiences, not operational communication)**

Yes

**B3. Social media**

Yes

**B4. Partner's website (pages related to EU funded projects)**

Yes

**B5. Human interest blogs, photo stories**

Yes

**B6. Audiovisual products, photos**

Yes

**B7. Other**

-

**Please provide additional details on section B**

Local media will be associated and may play a key role under some activities (e.g. radio stations would for instance partner for the installation of radio broadcast interruption devices, engagement of Government Information Services for distribution of information via radio, TV and internet). Videos produced would also be published on UNDP's YouTube Channel. The project will also feature on the forthcoming CTIC website.

UNDP will promote provide public and institutional visibility on the project by posting on its website <http://www.bb.undp.org>, based on evidence of impact at local level and documents such as interviews of local stakeholders. Interviews with local stakeholders will start as soon as the first field missions take place. Indeed during the assessment phase, photos, short videos and/or testimonies will be collected to illustrate the current situation. These would allow a comparison pre and post action

UNDP traditionally participates in the CDM Conferences, which is a good avenue for regional exchange of experience on disaster risk reduction. The CDM Conference will be an occasion to share regionally on the results of the previous and present Action and get inspiration from other regional projects. Similar regional sharing would occur through participation in annual ICG/CARIBE EWS Meetings, and activities such as the regional CaribeWAVE testing exercise, as well as IFRC and UNISDR regional activities particularly those specifically on EWS. Printed materials will be in the form of posters, stickers and banners

The EU's involvement would also be acknowledged in other public fora where the project interacts including during community meetings, EWS launch activities and simulation exercises. Press releases, media articles, etc would also highlight the EU's support.

**9.2 Do you foresee communication actions that go beyond standard obligations?**

No

**10. FINANCIAL OVERVIEW OF THE ACTION**

**10.1 Estimated expenditure**

	<u>Initial budget</u>	<u>Revised budget</u>	<u>Interim report incurred costs</u>	<u>Final report incurred costs</u>
<b>Implementation costs</b>	696.000,00	-	-	-
<b>Remuneration (max 7%)</b>	48.720,00	-	-	-
<b>Total costs</b>	744.720,00	0,00	0,00	0,00

**10.3 Funding of the Action**

	<u>Initial budget</u>	<u>Revised budget</u>	<u>Final budget</u>
Direct revenue of the action	0,00	-	-
Contribution by applicant	144.720,00	-	-
Contribution by other donors	0,00	-	-
Contribution by beneficiaries	-	-	-
Contribution requested from ECHO	600.000,00	-	-
% of total funding	80,57	-	-
<b>Total funding</b>	<b>744.720,00</b>	<b>0,00</b>	<b>0,00</b>

#### **10.4 Explanation about 100% funding**

-

*If other, please explain*

-

#### **10.5 Contribution in kind**

In-kind contributions will come primarily from the dedicated time of the staff of the national disaster offices and the community disaster organisations.

#### **10.6 Financial contributions by other donors**

-

#### **10.7 VAT exemption granted ? (applicable only to NGO's)**

No

*Please specify*

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## **11. REQUESTS FOR DEROGATION**

### **11.1 Specific derogations**

# Derogation

### **11.2 Permanent derogations**

# Derogation

## **12. ADMINISTRATIVE INFORMATION**

### **12.1 Name and title of legal representative signing the Agreement**

Ms Barbara Pesce-Monteiro - Director of UNDP Brussels Office

### **12.2 Name, address, e-mail and phone of the contact person(s)**

<u>Name</u>	<u>Office location</u>	<u>E-mail</u>	<u>Phone</u>
Stephen O'Malley	UNDP Barbados	<a href="mailto:stephen.omalley@one.un.org">stephen.omalley@one.un.org</a>	246 467 6001
Danielle Evanson	UNDP Barbados	<a href="mailto:danielle.evanson@undp.org">danielle.evanson@undp.org</a>	246 467 6032
UNDP Brussels focal point	UNDP Brussels	<a href="mailto:brussels.office@undp.org">brussels.office@undp.org</a>	32 2 5054625

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## 13. CONCLUSIONS AND HUMANITARIAN ORGANISATION'S COMMENTS

### 13.1 Possible comments

UNDP will seek to maximise synergies with DIPECHO partners, especially when they are, or have been, present in the countries targeted by the Action. UNDP maintains working relationship with the World Meteorological Organisation and CIMH, key partners in terms of early warning systems. Partner agencies such as UNWOMEN, UNISDR and UNICEF will also be engaged in advising on approaches for engaging and addressing the needs of special and vulnerable groups. CTIC will be integral in the strengthening of knowledge and response capacities around tsunamis. CDEMA will be the strategic focal point for systemisation and dissemination of the practices of CAP EWS at a regional level, alongside IFRC.

UNDP will implement this initiative based on decisions made by the beneficiaries themselves. As an example the beneficiaries will select their warning dissemination technologies as well as the communications/PAE projects/services. Using community-oriented Actions like this one will facilitate sustainability of the project impacts and strategies in the target beneficiaries. This will also serve as a base for scaling up best practices in the future. Additionally a sustainability matrix will be developed early during the Action to provide a strategic framework to maintain, manage and ensure development results beyond the project's life cycle.

In terms of capacity building beneficiaries will be trained in the use and maintenance of the CAP server, hazard detection equipment and the selected warning dissemination devices.

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