

Single Form 2021

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Decision number

ECHO/-AM/BUD/2020/91000

Start date

01/06/2021

Partner

UNDP-USA

Submitted

19/03/2021

Agreement number

-

Duration (months)

24

Partner type

UN

Action title

Community Flood Early Warning Systems (CFEWS) Enhanced in Trinidad and Tobago

1. GENERAL INFORMATION

1.1 Humanitarian organisation

UNDP-USA

1.2 Title of the action

Community Flood Early Warning Systems (CFEWS) Enhanced in Trinidad and Tobago

1.3 Time frame of the action

Start date 01/06/2021 **Duration** 24 months

1.4 Executive summary of the action

Flooding has had significant economic and social impact in the Trinidad and Tobago; for example, damage and losses from flood events in 1993, 2002 and 2006 were US\$580,000, US\$3,300,000 and US\$2,500,000, respectively.

The 10th meeting of the Joint Select Committee on Land and Physical Infrastructure indicated that there is need for (i) closer collaborations amongst entities responsible for flood alleviation and control of major river basins, (ii) spatial data to undertake flood mapping and risk analysis to support decision making and (iii) more public education and the building of resilience in the communities themselves to prepare, respond and adapt to floods. Also, the WRA manages a rainfall monitoring system which comprises rainfall and river monitoring stations; the key challenge is that the flood monitoring network consists of a mixture of aged, manually operated instruments and outdated telemetric components. The issue with flooding is compounded by the fact that the official hurricane season coincides with the country's rainy season.

The specific objective is to strengthen community and national capacities for generating impact-based flood early warnings and effectively planning and executing anticipatory actions. There are 7 communities targeted by this action, 2 are from Tobago and 5 are from Trinidad. Majority of these communities are in areas very highly or highly susceptibility to flooding and are among the poorest. The action will target four result areas (i) enhance capacities for detecting, monitoring, analysis and forecasting of flood hazards in fifteen communities – three in Tobago and twelve in Trinidad; (ii) expand the flood early warning information communication/ dissemination platform to reach more communities, municipalities and governmental agencies; and (iii) enhance capabilities for the coordination and management of floods at the community and national levels and (iv) improve emergency response (crisis modifier)

1.5 HIP / Decision (if known)

ECHO/-AM/BUD/2020/91000

2. Project Data Overview by Country

Countries	Sectors	Total number of unique beneficiaries per sector		Total amount allocated to a sector	
		[RQ/MR] (last favourable data)	[FR]	[RQ/MR] (last favourable data)	[FR]
1. Trinidad And Tobago	1. Disaster Risk Reduction / Disaster Preparedness	177.251	-	580.406,34	-
		Total		580.406,34	-

2.1 Geographical information

2.1 Country (1/1)

Trinidad And Tobago

2.2 Places of intervention (optional for actions in a group of countries and for global actions)

Name of the place of intervention (or name of country in case of actions in "Group of countries")	Upper administrative level (province)	Lowest administrative level (district)	Type
Trinidad (Location 1)	Caroni	Couva Caroni	Both
Trinidad (Location 2)	St. George	Maraval (upper and lower)	Both
Trinidad (Location 3)	Caroni	Cunupia	Urban
Trinidad (Location 4)	St. Patrick	Papourie	Rural
Trinidad (Location 5)	St. George	Diego Martin	Urban
Tobago (Location 1)	St. Andrew	Crooks River	Both
Tobago (Location 2)	St. Andrew	Bacolet	Rural

2.3 Information on beneficiaries

2.3.1 Number of unique beneficiaries

Gender	[RQ/MR] (last favourable data)	[IR]	[FR]
Female	88.851	-	-
Male	88.400	-	-
Total	177.251	-	-

2.3.2 Number of unique beneficiaries by sex and age

Age	[RQ/MR] (last favourable data)		[IR]		[FR]	
	Female	Male	Female	Male	Female	Male
0 - 59 months	5.572	5.805	-	-	-	-
5 - 17 years	14.265	15.082	-	-	-	-
18 - 49 years	42.974	43.931	-	-	-	-
50 years and more	26.040	23.582	-	-	-	-

2.3.3 Number of unique beneficiaries with disabilities (included in 2.3.1)

Gender	[RQ/MR] (last favourable data)	[IR]	[FR]
Female	3.537	-	-
Male	3.602	-	-

2.3.4 Number of unique beneficiaries by profile

Profile	[RQ/MR] (last favourable data)	[IR]	[FR]
Local population	177.251	-	-
Internally displaced	0	-	-
Refugees / asylum seekers	0	-	-
Other persons on the move	0	-	-
Returnees	0	-	-
In camp or camp like	0	-	-

2.3.5 Number of organisations directly targeted and benefiting from the action

Type	[RQ/MR] (last favourable data)	[IR]	[FR]
Local	11	-	-
International	3	-	-

2.4 Country (1/1) - Sector (1/1)

Trinidad And Tobago

2.4.1 Sector

Disaster Risk Reduction / Disaster Preparedness

2.4.2 Places of intervention (optional for actions in a group of countries and for global actions)

- Trinidad (Location 1)
- Trinidad (Location 2)
- Trinidad (Location 3)
- Trinidad (Location 4)
- Trinidad (Location 5)
- Tobago (Location 1)
- Tobago (Location 2)

2.4.3 Total amount (for this sector)

580.406,34

2.4.4 Number of unique beneficiaries (in this sector)

Gender	[RQ/MR] (last favourable data)	[IR]	[FR]
Female	88.851	-	-
Male	88.400	-	-
Total	177.251	-	-

2.4.5 Transfer modalities (in this sector)

Modality	[RQ/MR] (last favourable data)		[IR]		[FR]	
	Amount	Unique beneficiaries	Amount	Unique beneficiaries	Amount	Unique beneficiaries
In cash	0,00	0	-	-	-	-
In vouchers	0,00	0	-	-	-	-
In kind	0,00	0	-	-	-	-
Non-allocated amount	580.406,34		-		-	

2.4.6 Explain why cash transfers were not used

It is an institutional capacity building project with activities taking place at the community level and no cash-transfer to beneficiaries planned.

2.5 Eventual comments

The number of unique beneficiaries by profile (internally displaced, refugees etc.) for the beneficiary communities is not available at the time of the proposal preparation. This information will be collected and reported during the action at the interim and/or final stages.

However, it can be noted that The United Nations High Commissioner for Refugees, UNHCR, estimates that the worsening socio-economic, political, human rights and humanitarian conditions in Venezuela have led to the outflow of Venezuelan refugees and migrants to Trinidad and Tobago (T&T). Trinidad and Tobago's "population of concern" comprises more than 10,000 people — among them, 800 refugees and 9,985 asylum-seekers, most of whom are from Venezuela.

3. Humanitarian Organisation in the Area

3.1 Presence in the area

UNDP established its office in Trinidad and Tobago in 1961 and has been supporting and facilitating national development in-country for over fifty years. This is currently a multi country office servicing Aruba, Curacao and Sint. Martin. UNDP's key focus areas include poverty reduction; energy, environment and disaster risk reduction; democratic governance and rule of law/citizen security. Over the years UNDP has solidified strong partnerships with the Government Ministries and Agencies, Civil Society Organizations and the Private Sector. These relationships have enabled and contributed to UNDP's service delivery and impact. UNDP aims to create an enabling environment where the Government has the capacities for inclusive and sustainable human development.

UNDP Trinidad and Tobago has worked on a number of initiatives related to mitigation and disaster risk reduction that have focused on first responders, capacity development for disaster risk management, and reduction of carbon emissions amongst other themes. The country has also had a specific DRR project in connection to the recovery phase in St Maarten after the passage of Irma and Maria in 2017.

To address climate resilience and reduce disaster risk, UNDP takes a multi-dimensional approach integrating policy, capacity-building and local community measures. Interventions have sought to leverage the knowledge of a broad cross section of stakeholders and address particular vulnerabilities for increased resilience with a focus on early warning, critical infrastructure, local and national capacity building in Disaster Risk Reduction, inclusive of response and recovery and approaches for integrating humanitarian systems in Trinidad and Tobago. This has resulted in the piloting of DRR Management Centers in Trinidad, a mapping and ranking of critical infrastructure and the development of working papers on Strengthening Emergency Communications and Establishing a Multi Hazard Early Warning System for Trinidad and Tobago. In 2020, UNDP has assisted with updating the National Alert system platform by upgrading the existing emergency communications technology and software and supporting the rollout of the associated communications strategy for the National Alert system.

On the policy side UNDP has supported the inclusion of disaster risk reduction principles in national and sectoral development frameworks and planning processes. Advice and feedback are provided as a sitting member of the Technical Review Committee for Trinidad and Tobago's national Disaster Risk Management Policy and Law. UNDP has also previously drafted a working paper on the Legal Preparedness for Domestic Facilitation of International and Regional Disaster Assistance (2014).

Institutional capacity has been strengthened through assessments and subsequent implementation of capacity-building programmes to support the sustainability of climate resilience approaches, including low-emission development strategies and comprehensive disaster risk reduction principles. In 2017 this resulted in a series of capacity building sessions which were held with various Divisions of the Ministry of National Security who were then equipped and empowered to develop Integrated Disaster Risk Management Plans within their Divisions. More recently UNDP has developed a national capacity building initiative on Post Disaster Needs Assessment due to be launched in 2021.

UNDP CO has a complement of program and operations staff. There is a specific function which is designed to address DRR both as a separate focal area and as it intersects with Climate Change adaptation. Initiatives are designed and implemented in full partnership with national stakeholders. Current partnerships include two EU supported projects, one in Trinidad and Tobago which addresses renewable energy and the other in Aruba associated with building national and regional capacity in Science, Technology, Engineering and Mathematics for SIDS.

3.2 Synergies, links, complementarity with your other actions

UNDP, OCHA, IFRC and CDEMA recently co - implemented two projects funded by ECHO - "Strengthening integrated early warning systems for a more effective reduction of disaster risk in the Caribbean through knowledge and tool transfer", and "Strengthen integrated and cohesive preparedness capacity at a regional, national and community level in the Caribbean"; and this action will build on the following:

The EWS Toolkit will be promoted for use by the Community Hydrological Observer (CHO) network to be established/strengthened in the beneficiary communities (Result 3).

The MHEWS Checklist will be utilized for incorporating gender considerations in this action. Notable is that this checklist was used in the proposal stage for inclusion of gender actions/considerations;

The communications plan to support Saint Vincent and the Grenadines EWS, which provides guidance in the context of age, gender and vulnerable, will be utilized to enhance the gender marker during the implementation phase of the project.

Also notable is that the MHEWS Checklist is slated for application in Trinidad and Tobago in early 2021 through funding provided by the CREWS Initiative. The findings arising from this analysis will be useful to Result 3 of this action, specifically the output related to the development of SOPs for issuing flood warning and the flood management plan.

The Regional Risk Reduction Initiative (R3i) project funded by the European Union also produced a lesson report on public outreach in early warning which will be utilized to enhance the strategies used in the PEA for this action.

IFRC's community early warning systems: guiding principles (2012) will also be utilized by the team to strengthen the foundation for the design of the EWS at the strategic level (asking the right questions and exploring all relevant perspectives).

Also notable is that UNDP will incorporate lessons from the ECHO funded drought and flood preparedness projects in Cuba and the Dominican Republic. UNDP Panama is already in preliminary discussion with the team to identify key lessons that can be incorporated.

In terms of synergies with national actions, there is an existing programme at WRA called Adopt a River Programme that is funded by the Government of Trinidad through a Green Fund, which is an environmental fund derived from environmental taxes collected from businesses in Trinidad and Tobago. The mandate of this programme is to improve watersheds and rivers through partnerships between the WRA and volunteers from communities, corporate citizens, NGOs and other government agencies. This action will leverage this volunteer network (see Result 3), which will reduce the time and effort required for the mobilisation of community members to participate in the CHO network (See Result 3). This action is also fully aligned with the Draft National Integrated Water Resource Management Policy, which addresses Integrated Flood Management (See Pg. 25).

Furthermore, this action will collaborate with CDEMA, CIMH and the UNDRR to capitalize on their respective strengths and support the achievement of (i) the Sendai Framework for Disaster Risk Reduction 2015- 2030 notably Target G "Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030" and (ii) the Comprehensive Disaster Management (CDM) Framework for 2014- 2024, specifically Priority 4, Regional Outcome 4.3 - Community Early Warning Systems, integrated, improved and expanded.

4. Needs Assessment and Risks Analysis

4.1 Assessment dates and methodology

The needs assessment and risk analysis were informed primarily by literature review since the causes, effects and risks related to flooding in Trinidad and Tobago have been recently discussed at the level of Parliament via the Joint Select Committee on Land and Physical Infrastructure and well documented and researched, including in internationally recognized and published papers. The key reports/papers utilized are:

- Parliament 10th Report of the Joint Select Committee on Land and Physical Infrastructure on an inquiry into flood alleviation and control measures from major river basins and drainage catchments in Trinidad and Tobago subjected to major flooding over the past year (2020).
- Draft National Integrated Water Resources Management Policy (2018)

Interviews with the following key national agencies were also undertaken during the following dates to obtain feedback on the priority areas of this action:

- 10 November 2020 - Kick-off meeting with WRA, MRDLG, ODPM and UNDP to discuss Community Flood Early Warning System in Trinidad and Tobago
- 23 November 2020 - Planning Meeting with WRA, ODPM and UNDP on scope of the project/priority actions
- 2 December 2020 - Planning Meeting with ODPM and WRA on priority communities
- 26 January 2021 - planning meeting with MRDLG, ODPM and WRA on budget and work plan for the CFEWS action

4.2 Problem, needs and risk analysis

Trinidad and Tobago is highly susceptible to flooding. Although comparably being perceived as events of lower magnitude, floods have had a significant economic and social impact in the country throughout the years; for example, damage and losses from flood events in the years 1993, 2002 and 2006 were US\$580,000, US\$3,300,000 and US\$2,500,000, respectively (Roopnarine, et al., 2018). Also notable is the most recent major event reported in the country took place in October 2018 affected an estimate of 150,000 people from 4,100 households (IFRC, 2018) and according to the President of the Agricultural Society of Trinidad and Tobago, approximately 75% of local farmers in the country were severely affected through the loss of crops and livestock (IFRC, 2018). A record of hazard events in Trinidad and Tobago during the period 2011-2014 show 695 flood events, 277 strong wind events and 179 landslide events as the top three categories of hazards (See Annex 2 for more details); highlighting that flooding is a significant and recurring hazard for the country.

There are several root causes for flooding - since drainage infrastructure is not being updated to keep pace with the rapid urbanisation and with an increase in impermeable (concrete) land surfaces, water is less able to infiltrate the soil, resulting in displaced overland flow and higher incidence of flooding [ODPM, 2014]. Additionally, coastlines experience seasonal storm surges and high tide, which combined with climate associated sea level rise has exacerbated flooding and saltwater intrusion in low lying regions and flood prone areas remain attractive for socio-economic reasons (accessibility, agriculture, commerce and housing) [Roopnarine et al, 2018]. The issue with flooding is compounded by the fact that the official hurricane season coincides with the country's rainy season.

There are 7 communities targeted by this action, 2 are in Tobago and 7 are in Trinidad. The selection of communities from Trinidad was based on a rapid flood susceptibility study that was undertaken. The study modelled susceptibility based on the following 6 factors: elevation, slope (length), road density, drainage density, land use, and rainfall. The model was then verified with an overlay of actual flood occurrences and was found to have a 91% reliability level. See Annex 2 for the flood susceptibility map for Trinidad. Nine of ten communities are in areas either very highly or highly susceptibility to flooding. For Tobago, the data was not available to undertake a flood susceptibility mapping; however, stations are in proximity to areas with a high incidence of annual flooding. See Annex 2.

Also notable is that 2 of the communities are classified as rural; 2 are classified as urban and the remaining 4 are classified as both (See section 2.2). Poverty in rural communities is generally higher than in urban areas in the Caribbean which could be attributable to rural people having lower educational attainment and rural youth and women, particularly single mothers, being mostly affected by unemployment. The labour market in rural communities consist of un-skill or low skill, labour intensive, low technology type jobs with jobs predominantly linked to agriculture sector. The resulting effect is lower incomes and consumer spending (ILO, 2016). Also notable is that the distribution of the poor in Trinidad by county (based on the 2011 Survey of Living Conditions) reveals that majority of the poor are in St. George (27.4%), St. Patrick (19%), Victoria (17.1%), St. Andrew (11.9%) and Caroni (8.1%). The remaining poor are distributed in smaller percentages in Port-of-Spain, San Fernando, Nariva and Tobago. All the communities selected to benefit from this action are in these areas flagged to have majority of the poor population; therefore, this highlights that the communities selected to benefit from this action are among the poorest.

Currently, the WRA is charged with the responsibility for monitoring the country's water resources, which includes the monitoring of flood events. However, there are a number of other entities and agencies directly related to the water sector, which include:

- Trinidad and Tobago Meteorological Services provides weather and climate forecasts
- Regulated Industries Commission is the economic regulator for the water and sewerage sector
- Environmental Management Authority enforces water pollution and trade effluent levels among other responsibilities
- Ministry of Health sets and enforces standards for the quality of drinking water
- Institute of Marine Affairs collects, analyses and disseminates information on the developments in marine affairs
- Drainage Division develops and maintains main watercourses and irrigation systems
- Tobago House of Assembly coordinates water and wastewater management and the development of infrastructure in Tobago

The 10th meeting of the Joint Select Committee on Land and Physical Infrastructure indicated that there is "the need for closer collaborations amongst entities responsible for flood alleviation and control of major river basins" (See Pg. 26 and 116); and further recommended that "there is need to clearly identify the main agencies involved in flood management and define their roles including the agencies responsible for data collection and dissemination" (See Pg. 27).

Also noteworthy is that the WRA manages a hydrological monitoring system which comprises rainfall and river monitoring stations, which relay real time data from remote sites in various basins to a base station situated at the WRA. This allows for flood warnings to be issued in real time using the hydrological data being fed to a rainfall-runoff model as it occurs. At this time there are twenty-one (21) real time rainfall and eight (8) streamflow monitoring stations throughout Trinidad, which are supported by a network of manual and electronic data logging gauges. The key challenge is that the flood monitoring network consists of a mixture of aged, manually operated instruments and outdated telemetric components. In addition, there is an ad-hoc process for the dissemination of data and information to stakeholders to facilitate the timely dissemination of information to stakeholders in communities at risk.

Other area of concern raised by the Joint Select Committee is that there is need for more public education and the building of resilience in the communities themselves to prepare, respond and adapt to floods. Engaging and empowering communities are fundamental to people-centred early warning systems. Also, there is need for spatial data to undertake flood mapping and risk analysis to support decision making (See Pg. 30).

Since 1940, the country's average rainfall has followed a decreasing linear trend, but this has not been statistically significant. Projected rainfall trends, however, remain unclear; while global climate models (GCMs) predict a decrease in rainfall of 15% by the 2080s, four of these models projected increases (Cole Engineering Group Ltd., 2019). Integrated sea-level rise projections and resulting flood risks analysis indicate that floods reaching at least 0.5 m above high tide line at shore will become common events throughout most of the Caribbean within half a century, and more likely sooner. Therefore, the frequency of flooding resulting from sea level rise will increase in the future and therefore the need to reduce risks and strengthen anticipatory actions are important adaptation mechanisms.

In terms of the EWS status of development in Trinidad, it is limited to a national EWS which has forecasting capability or access to regional forecasting capability related to hydrometeorological hazards in particular tropical storms and hurricanes; hence there is a gap in EWS as it relates to flooding.

4.3 Response analysis

To address the needs and risks identified, this action aims to contribute towards flood risk informed planning and development across Trinidad and Tobago so as to reduce loss of life, minimize displacement and poverty. The specific objective is to strengthen community and national capacities for generating impact-based flood early warnings and effectively planning and executing anticipatory actions. To achieve this, the action will target four result areas that aim to (i) enhance capacities for detecting, monitoring, analysis and forecasting of flood hazards in fifteen communities – three in Tobago and twelve in Trinidad; (ii) expand the flood early warning information communication/ dissemination platform to reach more communities, municipalities and governmental agencies; (iii) enhance capabilities for the coordination and management of floods at the community and national levels and (iv) improved emergency response capacities (crisis modifier)

With regards to Result 1, a critical activity to kick-start the project will be the launch of a gender and age analysis, which will inform the updating of the work plan of the action paying due consideration to the budget available. This study will be the first of its kind for Trinidad and Tobago in the context of flooding and it is envisaged that the findings will be useful for informing future policies, strategies and/or programmes related to the water sector. Result 1 will also build on the work initiated by the WRA to develop in-house flood modelling capacities through the procurement of a supercomputer that will have the capacity to run flood models in 24 hours. This is important to be able to provide impact-based forecasting within a timely manner. There will also be hands on training for key government officials in the use of the flood models and the generation of usable flood maps. These maps will play a critical role in understanding the vulnerability of communities and can therefore inform the development of flood mitigation (design of dam levees, channel improvements) and adaptive measures (mapping of evacuation routes/plans). Having access to this type of information for the targeted communities can empower them to work together and with the local government and build their resilience to floods. The flood maps that are developed can also prove useful in locating housing developments, land zoning/planning and water management planning, as well as in the design of roadways, bridges and other public sector infrastructures, to note a few. The last activity under this result area will be the procurement and deployment of a total of 7 streamflow stations: 5 targeted for Trinidad and 2 for Tobago. These stations will have the ability to send data to the WRA, which will be displayed "live" on the website to be developed at Result 2. See Annex 3 for the location identified for the streamflow and rainfall gauges.

With regards to Result 2, this result area will support the expansion of the communications platform through the installation of 1 antenna in Tobago and 2 antennas in Trinidad, which will be able to transmit information/data from the stream flow stations and rain gauges to the WRA office. A complementary activity will be the building of a website to enable real-time sharing of the data received by the WRA from the streamflow and rainfall stations. This result will also advance a targeted Public Education and Awareness campaign for the Community Flood Early Warning Systems built. This action will also investigate and develop other warning communication and dissemination channels to be able to reach the target population, including people in vulnerable conditions and remote locations through the development of multiple communication channels (e.g., social media, flags, sirens, bells, public address systems, door-to-door visits, community meetings).

With regards to Result 3, the establishment and training of Community Hydrological Observer (CHO) networks is a key activity to promote capacity building, buy-in and sustainability of the action in the beneficiary communities. Another key activity will be the establishment of an inter-agency coordination mechanism to support the governance framework for the management of floods in Trinidad and Tobago. The work of this committee will be supported through the preparation of several critical research papers that will enhance the work of the coordination mechanism, specifically: (i) research on challenges, gaps and bottlenecks in information sharing across key government institutions in Trinidad and Tobago that have a role to play in flood management (with key recommendations on remedial actions) (ii) examination of the existing roles and responsibilities across key stakeholders with a view to clarifying and streamlining roles and responsibilities for more effective coordination and collaboration for the management of floods (stakeholder analysis) (iii) assessment of capacities of the key stakeholders in the context of their established/revised roles and responsibilities for flood management. These papers will culminate in the development of a comprehensive management plan for flooding in Trinidad and Tobago. Due to the plethora of players highlighted in the water sector, Standard Operating Procedures (SOPs) will be developed to ensure that conflicting information is not shared by key players such as the WRA, ODPM and Met Services. The final output of this result is the preparation and distribution of a capitalization document to ensure that the key lessons are documented and can be shared.

The final result, Result 4, is a crisis modifier result that will enable the action to have the flexibility to provide localised response in any of the beneficiary communities should an emergency situation arise. The project has included triggers to support either anticipatory or response support. The rationale is to use the CM result to further strengthen the capacities of the CHO networks through hands on experience in both anticipatory and response situations.

The execution of the 4 result areas of this action will build on successful experiences and lessons learned through some initial work that has started by WRA in establishing some elements of Community Flood Early Warning System in a few communities in Trinidad. A key lesson emerging is the importance of working from the bottom up, that is, targeting communities as the primary beneficiaries and incorporating education and governance components to promote sustainability of the intended results of the action. In this regard, this action has placed a strong emphasis on community engagement, building capacity and governance, which also has the value added of promoting sustainability.

This action will capitalize on established networks between the key national agencies working in the water sector (see details in Section 4.2). Their involvement in the outputs of this action will further clarify their respective roles and responsibilities for flood management and strengthen their coordinated efforts to sustain the effects and impacts of this action.

It should be noted that the Government of Trinidad is in the preliminary stages of looking at anticipatory actions for drought hazard. The following key outputs of this action will form the foundation for the future development of a drought EWS for highly vulnerable

communities in Trinidad and Tobago:

- i. The streamflow instrumentation installed in communities
- ii. The model system (software, some of the databases, high speed computers, trained individuals)
- iii. The website for sharing of impact-based forecasts
- iv. CHO network established
- v. Inter-agency coordination mechanism
- vi. Standard Operating Procedures

4.4 Have you assessed this project as entailing data protection risks?

No

4.4.1 Details of risk mitigation measures, including details of any planned Data Protection Impact Assessment (DPIA)

A DPIA was not undertaken as personal data on direct beneficiaries is not required for the targeted results of this action. The result related to the strengthening of the flood early warning communication/dissemination platform will utilize anonymous community information.

5. Beneficiaries

5.1 Beneficiaries - identification criteria

The 7 communities identified to benefit from the installation of streamflow stations were evaluated against the following criteria (i) there is high susceptibility to flooding (ii) communities populated and/or have agriculture subsistence activities and (iii) there are currently no streamflow stations or rainfall gauges.

To achieve the first criterion, a flood susceptibility mapping was undertaken for Trinidad. The study modeled susceptibility based on the following six (6) factors: elevation, slope (length), road density, drainage density, land use, and rainfall. The model was then verified with an overlay of actual flood occurrences and was found to have a 91% reliability level. The situation was different for Tobago as no flood susceptible maps are available for Tobago. This study still needs to be undertaken; therefore, stations were in areas with high incidents of annual flooding in the past.

The 7 beneficiary communities include: Couva Caroni, Maraval (upper and lower), Cunupia, Papurie, Diego Martin, Crooks River, Bacolet River. The latter 2 are in Tobago.

The locations that were selected for the installation of these additional streamflow monitoring stations were evaluated against the following criteria (i) the locations should be in watersheds with high susceptibility to flooding, (ii) the location should be in a currently ungauged or ineffectively gauged watershed, and (iii) the rain gauges should be upstream of the streamflow monitoring stations to guide flood early warning. See Annex 3 for the locations.

The community members that will be selected to participate in the Community Hydrological Observer Network are based on the following evaluation criteria (i) active participation in relevant community volunteering networks (i.e Adopt a River Programme); and (ii) gender equality mainstreaming by having a 50/50 share of male and female amongst volunteers.

5.2 Involvement of the beneficiaries in the design of / and in the action

The MRDLG has a strong and longstanding relationship with all the beneficiary communities and has been working with them through ongoing capacity and capability building activities, such as CERT and Incident Command System (ICS). The MRDLG meets regularly (at least one per month) with the 14 Municipal Disaster Management Coordinators and are familiar with their vulnerabilities, needs and strengths. The issue of flooding is regularly discussed due to recurring localized flooding events as well as options to better manage this hazard. Hence, the beneficiary communities are regularly engaged by one of the key partners of this action.

Further, the urgent need for this action has been endorsed by the Parliament of Trinidad and Tobago. A key recommendation of the Joint Select Committee was the need for an overarching water resource management policy; as such, in 2018 a National Integrated Water Resources Management Policy (NIWRMP) was drafted. The NIWRMP was elaborated through extensive and nation-wide stakeholder consultations, which took the format of stakeholder workshops, focus groups with persons representing selected interest groups (commercial/industrial, agricultural, and environment), public consultations and interviews. This action directly supports Section 7.14 of the NIWRM Policy, specifically, the achievement of #3 (Establishment of a flood monitoring network and EWS that include Real Time Monitoring, an EWS and Community Based Early Warning Systems) and #4 (Implementation of a public education campaign). Therefore, the overarching priorities of this action are aligned to a national policy that has been widely publicized and considerate of public input and feedback.

The sustainable design, implementation and monitoring of this action will involve the close engagement of the beneficiary communities to:

Understand the needs of the beneficiary communities to inform the design and development of the CFEWS, including optimal options for the communication of warning information to each beneficiary community;

Clarify how best to organize and manage the CHO network, particularly during the COVID pandemic;

identify suitable locations for the installation of the streamflow and rainfall stations;

Inform the design and roll-out of the community component of the public education and awareness campaign;

maintain the areas surrounding the streamflow stations and rainfall gauges;

record readings and regularly clean the stations;

operationalize the alarm component of the FEWS;

understand what type of alarm mechanism the community will respond to;

As the installations of the CFEWS are completed, this action will engage the beneficiary communities, particularly through the established CHO network, to:

go house to house (especially in rural communities) when necessary or use loudspeakers mounted on trucks to alert the community of impending flood waters;

give warnings to their communities since the CHO Team Leader will have access to the FEWS platform as well as access to other hydrometeorological data from the met office;

manage information from the FEWS to inform local Shelter Managers and CHO volunteers to make timely arrangements to activate shelters;

Serve as the voices of the wider community in providing feedback to the project team on what is working well and what needs to be improved.

The roles and responsibilities outlined above will be achieved through targeted training for the CHO network with funding from this action (Result 3.1)

Key government agencies that have responsibility for flooding in T&T will also be engaged in the implementation and monitoring of this action through the inter-agency coordination mechanism to be established (Result 3). This action will also support the convening of several meetings of this mechanism to obtain technical feedback and support for the key outputs of this action.

5.3 Does the proposed action provide a specific targeted response for groups or individuals with specific vulnerabilities? No

6. Gender and Age Marker

6.1 Gender and Age

Q1: Does the proposal contain an adequate and brief gender and age analysis? Not sufficiently

Q2: Is the assistance adapted to the specific needs and capacities of different gender and age groups? Not sufficiently

Q3: Does the action prevent/mitigate negative effects? Yes

Q4: Do relevant gender and age groups adequately participate in the design, implementation and evaluation of the action? Yes

Initial mark 1

6.2 Additional comments and challenges

The gender marker at the proposal stage is only 1 due to the fact that whilst there is some information on the distribution of beneficiaries by sex and age ranges etc, there is not adequate understanding on how each grouping is differently affected by the effects of floods, their accessibility to resources etc. As a result, the action is not fully adapted to the specific needs and capacities of the different gender and age groups in the beneficiary communities. However, efforts were made at the proposal stage to prevent negative effects through the use of the MHEWS Checklist and engagement of the MRDLG given their awareness of the vulnerabilities, needs and strengths of the communities. Further, efforts were made to include a diverse stakeholder grouping during the design phase. Also recall the extensive stakeholder consultation utilized by the Government of T&T in the design of the Draft National Integrated Water Resource Management Policy, which addresses Integrated Flood Management

Notable is that a critical activity to kick-start the project will be a gender and age analysis, which will be the first of its kind for T&T in the context of flooding. The findings and recommendations from this study will inform the updating of the work plan of this action. Also notable is that UNDP CO has a gender focal point to provide technical guidance during the execution of this project. The findings of the gender and age analysis will also be promoted in the capitalization document of this action.

UNDP is confident that using these strategic gender mainstreaming approaches will enable the implementation phase of this action will achieve higher gender scores.

7. Logic of the Intervention

7.1 Principal objective

To improve flood risk informed planning and development across Trinidad and Tobago so as to reduce loss of life, minimize displacement and poverty.

7.1.2 Specific objective description

To strengthen community and national capacities for generating impact-based flood early warnings and effectively planning and executing anticipatory actions

7.2 Indicators

7.2 Indicator (1/1)

Custom

Definition

of people in the beneficiary communities reached by the combined flood early warning channels

(Beneficiary communities are the 7 communities targeted by this action, Flood early warning channels include the various medium used to notify residents of flood warning; they include, CHO networks, website, and other channels to be investigated and developed by this action)

Source and method of data collection

CHO reports of preparatory actions undertaken (door-to-door visits etc.)
Reports of the Communications Specialist
Reports of the Web Developer
Website hits/analytics
Social media analytics (FB, Instagram, Twitter)
Communities outreach activities post flooding events by the MRDLG and WRA will help to determine the reach of flood early warnings.

Some of these reports will be housed at the WRA, ODPM and/or MRDLG and will be supplied to the Project Manager for reporting. Interviews will also be undertaken by the Project Manager as part of the data verification process. Data will be disaggregated by sex, to the best extent possible

Baseline

0.00

Target value

177251.00

7.3 Results

7.3 Result (1/4)

Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards

Sector

Disaster Risk Reduction / Disaster Preparedness

Subsectors

Hazard, risk analysis and early warning

Estimated total amount

246.140,36

Result 1 - Indicator 1

Type / Subsector

Hazard, risk analysis and early warning

Indicator

Number of people covered by a functional early warning system

Definition

Early warning system should comprise: (i) knowledge of the risks; (ii) monitoring, analysis and forecasting of the hazards; (iii) communication or dissemination of alerts and warnings; (iv) local capabilities to respond to the warnings received.

Source and method of data collection

The number of people covered by the CFEWS is dependent on the locations identified for the installation of the streamflow and rainfall stations. GIS maps have been developed by WRA to determine the population within these catchment areas that should be covered by the CFEWS, when operationalized.

Data will be disaggregated by sex, to the best extent possible

Baseline

0,00

Target value

177.251,00

Comments on the indicator, baseline and target value

A functional EWS in the case of this action is the community flood early warning system. Both the rainfall and the streamflow stations will be critical in the establishment of the flood early warning systems – the rainfall stations are more useful for the flash flood warnings during heavy rainfalls. Otherwise, both stations are used for flood warnings. Therefore, there will be 7 CFEWS established by this action.

Result 1 - Indicator 2

Type / Subsector

Custom

Definition

males and females benefiting from the training on flood models and maps (disaggregated by agency)

(Training on flood models/maps is specifically related to an important capacity building activity to be able to sustain the production of impact-based forecasts)

Source and method of data collection

Data sources for this indicator include training reports prepared by the Consultant/Technical Lead on the training. Registration forms will also be utilized.

Data will be collected by the WRA since the training will be at their offices.

Baseline

0,00

Target value

8,00

Comments on the indicator, baseline and target value

A target of at least 2 persons from the 4 key agencies as it is noted that majority of GIS staff at these government agencies are on contract and therefore there is staff turnover. Therefore, targeting 2 persons per agency should ensure that there is adequate backstopping within the government agencies.

Result 1 - Indicator 3

Type / Subsector

Custom

Definition

of recommendations from the gender and age analysis incorporated into the work plan of this action

(Gender and age analysis is an examination of the different gender and age groups in terms of their roles and control over resources; inequality/discrimination, including in the level of access to assistance; effects of the crisis; capacities for coping with, responding to, recovering from and preparing for crises; and specific needs)

Source and method of data collection

Data sources for this indicator is the report of the gender and age analysis and the revised work plan of this action. Since this consultancy will be managed by UNDP, the report will be readily available for reporting purposes.

Baseline

0,00

Target value

10,00

Result 1 - Activity 1

Short description (for the logframe)

1.1 Undertake gender and age analysis and identify key recommendations

Detailed description (if needed)

1.1 Gender and age analysis completed to inform the mainstreaming of gender considerations in the work plan of the action. A critical activity to kick-start the project will be the launch of a gender and age analysis, which will focus on an analysis of different gender and age groups in terms of their roles and control over resources; inequality/discrimination, including in the level of access to assistance; effects of flood related events; capacities for coping with, responding to, recovering from and preparing for flood related crises; and any specific needs. The study will also identify any potential negative effects of the action on different gender and age groups and provide recommendations to mitigate same and to ensure the inclusion and equitable access of all groups, particularly the most vulnerable, targeted by this action. The findings and recommendations from this study will inform the updating of the work plan of the action paying due consideration to the budget available. This study will be the first of its kind for Trinidad and Tobago in the

context of flooding and it is envisaged that the findings will be useful for informing future policies, strategies and/or programmes related to the water sector.

Result 1 - Activity 2

Short description (for the logframe)

1.2 Undertake training in flood models and develop impact-based forecasts for floods

Detailed description (if needed)

1.2 Flood models and maps developed to support impact based forecasting and for the building of mitigation and preparedness capacities

This result area will also build on the work initiated by the WRA to develop in-house flood modelling capacities. Currently the WRA is in possession of a software to model flooding in Trinidad and Tobago and they are undergoing training in the use of the software. However, there is urgent need for high-speed computers to run the flood models to support impact-based forecasting within a timely manner. The current computer systems take 5-7 days to run flood models; whilst a high-speed supercomputer will be able to achieve the same output within 24 hours. Issuing of warning information is a time-sensitive activity since community members require adequate time to take the necessary preparatory actions.

A local or regional expert (example from the Caribbean Institute of Meteorology and Hydrology) will be utilized to train relevant government officials in the generation of flood maps and to collaborate with the trainees to produce usable maps. Prior to this, the WRA will work in collaboration with the Consultant to collect the data required to run the flood models. Women and men will have equal opportunity to benefit from the training and will be engaged in the development of the flood maps to ensure that risks and vulnerabilities of both genders are considered. Community verification and validation meetings of the flood maps will be convened to have input from a wider cross section of people (special needs, age groups). These maps will play a critical role in understanding the vulnerability of communities and can therefore inform the development of flood mitigation (design of dam levees, channel improvements) and adaptive measures (mapping of evacuation routes/plans). Having access to this type of information for the targeted communities can empower them to work together and with the local government and build their resilience to floods. The flood maps that are developed can also prove useful in locating housing developments, land zoning/planning and water management planning, as well as in the design of roadways, bridges and other public sector infrastructures, to note a few.

Result 1 - Activity 3

Short description (for the logframe)

1.3 Procure and install streamflow and rainfall stations in communities highly susceptible to flooding in Trinidad and Tobago

Detailed description (if needed)

1.3 Streamflow and rainfall stations deployed in communities highly susceptible to flooding in Trinidad and Tobago

As noted in Chapter 3 (Needs Assessment and Risk Analysis), the flood monitoring network consists of a mixture of aged, manually operated instruments and outdated telemetric components. Therefore, this action will procure and deploy 7 additional streamflow stations in 7 communities. Notable is that each monitoring station comprise sensors, solar panels and a Yagi Antenna. The Yagi Antenna receives information/data from the monitoring stations and transmits to and from the repeater site (to be expanded under Result 2) and therefore, each Monitoring station must have a Yagi Antenna. Once the data gets to the repeater station (see Result 2), it will be sent to the WRA for sharing live on the website, which will also be developed by this action (see Result 2) as well as to be used by the flood models for the generation of impact-based forecasts. All efforts will be made to ensure that the equipment and installation sites are suited to local conditions, circumstances and gender differentiated needs and that the communities trained (see Result 3) are representative of both women and men and that they have access to and control of technical equipment and have the capacities for them.

7.3 Result (2/4)

Flood early warning information communication/dissemination platform is expanded and useful to more communities, municipalities and governmental agencies in Trinidad and Tobago

Sector

Disaster Risk Reduction / Disaster Preparedness

Subsectors

Information, communication and public awareness

Estimated total amount

139.060,47

Result 2 - Indicator 1

Type / Subsector

Information, communication and public awareness

Indicator

Number of people reached through Information, Education and Communication on DRR

Definition

Information, Education and Communication: community-led awareness campaigns, development and distribution of awareness materials, media campaigns; peer-to-peer awareness, workshops, exhibitions, training of teachers and pupils. In case of mass media campaigns provide explanation on how actual reach was estimated.

Source and method of data collection

Data sources for this indicator include:
Reports of the Communications Specialist
Reports of the Web Developer
Website hits/analytics
Social media analytics (FB, Instagram, Twitter)
Registration forms for Communities outreach activities.

Data will be collected via literature review and interviews with CHOs and beneficiaries
Data will be disaggregated by sex, where possible

Baseline

0,00

Target value

695.000,00

Comments on the indicator, baseline and target value

Number of people reached will be those targeted for wider public education and awareness on flood management in Trinidad and Tobago. It is assumed that the Public Education and Awareness () will be nation-wide but the PEA campaign will be further detailed when the project starts and will finalize the values for the target audience for the various activities to be undertaken.

The target value is approximately 50% of the population of Trinidad and Tobago.

Result 2 - Activity 1

Short description (for the logframe)

2.1 Expand the communications platform (repeater sites)

Detailed description (if needed)

2.1 Communications platform expanded and functional to strengthen coverage in Trinidad and Tobago
This result area will support the expansion of the communications platform through the installation of 1 antenna in Tobago and 2 antennas in Trinidad. Specifically, Omni Antennas will be installed for the expansion of the Repeater Sites to receive information/data from the Yagi antennas at the streamflow and rainfall monitoring stations (see Result 1) and transmit information/data to and from the WRA office. The proposed locations are: Flag Staff in Tobago, North Coast Trinidad, and Cumberland Hill in Trinidad. The Antennae in Cumberland is a replacement.

Result 2 - Activity 2

Short description (for the logframe)

2.2 Develop website for facilitating information dissemination as it relates to flooding

Detailed description (if needed)

2.2 Website for facilitating information dissemination is developed and functional
A complementary activity will be the building of a website to enable real-time sharing of the data received by the WRA from the streamflow and rainfall stations. Notable is that this will include data from all the automated stations that exist within WRA's flood monitoring network. This live data will be accessible by the public, businesses, non-governmental agencies, governmental agencies etc. This is an important achievement since the Government of Trinidad and Tobago signed onto the Open Government Partnership [1]. The Open Government Partnership (OGP) is based on the idea that an open government is more accessible, more responsive, and more accountable to citizens, and that improving the relationship between people and their government has long-term, exponential benefits for everyone[2].
Furthermore, impact-based forecasts generated by the activities advanced under Result 1 of this action will also be posted on this website. Therefore, the investment in the website will enhance flood warning information dissemination beyond the communities targeted by the action. Efforts will be made to ensure that warning messages are clear, consistent, gender sensitive and include risk and impact information and are designed so they reach everyone, with consideration for linking threat levels to emergency preparedness and response actions. Further, processes will be established in partnership with the Community Hydrological Observer Network (see Result 3) to verify that warnings have reached the principal stakeholders, particularly women and people in vulnerable conditions in the target communities.

[1] [\[Link replaced / shortened automatically\]](#)

[2] OGP is a broad partnership that includes members at the national and local level and thousands of civil society organizations. Through the Partnership, these powerful forces work together to co-create two-year action plans with concrete steps – commitments – across a broad range of issues. The open data portal is managed by the Ministry of Public Administration and Digital Transformation.

Result 2 - Activity 3

Short description (for the logframe)

2.3 A Public Education and Awareness Campaign for flood hazard and multiple channels for sharing flood warning information (particularly to the most vulnerable) is developed

Detailed description (if needed)

2.3 Flood Public Education and Awareness Campaign and Warning Communication and Dissemination Channels strengthened
A local consultant will be procured to advance a targeted PEA for CFEWS. It will include activities such as launch events in communities benefitting from the installation of rainfall gauges and streamflow stations. The launch events will provide a forum for promoting awareness of early warning colour code meaning and actions required, what are the reliable sources of information for flood warning information, visibility of this action and donors etc. There will also be PEA community-based activities that target some of the underlying issues for watershed management and the root causes of flooding such as deforestation and sedimentation, poor drainage, urbanisation, storm surges, the hurricane season and the implications of climate change on some of these factors etc. In this regard, the PEA will complement some of the actions addressed under the Adopt a River Programme mentioned in Chapter 5, section 5.1 (beneficiary identification criteria). Opportunities for piggy backing on and co-financing from the Adopt a River Programme will be further explored during the implementation of this action. For instance, this programme recently procured a bus that is equipped with a Public Announcement system, generator, projector and screen and is able to have various types of community outreach activities to promote sensitization on water issues. Gender sensitive PEA materials tailored to the specific needs of target groups (e.g., women, children, older people and people with disabilities) will be developed, where possible.

It is also envisaged that the website will also be used to facilitate information dissemination from all education and awareness activities initiated by this action as well as other PEA materials developed by key partners working in the water sector in Trinidad and Tobago.

Apart from the website, this action will also investigate and develop other warning communication and dissemination channels to be able to reach the target population, including people in vulnerable conditions and remote locations through the development of multiple communication channels (e.g., social media, flags, sirens, bells, public address systems, door-to-door visits, community meetings). Efforts will be made to ensure that communication and dissemination channels are tailored to the different needs of specific groups (urban and rural populations, women and men, older people and youth, people with disabilities, etc.). This will be informed by the findings of the gender and age analysis.

7.3 Result (3/4)

Coordination and management of floods at the community and national levels are enhanced

Sector

Disaster Risk Reduction / Disaster Preparedness

Subsectors

Community and local level action

Estimated total amount

157.235,00

Result 3 - Indicator 1

Type / Subsector

Community and local level action

Indicator

Number of people participating in interventions that enhance their capacity to face shocks and stresses

Definition

Interventions at household and local level aimed at concretely strengthen the capacity. Information or advocacy activities as well as trainings are not eligible unless they will result or are directly linked to concrete action (e.g. evacuation plan developed).

Examples: number of people who can use a protective shelter, etc; number of people covered/included in a new contingency plan.

Source and method of data collection

Data sources for this indicator include CHO training reports, including registration forms

Data will be collected via literature review and interviews with CHOs and beneficiaries (as required)

Data will be disaggregated by sex, to the best extent possible

Baseline

Target value

Comments on the indicator, baseline and target value

“Interventions” in the context of this action will be the CHOs networks. Each CHO usually comprise 30 community volunteers. Therefore, there should be a total of 210 persons benefitting (from the 7 communities)

Result 3 - Indicator 2

Type / Subsector

Custom

Definition

Number of inter-agency coordination mechanism functioning

Inter-agency coordination mechanism are a group of agencies that meet regularly
Functioning means that they are meeting as frequently as outlined in the final agreed TOR and have a quorum.

Source and method of data collection

Data sources for this indicator include meeting reports, including registration forms
Data will be collected via literature review

Baseline**Target value**

Result 3 - Activity 1

Short description (for the logframe)

3.1 Establish Community Hydrological Observers and provide training

Detailed description (if needed)

3.1 Community Hydrological Observers are established and trained to better prepare for, respond to and recover from flood hazards

The establishment and training of Community Hydrological Observer (CHO) networks is a key activity to promote capacity building, buy-in and sustainability of the action in the beneficiary communities. Training focuses on the FEMA Community Emergency Response Training and Incident Command Management System as well as installation, calibration, maintenance and trouble-shooting, data retrieval, quality Assurance/ Control as it relates to the monitoring stations. The FEMA CERT training will be led by the Ministry of Rural Development and Local Government with support from the Trinidad and Tobago Red Cross. The remaining training topics will be addressed by WRA.

A mobile app is being developed internally by the WRA, which will have the capacity to record damage in a structured manner using the FEMA CERT methodology. The app will utilize GPS technology to record the location of the documented damage and losses to infrastructure. This training will be extended to the CHO networks established by this action as well as testing and enhancement of the app. The elements of the app mirrors the requirements of the Initial Damage Assessment (IDA) and Damage Assessment and Needs Analysis (DANA).

Result 3 - Activity 2

Short description (for the logframe)

3.2 Establish an inter-agency coordination mechanism, develop an integrated flood management plan and outline Standard Operating Procedures for issuing flood warnings

Detailed description (if needed)

3.2 An inter-agency coordination mechanism, Flood Management Plan and SOPs are developed for effective management of floods

Another key activity will be the establishment of an inter-agency coordination mechanism to support the governance framework for the management of floods in Trinidad and Tobago. This coordination mechanism will include the agencies flagged in Section 4.2 (problem, needs and risk analysis) of this proposal as well as knowledgeable representatives who work directly at the community level. The latter will be represented by the 15 municipal Disaster Management Coordinators (DMC). The Disaster Management Coordinator is responsible for the establishment and maintenance of a robust disaster risk reduction programme within the assigned Municipal Corporation. This responsibility includes planning, implementing and evaluating activities related to all phases of the Disaster Cycle (i.e. Prevention, Mitigation, Preparedness, Early Warning, Response and Recovery). The DMC manage the CERT teams/volunteers and by extension, will manage the CHO network to be established by this action.

Due to the plethora of players in the water sector, Standard Operating Procedures (SOPs) will be developed for warning information dissemination to ensure that conflicting information is not shared by key players such as the WRA, ODPM and Met Services and that

the roles and responsibilities of the CHO networks in supporting information dissemination is clear.

The work of this coordination mechanism will be supported through the preparation of the following critical research papers that will enhance their: (i) research on challenges, gaps and bottlenecks in information sharing across key government institutions in Trinidad and Tobago that have a role to play in flood management (with key recommendations on remedial actions) (ii) examination of the existing roles and responsibilities across key stakeholders with a view to clarifying and streamlining roles and responsibilities for more effective coordination and collaboration for the management of floods (stakeholder analysis) (iii) assessment of capacities of the key stakeholders in the context of their established/revised roles and responsibilities for flood management. The preparation of these research documents will engage communities, as relevant, to understand the public's perceptions and expectations as it relates to these research areas. These papers will culminate in the development of a comprehensive management plan for flooding in Trinidad and Tobago.

Result 3 - Activity 3

Short description (for the logframe)

3.3 A document capitalization of this action is prepared and disseminated

Detailed description (if needed)

Throughout the lifecycle of this action the dedicated Project Manager and Communications Specialist will document the lessons and results of key outputs of the project; such as the findings of the gender and age analysis and how it influenced adjustments to the implementation strategy of the project; experiences in engaging communities in the management and maintenance of the community flood early warning systems; the findings and value of including gender and age analysis in the establishment of an EWS; the value-added of impact-based forecasting etc.

Further, the final evaluation will inform the capitalization of the entire action for sharing with development partners and other countries that want to replicate a similar project.

7.3 Result (4/4)

Improved emergency response capacities through a crisis modifier

Sector

Disaster Risk Reduction / Disaster Preparedness

Subsectors

Other (DRR / DP)

Estimated total amount

0,00

Result 4 - Indicator 1

Type / Subsector

Custom

Definition

% of beneficiaries (disaggregated by sex, age and disability) reporting that humanitarian assistance is delivered in a safe, accessible, accountable and participatory manner

Source and method of data collection

The CHO networks will be requested to provide reports on this indicator to the project manager should any of the two CM triggers be activated.

The final evaluation of this action will also include surveys and questionnaires for beneficiaries to provide information on this indicator.

Baseline

Target value

0,00

5,00

Comments on the indicator, baseline and target value

This indicator will only be reported on if the crisis modifier triggers/actions are operationalized.

Due to budget limitations, we anticipate that the action would be able to assist at most 5% of the beneficiary communities.

Result 4 - Indicator 2

Type / Subsector

Custom

Definition

Number of days between the crisis and the emergency response

Source and method of data collection

Date of the official request to the ODPM's Preparedness and Response Operations from the Chairman of the Council or Mayor for assistance in responding to a Level II flood event's impact on any of the beneficiary communities of this action.

Date of the meeting of the project board and agreement to trigger the CM - minutes of the meetings

Baseline

0,00

Target value

7,00

Comments on the indicator, baseline and target value

This indicator will only be reported on if the crisis modifier triggers/actions are operationalized

Result 4 - Activity 1

Short description (for the logframe)

4.1 Anticipatory actions supported

Detailed description (if needed)

Anticipatory Action Trigger:

Issuance of a Red Flood Alert Level for any of the beneficiary communities of this action.

Red Flood Alert Level means: very high or extreme risk to public safety, livelihoods, and property. Dangerous conditions are imminent or already occurring. There is a very high potential for multiple lives to be lost and major damage to property and infrastructure.

CM Actions:

1. An emergency meeting of the Project Board will be convened to make final decisions related to the operationalization of the CM result – budget, activities, partnerships etc.
2. In the event that there are multiple communities impacted, there is an app developed by the WRA that uses GPS and images taken from the damages to building and other infrastructures. This will be utilized to perform a rapid damage assessment and inform the prioritization of communities to benefit from the CM result.
3. Anticipatory actions to be undertaken include the use of the established community hydrological observer networks to undertake house to house visits to encourage community dwellers to move to safer locations and/or stock up on supplies. House to house visits is particularly important for getting the warning messages out to the most vulnerable that do not have internet, telephones, TV and/or radios. CHOs will also use the loudspeakers mounted on trucks to get the information out to community members. UNDP envisages that this to have minimal costs to this action, but will allow the project to utilize the capacities built at the community level, furthering strengthening their roles and responsibilities in the beneficiary communities

Preparedness actions already in place for anticipatory CMs:

1. The Trinidad and Tobago Meteorological Service (TTMS) has launched a new colour-coded National Early Warning System (EWS) for hydro-meteorological hazards in Trinidad and Tobago, including for the flood hazard. The structure of the warnings conforms to the format of the Common Alerting Protocol (CAP), an international standard for emergency alerting and public warning. The Met Office now issues 'Alerts', 'Watches' or 'Warnings' based on the amount of time between the current time and the expected time of impact. Alerts will have the longest lead time, while Warnings will have the shortest lead time. This national EWS will provide a good source of alerts/watches/warning for the beneficiary communities during the preparatory and installation phases of the community flood early warning system.

Result 4 - Activity 2

Short description (for the logframe)

4.2 Response actions supported

Detailed description (if needed)

Response Trigger:

For Trinidad: A request is made to the ODPM's Preparedness and Response Operations from the Chairman of the Council or Mayor for assistance in responding to a Level II flood event's impact on any of the beneficiary communities of this action.

For Tobago: A request is made to the ODPM's Preparedness and Response Operations from the Chief Secretary from the Tobago House of Assembly (THA) assistance in responding to a Level II flood event's impact on any of the beneficiary communities of this action.

At Level 2, the emergency event usually affects two or more municipal regions/Tobago, or while confined to one municipality, may be of a very serious nature (that is, have the potential for significant loss of life or damage to property, environment or economy). In such instances, the response can be dealt with using municipal and national resources.

CM Actions:

1. An emergency meeting of the Project Board will be convened to make final decisions related to the operationalization of the CM result – budget, activities, partnerships etc.
2. In the event that there are multiple communities impacted, there is an app developed by the WRA that uses GPS and images taken from the damages to building and other infrastructures. This will be utilized to perform a rapid damage assessment and inform the prioritization of communities to benefit from the CM result.
3. Response actions will be undertaken within one week of the receiving the request for assistance from the relevant authority and will leverage the CHO network to offer support to shelter management activities including: food distribution, ensuring privacy and dignity, providing personal safety and security. Funding from this action, up to a maximum of 10% of the budget, will be utilized to support the resourcing of the shelters in terms of water, food supplies, personal hygiene supplies, childcare supplies etc. This will be determined by the needs identified by the shelter occupants.

Preparedness actions in place to support response CM:

1. SOPs have been devised by the MRDLG to present a framework for actionable responses to all hazard impacts by the orchestrated effort of all 15 municipalities in Trinidad and Tobago using the manpower, equipment, materials and associated services when and where applicable. This framework is bolstered by mutual aid and assistance agreements which exist amongst all municipalities. The mutual aid and assistance agreements essentially allows one municipal corporation to release its equipment and personnel to the affected municipal corporation for 4 days at no cost to the impacted municipal corporation.
2. Majority of the beneficiary communities already have CERT teams established, which will be the team that receive further training in the installation, calibration, maintenance etc. of the stations installed under this action. This implies that the national CERT teams have the capacities to support CM related response activities
3. If it is perceived that a Level 1 incident has the potential to escalate to a Level 2 event, the ODPM's National Emergency Operations Centre (NEOC) would be notified and become partially activated. This activation would facilitate the closer monitoring of events and initiate preparation for response should the Level 1 response become overwhelmed. At Level 2, greater resources would be required for damage assessment, search and rescue, security/ crowd control, relief supply distribution, etc., depending on the type of incident. The Trinidad and Tobago Defense Force (TTDF) usually becomes involved at this level. The NEOC would be fully activated.

7.4 Results Context and Conditions

7.4 Preconditions

- High political buy-in exists for this action
- The national co-implementing partners demonstrate commitment for the project
- The beneficiary communities demonstrate commitment for the project

7.5 Assumptions and risks (including risk of fraudulent activities and environmental risk)

Assumptions:

- The national agencies with responsibility for the water sector are strong advocates for the project and actively participate in the inter-agency coordination mechanism
- Beneficiary populations are willing and motivated to volunteer to support the activities on the ground for the effective management and utilization of the CFEWS
- Beneficiary populations are interested in the training opportunities and apply the skills/knowledge gained
- Public trust in the warning information provided by the channels used
- Technical experts available in Trinidad and Tobago to fulfill the human resources noted at Section 10.1 (human resources and management capacities)
- Sufficient capacities exist within the national partner agencies and beneficiary communities to undertake the project
- Remote training is a suitable alternative

Risks:

- The installation works for the streamflow and rainfall stations are not completed during the dry season and therefore work overlap in the rainy season, which can affect activities in the field.
- Occurrence of a disaster event
- Changes in key technical staff appointed to or benefiting from this action (e.g. inter-agency coordination mechanism, training in flood models and mapping) in key national partner agencies
- Disgruntled communities not benefiting from this action
- Fluctuations in the exchange rate of euro to Trinidad and Tobago Dollars can affect the budget negatively
- Worsening of the COVID-19 pandemic in Trinidad and Tobago, impairing key activities in the beneficiary communities

7.6 Contingency measures taken to mitigate the risks described in the section 7.5

- The official start of this action, vis-à-vis, rainy season in Trinidad and Tobago will be factored in the final work plan and implementation strategy for the action
- Pending effects of disaster event, request will be made to ECHO for the temporary suspension of the project or extension of timelines.
- Advocacy actions at policy level in each institution to identify the participation of 2 technical staff, that is, a primary and alternate focal point.
- The PEA campaign will seek to target the entire population of Trinidad and Tobago and promote awareness of the project as well, including the prioritization of the most vulnerable in the first instance with future plans for scaling up the intervention across Trinidad and Tobago, as more funding becomes available
- Continuous monitoring will be given to the euro/dollar exchange rate and, in case of excessive volatility, measures may be taken to reduce foreign exchange risk.
- Options for remote training will be explored should the COVID-pandemic situation worsen
- All COVID protocols will be promoted during the project, particularly for individuals working in the field

8. Resilience Marker

8.1 Resilience

Q1: Do the proposed project activities adequately reflect an analysis of risks and vulnerabilities (including conflict, environment and climate risks)? Yes

Provide details

This action is risk-informed and is premised on recent assessments and policy dialogue. The criteria used for the selection of beneficiary communities is cognizant of risks that exist at the community level. Further, an assessment of underlying factors that exacerbate flood risks in Trinidad have been identified, and this action aims to target some of them through the various activities such as the PEA campaign, training for communities and setting up of an EWS.

Q2: Does the project adopt a "do no harm and conflict sensitivity" approach, include specific measures to ensure that the identified risks and any environmental impacts of the project are addressed to the extent possible, and are not aggravated by the action? Yes

Provide details

This action is risk-informed and is premised on recent assessments and policy dialogue. The criteria used for the selection of beneficiary communities is cognizant of risks that exist at the community level. Further, an assessment of underlying factors that exacerbate flood risks in Trinidad have been identified, and this action aims to target some of them through the various activities such as the PEA campaign, training for communities and setting up of an EWS.

Q3: Does the project include measures to strengthen local preparedness capacities (of individuals and national or local institutions or organisations) to respond or adapt to identified risks? Yes

Provide details

This is well highlighted in Section 7 since all three of the results have capacity building activities that, when combined, will promote capacity building for government agencies and individuals in 13 beneficiary communities.

Q4: Does the project contribute to long-term strategies to reduce humanitarian needs, underlying vulnerability and risks or identifies modalities to link up with ongoing development interventions (national or international stakeholders)? Yes

Provide details

Establishing CFEWS that are able to get flood warnings disseminated in a timely manner, coupled with building national and community capacities to adequately respond to flood events will reduce losses and the need for humanitarian assistance.

Initial mark 2

9. Monitoring and Evaluation

9.1 Complaint mechanism

- The website to be developed will include short surveys to obtain feedback from users. These surveys will be analyzed by the project manager and WRA for undertaking necessary enhancements/remedial measures;
- Recalling that the CHO networks comprise community members that will be working closely with WRA, ODPM and MRDLG throughout the project. Therefore, they will serve as a medium for channeling concerns from the 13 beneficiary communities to these respective government agencies. The CHO network volunteers are the agents on the ground that interact with the entire community, especially through their door-to-door outreach activities. Hence, they will have a thorough knowledge of the bottle necks, what is working well, what needs to be improved as it relates to the CFEWS;
- There is also a mobile app being developed by WRA to undertake rapid damage assessments in the form of text and photos/images. The CHO networks will be trained in the use of this app and will be able to transmit information of damages, needs and concerns from the community, particularly during and after a flood event.

- There are regional disaster management units (municipality level) that the beneficiary communities fall within. This structure is another mechanism for the voicing of concerns from the communities
- The social media portals to be developed and tools as part of the wider PEA campaign will have forums for the public to share feedback;

9.2 Monitoring of the action

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation mechanisms:

- Monitoring and management of risks will be done quarterly. This entails the identification of emerging risks that may threaten achievement of intended results. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.
- The project manager will undertake periodic field visits (quarterly) and verify the progress in the implementation of the activities, identify issues or bottlenecks and plan corrective actions. This will also result in the identification of knowledge, good practices and lessons that will be integrated back into the project.
- A governance mechanism (i.e., project board) will be established to hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. The envisaged members are ODPM, WRA, MRDLG, Met Services, Red Cross, UNDP CO, UNDRR and CDEMA. Other expert agencies will be co-opted as needed. The project board will meet at least twice per year.
- In the project's final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.
- UNDP will conduct a final external evaluation for the project. An external evaluator will be hired for conduct of the final evaluation. The findings of this report will support the preparation of the document capitalization of this action.

For performance monitoring and reporting, UNDP shall establish a permanent internal, technical and financial monitoring system for the project and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the project, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators. The report shall be laid out in such a way as to allow monitoring of the means envisaged and employed, and of the budget details for the project. This documentation will form the basis for completing the interim and final reports in the Appel system.

9.3 Is this action remotely managed?	No
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9.4 Which of the following evaluations will be undertaken and charged to the action?

<i>Internal evaluation of the action's results</i>	No
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<i>External evaluation of the action's results</i>	Yes
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<i>External audit (only if it is a legal obligation)</i>	No
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9.4.1 Further details on each evaluation / justification for external audit

A final independent (external) evaluation is budgeted for the project. It will assess the relevance, effectiveness, efficiency and sustainability of the action. There will not be an evaluation of the impact given the short timeframe for this action. This exercise will also support the preparation of a capitalization document for this action.

9.5 Studies carried out in relation to the action (if relevant)	No
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10. Implementation

10.1 Human resources and management capacities

UNDP will assume responsibility for the day-to-day management and implementation of the following contracts:

- The project envisages a project team consisting of a full-time Program Manager and a Communications Specialist for the duration of the project. Both these positions will be filled by people with relevant experience in managing such projects and with required domain expertise. Preference will be given to local hires due to COVID-19 pandemic and the travel restrictions in Trinidad and Tobago. Also, given the community-based nature of this action, it is desirable that the Project Manager and the Communications Specialist spend time in the communities for coordination, implementation, monitoring, verification and reporting on activities. The project manager will be responsible for coordinating various activities planned under all the outputs. The Project Manager will also be responsible for reporting requirements to ECHO and coordination of Project Steering Committee meetings. The Communications Specialist will have experience in designing and implementing communication programs. Experience in disaster risk reduction communication campaigns is an asset.

For result 1, two consultants will be hired by this action to undertake the gender and age analysis and training in flood modelling, respectively. Local consultants will be hired in both instance; however, if in the event a local flood modelling consultant is not located, an alternative arrangement would be to collaborate with the CIMH (HQ in Barbados) since they have in-house expertise in this area. In this regard, the budget under this action will be used for air fare and DSA for the CIMH staff member. The gender consultant is needed for approximately 2 months and the flood modeler for approximately 1 week (hands on training).

For result 2, a national consultant will be hired by this action to perform web development duties. The other key outputs associated with result 2 will be led by the Communications Specialist hired full time by this action.

For result 3, a national consultant will be hired by this action to undertake the research papers that will culminate in the development

of a comprehensive management plan for flooding in Trinidad and Tobago. The Project Manager and Communications Specialist will support the on-going capitalization of key outputs as they produced for sharing of lessons.

For result 4, the project board and CHO network will play a key role should the crisis modifier be triggers for anticipatory or response actions

The project will be subject to a terminal evaluation. A national consultant will be hired to undertake this activity.

The project will be supported by programmatic and operational staff at UNDP Trinidad and Tobago Office to ensure quality control and effective use of UNDP policies and procedures for procurement and contracting.

UNDP will carry out cost-efficient, transparent, and timely procurement as required by UNDP's Procurement and Financial Rules and Regulations. The project will ensure cost-effectiveness by working in strong partnership with the ongoing work of the Government of T&T for the installation of streamflow stations and rainfall gauges, thereby tapping into existing momentum and know-how. Also, since the COVID pandemic, the use of virtual meetings is more pronounced; therefore, when possible this medium will be utilized to reduce the costs associated with meetings.

10.2 Do you intend to deploy EU Aid Volunteers in the framework of this action? No

10.3 Logistics

10.3.1 Are you overseeing your entire supply chain? Please answer "No" if you are relying on other entities to do this either fully or partially (e.g. Humanitarian Procurement Centre, Global Logistics Cluster, through joint procurement initiatives etc.)? Yes

10.3.2 Please describe shortly the approaches you are using. If used, please also provide details on the Humanitarian Procurement Centre

The following equipment will be purchased by this action:

- 1 Dell Precision 5820 Tower.
- 3 (450-470 MHz) OMNI FIBREGLASS ANTENNA 50 OHM, 10 DBI. (N-TYPE FEMALE)
- 14 Solar panel, RTU, Sensor, Yagi Antennas

Procurements of service, equipment and goods will be undertaken by each UNDP country office in accordance to UNDP procedures to ensure minimization of risks. All records will be maintained by the project.

10.4.1 Do you anticipate any implementation challenges in the supply chain? No

10.6 Are there any other participants in the action? Yes

11. Field Coordination

11.1 Operational coordination with other humanitarian actors

The following should be noted should the crisis modifier be triggered.

National Operational Coordination:

ODPM is the country's strategic disaster management agency that mobilised and coordinates the country's key agencies and resources during emergency situations. In so doing the ODPM integrates competencies and capabilities of the Defence Force and Protective Services, Ministries and Agencies, the Private Sector, Civil Society Organizations, and other key stakeholders to respond to and recover from disasters and hazardous events. In a Level 1 emergency, the Emergency Operations Centre of a Ministry, agency, company or municipality is activated. In a Level 2 emergency the National Emergency Operations Centre (NEOC), managed by the ODPM, is responsible for coordination of activities and development of the strategy for response and relief.

The NEOC is based on the coordination of Emergency Service/Support Functions (ESFs). These ESF roles are held by representatives of particular ministries/agencies/organizations that are participants in the National Response System. The ESFs form an integral part of the NEOC as they have direct responsibility for coordinating the efforts of their respective bodies in either a leading or supporting role. The functional areas included in the NEOC include: transportation (land, sea, air), Public Utilities (water, electricity, telecommunications), Public Works/Infrastructure, Fire Services, National Security (Police, Defence Force, Immigration), Human Services (Social Development and Family Services, Local Government, Civil Society Organizations), Medical Services, Search and Rescue, Food and Agriculture, Energy, Long-term Recovery, International Relations, and others.

Concept of Operations: For Level 2 or Level 3 Activation the NEOC provides continuous monitoring and situational awareness on a 24-hour basis, until the order is given to stand-down is given. This is usually given after the completion of the response and initial recovery phases. While activated the NEOC Director will establish the "batting rhythm" or the reporting schedule for the updating of situational reports and briefings to the NEOC. This can be hourly, three-hourly, six-hourly depending on the nature of the incident.

United Nations Operational Coordination:

UNDP Trinidad and Tobago's humanitarian response is led by the Resident Coordinator's Office. The office chairs the United Nations Emergency Technical Team (UNETT), which is the humanitarian response team in emergency situations.

At the global level, UNDP leads the Cluster Working Group on Early Recovery (CWGER). At the country level, UNDP helps HC/RCs and the HCT to integrate early recovery approaches into the humanitarian response through the deployment of Early Recovery Advisors (ERAs). It also provides the HC/RC with coordination support for issues not covered by any of the other clusters that have been activated in-country. Through programmes, UNDP works with the affected country and its humanitarian and development partners (e.g. local authorities, civil society organizations and the private sector) to design and implement programmes needed to help people move from humanitarian assistance to development. It undertakes capacity building of national and local authorities to enable them to take over the coordination of programmes from humanitarian actors, many of whom are international agencies and organizations. UNDP also play a role in assisting countries and their people to prevent crises as well as recover from them. This includes supporting disaster risk reduction (DRR) interventions, particularly in countries affected by recurrent crises.

11.2 Action listed in

<i>Humanitarian Response Plan (HRP)</i>	No
<i>UN Flash Appeal</i>	No
<i>Red Cross / Red Crescent appeal</i>	No
<i>Other</i>	No

11.3 Coordination with national and local authorities

Project implementation will be closely coordinated with key national (WRA, ODPM, MRDLG, Met Services, Red Cross) stakeholders, which will be formalized through the setting up of a project board. This, coupled with the strengthening of the capacities of the beneficiary communities in disaster risk management as well as enhancing the national coordination platform (inter-agency mechanism) for the management of floods, will allow UNDP to work more closely and effectively at the grass root level as well as with other national institutions that have a stake in flood management in Trinidad and Tobago.

11.4 Coordination with development actors and programmes

This action is fully aligned with the Draft National Integrated Water Resource Management Policy, which addresses Integrated Flood Management (See Pg. 25) and calls for the Government to develop an integrated flood management programme, which include:

1. Restricted development in flood plains;
2. Enhancement of urban drainage systems over the next fifteen years. This will also involve the systematic maintenance of existing and proposed systems;
3. Establishment of a flood monitoring network and early warning systems This may include Real Time Monitoring, an Early Warning System and Community Based Early Warning Systems;
4. Implementation of a public education campaign;
5. Harnessing of flood water to augment water supply; and
6. Where feasible, allowing the natural process of riverine flooding to take place to sustain aquatic, riparian and floodplain ecosystem functioning.
7. Promotion of water infiltration zones in urban areas

This action is directly supporting the achievement of #3 and 4 of the proposed integrated flood management programme; and the flood maps to be developed under Result 1 will strongly guide #2 of the programme in the long term.

This strong alignment means that this project is highly relevant, and timely to the needs of the beneficiary communities and that there is strong political buy-in. Coupled with the outputs of this action related to capacity building for community members and the setting up of an interagency coordination mechanism, whose work will be supported with a flood management plan and SOPs for issuing warning; UNDP is keen that there will be adequate tools, systems, capacities and leadership in place to sustain the results of this action and for facilitating seamless hand-over to the communities and government agencies.

12. Visibility, Communication and Information Activities

12.1 Standard visibility

A. Compulsory display of EU Humanitarian Aid visual identity on (all points required):

<i>A1: Building signage (e.g. partner office buildings, health centers, distribution points)</i>	Yes
<i>A2: Equipment (for e.g. vehicles, water tanks, containers)</i>	Yes
<i>A3: Shipments and goods for distribution as part of the humanitarian response (e.g. blankets, sacks, tents, buckets, hygiene kits, debit cards)</i>	Yes
<i>A4: Branding of the operational materials/outreach materials addressing beneficiaries (e.g. training materials, flyers, notebooks, posters etc.)</i>	Yes
<i>A5: Clothing items worn by project staff (e.g. T-shirts, field vests, caps)</i>	Yes

B. External communication of EU funding and partnership through (select at least 5 points):

B1: Press releases, press conference, other media outreach	Yes
B2: Videos	No
B3: Photos	Yes
B4: Human interest stories with visuals	No
B5: Social media posts	Yes
B6: Events	Yes
B7: Print materials (e.g. brochures, factsheets etc.)	Yes
B8: Others	No

Please specify for each communication action frequency, scope, timeline, channels to be used and number of people to be reached:

The objective of the visibility and communication strategy will be to ensure that all the beneficiaries and external stakeholders are aware of the action, its scope, intended results and the donor. The strategy for communication and visibility will have the following activities:

- Press release, press conferences or other media event at the beginning of the Project to promote its objectives, major activities and expected outputs, and another one at the end of the Project to introduce the main products and accomplishments.
- Social media will be used weekly to promote the activities of the project and progress. Photos will be used on these platforms as much as possible to illustrate the work that is being done.
- Materials will be printed to strengthen the community training activities and logos of ECHO will be included
- Events such as launch of streamflow and rainfall stations are planned to promote awareness of flood hazard, response measures, the warning channels to be used etc. These events will publicize the donor
- All events of the project such as training workshops, launch of stations, community training activities etc. the visibility of ECHO will be ensured through the use of banners and other visibility materials.

. Preparation of a capitalization document for this action. Some outputs will be capitalized by the Project Manager and Communications Specialist; the overall project will be capitalized through the final evaluation process.

12.2 Do you foresee communication actions that go beyond standard obligations? No

13. Financial Overview of the Action

13.1 Estimated costs

	<i>Initial budget</i>	<i>Revised budget</i>	<i>Interim report incurred costs</i>	<i>Final report incurred costs</i>	<i>[RCI] Final update</i>
Total direct eligible costs	542.435,83	-	-	-	-
% of indirect costs (max 7%)	7,0	-	-	-	-
Amount of indirect costs (cut after 2nd decimal)	37.970,51	-	-	-	-
Total costs	580.406,34	0,00	0,00	0,00	0,00

13.2 Percentage of direct eligible costs allocated to the support costs

	<i>Initial budget</i>	<i>Revised budget</i>	<i>Interim report incurred costs</i>	<i>Final report incurred costs</i>
% of support costs	0,00	-	-	-

13.3 Funding of action

	<i>Initial budget</i>	<i>Revised budget</i>	<i>Final budget</i>	<i>[RCI] Final update</i>
<i>Direct revenue of the action</i>	0,00	-	-	-
<i>Contribution by applicant</i>	42.234,14	-	-	-
<i>Contribution by other donors</i>	138.172,20	-	-	-
<i>Contribution by beneficiaries</i>	-	-	-	-
<i>Contribution requested from ECHO</i>	400.000,00	-	-	-
<i>% of total funding</i>	68,9172	-	-	-
<i>Total funding</i>	580.406,34	0,00	0,00	0,00

13.7 Financial contributions by other donors

the costs estimated under section 13.2 are quantified as 0% pending clarifications requested by UN agencies from DG ECHO

13.8 VAT exemption granted (including to the implementing partners)?

Yes

13.10 Do you intend to involve and charge HQ staff costs to project?

No

14. Requests for Alternative Arrangements

15. Administrative Information

15.1 Name and title of legal representative signing the Agreement

Ms Barbara Pesce-Monteiro - Director of UNDP Brussels Office

15.1 Name and title of legal representative signing the Agreement

<i>Name</i>	<i>Office location</i>	<i>Phone</i>	<i>E-mail</i>
Barbara Pesce Monteiro	UNDP Brussels Office	+32 2 5054625	brussels.office@undp.org
Rosemary Lall	UNDP Trinidad and Tobago	+18683849224	rosemary.lall@undp.org
Randi Davis	UNDP Trinidad and Tobago	+1 646 781 4361	randi.davis@undp.org

16. Conclusions and Lessons Learned