THE REPUBLIC OF TRINIDAD AND TOBAGO

MINISTER OF NATIONAL SECURITY

THE HONOURABLE FITZGERALD E. HINDS M.P.

July 21, 2021

Ms. Randi Davis
UNDP Resident Representative
Trinidad and Tobago, Aruba, Curaçao, and Saint Maarten
3A Chancery Lane
PORT OF SPAIN

Dear Ms. Davis,

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

Reference: Letter on Flood Action to the Minister of National Security dated June 10, 2021.

This letter serves to acknowledge receipt of your correspondence at reference and to express my profound gratitude to the UNDP, on behalf of the Government of the Republic of Trinidad and Tobago, for successfully negotiating the sum of Euro 400,000 with the European Civil Protection and Humanitarian Aid Operations (ECHO).

This grant, which will be used for *Strengthening Community Flood Early Warning Systems (CFEWS) in Trinidad and Tobago;* and more specifically, in seven (7) communities. It is very important and timely, especially with the commencement of the Wet and Hurricane seasons.

I therefore fully support this project and approve of the UNDP's offer, having affixed my signature to the enclosed project document, as requested.

I take this opportunity to thank you in advance, for the other initiatives that the UNDP is currently developing in collaboration with the Office of Disaster Preparedness and Management (ODPM); and the other Divisions of the Ministry of National Security. These initiatives are greatly appreciated and underscore the value that the UNDP provides to national growth and development.

Office of the Minister of National Security
Temple Court I, 31-33 Abercromby Street, Port of Spain
Tel: 623-2441-5, Ext. 12231 Fax: 625-2820 Email: fhinds@mns.gov.tt Website: www.nationalsecurity.gov.tt

Thank you once again for your support; and may I kindly request that through your office, Trinidad and Tobago's gratitude is conveyed to ECHO for the grant funds provided for the project.

Yours faithfully,

Fitzgerald E. Hinds, M.P.
Minister

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UNITED NATIONS DEVELOPMENT PROGRAMME

PROJECT DOCUMENT

Project Title: Strengthening Community Flood Early Warning Systems (CFEWS) in Trinidad and Tobago

Project Number: 00127021

Implementing Partner: Office of Disaster Preparedness and Management, Ministry of National Security, Trinidad and Tobago

Start Date: 1 June, 2021 **End Date:** 30 May 2023 **PAC Meeting date:** 28 May 2021

Brief Description

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). The most recent major event reported in the country took place in October 2018 and affected an estimated 150,000 people from 4,100 households (IFRC, 2018). 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: highlighting that flooding is a significant and recurring hazard for the country.

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 Water Resources Agency (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 of this project is to strengthen community and national capacities for generating impact-based flood early warning and effectively plan and execute anticipatory actions. There are 7 communities targeted by this project, 2 are from Tobago and 5 are from Trinidad. The majority of these communities are in areas that are highly susceptibility to flooding and are among the poorest. The project will target four Output areas (i) enhance capacities for detecting, monitoring, analysis and forecasting of flood hazards; (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 in a crisis.

Contributing Outcome (RPD):

Outcome 2. Risk-informed climate change and sustainable development frameworks that promote healthy ecosystems and sustainable livelihoods, and reduce risk, especially for people in vulnerable conditions (Strategic Plan 3.3.1)

Indicative Output(s) with gender marker[2]:

Output 1: Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards. GEN 2

Output 2: Flood early warning information communication/dissemination platform is expanded and useful to more communities, municipalities and governmental agencies in Trinidad and Tobago. GEN 1

Output 3: Coordination and management of floods at the community and national levels are enhanced. GEN 1

Output 4: Improved emergency response capacities in a crisis. GEN 1

Overall Project gender marker is 1

Total resources required:	€400.000.00 (US$487.804.88)[1]	
Total resources allocated:		
	Co-financing:	
	Donor:	€400.000.00 (US$487,804.88)
	Government:	
	In-Kind:	
Unfunded:	0	

[1] Exchange rate as of February 2021 used: USD=0.82 Euros

Agreed by (signatures):

Government - Ministry of National Security	UNDP Trinidad and Tobago, Aruba, Curaçao and Sint Maarten
Print Name: The Honourable Fitzgerald Ethelbert Hinds M.P. Minister, MNS	Print Name: Mrs. Randi Davis, Resident Representative, UNDP
Date: 21st July, 2021	Date: 10-Jun-2021

I. DEVELOPMENT CHALLENGE

The occurrence of flooding has been increasing globally in recent decades. This phenomenon has resulted in growing impacts, assessed in terms of damages, loss of life, and loss of economic output. According to Douben (2006), since the mid 1980's, flooding has been the most frequently occurring, has claimed the highest number of human lives, and has generated the largest economic losses among all natural hazards worldwide. Of some 7,000 recorded natural disasters, 75 % were identified as water- related events, of which floods were the most frequent, accounting for roughly one-third of these. Furthermore, when assessed in economic terms, floods were the cause of roughly 20 % of all losses for the 30-year period up to 2003. Such losses were estimated to be in the order of USD208 billion, during the same period, with human casualties exceeding 184,000 between 1986 and 1995 alone. While the increase in flooding has been widespread on a global scale, specific regions have suffered more events than others. Asia for instance experienced roughly 45 % of all major floods between 1985 and 2003, with the Americas experiencing some 25 %. Several factors have been identified as principal drivers for the enhanced pervasiveness and effects of flooding around the world. Among these are the more widespread occurrence of heavy and/or long-lasting rain, the increased intensity of precipitation in the form of brief but torrential rainfall, and a greater frequency of tropical cyclones and monsoon rains. With respect to impacts, flooding produces greater human casualties and economic losses due to the rising share of global populations that have settled on flood-prone areas[2].

In the context of the Caribbean, flooding as an extreme event, has become progressively evident as a result of an increased number of intense rainfall events, and storm surges from hurricanes. Such events in turn, have been linked to the impacts of global climate change, which has been shown to be the cause for several specific events including sea-level rise; global temperature rise, ocean warming and acidification, and the melting of glaciers. In the specific instance of the Caribbean subregion, flooding events often result in significant disruptions of economic and social life[3]. See **Table 1** below for a summary of the effects of flooding in the Caribbean.

Table 1: Affected population and value of damages in the Caribbean from flood events over the period 1990-2018.

Flood Occurrence	Total Affected Population	Total Damage ('000 US $)
119	6 077 603	1 460 082

Adapted from: L. Fontes de Meira and W. Phillips (2019:8)

In view of the realities of the Caribbean Small Island Developing States (SIDS), investing in risk reduction is a central dimension way of ensuring that disasters and climate change do not derail development progress or that development strategies do not inadvertently create new risks.

The United Nations Development Programme (UNDP) has contributed to the social and economic recovery of disaster-affected communities and helped develop capacities through a two-pronged approach. First, UNDP supports national governments to assess recovery needs and plan and implement the recovery process. Second, UNDP supports communities to restore their livelihoods and carry out local risk reduction and adaptation measures. Both approaches embody the 'build back better' principle, which ensures recovery is not just an opportunity to restore what was lost during a disaster, but an opportunity to build resilience and for government and society to transform and strengthen infrastructure and capacities.

The Sendai Framework for Disaster Risk Reduction (SFDRR), which was adopted at the UN World Conference on DRR in March 2015, calls for a more holistic and systematic approach to DRR – one that emphasises the importance of multi-stakeholder partnerships. UNDP's DRR flagship programme '5-10-50' is dedicated to taking up this challenge. 5-10-50 supports the implementation of the Sendai Framework by enabling 50 countries to move towards risk-informed development over a period of 10 years through five mutually reinforcing interventions: (i) risk assessment and

[2] L. Fontes de Meira and W. Phillips "An economic analysis of flooding in the Caribbean: the case of Jamaica and Trinidad and Tobago", Studies and Perspectives series-ECLAC subregional headquarters for the Caribbean, No. 78 (LC/TS.2019/55-LC/CAR/TS.2019/1), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2019.

[3] L. Fontes de Meira and W. Phillips (2019).

communication, (ii) inclusive risk governance, (iii) urban and local-level risk management, (iv) **preparedness and early warning–early action**, and (v) resilient recovery[4].

In terms of Preparedness and Early Warning Systems (EWS) the central problems in the Caribbean include "weak warning and poor response leading to increased life and economic losses from disasters, thus harming societal resilience and hindering sustainable development". Most mortalities and economic losses result from hydro-meteorological disasters including floods, storms and droughts. This indicates among other things, weaknesses in early warning and preparedness systems, since timely warning and response can reduce losses. Cumulative negative impact, contributed to in part inadequate early warning systems, can result in disease, displacement, increased poverty, and shock to family and community wellbeing; at a national level, the lack of early warning and preparedness in face of an imminent threat can result in damage to natural resources, eco-systems and human resources, increased social unrest and civil conflicts, and shock to national sustainable development goals. The immediate causes identified are high population exposure, poorly structured housing, lack of timely and understandable early warning, and response by authorities and communities; dynamic pressures such as weak warning infrastructure & capacities, lack of multi-disciplinary coordination, weak response capacities, as well as unplanned urbanization, climate variability, and environmental degradation exacerbate the problem. Poor governance and poverty are considered the root causes of the problem[5]. Challenges facing early warning systems include substantial differences in hazard monitoring and forecasting capacities; weak coordination amongst hazard monitoring agencies, decision-makers, emergency responders, civil society and other stakeholders; and limited early warning dissemination or poor message targeting[6].

Some of the solutions to address such challenges include strengthening capacities of national DRM authorities and hazard monitoring/forecasting departments; strengthening early warning communication to decision-makers, stakeholders and at-risk communities; enhancing coordination between different actors for effective transmission of early warning; applying a variety of technologies and means of communication for targeted audiences; and building community based preparedness and response capacity.

This project seeks to address the flood hazard through the enhancement and operationalisation of an EWS in Trinidad and Tobago, with emphasis at the community level.

Trinidad and Tobago's Context

Trinidad and Tobago is located in the Lesser Antilles Archipelago, northeast of Venezuela. The country consists of two main islands, Trinidad and Tobago. The Republic of Trinidad and Tobago is a sovereign island state, meaning the government has full right and power to govern itself without any outside influences or bodies interfering.

Trinidad and Tobago is considered to be one of the most diverse countries in the Caribbean region with its own mix of culture and social values which make it truly unique. Unfortunately, Small Island Developing States (SIDS) like Trinidad and Tobago are highly susceptible to economic vulnerability, which refers specifically to the way in which the nation's economy responds to both internal and external shocks. In the twin island Republic of Trinidad and Tobago there are multiple factors which contribute to economic vulnerability such as: the vulnerability to natural disasters (from hydrometeorological hazards such as tropical cyclones, flood, storm surge, tsunami, drought and geological hazards such as earthquakes, mud volcanoes, liquefaction, landslide) and anthropogenic disasters (from chemical hazards such as oil pollution and environmental hazards such as land and soil degradation, deforestation, loss of mangroves, coastal and soil erosion); economic openness; export concentration, dependence of strategic imports and sectors; and inadequate coping mechanisms to name a few. Furthermore, within the past 20 years, the country's landscape has changed dramatically due to increased development, and the intensification of built infrastructure. Presently, much of the nation's population is located along the Trinidad's western coastline, which is also the location of Trinidad's three largest cities, Port of Spain, San-Fernando and Chaguanas while Scarbrough is the largest town in Tobago. All of the 14 municipalities of Trinidad in addition to its sister island Tobago, are susceptible to a variety of natural and anthropogenic hazards[7].

Of particular concern for Trinidad and Tobago is 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

[4] https://www.sustainablegoals.org.uk/sendai-paris-risk-informed-development/

[5] UNDP EWS and Preparedness Theory of Change, "5-10-50" Programme, 2015.

[6] DIPECHO II PRODOC"

[7] ODPM (2014). Preliminary Vulnerability Assessment of Trinidad and Tobago. Pg:5

infiltrate the soil, resulting in displaced overland flow and higher incidence of flooding[8]. 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)[9]. Since 1940, Trinidad and Tobago's mean rainfall has followed a decreasing linear trend, but this has not been statistically significant. Projected rainfall trends for Trinidad and Tobago, however, remain unclear; while global climate models (GCMs) predict a decrease in rainfall of 15% by the 2080s, four of these models projected increases (Trinidad and Tobago Meteorological Service, 2018)[10]. 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. Floods above 1 m may become common by the end of the century, and permanent sea-level rise exceeding this threshold is possible[11].

The issue with flooding in Trinidad and Tobago is compounded by the fact that the official hurricane season in the Greater Caribbean region coincides with Trinidad and Tobago's rainy season, which officially begins the first of June and lasts through November, with 84% of all hurricanes occurring during August and September. The heavy rains in this season are concentrated in a short time, and usually result in major flooding in key areas of the country (map 1).[12].

Further, activities such as illegal/unregulated quarrying, encroachment of river reserves, backfilling and illegal diversion of watercourses, which contributes to sedimentation thereby reducing the capacity of rivers, are some of the challenges faced despite over three hundred (300) desilting projects pursued by the Ministry of Works and Transport in recent years[13].

Although comparably being perceived as events of lower magnitude, flooding has 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[14]. Also notable is the most recent major event reported in the country which took place in October 2018 affected an estimated 150,000 people from 4,100 households and according to the president of the Agricultural Society of Trinidad and Tobago, approximately 75 per cent of local farmers in the country were severely affected through the loss of crops and livestock. See Figures 1 and 2 for information depicting the vulnerability of Trinidad to flooding.

Figure 1: Map of flood prone areas in Trinidad

[8] ODPM (2014) Trinidad and Tobago DRR Country Document

[9] Eudoxie and Wuddivira, 2014 in **Roopnarine, R., Opadeyi, J., Eudoxie, G., Thong, G. and Edwards, E. 2018.** GIS-based Flood Susceptibility and Risk Mapping Trinidad Using Weight Factor Modeling. *Caribbean Journal of Earth Science*. **49**, 1-9. © Geological Society of Jamaica.

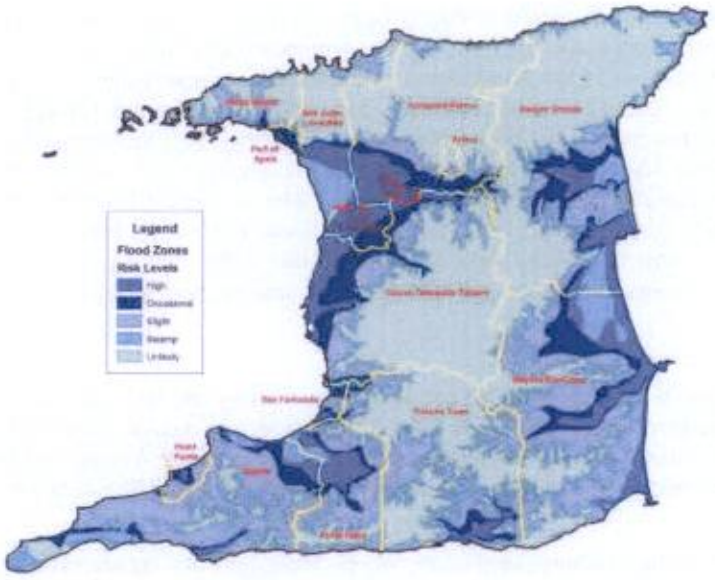
[10] Cole Engineering Group Lts (2019). Development of Dry Season and Drought Water Supply Management Plans for Trinidad and Tobago

[11] Struss and Kulp, 2018. Sea Level Rise Threats in the Caribbean. IDB

[12] L. Fontes de Meira and W. Phillips (2019).

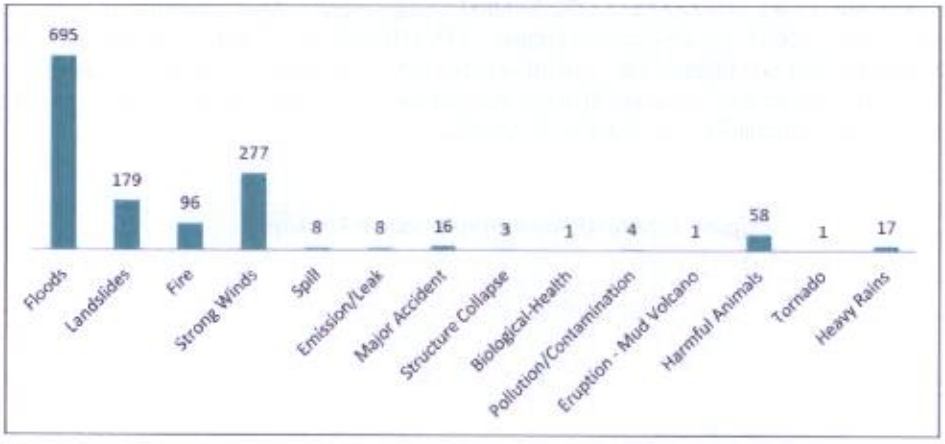
[13] Joint Select Committee on Land and Physical Infrastructure (2020). 10th Report of the Joint Select Committee on Land and Physical Infrastructure on Flood Alleviation and Control Measures for Major River Basins and Drainage Catchments in Trinidad and Tobago Subjected to Major Flooding

[14] **Roopnarine, et al. (2018)**



Source: ECLAC, 2019 – Prepared by the authors on the basis of GIS data provided by the country

Figure 2: Occurrences of Floods in Trinidad, in comparison to other hazards, within the 2011-2014 period



Source: Trinidad and Tobago DRR Country Document (ODPM, 2014)

The graph demonstrates that floods are indeed a significant and recurring hazard for the twin island state that needs to be better managed; affirming the important role that a comprehensive flood EWS can provide.

In terms of the Early Warning System (EWS) status of development in Trinidad, the recently completed Comprehensive Disaster Management (CDM) Audit Report (October 2020) highlights that Trinidad has high level achievements as it pertains to Early warning system, but 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. Further, ODPM has a functional partnership with the Met Office, Seismic Research Centre (SRC), and other regional partners; more so for storms, ocean events, earthquakes, and tsunamis. Furthermore, the 2014 DRR Country Document for Trinidad and Tobago indicated that "communities still need guidance for the planning process and for implementation of the respective plans. Hazard mapping and vulnerability assessment, needs assessments, plan preparation, information and warning systems, record keeping, recovery and sustainability planning are needed in several communities on both islands".

Problem

Early warning is a major element of disaster risk reduction, preventing loss of life and reducing the material and economic impact of a disaster. Its effectiveness relies on the timely provision of disaster risk information, providing guidance on how to act upon warnings, and reinforcing the need for preparedness. An Early Warning System (EWS) is "the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss"[15].

The Water Resources Agency (WRA) of The Water and Sewerage Authority (WASA) of Trinidad and Tobago 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:

i. The Ministry of Public Utilities which is the Ministry responsible for WASA. Their stated mission is to "facilitate the effective delivery of efficient, affordable and quality public utility services" and they are responsible for managing electricity, telecommunications, water, and meteorological services;
ii. Trinidad and Tobago Meteorological Services (TTMS), a division of the Ministry of Public Utilities, that provides weather and climate forecasts
iii. Tobago House of Assembly, whose administration responsibilities in Tobago includes the coordination of water and wastewater management and the development of infrastructure. This is carried out in conjunction with WASA's local office in Tobago. The specific THA Divisions responsible for water are the Division of Infrastructure, Quarries and the Environment and the Division of Settlements, Urban Renewal and Public Utilities
iv. Regulated Industries Commission (RIC), which is the economic regulator for the water and sewerage sector and also for the Trinidad and Tobago Electricity Commission;
v. The Environmental Management Authority (EMA), which is responsible for environmental protection and conservation, industry monitoring, and enforcing water pollution and trade effluent levels;
vi. Ministry of Health, which is responsible for setting, monitoring and enforcing standards for the quality of drinking water in Trinidad and Tobago;
vii. Institute of Marine Affairs, responsible for collecting, analysing, and disseminating information on the developments in marine affairs, and the scoping and implementation of programmes and projects;
viii. Ministry of Works and Transport – Drainage Division, which develops and maintains main watercourses and irrigation systems; and
ix. Ministry of Agriculture, Land and Fisheries, which advocates and ensures the conservation of biodiversity and the sustainable development of food and non-food systems
x. Ministry of Finance, which has overall responsibility for all financial matters pertaining to the funding of government and government-owned entities. Since WASA has been unable to finance capital projects from internally generated funds, all large capital expenditures currently must be approved by the Ministry of Finance. The Ministry either provides direct funding for some of these projects through the annual budget or ensures government guarantees for loans when funding is sought for capital projects from the commercial banking sector. Additionally, the Ministry of Finance works in conjunction with the Ministry of Planning and Development when it is necessary to secure funding for WASA from international agencies, such as the World Bank;

However, the report of the Joint Select Committee on Land and Physical Infrastructure[16] 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). It should also be noted that one of the key requirements of an EWS is to have an institutional mechanism in place to strengthen detection, monitoring, analysis, forecasting and warning dissemination and communication.

A further challenge is that **there is the lack of capacity in some of these institutions to support the work that is required to effectively manage floods**. For example, the report of the Joint Select Committee on Land and Physical Infrastructure indicated that there is "lack of human resource capacity to undergo comprehensive scientific studies to properly inform intervention strategies (in Tobago" (See Pg. 157). Other sections of the report makes mention of limited capacities as it relates to the "lack of data or inadequate data", "lack of finance", "lack of expertise", "poor enforcement"

[15]UNISDR 2009. "UNISDR Terminology on Disaster Risk Reduction", available at http://www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf

[16] on an Inquiry into Flood Alleviation and Control Measures for Major river basins and drainage catchments in Trinidad and a Tobago

and "inadequate staffing" to note a few (See Pgs. 21- 30). There is also mention of the **need for spatial data to undertake flood mapping and risk analysis to support decision making** (See Pg. 30).

Also noteworthy is that the WRA manages a rainfall 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 Water Resources Agency. 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. Currently 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**. This is primarily attributed to limited financial and technological resources, which hampers the proper maintenance of existing equipment, the technological advancement of the Agency, the types of projects that can be undertaken and the time taken to deliver tasks.

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**. This situation in Trinidad is similar across the Region since the *2016 EWS Desk Review* recalls that recent assessments of existing early warning systems show that in most cases communication systems and adequate response plans are missing, and that early warning communications need to be addressed. The IFRC needs assessment states that EWS communication needs enhancement of hazard specific products, as well as a coordinated mechanism that collects, inputs, produces and disseminates relevant information in a timely, efficient and effective manner, to allow all members of the Disaster Management System to communicate and collaborate with concerted actions. This argues for increased advocacy at the national levels, and for regional commitment to facilitate access to EWS existing information products.

Another critical area of concern raise by the Joint Select Committee on Land and Physical Infrastructure 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-centered early warning systems. They should be actively involved in all aspects of the establishment and operation of early warning systems; be aware of the hazards and potential impacts to which they are exposed; and be able to take actions to minimize the threat of loss or damage. They should take ownership of these systems.

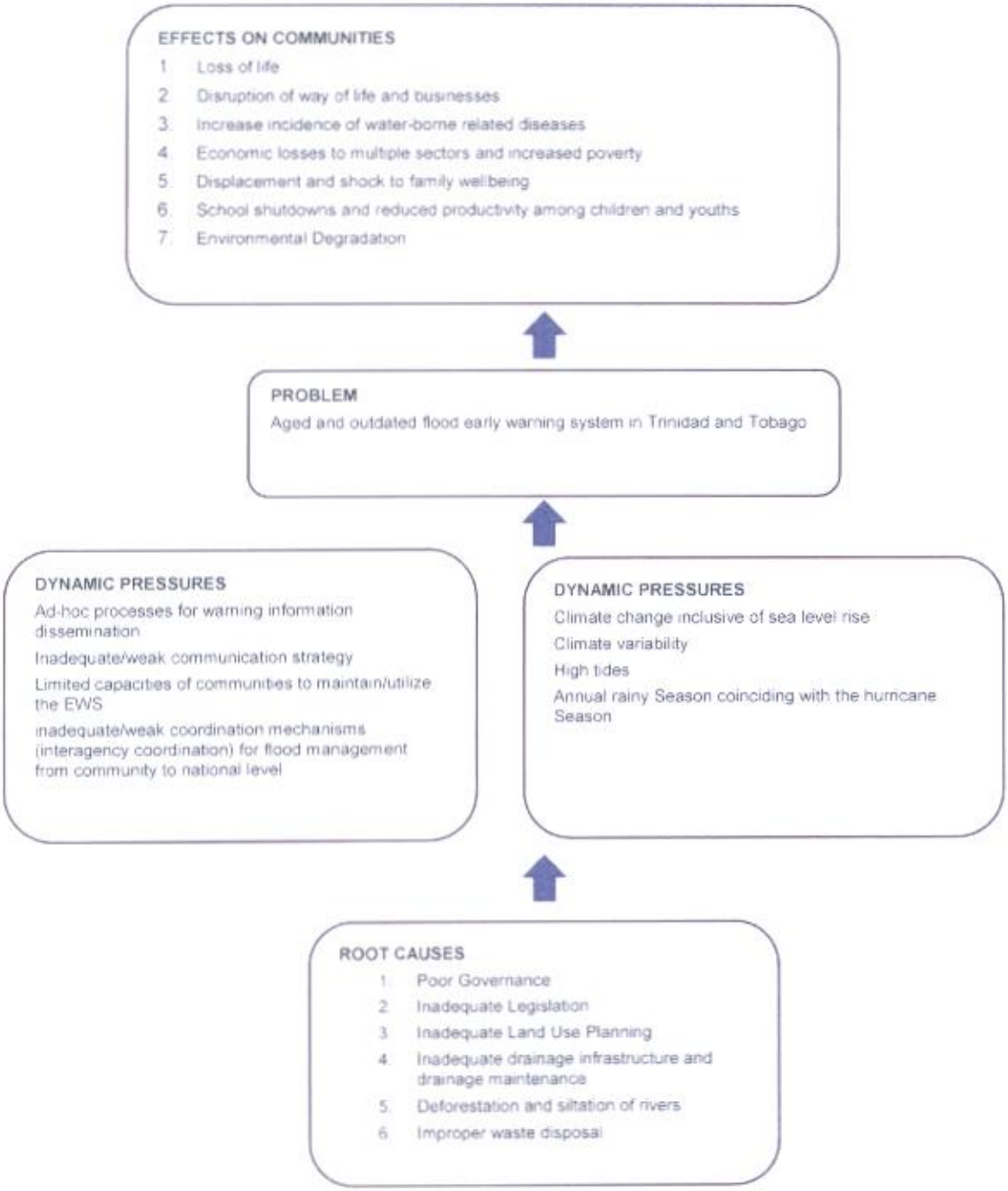
To address the needs and risks identified, this project aims to contribute towards flood risk informed planning and development across Trinidad and Tobago so as to reduce loss of life, minimize displacement and poverty. Seven (7) communities are targeted to benefit, and they include: **Couva Caroni, Maraval (upper and lower), Cunupia, Papurie, Diego Martin, Crooks River, Bacolet River**; the first five are in Trinidad and the latter two communities are in Tobago. These communities were selected based on the following selection criteria and in consultation with the national partners *(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.* The distribution of the beneficiaries by sex, age group and disability in these seven communities are depicted in the table below.

Table 2: Distribution of Beneficiaries by Age Group, Sex and Disability

	Male	*Female*	*Sub-total*
0-4	5,805	5,572	11,377
5-17	15,082	14,265	29,347
18-49	43,931	42,974	86,905
>50	23,582	26,040	49,622
SUB-TOTAL	**88,400**	**88,851**	**177,251**
Disabilities	***3,602***	***3,537***	***7,139***

Source: WRA, 2021.

Problem Tree Diagram
Community Flood Early Warning System (CFEWS) in Trinidad and Tobago



II. STRATEGY

Theory of Change

To address the development challenge identified, this project aims to contribute towards flood risk informed planning and development across Trinidad and Tobago so as to reduce loss of life and infrastructure, 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 project will target four Output 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 in a crisis

Solution Pathway Diagram

Theory of Change for Strengthening Community Flood Early Warning System (CFEWS) in Trinidad and Tobago

National Development Context

1. Sustainable Development
2. Resilient Society
3. Natural resources protected, human resources and settlements saved – reduction in economic losses
4. Poverty minimized
5. The development of flood maps under the CFEWS can also prove useful in:
   - i. Locating housing developments, land zoning/planning and water management planning
   - ii. Identification of vulnerable communities and mapping of evacuation routes/plans
   - iii. Design of roadways, bridges and other public sector infrastructure
   - iv. Design of dam levees, channel improvements and installation of other flood mitigative infrastructure

Community Development Context

1. Lower life losses, lower disease, and minimal displacement
2. Improved family wellbeing
3. Improved community knowledge and awareness of preparedness and response to floods
4. Enhanced community ownership of the CFEWS mechanism and its sustainability

DEVELOPMENT GOAL

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

FORESEEABLE RESULTS (OUTCOMES)

1. Capacities enhanced for detecting, monitoring, analysis and forecasting of flood hazards
2. The flood early warning information communication/dissemination platform is expanded and useful to more regions in Trinidad and to Tobago
3. Coordination and management of floods at the community and national levels are enhanced
4. Improved emergency response capacities in a crisis

DEVELOPMENT ACTIONS

1. Undertake gender and age analysis of the effects of flooding in Trinidad and Tobago
2. Acquire high-speed computers (GPUs) for running flood models and the generation of flood maps
3. Acquire technical support for capacity building in flood map development
4. Acquire technical support for flood model preparation
5. Procure and deploy 7 monitoring stations
6. Develop website for facilitating real time information sharing of rainfall and river discharge data, warning information dissemination and promoting national awareness building for flood hazards
7. Installation of 1 antenna in Tobago and 2 antennas in Trinidad
8. Develop and launch Public Education and Awareness Campaign for flood hazard
9. Develop channels for flood warning information dissemination
10. Establish and train Community Hydrological Observers (CHO) in the beneficiary communities
11. Formalize a governance mechanism (inter-sectoral) for effective management of floods, inclusive of agencies involved in mitigation activities such as drainage, urban planning etc
12. Support the development of a management plan for flood hazards
13. Support anticipatory and response actions through the use of the CHO network

Proposed Approach

This project is designed to address ***the needs of the more vulnerable***. There are seven (7) communities targeted by this project, two (2) are in Tobago and five (5) are in Trinidad. **The selection of beneficiary 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. All of the beneficiary 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. Also notable is that the distribution of population below the poverty line 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.

The execution of the 4 result areas of this project will also 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 project***. In this regard, this project has placed a strong emphasis on community engagement, building capacity and governance; these combined also have the value added of promoting sustainability.

This project provides a process to ***maximize existing tools and extend their reach; it draws on successful experiences achieved and lessons learned through similar projects;*** for instance:

i. 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 project will build on the following: The Early Warning System Toolkit will be promoted for use by the Community Hydrological Observer (CHO) network to be established/strengthened in the beneficiary communities (Output 3). The Multi-Hazard Early Warning System (MHEWS) Checklist will be utilized for incorporating gender considerations in this project. 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.

ii. 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 project.

iii. It is proposed that IFRC's community early warning systems: guiding principles (2012) will be utilized by the team to strengthen the foundation for the design of the EWS at the strategic level.

iv. Where relevant and feasible, 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.

v. 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 project is expected to leverage this volunteer network (see Output 3) in establishing the CHO network (See Output 3).

vi. Also notable is that the MHEWS Checklist is currently being applied in Trinidad and Tobago through funding provided by the CREWS Initiative. The findings arising from this analysis will be useful to Output 3 of this project, specifically the output related to the development of Standard Operating Procedures (SOPs) for issuing flood warning and the flood management plan.

vii. Trinidad and Tobago is a beneficiary of the Global Environmental Facility (GEF) Caribbean Regional Fund for Waste Water Management (CReW+) project. WRA is the national implementation lead agency and a key objective of the project is to develop a Water Information Management System (WIMS) for water related data and information that incorporates existing databases and other water sector stakeholders, to inform national decision-making. Outputs 1.2 and 2.2 of this project will have synergies with the WIMS

viii. ODPM is finalizing a Memorandum of Understanding (MOU) with the Department of Geography at the University of West Indies, St. Agustine Campus. One key area of work to be done in this collaboration is the application of the Caribbean Community Risk information Tool (cCRiT) in Trinidad and Tobago. This partnership with the UWI can be leveraged by this Project in terms of better understanding the vulnerabilities of communities as well as utilizing the technical expertise at UWI for informing the relevant outputs. To this end, UWI can be co-opted, as needed, to participate in meetings of the Project Board.

This project will also ***capitalize on established networks between relevant national agencies***, including the Water Resources Agency (WRA) of the Water and Sewerage Authority (WASA), the Ministry of Rural Development & Local Government (MRDLG), The Trinidad and Tobago Red Cross Society, the Municipal Corporations, Meteorological Services, the Ministry of Works and Transport, the Office of Disaster Preparedness and Management (ODPM) and the Tobago Emergency Management Agency (TEMA). At the regional and international levels, there will be collaboration between United Nations Development Programme (UNDP) and the International Federation of Red Cross and Red Crescent Societies (IFRC), the Caribbean Disaster Emergency Management Agency (CDEMA), the United Nations Office for Disaster Risk Reduction (UNDRR), and the University of the West Indies, as appropriate. ***The engagement of these relevant actors in DRR in the region will be an added value for the project implementation and the engagement of the national agencies***, as appropriate, will further clarify roles and responsibilities for flood management and strengthen coordinated efforts to sustain the effects and impacts of this project. Further, UNDP CO has a specific function to address DRR both as a separate focal area and as it intersects with Climate Change Adaptation. There is also the Regional Disaster Risk Reduction and Recovery Team (DRT) based in Panama and the Global DRT Team that UNDP CO can leverage, as needed, to provide technical input and guidance in the implementation of this Project.

This project will ***promote gender considerations.*** A gender and age analysis, which will be the first of its kind for Trinidad and Tobago in the context of flooding (Output 1) will be conducted at the start of the project. The findings and recommendations from this study will inform the updating of the work plan of this project, paying due consideration to the budget available. The findings of the gender and age analysis will be promoted in the public education and awareness campaign as appropriate. Efforts will also be made to collect and disaggregate information by sex and age, to the best extent possible in order to allow for monitoring of project implementation in a gender sensitive manner.

Linkages to International and Regional Frameworks

This project supports the achievement of the following international and regional DRR frameworks:

The **Sendai Framework for Disaster Risk Reduction 2015-2030** was adopted at the UN World Conference on DRR in March 2015. The framework aims to "prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience". Priority areas for project include 1) Understanding disaster risk, 2) Strengthening disaster risk governance to manage disaster risk, 3) Investing in Disaster Risk Reduction for resilience, 4) Enhancing disaster preparedness for effective response and to "build back better" in recovery, rehabilitation and reconstruction. One of the 7 global targets of the framework, notably Target G, specifically refers to EWS aiming to "Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030" through adequate and sustainable support. Under *Priority 1*, the framework highlights the importance to "enhance the development and dissemination of science-based methodologies and tools to record and share disaster losses and relevant disaggregated data and statistics, as well as to strengthen disaster risk modelling, assessment, mapping, monitoring and multi-hazard early warning systems". In addition, under *Priority 4* the framework acknowledges that "the steady growth of disaster risk, including the increase of people and assets exposure, combined with the lessons learned from past disasters, indicates the need to further strengthen disaster preparedness for response, take action in anticipation of events, integrate disaster risk reduction in response preparedness and ensure that capacities are in place for effective response and recovery at all level". It specifically highlights the importance to "invest in, develop, maintain and strengthen people-centred multi-hazard, multi-sectoral forecasting and early warning systems, disaster risk and emergency communications mechanisms, social technologies and hazard-monitoring telecommunications systems; develop such systems through a participatory process; tailor them to the needs of users, including social and cultural requirements, in particular gender; promote the application of simple and low-cost early warning equipment and facilities; and broaden release channels for natural disaster early warning information."

UNDP Strategic Plan, 2018-2021 is anchored in the 2030 Agenda for Sustainable Development and committed to the principles of universality, equality and leaving no one behind, the UNDP vision for the Strategic Plan, 2018-2021 is to help countries achieve sustainable development by eradicating poverty in all its forms and dimensions, accelerating structural transformations for sustainable development and building resilience to crises and shocks. The plan reinforces our commitment to working in partnership with Governments, civil society and the private sector, as a catalyst and facilitator of support from the United Nations System as mandated by the General Assembly. One of the key areas that UNDP wants to catalyze tangible results by 2021 relates to "Building resilience to crises and shocks, in order to safeguard development gains." This project directly supports that achievement of this result area.

At a regional level, the Caribbean Disaster Emergency Management Agency (CDEMA) spearheaded the adoption of a strategic **Comprehensive Disaster Management (CDM) Framework for 2014-2024**, with an aim to integrate disaster management considerations into the development planning and decision-making process of CDEMA's Participating States (PSs). The CDM Regional Goal is "Safer, more resilient and sustainable CDEMA Participating States through Comprehensive Disaster Management", to be achieved through four Priority Areas: 1) Strengthen institutional arrangements for CDM; 2) Increased and sustained knowledge management and learning for CDM; 3) Improved integration of CDM at sectoral level; 4) Strengthened and sustained community resilience. This project mainstreams the CDM Strategy since early warning continues to be an integral aspect of the Comprehensive Disaster Risk Management approach. This is a priority strategically at the regional level (4.3 of the CDM Framework). The project further contributes to CDM priority 4, through strengthening community and national EWS integration (Regional Outcome 4.3), contributing to the establishment of a comprehensive understanding and approach to EWS in the region.

Furthermore, CARICOM members adopted the Caribbean Resilience Framework in 2018. Aligned to the CDEMA's Comprehensive Disaster Management Strategy, the framework establishes five pillars of resilience that must be addressed to reduce vulnerability to hazard impacts:

i. Social Protection for the Marginal and Most Vulnerable
ii. Enhancing Economic Opportunity
iii. Safeguarding Infrastructure
iv. Environmental Protection
v. Operational Readiness and Recovery

This project directly supports Pillar 5.

Linkages to National Development Frameworks

The National Development Strategy 2016-2030 (Vision 2030) highlights five (5) major goals: (1) Putting people first: nurturing our greatest asset, (2) Promoting good governance and service excellence, (3) Improving productivity through quality infrastructure and transportation, (4) Building globally competitive businesses and (5) Placing the environment at the center of social and economic development.

Goal 2 of Vision 2030 states that "Our public utility system will be better managed with improved access for all". The Strategic Initiatives/Actions are to "Promote an integrated approach to Water Resources Management. Integrated water resources management promotes the coordinated development and management of water, land and related resources in order to maximize available water supply, and the resultant economic benefits and social welfare in an equitable manner, without compromising the sustainability of vital ecosystems. To this end, this project will support Goal 2 enhancing an effective water resources/hydrological monitoring network; development of an integrated flood management plan that will include the undertaking of flood mapping, establishment of flood boundaries, the establishment of monitoring and early warning systems and an inter-agency coordination mechanism.

This project is fully aligned with the **Draft National Integrated Water Resource Management Policy (2018)**, which addresses Integrated Flood Management and calls for the Government to develop an integrated flood management programme, which include:

i. Restricted development in flood plains;
ii. Enhancement of urban drainage systems over the next fifteen years. This will also involve the systematic maintenance of existing and proposed systems;
iii. 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;
iv. Implementation of a public education campaign;
v. Harnessing of flood water to augment water supply;

vi. Where feasible, allowing the natural process of riverine flooding to take place to sustain aquatic, riparian and floodplain ecosystem functioning; and
vii. Promotion of water infiltration zones in urban areas

This project is directly supporting the achievement of #3 and 4 of the proposed integrated flood management programme; and the flood maps to be developed under Output 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.

Trinidad and Tobago has not yet developed a National Adaptation Plan for climate change, however, the **National Climate Change Policy (2011)** recognizes the importance of climate change considerations and planning. Recognizing its obligations under the United Nations Framework Convention on Climate Change (UNFCCC), the main objectives of the Policy are to:

i. Reduce greenhouse gas emissions
ii. Protect the natural environment and human health
iii. Enhance agriculture and food security
iv. Build resilience of people and natural systems to adapt to climate change impacts
v. Raise awareness on climate change adaptation
vi. Conserve water supplies

This project will support the achievement of objectives IV and V.

Trinidad and Tobago's National Environmental Policy (2018) outlines as one of its six priorities, "Addressing Climate Change and Environmental and Natural Hazards." The Policy reaffirms the Government's commitment to take measures to reduce disaster risk. While emphasis is placed on environmental hazards, the Policy successfully establishes the relationship between climate change, unsustainable environmental practices and technological hazards.

The National Response Framework (2010) adopts a multi-hazard approach to present the structure within which key stakeholders interface to prepare for and provide a cohesive national response mechanism to disasters and emergencies. The Framework discerns the varying responsibilities and coordination that occurs at varying levels for effective disaster planning and response. The National Response Framework seeks to:

i. Protect life, property and livelihood
ii. Reduce suffering
iii. Protect government facilities
iv. Avert the cascading of a single event to a multi-event
v. Protect the economy
vi. Ensure continuity of government
vii. Ensure efficient restoration for citizens and businesses post-event

This project will support the achievement of objectives ii and iv.

III. RESULTS AND PARTNERSHIPS

The proposed results for this project are articulated in the Logic Model below

DEVELOPMENT IMPACT: To improve flood risk informed planning and development across Trinidad and Tobago so as to reduce loss of life, minimize displacement and poverty.			
OUTCOME: to strengthen community and national capacities for generating impact-based flood early warnings and effectively plan and execute anticipatory actions			
OUTPUTS:			
1. Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards	**2. Flood early warning information communication/ dissemination platform is expanded and useful to more municipalities and governmental agencies in Trinidad and to Tobago**	**3. Coordination and management of floods at the community and national levels are enhanced**	**4. Improved emergency response capacities in a crisis**
ACTIVITIES:			
1.1 Gender and age analysis is completed and key recommendations implemented	2.1 Communications platform expanded and functional to strengthen coverage in Trinidad and Tobago	3.1 Community Hydrological Observers are established and trained to better prepare for, respond to and recover from flood hazards	4.1 Anticipatory actions supported
1.2 Training in flood models completed and impact-based forecasts for flooding strengthened	2.2 Website for facilitating information dissemination is developed and functional	3.2 An inter-agency coordination mechanism is established and key documentation for management of same (SOPs etc.)	4.2 Response actions supported
1.3 Streamflow and rainfall stations deployed in communities highly susceptible to flooding in Trinidad and Tobago	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	3.3 A document capitalization of this project is prepared and disseminated	

Output 1: Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards

A critical activity to kick-start the project will be the launch of a gender and age analysis[17]. The study will also identify any potential negative effects of the project 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 project. The findings and recommendations from this study will inform the updating of the work plan of the project 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.

Output 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

[17] As per ECHO guidelines, gender and age analysis can include activities such as 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 scope of this activity will be determined during project implementation

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. 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.

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. Recall that the beneficiary communities include: **Couva Caroni, Maraval (upper and lower), Cunupia, Papurie, Diego Martin, Crooks River, Bacolet River**. The stations that will be installed by this project will have the ability to send data to the WRA, which will be displayed "live" on the website to be developed by this project; see details at Output 2. The locations identified for the installation of these 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.*

Output 2: Flood early warning information communication/dissemination platform is expanded and useful to more municipalities and governmental agencies 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, which will be able to transmit information/data from the stream flow stations and rain gauges to 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. 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 Output 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.

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 with key stakeholders such as the National Met Service and Local Disaster Managers. Warning information will also be posted on the website. This is an important initiative for the project since the Government of Trinidad and Tobago signed onto the Open Government Partnership[18]. 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. 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.

This result will also advance a targeted Public Education and Awareness campaign for the Community Flood Early Warning Systems built. It can include activities such as launch events in communities benefitting from the installation of rainfall gauges and streamflow stations. The launch events would 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 project 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 earlier. Opportunities for piggy backing on and co-financing from the Adopt a River Programme will be further explored during the implementation of this project. For instance, the Adopt a River 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.

[18] https://www.opengovpartnership.org/

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. This project 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). It is envisaged that the website will also be used to facilitate information dissemination from any education and awareness campaigns initiated by the WRA or key partner agencies.

Also notable is that this final evaluation of the project is budgeted for under this Output in the ECHO proposal on APPEL; since the lessons and best practices emerging from the evaluation needs to be publicised and promoted through the PEA channels established by the Project.

Output 3: Coordination and management of floods at the community and national levels are enhanced.

The objective of this output is to enhance capacities and capabilities for reducing flood disaster risks (aka prevention and mitigation), flood management and coordination at the national and community levels.

Activities from this result will focus on the support for the training and establishment of community hydrological observer (CHO) networks in the beneficiary communities. This will be led primarily by the Ministry of Rural Development and Local Government with support from the Trinidad and Tobago Red Cross. The establishment of CHOs will promote capacity building, buy-in and sustainability of the project 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. Emphasis will be placed on empowering communities to develop a culture of project ownership, flood prevention and mitigation through their engagement in the implementation and monitoring of this project as detailed in the Section below on Stakeholder Participation (Pages 24-25) which highlights the role of the Communities and CHO network in the execution of the project activities including maintenance and monitoring of the stations that are installed.

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. The establishment and training of Community Hydrological Observer (CHO) networks is a key activity to promote capacity building, buy-in and sustainability of the project 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 disseminated. The document capitalization can utilize annual reports and the project evaluation report. Lessons should be presented in a way that is easily assimilated for replication/scaling up; hence the Communications Specialist will support the shaping of this document.

Output 4: Improved emergency response capacities in a crisis

The final Output, Output 4, is a crisis modifier Output that will enable the project 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 Output to further strengthen the capacities of the CHO networks through hands on experience in both anticipatory and response situations.

The triggers for supporting preparedness and/or response actions in a crisis are outlined below.

Preparedness Trigger:

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

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

Actions:

i. An emergency meeting of the Project Board will be convened to make final decisions related to the operationalization of the CM Output – budget, activities, partnerships etc.

ii. 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 Output.

iii. 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

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 project.

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

At Level 2, the emergency event usually affects two or more municipal regions/Tobago[19], or while confined to one municipality, may be of a 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.

Actions:

i. Same as actions (i) and (ii) for preparedness trigger

ii. 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 project, 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

Resources Required to Achieve the Expected Outputs

[19] All of Tobago since it is considered a Corporation.

Day-to-day management and implementation of the project will be facilitated by a Project Management Unit that comprises the following:

i. 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 project, it is desirous that the Project Manager and the Communications Specialist spend time in the communities for coordination, implementation, monitoring, verification and reporting on activities once national COVID restrictions allow 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 Board meetings. The Communications Specialist will have experience in designing and implementing communication programs. Experience in disaster risk reduction communication campaigns is an asset.

In addition, consultants will be hired as follows:

ii. For Output 1, two consultants will be hired by this project 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 project will be used for air fare and DSA for the CIMH staff member.

iii. For Output 2, a national consultant will be hired by this project to perform web development duties. The other key outputs associated with Output 2 will be led by the Communications Specialist hired by this project. The project will also be subject to a terminal evaluation. A national consultant will be hired to undertake this activity. It is envisaged that the key lessons and findings of the evaluation will be disseminated via the communications channels developed by the Communications Specialist

iv. For Output 3, a national consultant will be hired by this project to undertake he 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. The findings and lessons from the final evaluation should inform the final capitalization materials developed and disseminated by the project team.

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

vi. 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.

National Partnerships

Collaboration and coordination with other relevant actors in EWS and DRR are essential for avoiding duplication of efforts, strengthening project visibility, ensuring sustainability, and promoting shared ownership and institutionalization of the CFEWS.

Recalling that at the national level, the project's strategic partners will be the Office for Disaster Preparedness and Management (ODPM), the Tobago Emergency Management Agency (TEMA), the Water Resources Agency (WRA), the Ministry of Rural Development & Local Government and their Municipal Corporations, and the Meteorological Services.

The DRM System for Trinidad and Tobago is currently structured around the **ODPM**, which serves as coordinating and monitoring body for disaster risk management within the GORTT. In that regard, ODPM serves as the driver and systems coordinator for disaster prevention and mitigation, preparedness and response, and reconstruction and recovery. This lead agency for CDM is required to play a strategic as well as operational role in the discharge of its mandate. ODPM is a division within the Ministry of National Security (MNS), and therefore operates under the authority of the Ministry. The MNS coordinates all agencies, including intelligence and public safety; advises the Minister on disaster emergency details and provides finance to support ODPM from yearly subsidies.

TEMA is the focal point for disaster risk management on the island of Tobago. TEMA reports to the Tobago House of Assembly (THA) and has a working relationship with ODPM. Like its counterpart in Trinidad, TEMA is charged to handle all aspects of DRM to build resilience on the island. TEMA executes a Level 1 response function. TEMA was

first established as the National Emergency Management Agency, in accordance with the Tobago House of Assembly, Executive Council Minute No.64 of March 09, 1998.

The **MRDLG** functions as the coordinating agency which guides Municipal Corporations and Special Purpose Enterprises in assisting communities by pooling resources in targeted areas which include among others Infrastructure Development, Disaster Management, Public Health and Sanitation. The Ministry is also responsible for organizing, promoting and implementing rural development policies and strategies. MRDLG has a strong and longstanding relationship with all the beneficiary communities of this project 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 MDRLG will serve as a conduit from channelling information to and from the beneficiary communities as it pertains to this project. The MRDLG will also take the lead in the training of the CHO networks.

Further, the Local Government System encompasses a number of interconnected actors including 14 municipal corporations: 2 city corporations, 3 borough corporations, 9 regional corporations. The **system of Regional Corporations and Disaster Management Units (DMUs)** operate at the regional and local levels in T&T. The Regional Corporations are situated under the purview of the Ministry of Local Government (MOLG). Each Regional Corporation has a Disaster Management Unit (DMU), and a post of Chief Disaster Coordinator is established in the Ministry to coordinate and support the work of the DMUs. The coordinator officially shares and reports information from the ODPM or may make requests to the ODPM for assistance with programmes or response activities. The core functions of the DMU are listed as: (i) Provide expert Disaster Risk Reduction advice to the Administration of the Corporations (ii) Collaborate with other first responders in providing local-level assistance to citizens impacted by hazards. First responder agencies include the Trinidad and Tobago Fire Services (TTFS), the Trinidad and Tobago Defence Force (TTDF), the Trinidad and Tobago Police Service (TTPS) and other Non-Governmental Organizations (NGOs) (iii) Manage the operations of the Municipal Emergency Operations Centre (MEOC) when activated (iv) Educate communities on all phases of the disaster management cycle (v) Carry out activities in accordance with the disaster management policy of the Ministry of Local Government. In the MOLG, the Chief Disaster Coordinator manages and supervises on a daily basis, the disaster risk reduction programmes of all 14 municipalities and coordinates with the assigned regional coordinators at the ODPM. The DMUs often report to the Regional Coordinators of the Preparedness and Response Unit (PRU) of the ODPM on a timely basis in close consultation with the Chief Disaster Coordinator. Resources that are applied to DRR programmes within the municipalities remain a challenge. Local governments, like communities and individuals, are at the centre of effective early warning systems. They should be empowered by national governments, have considerable knowledge of the hazards to which their communities are exposed and be actively involved in the design and maintenance of early warning systems. They must understand advisory information received and be able to advise, instruct and engage the local population in a manner that increases public safety and reduces the possible loss of resources on which the community depends.

The mission of **WRA** is to manage the water resources of the country in an integrated and sustainable manner through conservation, protection, development, regulation and collaboration with stakeholders. The goals of the Agency are to (i) Monitor the water resources of the country by building and maintaining hydrologic networks and to disseminate the information through a national database and information system, (ii) Promote and undertake water resources planning, assessment and development, (iii) License and regulate water abstractors and allocate the resource in a sustainable manner and (iv) Support development of the water supply to meet the growing demand from the various sectors of the economy. The Agency's 2020/21 Capital Development Programme supports the National Development Strategy 2016 – 2030 (Vision 2030) of Trinidad and Tobago. The goal of Vision 2030 is that Trinidad and Tobago will be able to sustain its own development and provide a high quality of life for all its citizens, for generations to come. Water is a key factor in the realization of this vision as water touches all sectors of the economy, society and the environment. Vision 2030 also highlights key shifts that must be taken as a nation to positively transform our values, attitudes and behaviours. One of the crucial shifts is the move to more evidence-based decision making (i.e. need to develop an approach to knowledge and decisions that is based more on practical, verifiable facts). As demand increases for the limited water resources it is necessary to ensure that there is a stringent and efficient monitoring system in place. To this end, the WRA manages a rainfall monitoring system; which this project will contribute to the expansion and strengthening of. The following are the advantages of partnering with WRA to monitor floods:

1. Lower costs for the same coverage.
2. No recurrent cost to Municipal Corporations / DMU as the stations will be maintained by WRA

3. Inter-agency collaboration
4. Maximize the efficient and effective use of limited national resources
5. Data sharing to facilitate timely response especially in periods of extreme hydrological events

Ministry of Works and Transport is one of the largest government organizations in Trinidad and Tobago. They are responsible for providing the physical infrastructure and transport services necessary for the social and economic development of the country. They provide oversight to waterways and are therefore an important stakeholder to achieving the objective of this project. .

For more details on the regional and international partners that the project can collaborate with, as appropriate, see **Annex I.**

Risks and Assumptions

The design of this project makes the following key assumptions:

1. The national agencies with responsibility for the water sector are strong advocates for the project and actively participate in the inter-agency coordination mechanism;
2. Beneficiary populations are willing and motivated to volunteer to support the activities on the ground for the effective management and utilization of the CFEWS;
3. Beneficiary populations are interested in the training opportunities and apply the skills/knowledge gained;
4. There is public trust in the warning information provided by the channels used;
5. Technical experts available in Trinidad and Tobago and within the UN System to fulfil the human resources required;
6. Labour for installation is available within the Municipal Corporations or other partnering organizations;
7. Remote training is a suitable alternative;
8. The relevant units of the MRDLG are readily equipped with computer and internet access;
9. Sufficient capacities exist within the national partner agencies and beneficiary communities to undertake the project;
10. Approval will be given by Drainage Division / other required Ministries in a timely manner for the installation of instruments on bridges

The following table shows the main risks identified and the correspondent mitigation and contingency measures to implement in case that those risks occur

#	Risks	Mitigation measures
1	Occurrence of a disaster that may require emergency measures and change of priorities particularly (Environmental)	There is a crisis modifier result that will allow the project to support humanitarian actions (up to 5% of budget). Therefore there is flexibility built into the project to be able to support a crisis situation and report on the targets associated with the crisis modifier
2	Staff turnover in national institutions involved in the project may alter the efficiency and sustainability of the project (Operational/Organizational)	Advocacy actions at policy level in each institution to identify the participation of 2 technical staff, that is, a primary and alternate focal point.
3	Disgruntled communities not benefiting from this project (Social)	The PEA campaign will promote awareness of the project, 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
4	Fluctuations in the price of the currency (Euro to Trinidad Dollars) may lead to the reduction of project budget (Financial)	Constantly monitor exchange rates and in case of excessive volatility that results in reduced funding then options to fill the gap will be explored such as additional co-financing from partners.
5	Changes in institutional priorities that may result in	The PEA campaign will seek to promote the timeliness, relevance and importance of the project, including at the policy

#	Risks	Mitigation measures
	delays in project activities (Operational/Political)	level in Trinidad and Tobago. There is be consist involvement of the project partners to allow for on going buy in
6	Limited participation of institutions (Political)	The engagement of relevant agencies on the project board will also be an avenue to maintain connections with the relevant national institutions of this project.
7	Weak involvement of decision makers in strategic project activities (Political)	The project unit will maintain a direct dialogue with the decision-making level of the national entities so that channels of communication and coordination can find alternative solutions in a timely manner against any contingency across the project.
8	Worsening of the COVID-19 pandemic in Trinidad and Tobago, impairing key activities in the beneficiary communities (Environmental/Social)	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.

A comprehensive Social and Environmental Screening and Risk Analysis are detailed at **Annexes II and III**, respectively.

Stakeholder Engagement.
It is envisaged that **beneficiary communities will be engaged in the design, implementation and monitoring of this project**.

Specific activities for engaging stakeholders during project execution include:

i. The design and development of the CFEWS, including optimal options for the communication of warning information to each beneficiary community;
ii. Clarifying how best to organize and manage the CHO network, particularly during the COVID pandemic;
iii. Identifying suitable locations for the installation of the streamflow and rainfall stations;
iv. Informing the design and roll-out of the community component of the public education and awareness campaign;
v. Maintaining the areas surrounding the streamflow stations and rainfall gauges;
vi. Recording readings and regularly clean the stations;
vii. Operationalizing the alarm component of the FEWS;
viii. Providing input and guidance on what type of alarm mechanism the community will respond to;

Further, as the installations of the CFEWS are completed, **this project will engage the beneficiary communities, particularly through the established CHO network, to**:

i. Go house to house (especially in rural communities) when necessary or use loudspeakers mounted on trucks to alert the community of impending flood waters;
ii. 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;
iii. Manage information from the FEWS to inform local Shelter Managers and CHO volunteers to make timely arrangements to activate shelters;
iv. 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 project (See Output 3)

Knowledge
This project is designed to strongly support knowledge management and improve flood management in the longer term as well as development planning in Trinidad and Tobago. Key knowledge management products include:

i. The report of the gender and age analysis of flooding in Trinidad and Tobago will be published. 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
ii. Databases will be developed to support the generation of the flood models and maps
iii. The website to be developed to strengthen real time information sharing of rainfall and river discharge data and warning information dissemination will also serve as a platform for cataloguing information on flood occurrences in Trinidad and Tobago. Over time, this information can be used to inform future planning and development needs.
iv. The channels developed for the sharing of flood warning information will serve to promote information on flood hazards
v. Several studies will be published to support the development of a comprehensive flood management plan and the work of the interagency coordination committee; 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 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.

Furthermore, the objective of the visibility and communication strategy (Output 2) will be to ensure that all the beneficiaries and external stakeholders are aware of the project, its scope, intended Outputs, the donor and key lessons learned. The strategy for communication and visibility will have the following activities:

i. 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.
ii. Social media will be used to promote the activities of the project and share information on lessons and progress. Photos will be used on these platforms as much as possible to illustrate the work that is being done.
iii. Materials will be printed to strengthen the community training activities and logos of key implementation partners will be included
iv. Where COVID restrictions allow 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.

Sustainability and Scaling Up

Sustaining and scaling up of the results are central to this project. As noted earlier, the building of community capacities to prepare and respond to floods and the formalization of community engagement through the establishment of Community Hydrological Observers network and the setting up of an interagency coordination mechanism, whose work will be supported with a flood management plan and SOPs for issuing warning will allow for the sustainability of the benefits in the beneficiary communities, and it will create a pool of resources (human and governance) that can be called upon to support scaling-up and replication in the future.

Also, national ownership is strongly being promoted by addressing a priority hazard and supporting key national policy frameworks. This strong alignment means that this project is highly relevant, and timely to the needs of the beneficiary communities and well within the mandates of the partner agencies.

In view of the foregoing, UNDP is keen that there will be adequate tools, systems, capacities and leadership in place to sustain the results of this project and for facilitating seamless hand-over to the communities and government agencies.

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 the current project 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

The fact that the key outputs of this project are applicable to wider and future development goals further strengthens the political buy-in and sustainability of this project.

This project is also complementary to other national initiatives that are ongoing such as the Adopt a River Initiative, application of the MHEWS Checklist and Development of MHEWS Roadmap and the development of the WIMS. The capacities that will be built through this project and the synergies with national projects and initiatives promotes sustainability and can serve to catalyze resources for future expansion.

IV. PROJECT MANAGEMENT

The project will be implemented by UNDP following the Direct Project Modality (DIM). UNDP will assume responsibility for the day-to-day management of the implementation of the following contracts. This includes: monitoring implementation progress and quality as well as performance of the contractors, financial management (payments, accounting and reporting, budget monitoring and – if needed – revision, and organising the required external audits), ensuring coordination with the relevant stakeholders and with similar interventions/programmes, and providing secretariat services to the project's steering committee (convening meetings, establishing agendas, writing minutes and related action plans, monitoring progress on implementation of action plans).

At the country level, the ODPM, MRDLG and the WRA will be the primary national co-implementing agencies on this project. These institutions will collaborate to implement and coordinate the key activities of this project, ensure timelines are sufficiently maintained, expenditures are in-keeping with the budget and promote quality control. This project also assumes the support and engagement of UNDRR, CIMH, CDEMA and IFRC on this project as appropriate and feasible.

Cost Efficiency and Effectiveness

This project is expected to deliver maximum results with available resources; it builds on existing tools and previous initiatives; it leverages best practices and lessons learned from previous projects. The use of UNDP's rules, processes and procedures for project implementation also ensures that the procurement of goods and services promote transparency and cost efficiency and effectiveness.

Also, 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. 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.

V. RESULTS FRAMEWORK[20]

Intended Outcome as stated in MSDF: Policies and programmes for climate change resilience, disaster risk reduction and universal access to clean and sustainable energy

UNDP Country Programme: Output 4.1. Disaster risk reduction approaches integrated into relevant national, sectoral and community-based planning frameworks and processes

Output indicators as stated in the UNDP Country Programme, including baseline and targets:

Indicator: Number of new plans that integrate disaster risk reduction approaches in line with the Sendai Framework, including gender

Baseline: 0

Target: 4

UNDP Strategic Plan Outcome 3: Strengthen Resilience to Shocks and Crises

Applicable Output(s) from the UNDP Strategic Plan: 3.3.1. Evidence-based assessment and planning tools and mechanisms applied to enable implementation of gender-sensitive and risk-informed prevention and preparedness to limit the impact of natural hazards and pandemics and promote peaceful, just and inclusive societies

UNDP 2018-2021 Strategic Plan Indicator 3.3.1.1 Number of additional countries with operational end-to-end multi-sectoral early warning systems (EWS) to limit the gender-differentiated impact of (a) natural hazards (b) health shocks (c) economic crises and (d) other risk factors

Project title and Atlas Project Number: Strengthening Community Flood Early Warning System (CFEWS) in Trinidad and Tobago; Atlas ID: 00127021

IMPACT[21]	INDICATOR	DATA SOURCE	BASELINE	TARGETS	DATA COLLECTION METHODS & RISKS
To improve flood risk informed planning and development across Trinidad and Tobago so as to reduce loss of life, minimize displacement and poverty.	# of people in the beneficiary communities reached by the combined flood early warning channels	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)	0	177,251 (End of Project	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

[20] UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project

[21] Whilst it is not customary to include indicators at this level in the PRODOC; the project will be expected to report on this indicator to ECHO via APPEL

		Communities outreach activities post flooding events by the MRDLG and WRA will help to determine the reach of flood early warnings.						
EXPECTED OUTPUTS	**INDICATORS**	**DATA SOURCE**	**BASELINE**		**TARGETS**			**DATA COLLECTION METHODS & RISKS**
			Value	**Year**	**Year 1**	**Year 2**	**FINAL**	
1. Capacities enhanced for detecting, monitoring, analysis and forecasting of flood hazards	1- Number of people covered by a functional early warning system (disaggregated by sex)	GIS maps of areas covered by the final monitoring stations installed (located with WRA), census data	0	2021	0 persons	177, 251	177, 251	Review of GIS maps with relevant population information for the beneficiary communities. Field visits and interviews (as needed). Risk – COVID-19 pandemic affecting the ability or frequency to undertake community verification visits
	# males and females benefiting from the training on flood models and maps (disaggregated by agency)	Training reports prepared by the Consultant/Technical Lead on the training. Registration forms will also be utilized.	0	2021	0 persons	8 persons	8 persons *(at least 2 persons from 4 agencies)*	Literature review of training reports, interviews with trainees, if needed. Interviews with key staff at WRA can be undertaken since this national agency will lead on the design and implementation of this training activity. Risks – none/limited since the training report and/or interviewees should be easily accessible given WRA's role as an implementing partner for the project.
	# of recommendations from the gender and age analysis incorporated into the work plan of this project	Report of the gender and age analysis and the revised work plan of this project	0	2021	0 recommendations incorporated into workplan	10 recommendations incorporated into workplan	10 recommendations incorporated into workplan	Literature review of gender report and final work plan of the project. Risks – none/limited since this consultancy will be managed by UNDP and the work plan will be prepared by the Project Manager. Therefore, the gender report and the work plan will be readily available at UNDP.

2. Flood early warning information communication/ dissemination platform is expanded to more municipalities and governmental agencies in Trinidad and to Tobago	Number of people reached through Information, Education and Communication on DRR (disaggregated by sex)	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	0	2021	0 people	695,000 people	695,000 people or 50% of the population of Tnt	Data will be collected from online tools and reports(web analytics) and surveys with CHOs and beneficiaries Risk –interviewees (if required) are unwilling to complete surveys. Also, misinterpretation of information since many hits for a particular website does not represent the quality (suitability, usefulness, timeliness) of the information being shared
3. Coordination and management of floods at the community and national levels are enhanced	Number of people participating in interventions that enhance their capacity to face shocks and stresses (disaggregated by sex)	CHO training reports, including registration forms; interviews/survey with trainees, if needed	0	2021	105 persons	105 persons	210 persons [30 persons per 7 communities]	Literature review of CHO training reports and registration forms Risks – none/limited since the training report and/or interviewees should be easily accessible given MDRLG's role as an implementing partner for the project.
	Number of inter-agency flood management coordination mechanisms functioning	Meeting reports (minutes), after action review report, including registration forms	0	2021	0	1	1 inter-agency coordination mechanism	Literature reviews of meeting reports and review of after-action reports of flood management drills Risks – the elected Secretary will be responsible for the preparation of the meeting minutes. This role might change annually and the quality and standardization in the meeting notes and type of information collected may vary
5. Improved emergency response capacities in a crisis	% of beneficiaries (disaggregated by sex, age and disability) reporting that humanitarian assistance is delivered in a safe, accessible, accountable and participatory manner	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 Surveys sent to beneficiaries	0	2021	0	5% [Due to budget limitations, we anticipate that the project would be able to assist	0	Literature review of CHO reports Risks –not all beneficiaries will complete any surveys shared; the CHO network may not be able to do extensive consultations in the communities due to the COVID-19 pandemic

		The final evaluation of this project will also include surveys and questionnaires for beneficiaries to provide information on this indicator				at most 5% of the beneficiary communities]		
	Number of days between the crisis and the emergency response	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 project. Date of the meeting of the project board and agreement to trigger the CM - minutes of the meetings	0	2021	0	7 days	7 days	Review of the official request and minutes of the meeting of the Board Risks – none/limited since these official reports will need to be collected by UNDP to trigger either of the crisis response

VI. MONITORING AND EVALUATION

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

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Quarterly	Project management will take measures according to the achievements.	UNDP, WRA, MRDLG, ODPM, TEMA	N/A
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	UNDP, WRA, MRDLG, ODPM, TEMA	N/A
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.	UNDP, WRA, MRDLG, ODPM, TEMA	N/A
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	UNDP, WRA, MRDLG, ODPM, TEMA	N/A
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	At least annually	Performance data, risks, lessons learned and quality will be discussed by the project board and used to make course corrections.	UNDP, WRA, MRDLG, ODPM, TEMA	N/A
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved	Intermediate (month 12) and at the end of	Revision of achievements and lesson learned, and report to the Donor.	UNDP	N/A

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
	against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk log with mitigation measures, and any evaluation or review reports prepared over the period.	the project (month 24: final report)			
Project Review (Project Board)	The project's governance mechanism (i.e., project board) will 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. 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. The project board will meet twice per year	Once per quarter	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.	UNDP, UNDRR, WRA, MRDLG, ODPM, TEMA, Donor	N/A

Evaluation Plan[22]

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNDAF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
Final Evaluation of the CFEWS Project	UNDP and ECHO			March 2023	Beneficiary communities and staff from UNDP, WRA, MRDLG, ODPM, TEMA, Met Services, , Donor	10,000 USD or 8, 200 Euros Source: ECHO funds

[22] Optional, if needed

VII. Multi-Year Work Plan [23] [24]

There are two multi-year work plans contained in this section; one is in Euros and the other is in USD.
The exchange rate that was used at the time of the proposal development is 1USD=0.82 Euros[25].

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (Euros)	Budget Notes
	Activity 1.1: Gender and age analysis completed to inform the mainstreaming of gender considerations in the work plan of the project	€9,018.43		UNDP	ECHO	Consumables and Goods – 75700	€818.43	1
Output 1: Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards ***Gender marker:2***	Sub-activity 1.1.1: Undertake gender and age analysis Sub-activity 1.1.2: Incorporate findings from gender and age analysis into the work plan of the project Sub-activity 1.1.3: Promotion and awareness of the findings of the study for informing other policies, strategies and/or actions related to flooding					Sub-contracting-71200	€8200.00	
	Activity 1.2: Flood models and maps developed to support impact-based forecasting and for the building of mitigation and preparedness capacities	€10,660.00		UNDP	ECHO	ICT Equipment – 72800	€6560.00	2

[23] Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

[24] Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

[25] https://treasury.un.org/operationalrates/OperationalRates.php (Exchange rates in February 2021 used)

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (Euros)	Budget Notes
	Sub-activity 1.2.1: Procure and install high speed super computer. Sub-activity 1.2.2: Collect data required for the development of flood maps Sub-activity 1.2.3: Train stakeholders and develop usable flood maps					Sub-Contracting-71200	€4100.00	
	Activity 1.3: Streamflow and rainfall stations deployed in communities highly susceptible to flooding in Trinidad and Tobago Sub-activity 1.3.1: Procure, prepare site, construct infrastructure, install, test streamflow and rain gauge stations Sub-activity 1.3.2: conduct measurements (river profiling, treshold levels, velocity, discharge etc.) Sub-activity 1.3.3: Install signage and launch of sites with sensitization session for community members	€111,566.20	€ 25,960.50	UNDP, WRA, Beneficiary Communities	ECHO	Personnel – 71400 Equipment – 72100 Construction Costs – 73200 Communications – 74200 *Equipment can be sourced in Year 1 and installed in year 2*	€13,776.00 €111,566.20 €8,084.50 €4,100.00	3
SUB-TOTAL		**€131,244.63**	**€ 25,960.50**				**€ 157,205.13**	
Output 2: Flood early warning information communication/dissemination platform is expanded and useful to more communities, municipalities and	**Activity 2.1 Communications platform expanded and functional to strengthen coverage in Trinidad and Tobago** Sub-activity 2.1.1 purchase 3 Omni antennas Trinidad and Tobago	€12,126.77 *(purchase of antennas)*	€46,081.70 *(installation)*	WRA, UNDP	ECHO	Personnel – 71400 Equipment – 72400 Construction – 73200	€15,591.55 €12,126.77 €30,490.15	4

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (Euros)	Budget Notes
governmental agencies in Trinidad and Tobago *Gender marker: 1*	Sub-activity 2.1.2: Select site, prepare site, install and test antennas.					*Antennas to be sourced in year 1 and installed in year 2.*		
	Activity 2.2 Website for facilitating information dissemination is developed and functional Sub-activity 2.2.1: Design website for real-time information sharing from streamflow and rainfall gauges, promoting PEA product and sharing impact-based forecasts		€ 25,666.00	WRA, ODPM, Met Services, Web Development Consultant, Communications Specialist (UNDP)	ECHO	Personnel – 71400 Equipment – 72400 Sub-contracting - 71200	€13,776.00 €5,740.00 €6,150.00	5
	Activity 2.3 Flood Public Education and Awareness Campaign and Warning Communication and Dissemination Channels strengthened Sub-activity 2.3.1: Develop work plan for PEA campaign Sub-activity 2.3.2: Develop products for PEA campaign Sub-activity 2.3.3: Develop products and channels for enhancing the sharing of warning information	€ 6,576.40	€ 26,305.60	Communications Specialist, WRA, ODPM, Beneficiary Communities	ECHO	Personnel – 71400 Communications – 74200 *Estimated that 20% and 80% of works completed in Year 1 and 2 respectively.*	€22,632.00 €10,250.00	6
SUB-TOTAL		**€ 18,703.17**	**€ 98,053.30**				**€ 116,756.47**	

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (Euros)	Budget Notes
Output 3: Coordination and management of floods at the community and national levels are enhanced. *Gender marker: 1*	**Activity 3.1 Community Hydrological Observers are established and trained to better prepare for, respond to and recover from flood hazards** Sub-activity 3.1.1: establish CHO networks Sub-activity 3.1.2: convene training of CHO networks in CERT Sub-activity 3.1.3: convene training of CHO networks in installation, calibration, maintenance and trouble-shooting, data retrieval, quality Assurance/ Control	€0.00	€0.00	MRDLG, WRA, Red Cross, Beneficiary communities	ECHO	*This entire activity is co-financed by MRDLG and WRA.*	€0.00	7
	Activity 3.2 An inter-agency coordination mechanism, Flood Management Plan and SOPs are developed for effective management of floods Sub-activity 3.2.1: Draft TOR, convene first meeting of ICM Sub-activity 3.2.2: convene routine meetings of the ICM to support the review and endorsement of the outputs of this consultancy Sub-activity 3.2.3 Launch study to identify challenges across agencies involved in flood management, clarification of their roles and responsibilities and assessment of their capacities to fulfill their mandate Sub-activity 3.2.4 Obtain endorsement of findings of the study	€10,069.60	€40,278.40	UNDP, WRA, ODPM, Met Services, MRDLG, Red Cross	ECHO	Personnel – 71400 Consumables and goods – 75700 Sub-contracting – 71200 *Estimated that 20% and 80% of the works will be done in Year 1 and 2 respectively.*	€41,328.00 €820.00 €8,200.00	8

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (Euros)	Budget Notes
	Sub-activity 3.2.5 Develop flood management plan based on the findings of the study Sub-activity 3.2.6: develop SOPs for issuing of flood warning Sub-activity 3.2.7: convene tabletop exercise to test SOP Sub-activity 3.2.8 finalize SOP based on after action review of table top							
SUB-TOTAL		**€10,069.60**	**€40,278.40**				**€ 50,348.00**	
Output 4: Improved emergency response capacities in a crisis ***Gender marker:1***	**Activity 4.1 Anticipatory actions supported** Sub-activity 4.1.1: Convene emergency meeting of the Project Board to operationalize CM, including prioritization of areas, scope of works, budget etc. Sub-activity 4.1.2: undertake anticipatory actions through the established CHO networks	€0.00	€0.00	CHO networks, ODPM	ECHO	*Up to a maximum of 5% of the ECHO funds (€16,400) will be reallocated to support anticipatory or response actions, should the need arise.*	€0.00	9
	Activity 4.2 Response actions supported Sub-activity 4.2.1: Convene emergency meeting of the Project Board to operationalize CM, including prioritization of areas, scope of works, budget etc. Sub-activity 4.2.2: undertake response actions through the established CHO networks	€0.00	€0.00	CHO networks, ODPM	ECHO	*Up to a maximum of 5% of the ECHO funds (€16,400) will be reallocated to support anticipatory or response actions, should the need arise*	€0.00	
SUB-TOTAL		€0.00	€0.00				€0.00	

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (Euros)	Budget Notes
General Management Support (GMS)			**€ 26,168.22**		ECHO	75105	**€ 26,168.22**	**10**
Audit			**€ 11,802.17**		ECHO	72100	**€ 11,802.18**	**11**
Monitoring & Evaluation			**€ 8,200.00**		ECHO	72100	**€ 8,200.00**	**12**
UNDP Operational and Programmatic Costs			**€ 29,520.00**		ECHO	74500	**€ 29,520.00**	**13**
GRAND-TOTAL		**€ 160,017.40**	**€ 239,982.60**		ECHO		**€ 400,000.00**	

Budget Notes (Euros):

No.	Notes on Planned Activities	Notes on Budget Description
1	Sub-activity 1.1.1 is to be sub-contracted to Local or International Consultant. Sub-activities 1.1.2 and 1.1.3 are to be done by the Project Manager and Communications Specialist. Sub-activity 1.1.3 should also engage the national implementing partners.	Consumables is for supporting the convening of any meetings with stakeholders for the conduct of the gender analysis Sub-contracting refers to Consultant fees, which is estimated at €4100 for undertaking the gender study and €4100 for consulting fees for leading the implementation of key recommendations of the gender studies. See Annex IV for budget details on co-financing.
2	Sub-activity 1.2.1 to be done by Project Manager and WRA. Sub-activity 1.2.2 to be led by WRA. It is estimated that 4 staff members will provide part-time support over 2 months to collect the baseline data required for the flood modelling training. Local Consultant hired at Sub-activity 1.2.3 to provide technical input and guidance on this Sub-activity (remote input if based outside of Trinidad). Sub-activity 1.2.3 to be sub-contracted. Local Consultant to conduct training in flood modeling. If Local Consultant is unavailable, recommended that CIMH be engaged. The budget can be used to support travel and per diem for Trinidad and Tobago.	ICT equipment required is 1 Dell Precision 5820 Tower. Detailed specs to be provided by WRA. Sub-activity 1.2.2 to be co-financed by WRA. See Annex IV for budget details on co-financing.
3	Sub-activities 1.3.1 – 1.3.2 to be led by WRA (Technical Lead) with support from the Project Manager for the procurement of equipment. Local teams to be used for all works required.	Personnel budget line covers 20% of Project Manager Salary. Salary is budgeted at €2,870 per month for 24 months. 20% is € 13,776.00 See Annex IV for budget details on co-financing.

No.	Notes on Planned Activities	Notes on Budget Description
	Sub-activity 1.3.3 to be led by Communications Specialist.	Equipment budget is for the purchase of 7 monitoring stations. Approximately € 15,938.03 budgeted per monitoring station. The cost for the streamflow gauges and rainfall stations are the same Construction costs is approximately € 1,154.93 to prepare each site and undertake necessary construction works for the installation of the 7 monitoring stations. Communications budget is for any public event, including the building and installation of signage at each site. Visibility of the ECHO must be promoted.
4	Sub-activities 2.1.1 and 2.1.2 to be led by WRA (Technical Lead) with support from the Project Manager for the procurement of equipment. Local teams to be used for all works required.	Personnel budget line is for the local staff required to install the 3 Omni antennas. Approximately € 5,197.18 budgeted for labour work per site Equipment budget is for the purchase of 3 Omni Antennas. Approximately € 4,042.26 budgeted per Omni Antennae Construction costs are approximately € 10,163.38 per site and includes the materials required to construct base etc. for the installation of the Antennas
5	Sub-activity 2.2.1 to be sub-contracted to web-developer; oversight provided by Communications Specialist and Project Manager	Personnel budget is 20% of Project Manager's salary. See Annex IV for budget details on co-financing. Equipment budget is for hosting of large data driven website. Funding allocated for 12-month hosting fees Sub-contracting is the Web-Developer Consultant fees.
6	Sub-activities 2.3.1 – 2.3.3 to be led by Communications Consultant.	Personnel budget line is salary Comms specialist to be hired for 12mths at € 1,886.00 per month Communications budget line is for all Public Education and Awareness products and activities related to this entire project
7	Sub-activity 3.1.1 to be led by key implementing agencies: WRA, ODPM and MRDLG; oversight provided by Project Manager Sub-activities 3.1.2 and 3.1.3 to be led by MRDLG and WRA, respectively	All sub-activities co-financed by MRDLG and WRA. See Annex IV for budget details on co-financing.
8	Sub-activity 3.2.1 and 3.2.2 to be led by Project Manager and ODPM Sub-activity 3.2.3 to 3.2.8 to be sub-contracted to Consultant(s) for undertaking studies, developing SOPs and tabletop exercises. Oversight provided by Project Manager	Personnel costs is 60% of Project Manager's salary. See Annex IV for budget details on co-financing. Consumables is budgeted at € 820.00 to support any meetings/consultations required to undertake the data collection for the studies and/or convening of table-top exercise Sub-contracting is budgeted at € 8,200.00 for the Consultant(s) to undertake the study and development of SOPs
9	No monies budgeted for this output. Pending trigger of crisis modifier.	Up to a maximum of 5% of the ECHO funds (€16400) will be reallocated to support anticipatory or response actions, should the need arise.
10	***General Management Support (GMS)***	For UNDP and ATLAS, GMS is calculated at 7% of the programmatic budget, audit, M&E and UNDP operational costs, (total is € 373,831.78), which equates to € 26,168.22

No.	Notes on Planned Activities	Notes on Budget Description
11	*Audit*	€ 11,802.17 for hiring of consultant to perform an external audit as per UNDP requirements. **Important Note:** This budget line is the difference in the GMS calculation between ECHO and UNDP guidelines. As per ECHO's guidelines, GMS was calculated at 7% of the Total Programmatic Budget (cash and co-financing amount of € 542,434.26), which equates to € 37,970.40. For UNDP and ATLAS, GMS is calculated at 7% of the programmatic budget, audit, M&E and UNDP operational costs, (total is € 373,831.78), which equates to € 26,168.22. The difference in GMS is € 11,802.18, which has been allocated to the Audit of the Project during Year 2. This implies that the monies spend on auditing needs to be reported on APPEL in the GMS line.
12	*Monitoring and Evaluation*	A budget of € 8,200.00 is allocated for the hiring of an external evaluator for the conduct of the Final evaluation. This should occur during the last quarter of the project. **Important Note:** In APPEL, the Evaluation is budgeted under Activity 2.3; Budget line – Sub-contracting.
13	*UNDP operational and programmatic costs*	A total of € 29,520.00 has been allocated in the ECHO proposal, which UNDP can charge to the Project. Activities that can be charged include rental of office space, printing, transportation, computers for key project staff members to be hired. For the purpose of the PRODOC, this budget line has been isolated so that it can be adequately tracked by the Project Manager for auditing and reporting purposes during the lifetime of the Project. See Annex IV for budget details on co-financing related to UNDP operational and programmatic costs. **Important Note:** The budget submitted to APPEL has the € 29,520.00 distributed across the following activities and budget lines. Activity 1.3 – 20% of € 29,520 included in Personnel budget line Activity 2.2 – 20% of € 29,520 included in Personnel budget line Activity 3.2 – 60% of € 29,520 included in Personnel budget line These details are important when preparing financial statement for submission to APPEL.

Please see below for the multi-year work plan in USD

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (USD)	Budget Notes
	Activity 1.1: Gender and age analysis completed to inform the mainstreaming of gender considerations in the work plan of the project	$10,998.09		UNDP	ECHO	Consumables and Goods – 75700	$998.09	1
Output 1: Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards ***Gender marker:2***[28]	Action 1.1.1: Undertake gender and age analysis Action 1.1.2: Incorporate findings from gender and age analysis into the work plan of the project Action 1.1.3: Promotion and awareness of the findings of the study for informing other policies, strategies and/or actions related to flooding					Sub-contracting-71200	$10,000.00	
	Activity 1.2: Flood models and maps developed to support impact-based forecasting and for the building of mitigation and preparedness capacities Action 1.2.1: Procure and install high speed super computer. Action 1.2.2: Collect data required for the development of flood maps Action 1.2.3: Train stakeholders and develop usable flood maps	$13,000.00		UNDP	ECHO	ICT Equipment – 72800	$8,000.00	2
						Sub-Contracting-71200	$5,000.00	
	Activity 1.3: Streamflow and rainfall stations deployed in communities highly susceptible to flooding in Trinidad and Tobago	$136,056.34	$31,695.15	UNDP, WRA, Beneficiary	ECHO	Personnel – 71400	$16,800.00	3
							$136,056.34	

[28] The Gender Marker measures how much a project invests in gender equality and women's empowerment. •GEN3 (Gender equality as a principle objective); GEN2 (Gender equality as a significant objective); GEN1 (Limited contribution to gender equality). GEN0 (No contribution to gender quality)

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (USD)	Budget Notes
	Action 1.3.1: Procure, prepare site, construct infrastructure, install, test streamflow and rain gauge stations Action 1.3.2: conduct measurements (river profiling, treshold levels, velocity, discharge etc.) Action 1.3.3: Install signage and launch of sites with sensitization session for community members			Communities		Equipment – 72100 Construction Costs – 73200 Communications – 74200 *Equipment can be sourced in Year 1 and installed in year 2*	$9,859.15 $5,000.00	
SUB-TOTAL		**$160,054.43**	**$31,695.15**				**$191,713.58**	
Output 2: Flood early warning information communication/dissemination platform is expanded and useful to more communities, municipalities and governmental agencies in Trinidad and Tobago ***Gender marker:1***	**Activity 2.1 Communications platform expanded and functional to strengthen coverage in Trinidad and Tobago** Action 2.1.1 purchase 3 Omni antennas Trinidad and Tobago Action 2.1.2: Select site, prepare site, install and test antennas.	$14,788.74 *(purchase of antennas)*	$56,197.20 *(installation)*	WRA, UNDP	ECHO	Personnel – 71400 Equipment – 72400 Construction – 73200 *Antennas to be sourced in year 1 and installed in year 2.*	$19,014.09 $14,788.74 $37,183.11	4

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (USD)	Budget Notes
	Activity 2.2 Website for facilitating information dissemination is developed and functional Action 2.2.1: Design website for real-time information sharing from streamflow and rainfall gauges, promoting PEA product and sharing impact-based forecasts		$31,300.00	WRA, ODPM, Met Services, Web Development Consultant, Communications Specialist (UNDP)	ECHO	Personnel – 71400 Equipment – 72400 Sub-contracting - 71200	$16,800.00 $7,000.00 $7,500.00	5
	Activity 2.3 Flood Public Education and Awareness Campaign and Warning Communication and Dissemination Channels strengthened Action 2.3.1: Develop work plan for PEA campaign Action 2.3.2: Develop products for PEA campaign Action 2.3.3: Develop products and channels for enhancing the sharing of warning information	$8,020.00	$32,080.00	Communications Specialist, WRA, ODPM, Beneficiary Communities	ECHO	Personnel – 71400 Communications – 74200 *Estimated that 20% and 80% of works completed in Year 1 and 2 respectively.*	$27,600.00 $12,500.00	6
SUB-TOTAL		**$22,808.74**	**$119,577.20**				**$142,385.94**	

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (USD)	Budget Notes
Output 3: Coordination and management of floods at the community and national levels are enhanced. ***Gender marker:1***	**Activity 3.1 Community Hydrological Observers are established and trained to better prepare for, respond to and recover from flood hazards** Action 3.1.1: establish CHO networks Action 3.1.2: convene training of CHO networks in CERT Action 3.1.3: convene training of CHO networks in installation, calibration, maintenance and trouble-shooting, data retrieval, quality Assurance/ Control	$0.00	$0.00	MRDLG, WRA, Red Cross, Beneficiary communities	ECHO	*This entire activity is co-financed by MRDLG.*	$0.00	7
	Activity 3.2 An inter-agency coordination mechanism, Flood Management Plan and SOPs are developed for effective management of floods Action 3.2.1: Draft TOR, convene first meeting of ICM Action 3.2.2: convene routine meetings of the ICM to support the review and endorsement of the outputs of this consultancy Action 3.2.3 Launch study to identify challenges across agencies involved in flood management, clarification of their roles and responsibilities and assessment of their capacities to fulfill their mandate Action 3.2.4 Obtain endorsement of findings of the study	$12,280.00	$49,120.00	UNDP, WRA, ODPM, Met Services, MRDLG, Red Cross	ECHO	Personnel – 71400 Consumables and goods – 75700 Sub-contracting – 71200 *Estimated that 20% and 80% of the works will be done in Year 1 and 2 respectively.*	$50,400.00 $1,000.00 $10,000.00	8

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (USD)	Budget Notes
	Action 3.2.5 Develop flood management plan based on the findings of the study "Action 3.2.6: develop SOPs for issuing of flood warning" Action 3.2.7: convene tabletop exercise to test SOP Action 3.2.8 finalize SOP based on after action review of table top							
SUB-TOTAL		**$12,280.00**	**$49,120.00**				**$61,400.00**	
Output 4: Improved emergency response capacities in a crisis ***Gender marker:1***	**Activity 4.1 Anticipatory actions supported** Action 4.1.1: Convene emergency meeting of the Project Board to operationalize CM, including prioritization of areas, scope of works, budget etc. Action 4.1.2: undertake anticipatory actions through the established CHO networks	$0.00	$0.00	CHO networks, ODPM	ECHO	*Up to a maximum of 5% of the ECHO funds ($20000) will be reallocated to support anticipatory or response actions, should the need arise.*	$0.00	9
	Activity 4.2 Response actions supported Action 4.2.1: Convene emergency meeting of the Project Board to operationalize CM, including prioritization of areas, scope of works, budget etc. Action 4.2.2: undertake response actions through the established CHO networks	$0.00	$0.00	CHO networks, ODPM	ECHO	*Up to a maximum of 5% of the ECHO funds will be reallocated to support anticipatory or response actions, should the need arise.*	$0.00	
SUB-TOTAL		**$0.00**	**$0.00**				**$0.00**	

Expected Outputs	Planned Activities	Year 1	Year 2	Responsibility	Funding Source	Budget Description	Total Amount (USD)	Budget Notes
General Management Support (GMS)			$31,912.47		ECHO	75105	$31,912.47	10
Audit			$14,392.89		ECHO	72100	$14,392.89	11
Monitoring & Evaluation			$10,000.00		ECHO	72100	$10,000.00	12
UNDP Operational Costs			$36,000.00		ECHO	74500	$36,000.00	13
GRAND-TOTAL		$292,697.71	$292,697.71		ECHO		$487,804.88	

Budget Notes (USD):

No.	Notes on Planned Activities	Notes on Budget Description
1	Sub-activity 1.1.1 is to be sub-contracted to Local or International Consultant. Sub-activities 1.1.2 and 1.1.3 are to be done by the Project Manager and Communications Specialist. Sub-activity 1.1.3 should also engage the national implementing partners.	Consumables is for supporting the convening of any meetings with stakeholders for the conduct of the gender analysis. Sub-contracting refers to Consultant fees, which is estimated at 5000USD for undertaking the gender study and 5000USD for consulting fees for leading the implementation of key recommendations of the gender studies. See Annex IV for budget details on co-financing.
2	Sub-activity 1.2.1 to be done by Project Manager and WRA. Sub-activity 1.2.2 to be led by WRA. It is estimated that 4 staff members will provide part-time support over 2 months to collect the baseline data required for the flood modelling training. Local Consultant hired at Sub-activity 1.2.3 to provide technical input and guidance on this Sub-activity (remote input if based outside of Trinidad). Sub-activity 1.2.3 to be sub-contracted. Local Consultant to conduct training in flood modeling. If Local Consultant is unavailable, recommended that CIMH be engaged. The budget can be used to support travel and per diem for Trinidad and Tobago	ICT equipment required is 1 Dell Precision 5820 Tower. Detailed specs to be provided by WRA. Sub-activity 1.2.2 to be co-financed by WRA. See Annex IV for budget details on co-financing

No.	Notes on Planned Activities	Notes on Budget Description
3	Sub-activities 1.3.1 – 1.3.2 to be led by WRA (Technical Lead) with support from the Project Manager for the procurement of equipment. Local teams to be used for all works required Sub-activity 1.3.3 to be led by Communications Specialist	Personnel budget line covers 20% of Project Manager Salary. Salary is budgeted at 3500USD per month for 24 months. 20% is 16,800USD. See Annex IV for budget details on co-financing Equipment budget is for the purchase of 7 monitoring stations. Approximately 19,436.62USD budgeted per monitoring station. The cost for the streamflow gauges and rainfall stations are the same. Construction costs is approximately 1408.45USD to prepare each site and undertake necessary construction works for the installation of the 7 monitoring stations. Communications budget is for any public event, including the building and installation of signage at each site. Visibility of the ECHO must be promoted.
4	Sub-activities 2.1.1 and 2.1.2 to be led by WRA (Technical Lead) with support from the Project Manager for the procurement of equipment. Local teams to be used for all works required	Personnel budget line is for the local staff required to install the 3 Omni antennas. Approximately 6338.03USD budgeted for labour work per site. Equipment budget is for the purchase of 3 Omni Antennas. Approximately 4,929.58USD budgeted per Omni Antennae. Construction costs are approximately USD12394.37 per site and includes the materials required to construct base etc. for the installation of the Antennas
5	Sub-activity 2.2.1 to be sub-contracted to web-developer, oversight provided by Communications Specialist and Project Manager	Personnel budget is 20% of Project Manager's salary. See Annex IV for budget details on co-financing Equipment budget is for hosting of large data driven website. Funding allocated for 12-month hosting fees. Sub-contracting is the Web-Developer Consultant fees
6	Sub-activities 2.3.1 – 2.3.3 to be led by Communications Consultant.	Personnel budget line is salary Comms specialist to be hired for 12mths at 2300USD per month. Communications budget line is for all Public Education and Awareness products and activities related to this entire project.
7	Sub-activity 3.1.1 to be led by key implementing agencies: WRA, ODPM and MRDLG; oversight provided by Project Manager Sub-activities 3.1.2 and 3.1.3 to be led by MRDLG and WRA, respectively	All sub-activities co-financed by MRDLG and WRA. See Annex IV for budget details on co-financing.
8	Sub-activity 3.2.1 and 3.2.2 to be led by Project Manager and ODPM Sub-activity 3.2.3 to 3.2.8 to be sub-contracted to Consultant(s) for undertaking studies, developing SOPs and tabletop exercises. Oversight provided by Project Manager	Personnel costs is 60% of Project Manager's salary. See Annex IV for budget details on co-financing Consumables is budgeted at 1000USD to support any meetings/consultations required to undertake the data collection for the studies and/or convening of table-top exercise

No.	Notes on Planned Activities	Notes on Budget Description
		Sub-contracting is budgeted at 10,000USD for the Consultant(s) to undertake the study and development of SOPs.
9	No monies budgeted for this output. Pending trigger of crisis modifier.	Up to a maximum of 5% of the ECHO funds 20,000USD) will be reallocated to support anticipatory or response actions, should the need arise.
10	***General Management Support (GMS)***	For UNDP and ATLAS, GMS is calculated at 7% of the programmatic budget, audit, M&E and UNDP operational costs, (total is USD$455,892.41), which equates to USD31,912.47
11	***Audit***	USD14,392.89 for hiring of consultant to perform an external audit as per UNDP requirements. **Important Note:** This budget line is the difference in the GMS calculation between ECHO and UNDP guidelines. As per ECHO's guidelines, GMS was calculated at 7% of the Total Programmatic Budget (cash and co-financing amount of US$661,505.20), which equates to USD46,305.36. For UNDP and ATLAS, GMS is calculated at 7% of the programmatic budget, audit, M&E and UNDP operational costs, (total is USD$455,892.41), which equates to USD31,912.47. The difference in GMS is USD$14,392.89, which has been allocated to the Audit of the Project during Year 2. This implies that the monies spend on auditing needs to be reported on APPEL in the GMS line.
12	***Monitoring and Evaluation***	A budget of 10,000 USD is allocated for the hiring of an external evaluator for the conduct of the Final evaluation. This should occur during the last quarter of the project. **Important Note:** In APPEL, the Evaluation is budgeted under Activity 2.3; Budget line – Sub-contracting.
13	***UNDP operational and programmatic costs***	A total of 36,000USD has been allocated in the ECHO proposal, which UNDP can charge to the Project. Activities that can be charged include rental of office space, printing, transportation, computers for key project staff members to be hired. For the purpose of the PRODOC, this budget line has been isolated so that it can be adequately tracked by the Project Manager for auditing and reporting purposes during the lifetime of the Project. See Annex IV for budget details on co-financing related to UNDP operational and programmatic costs. **Important Note:** The budget submitted to APPEL has the € 29,520.00 distributed across the following activities and budget lines: Activity 1.3 – 20% of € 29,520 included in Personnel budget line Activity 2.2 – 20% of € 29,520 included in Personnel budget line Activity 3.2 – 60% of € 29,520 included in Personnel budget line These details are important when preparing financial statement for submission to APPEL.

VIII. Governance and Management Arrangements

The management arrangements of the project are governed by the UNDP rules and regulations. These are specifically designed to take into account the requirements of this project and have been successfully applied by the UNDP Trinidad and Tobago Country Office in its partnership projects in the region thus far.

UNDP will assume responsibility for the day-to-day management of the implementation of the project. This includes: monitoring implementation progress and quality as well as performance of the contractors, financial management (payments, accounting and reporting, budget monitoring and – if needed – revision, and organising the required external audits), ensuring coordination with the relevant stakeholders and with similar interventions/programmes, and providing secretariat services to the project's Steering Committee (convening meetings, establishing agendas, writing minutes and related action plans, monitoring progress on implementation of action plans). UNDP will organise a project office in Port-of-Spain, and the team will operate from this office. Technical Support will be provided by the UNDP Regional Hub for Latin America and the Caribbean based in Panama. This project has a maximum duration of 24 months, with three additional months for final reporting.

A Steering Committee or Project Board will be established to oversee and to provide overall guidance to the implementation of the Project. The role of the Project Board is to provide strategic guidance to the project to ensure completion of project goals and to coordinate with the project manager to ensure tasks are completed in an appropriate sequence. The Steering Committee/Project Board will provide recommendations for project management decisions by consensus, when required..

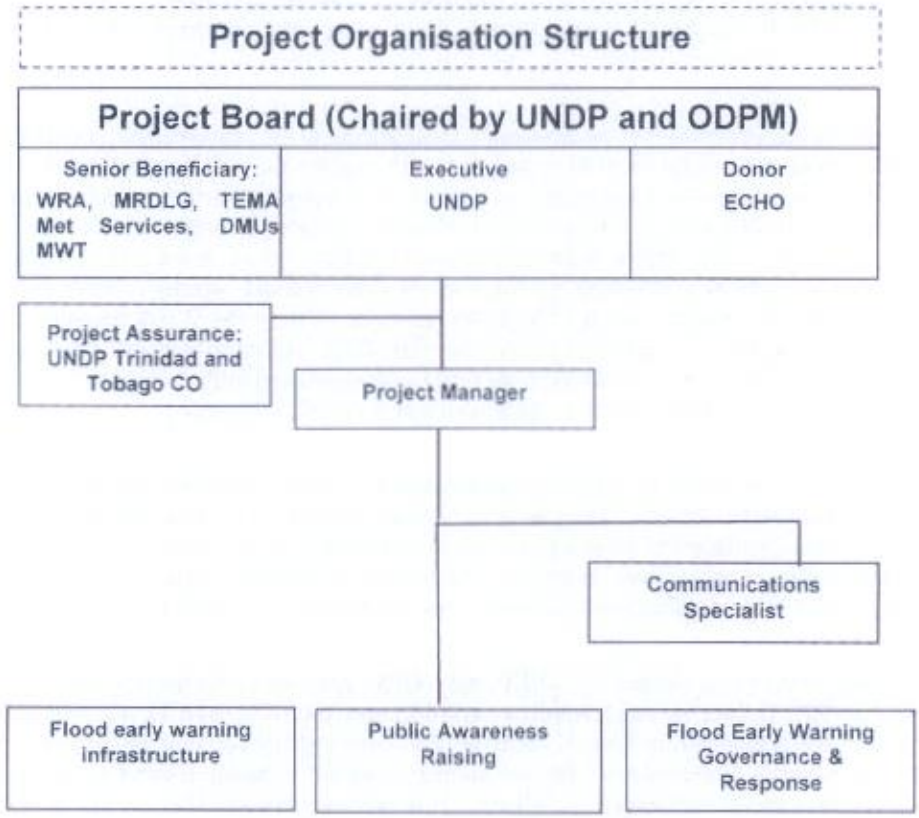
The Project Board will be co-chaired by UNDP and ODPM and will comprise representatives from ECHO, WRA, MRDLG, Met Services, Ministry of Works and Transport (MWT), a representative of the DMUs[27] for the regional corporations covering the 7 beneficiary communities on the Project. Representatives of other stakeholders may be invited to attend steering committee meetings, as appropriate; for example gender experts, UWI etc.. This approach ensures that the perspectives and synergies of the partners are captured and that there is ownership, promotion of sustainability and coordination with regional and national strategies.

The Project Board will convene at least twice per year (semi-annually) after the start of project implementation. The meetings can be face-to-face or online, pending developments as it relates to the COVID-19 pandemic.

[27] See Section III (Results and Partnerships), Subsection: National Partnerships on Page 27 for more information on the DMU System

Project Organization Structure

The following organigram shows this project organization structure for the implementation:



IX. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement. between the Government of (country) and UNDP, signed on 20 May 1976. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by UNDP in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

In line with the Financial and Administrative Framework Agreement between the EU and UN, financial transactions and financial statements shall be subject to the internal and external auditing procedures laid down in the financial regulations, rules and directives of UNDP.

X. RISK MANAGEMENT

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)

2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the [project funds][28] [UNDP funds received pursuant to the Project Document][29] are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

3. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

4. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse ("SEA") and sexual harassment ("SH") allegations in accordance with its regulations, rules, policies and procedures.

6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

[28] To be used where UNDP is the Implementing Partner

[29] To be used where the UN, a UN fund/programme or a specialized agency is the Implementing Partner

7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient:

    a. Consistent with the Article III of the SBAA, the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
        i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
        ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.

    b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party's, subcontractor's and sub-recipient's obligations under this Project Document.

    c. In the performance of the activities under this Project, UNDP as the Implementing Partner shall ensure, with respect to the activities of any of its responsible parties, sub-recipients and other entities engaged under the Project, either as contractors or subcontractors, their personnel and any individuals performing services for them, that those entities have in place adequate and proper procedures, processes and policies to prevent and/or address SEA and SH.

    d. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

    e. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

    f. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.

    g. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

        Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head

of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

h. UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail any responsible party's, subcontractor's or sub-recipient's obligations under this Project Document.

Where such funds have not been refunded to UNDP, the responsible party, subcontractor or sub-recipient agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to such responsible party, subcontractor or sub-recipient for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

i. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.

j. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

k. Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, *mutatis mutandis*, in all its sub-contracts or sub-agreements entered into further to this Project Document.

XI. ANNEXES

1. **Details on Key National and International Agencies/Partners**
2. **Social and Environmental Screening Template**
3. **Risk Analysis.**
4. **Cash and Co-financing budget Details**
5. **Project Quality Assurance Report**
6. **Terms of Reference of Project Board**
7. **Terms of Reference of Project Coordinator**
8. **Terms of Reference of Communications Specialist**

XII. ANNEX I– REGIONAL AND INTERNATIONAL PARTNERS

International and Regional Partnerships

Partnership between UNDP and key development agencies in the region, such as UNDRR, IFRC, UWI and CDEMA, will enhance the project's efficiency and scope, ensuring the integration of community level EWS into national systems, and regional support for sustainability.

UNDP has been a key contributor to DRR in the Caribbean for the last fifty years. UNDP has consolidated experience in implementing EWS, providing support to DRR and EWS through regional and national level initiatives, coordinated with CDEMA and national governmental bodies in the region. UNDP, through its Country Offices (COs) carry out strategic interventions in DRR and EWS, in communication with the corresponding National Systems. Since 2009, UNDP has implemented 3 DIPECHO projects related to EWS: the 2013 "CAP" project, the 2015 "Strengthening resilience and coping capacities in the Caribbean through integrated EWS" and the 2018 "strengthening of integrated and cohesive preparedness capacity at the regional, national and community levels in the Caribbean" Project. As an example of the demonstration of the work done in advancing EWS, the most recent DIPECHO funded project (2018) facilitated the establishment of a common regional strategy for Multi-hazard Early Warning Systems (MHEWS), grounded in the Caribbean Disaster Emergency Management Agency's (CDEMA) Regional CDM framework, which meaningfully engaged national authorities in target countries to create a strategy based on Caribbean priorities. Progress was also made in the articulation and revision of the vision and mission of the Regional Consortium of Early Warning Systems (REWSC), thus providing the consortium with a definition of its institutional role, including leadership on providing guidance, quality assurance and validation of policies, procedures and protocols of EWS adapted to the Caribbean context.

UNDRR serves as the focal point in the United Nations system for the coordination of disaster reduction and to ensure synergies among disaster reduction activities. UNDRR oversees the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030, supporting countries in its implementation, monitoring and sharing what works in reducing existing risk and preventing the creation of new risk. Recalling that one of the 7 global targets of the framework specifically refers to EWS. Among other priorities, the UNDRR's Regional Office for the Americas and the Caribbean (ROAMC) assists the region's countries through their national focal points to the Sendai Framework for Disaster Risk Reduction 2015-2030 to meet the Sendai Framework's Global Targets.

CDEMA, as inter-governmental agency for disaster management in the Caribbean Community (CARICOM), has been present in the Caribbean since 1991, when it was first established as CDERA, transitioning to CDEMA in 2009 to fully embrace the principles and practice of the CDM. CDEMA presently comprises 19 Participating States (PS): Anguilla, Antigua and Barbuda, Commonwealth of the Bahamas, Barbados, Belize, Cayman Islands, Commonwealth of Dominica, Grenada, Republic of Guyana, Haiti, Jamaica, Montserrat, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, Suriname, Republic of Trinidad & Tobago, Turks & Caicos Islands and the Virgin Islands. CDEMA's mandate has expanded to position the regional disaster management body more strategically to fully take up its role as facilitator, driver, coordinator and motivating force for the promotion and engineering of CDM in all Participating States. Its functions include mobilising and coordinating disaster relief; mitigating consequences of disasters in PS, providing coordinated response to PS; securing, coordinating and providing to inter-governmental and non-governmental organisations comprehensive information on disasters affecting PS; encouraging the adoption of disaster loss reduction and mitigation policies and practices at the national and regional level, as well as cooperative arrangements and mechanisms to facilitate the development of a culture of disaster loss reduction; and coordinating the establishment, enhancement and maintenance of adequate emergency disaster response capabilities among the Participating States. Having CDEMA as a partner on this initiative will allow for the transfer of best practices across its member countries.

IFRC has been engaged in humanitarian work in the Caribbean for over 60 years. It is present in every country and Overseas Territories (OSTs) through its national societies and branches. All local Red Cross National Societies (RC NS) are engaged in emergency response, Community Based Disaster Management (CBDM), Health and First Aid training (CBHFA). Their DRM 3-pillar approach to community resilience programming involves institutional strengthening, knowledge management and communication and advocacy. They were very instrumental in the 2018 DIPECHO project, where they

supported the development of Community Disaster Response Teams (CDRTs) which has strengthened disaster preparedness and response at the community level in the region. The Red Cross continues to scale up its delivery and strengthen partnerships to address increasing risk. In 2016, the Caribbean Red Cross launched its Community Resilience Framework and Action plan (aligned to the Global Framework for Community Resilience, the CDM Strategy and the Sendai Framework). They envision Community resilience programming as a collaborative program that will be achieved through improved communication, advocacy and the use of strengthened information. Trinidad and Tobago Red Cross has already been engaged in Phase 1 of the CFEWS and therefore their engagement in this follow up Phase, will allow for the continued strengthening of partnerships between Red Cross and national institutions.

The UWI St. Augustine Campus is situated 15km from the bustling capital of one of the Caribbean's most rapidly developing island states, Trinidad and Tobago. With its focus on research and innovation, fully accredited programmes across seven faculties, and a cosmopolitan campus community, St. Augustine is a true representation of an innovative, internationally competitive, contemporary university deeply rooted in the Caribbean. UWI is internationally recognized as a centre of excellence in research, knowledge creation and innovation on matters related to the Caribbean and small island states. In its commitment to enhancing Caribbean development, UWI's focal areas are linked closely to CARICOM's development priorities. They take into account region-wide areas of concern such as environmental issues, health and wellness, gender equity and the critical importance of innovation. They have a highly qualified faculty and their researchers are the best available locally, regionally and internationally.

XIII. ANNEX II - SOCIAL AND ENVIRONMENTAL SCREENING PROCEDURE (2021 SESP, VERSION 1)

Project Information

Project Information	
1. Project Title	Community Flood Early Warning System (CFEWS) in Trinidad and Tobago
2. Project Number (i.e. Atlas project ID, PIMS+)	00127021
3. Location (Global/Region/Country)	Trinidad and Tobago
4. Project stage (Design or Implementation)	Design
5. Date	2 June 2021

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the project mainstreams the human rights-based approach

This project upholds the principle of "universal respect for, and observance of, human rights and fundamental freedoms for all." This project ensures that there will be participation and inclusion, and equality and non-discrimination. The project is designed to encourage the sustainable design, implementation and monitoring through the close engagement of the beneficiary communities to:

i. 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.
ii. Clarify how best to organize and manage the CHO network, particularly during the COVID pandemic,
iii. identify suitable locations for the installation of the streamflow and rainfall stations;
iv. Inform the design and roll-out of the community component of the public education and awareness campaign;
v. maintain the areas surrounding the streamflow stations and rainfall gauges;
vi. record readings and regularly clean the stations.
vii. operationalize the alarm component of the FEWS;
viii. understand what type of alarm mechanism the community will respond to.

Further, as the installations of the CFEWS are completed, this project will engage the beneficiary communities, particularly through the established CHO network, to

ix. go house to house (especially in rural communities) when necessary or use loudspeakers mounted on trucks to alert the community of impending flood waters.
x. 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
xi. (xi) manage information from the FEWS to inform local Shelter Managers and CHO volunteers to make timely arrangements to activate shelters.

The roles and responsibilities at items (viii) to (x) will be achieved through targeted training for the CHO network with funding from this project (Result 3).

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

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

All efforts were made by UNDP at the proposal stage to prevent/mitigate the negative effects of the project, particularly on gender, through the use of the Multi-hazard Early Warning (MHEWS) Checklist and engagement with the MRDLG. The MHEWS checklist was developed with stakeholders to be considerate of gender in the design and implementation of a EWS. 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. Further, all efforts were made to include a diverse stakeholder grouping during the design phase.

We anticipate that this project will have considerable achievements for the gender market as a critical activity to kick -start the project will be the launch of a gender and age analysis, which will be the first of its kind for Trinidad and Tobago in the context of flooding. The findings and recommendations from this study will inform the updating of the work plan of this project, paying due consideration to the budget available. The findings of the gender and age analysis will also be promoted in the capitalization document coming out of this project to be instructive to other disaster preparedness actions in Trinidad and Tobago. Also, the monitoring planned for this project as per the indicators identified indicates that efforts will be made to collect and disaggregate information by sex and age, to the best extent possible.

UNDP is confident that using these strategic gender mainstreaming approaches (the EWS Checklist, the Inception Gender and Age Analysis and gender disaggregated monitoring data) will enable this project to adapt to the specific needs and capacities of different gender and age groups thereby improving gender equality and women's empowerment.

Briefly describe in the space below how the project mainstreams sustainability and resilience

This project mainstreams resilience since it is risk-informed and is premised on recent flood vulnerability assessments and policy dialogue. Further, the criteria used for the selection of beneficiary communities is cognizant of risks that exist at the community level and the most vulnerable communities were selected in terms of susceptibility to flooding and distribution of poverty in Trinidad and Tobago.

Sustaining is central to this project. As noted earlier, the building of community capacities to prepare and respond to floods and the formalization of community engagement through the establishment of Community Hydrological Observers network and the setting up of an interagency coordination mechanism, whose work will be supported with a flood management plan and SOPs for issuing warning will allow for the sustainability of the benefits in the beneficiary communities, and it will create a pool of resources (human and governance) that can be called upon to support scaling-up and replication in the future.

Briefly describe in the space below how the project strengthens accountability to stakeholders

Accountability to stakeholders will be promoted through the following activities:

- The CHO networks comprise community members that will be working closely with the project team during the implementation of this project. This allows representatives of the communities to be aware of the work being undertaken, and these individuals will also serve as a medium for channeling concerns from the beneficiary communities to the project implementation unit;
- There is dedicated budget and personnel assigned on this project to focus on communications and visibility;
- The social media portals to be developed and tools as part of the wider PEA campaign will not only promote awareness of the progress being made but it will serve as a forum for the public to share feedback;
- The website for sharing live information from the monitoring stations will include short surveys to obtain feedback from users;
- 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 project board includes several key national agencies with responsibility for flood management. Their engagement on the project board promotes transparency and accountability;
- 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. The findings of this report will support the preparation of the document capitalization of this project.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
There is minimal to no Social and Environmental Risks, as per the checklist attached, in relation to this Project.	*Impact and Likelihood (1-5)*	*Significance (Low, Moderate Substantial, High)*	*Comments (optional)*	*Description of assessment and management measures for risks rated as Moderate, Substantial or High*

QUESTION 4: What is the overall project risk categorization?			
	Low Risk	☑	
	Moderate Risk	☐	
	Substantial Risk	☐	
	High Risk	☐	

QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)					
Question only required for Moderate, Substantial and High Risk projects					
Is assessment required? (check if "yes")	☐				*Status? (complete*

					d, planned)
	If yes, indicate overall type and status		☐	Targeted assessment(s)	
			☐	ESIA (Environmental and Social Impact Assessment)	
			☐	SESA (Strategic Environmental and Social Assessment)	
	Are management plans required? (check if "yes)	☐			
	If yes, indicate overall type		☐	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	
			☐	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	
			☐	ESMF (Environmental and Social Management Framework)	
	Based on identified <u>risks</u>, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind				
	Human Rights	☐			
	Gender Equality and Women's Empowerment	☐			
	Accountability	☐			

	1. Biodiversity Conservation and Sustainable Natural Resource Management	☐	
	2. Climate Change and Disaster Risks	☐	
	3. Community Health, Safety and Security	☐	
	4. Cultural Heritage	☐	
	5. Displacement and Resettlement	☐	
	6. Indigenous Peoples	☐	
	7. Labour and Working Conditions	☐	
	8. Pollution Prevention and Resource Efficiency	☐	

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	Date	Description
QA Assessor Rosemary Lall	09-Jun-2021	UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair	09-Jun-2021	UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.	
Overarching Principle: Leave No One Behind **Human Rights**	Answer (Yes/No)
P.1 Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	*No*
P.2 Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	*No*
P.3 Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	*No*
Would the project potentially involve or lead to:	
P.4 adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
P.5 inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? [30]	No

[30] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

P.6 restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	No
P.7 exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Gender Equality and Women's Empowerment	
P.8 Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	No
Would the project potentially involve or lead to:	
P.9 adverse impacts on gender equality and/or the situation of women and girls?	*No*
P.10 reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
P.11 limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	No
P.12 exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.*	No
Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below	
Accountability	

Would the project potentially involve or lead to:	
P.13 exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	No
P.14 grievances or objections from potentially affected stakeholders?	No
P.15 risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	No
Project-Level Standards	
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management	
Would the project potentially involve or lead to:	
1.1 adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	No
1.2 activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3 changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4 risks to endangered species (e.g. reduction, encroachment on habitat)?	No
1.5 exacerbation of illegal wildlife trade?	No
1.6 introduction of invasive alien species?	No
1.7 adverse impacts on soils?	No

1.8	harvesting of natural forests, plantation development, or reforestation?	No
1.9	significant agricultural production?	No
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	No
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	No
1.12	handling or utilization of genetically modified organisms/living modified organisms?[31]	No
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[32]	No
1.14	adverse transboundary or global environmental concerns?	No
Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	No
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes*	No
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	No

[31] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.

[32] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	No
Standard 3: Community Health, Safety and Security		
Would the project potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	No
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	No
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	No
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	No
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	No
3.7	influx of project workers to project areas?	No
3.8	engagement of security personnel to protect facilities and property or to support project activities?	No
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	No
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	No

4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.4	alterations to landscapes and natural features with cultural significance?	No
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	No
5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	risk of forced evictions?[33]	No
5.4	impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	No
6.2	activities located on lands and territories claimed by indigenous peoples?	No
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is	No

[33] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

	located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk*	
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	No
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	No
6.8	risks to the physical and cultural survival of indigenous peoples?	No
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	No
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		
7.1	working conditions that do not meet national labour laws and international commitments?	No

7.2	working conditions that may deny freedom of association and collective bargaining?	No
7.3	use of child labour?	No
7.4	use of forced labour?	No
7.5	discriminatory working conditions and/or lack of equal opportunity?	No
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	No
Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
8.2	the generation of waste (both hazardous and non-hazardous)?	No
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	No
8.4	the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	No
8.5	the application of pesticides that may have a negative effect on the environment or human health?	No
8.6	significant consumption of raw materials, energy, and/or water?	No

XIV. ANNEX III: RISK LOG MATRIX

Project Title: Community Flood Early Warning System (CFEWS) in Trinidad and Tobago	Award ID: 00127021	Date: 1 June 2021 to 30 May 2023

#	Description	Date Identified	Type	Impact & Probability[34]	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
1.	Occurrence of a disaster, particularly during the next rainy season (May-June) and/or seismic related hazards may require urgent emergency measures and change of priorities due to response and recovery actions	Start of the project	Environmental	Possible difficulties in the implementation of activities and possible change of priorities for fund allocations. P = 3 I = 3 ***Risk Level = Moderate***	*There is a crisis modifier result that will allow the project to support humanitarian actions (up to 5% of budget). Therefore there is flexibility built into the project to be able to support a crisis situation and report on the targets associated with the crisis modifier*	Project Management Unit			

[34] Enter likelihood/probability based on 1-5 scale (1 = Not likely; 5 = Expected). Enter impact based on 1-5 scale (1 = Negligible; 5 = Extreme). Based on Likelihood/probability and Impact, use the Risk Matrix to identify the Risk Level (High, Substantial, Moderate or Low)

#	Description	Date Identified	Type	Impact & Probability[34]	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
2.	Staff turnover in national institutions involved in the project may alter the efficiency and sustainability of the project	Start of the project	Operational, Organizational	The efficiency and sustainability of the Project may be affected. P = 2 I = 4 ***Risk Level = Moderate***	*Advocacy actions at policy level in each institution to identify the participation of 2 technical staff, that is, a primary and alternate focal point.*	Project Management Unit and National Counterparts			
3.	Disgruntled communities not benefiting from this project	Start of the project	Social	The efficiency and sustainability of the Project may be affected. P = 2 I = 3 ***Risk Level = Moderate***	*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*	Project Management Unit and National Counterparts			
4.	Fluctuations in the price of the currency (Euro to Trinidad Dollars) may lead to the reduction of project budget.	Start of the project	Financial	Budget reduction due to currency fluctuation may lead to the prioritization of activities and affect substantially on the achievements of project results. P =2	*Constantly monitor exchange rates and in case of excessive volatility that results in reduced funding then the implementation plan will be updated to reflect new budget balances*	Project Management Unit, Project Board			

#	Description	Date Identified	Type	Impact & Probability[34]	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
				I =35 ***Risk Level = Moderate***					
5.	Changes in institutional priorities that may result in delays in project activities.	Start of the project	Operational, Political	Institutional engagement is important for implementation of activities in a timely way. Changes in their priorities may result in delays or substantive impact on the implementation of project activities. P= 2 I= 4 ***Risk Level = Moderate***	*The PEA campaign will seek to promote the timeliness, relevance and importance of the project, including at the policy level in Trinidad and Tobago.*	Project management Unit, Project Board, National Counterparts.			
6.	Limited participation of institutions.	Start of the project	Political	The lack of institutional engagement may lead to the reduction of commitment with project activities and may result in delays and difficulties in implementation. P = 2 I = 4 ***Risk Level = Moderate***	*The engagement of relevant agencies on the project board will also be an avenue to maintain connections with the relevant national institutions of this project.*	Project Management Unit, Project Board, National Counterparts.			
7.	Weak involvement of decision makers in strategic project activities.	Start of the project	Political	This may impact on the timely and effective implementation of activities. P = 2	*Maintain of a direct dialogue with the decision-making level of the national entities so*	Project Management Unit, Project Board,			

#	Description	Date Identified	Type	Impact & Probability[34]	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
				I = 4 ***Risk Level = Moderate***	*that channels of communication and coordination can find alternative solutions in a timely manner against any contingency across the project.*	National Counterparts.			
8.	Worsening of the COVID-19 pandemic in Trinidad and Tobago, impairing key activities in the beneficiary communities	Start of the project	Social and Environmental	This can have serious effects on the implementation of the project. P = 4 I = 5 ***Risk Level = High***	*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.*	Project Management Unit			

XV. ANNEX IV – CASH AND CO-FINANCING BUDGET

The exchange rate used in the project document is 1USD=0.82 Euros

EXPECTED RESULTS	KEY ACTIVITIES	BUDGET DESCRIPTION	ECHO CASH (EUROS)	CO-FINANCING (EUROS)	TOTAL BUDGET (EUROS)	BUDGET NOTES
OUTPUT 1: Capacities enhanced for detecting, monitoring, analysing and forecasting of flood hazards	1.1 Gender and age analysis completed to inform the mainstreaming of gender considerations in the work plan of the project.	Personnel		€ 1,232.46	€ 1,232.46	1
		Consumables and Goods (trainings and meetings)	€ 818.43	€ -	€ 818.43	
		Subcontracting	€ 8,200.00	€ -	€ 8,200.00	
		Sub-Total Activity 1.1 (Cash and Co-Financing)			**€ 10,250.89**	
	1.2 Flood models and maps developed to support impact based forecasting and for the building of mitigation and preparedness capacities	Personnel		€ 15,388.78	€ 15,388.78	2
		ICT Equipment	€ 6,560.00	€ -	€ 6,560.00	
		Subcontracting	€ 4,100.00	€ -	€ 4,100.00	
		Sub-Total Activity 1.2 (Cash and Co-Financing)			**€ 26,048.78**	
	1.3 Streamflow and rainfall stations deployed in communities highly susceptible to flooding in Trinidad and Tobago	Personnel	€ 13,776.00	€ 66,408.42	€ 80,184.42	3
		Equipment	€ 111,566.20	€ -	€ 111,566.20	
		Construction Costs	€ 8,084.50	€ -	€ 8,084.50	
		Communications (audiovisual and printing costs)	€ 4,100.00	€ -	€ 4,100.00	
		Sub-Total Activity 1.3 (Cash and Co-Financing)			**€ 203,935.12**	
		Sub-total Output 1 (Cash and Co-Financing)			**€ 240,234.79**	
OUTPUT 2: Flood early warning information	2.1 Communications platform expanded and	Personnel	€ 15,591.55	€ -	€ 15,591.55	
		Equipment	€ 12,126.77	€ -	€ 12,126.77	

EXPECTED RESULTS	KEY ACTIVITIES	BUDGET DESCRIPTION	ECHO CASH (EUROS)	CO-FINANCING (EUROS)	TOTAL BUDGET (EUROS)	BUDGET NOTES
communication/dissemination platform is expanded and useful to more communities, municipalities and governmental agencies in Trinidad and to Tobago	functional to strengthen coverage in Trinidad and Tobago	Construction Costs	€ 30,490.15	€ -	€ 30,490.15	
		Sub-Total Activity 2.1			**€ 58,208.47**	
	2.2 Website for facilitating information dissemination is developed and functional	Personnel	€ 13,776.00	€ 8,200.00	€ 21,976.00	4
		Equipment	€ 5,740.00	€ -	€ 5,740.00	
		Subcontracting	€ 6,150.00	€ -	€ 6,150.00	
		Sub-total Activity 2.2			**€ 33,866.00**	
	2.3 Flood Public Education and Awareness Campaign and Warning Communication and Dissemination Channels strengthened	Personnel	€ 22,632.00	€ -	€ 22,632.00	
		Communications (audiovisual and printing costs)	€ 10,250.00	€ -	€ 10,250.00	
		Sub-total Activity 2.3 (Cash and Co-Financing)			**€ 32,882.00**	
		Sub-total Output 2 (Cash and Co-Financing)			**€ 124,956.47**	
OUTPUT 3: Coordination and management of floods at the community and national levels are enhanced.	3.1 Community Hydrological Observers are established and trained to better prepare for, respond to and recover from flood hazards	Consumables and Goods (trainings and meetings)		€ 64,575.00	€ 64,575.00	5
		Sub-total Activity 3.1(Cash and Co-Financing)			**€ 64,575.00**	
	3.2 An inter-agency coordination mechanism, Flood Management Plan and SOPs are developed	Personnel	€ 41,328.00	€ 24,600.00	€ 65,928.00	6
		Consumables and Goods (trainings and meetings)	€ 820.00	€ -	€ 820.00	

EXPECTED RESULTS	KEY ACTIVITIES	BUDGET DESCRIPTION	ECHO CASH (EUROS)	CO-FINANCING (EUROS)	TOTAL BUDGET (EUROS)	BUDGET NOTES
	for effective management of floods	Subcontracting	€ 8,200.00	€ -	€ 8,200.00	
		Sub-Total Activity 3.2 (Cash and Co-Financing)			**€ 74,948.00**	
		Sub-Total Output 3 (Cash and Co-Financing)			**€ 139,523.00**	
OUTPUT 4: Improved Emergency Response capacities though a crisis modifier	4.1 Anticipatory actions supported	€ -	€ -	€ -	€ -	
	4.2 Response actions supported	€ -	€ -	€ -	€ -	
		Sub-Total Output 4 (Cash and Co-Financing)			**€ -**	
OTHER:						
		Audit	**€ 11,802.17**			7
		Monitoring & Evaluation	**€ 8,200.00**			8
		UNDP Programmatic and Operational Costs	**€ 29,520.00**			9
		GMS	**€ 26,168.22**			10
		SUB-TOTAL CO-FINANCING (UNDP)		**€ 42,232.46**		11
		SUB-TOTAL CO-FINANCING (OTHER DONORS)		**€ 138,172.20**		
		SUB-TOTAL ECHO CASH	**€ 400,000.00**			
		GRAND TOTAL			**€ 580,404.66**	12

Budget Notes	Co-financing Detailed Budget Notes

1	This is UNDP gender focal point time. Co-financing item. Estimated salary is 3500 usd/2870 euros per month. Daily rate is 167 USD/136.94 Euros. Estimate 3 days per month for 3 months = 9 days total.
2	WRA to support data collection by field visits to inform the flood models and map development. Estimate of time = 2 months (42 days) x 4 persons x 72.02USD/59.08 Euros (half-day rates) = USD12,100/9922 Euros Training Time of 8 persons from key agencies such as ODPM, Met Office, MRDLG and WRA (at least 2 from each agency). Estimate of time for 5 full days of training = 8persons*5days*166.67 USD/136.67 Euros per full day= 6666.80USD/5,466.78 Euros ** based on 1 month salary at a rate of 3500 USD/2870 Euros (21 working days per month) = 166.67USD/136.67 Euros per day*
3	20% of UNDP operational and programmatic co-finance cost (50000usd/41000 Euros co-financing for 2 years) + co-financing from WRA for the installation of the equipment at the sites. This is approximately USD10,140.84/8315.49 Euros per station. For 7 stations, this is USD70985.88/58208.42 Euros
4	20% of UNDP operational and programmatic co-finance cost (50000USD/41000Euros co-financing for 2 years)
5	Training of volunteers is approximately USD150/123 Euros per person for Personal Protective Equipment (overalls, hemit, book bag, books, raincoast, torch lights, etc) and USD150/123 Euros for Training per person (4days). Approximately 30 persons per community. Total is 300*30*7=63000USD/51660 Euros Also training for CHO in instrumentation (installation, maintenance, cleaning of sites, etc) - 30 persons per location (9) for 2 days. 30persons x9locations x37.50USD/30.75 Euros per dayx 2 days=USD15,750/12,915 Euros
6	60% of UNDP operational and programmatic co-finance cost (50000 USD/ 41000 Euros co-financing for 2 years)
7	Recall that this budget line is the difference in the GMS calculation between ECHO and UNDP guidelines. As per ECHO's guidelines, GMS was calculated at 7% of the Total Budget (cash and co-financing amount of € 542,434.26), which equates to € 37,970.40. For UNDP and ATLAS, GMS is calculated at 7% of the Cash Contribution from the Donor (€400,000), which equates to € 28,000.00. The difference in GMS is € 9,970.40, which has been allocated to the Audit of the Project during Year 2. This implies that the monies spend on auditing needs to be reported on APPEL in the GMS line.

8 Recall that a budget of € 8,200.00 D is allocated for the hiring of an external evaluator for the conduct of the Final evaluation. This should occur during the last quarter of the project.

Important Note:

In APPEL, the Evaluation is budgeted under Activity 2.3; Budget line – Sub-contracting.

9 Recall that a total of € 29,520.00 has been allocated in the ECHO proposal, which UNDP can charge to the Project. Activities that can be charged include rental of office space, printing, transportation, computers for key project staff members to be hired. For the purpose of the PRODOC, this budget line has been isolated so that it can be adequately tracked by the Project Manager for auditing and reporting purposes during the lifetime of the Project.

See Annex IV for budget details on co-financing related to UNDP operational and programmatic costs.

Important Note:

The budget submitted to APPEL has the € 29,520.00 distributed across the following activities and budget lines:

Activity 1.3 – 20% of € 29,520 included in Personnel budget line

Activity 2.2 – 20% of € 29,520 included in Personnel budget line

Activity 3.2 – 60% of € 29,520 included in Personnel budget line

These details are important when preparing financial statement for submission to APPEL

10 Recall that for UNDP and ATLAS, GMS is calculated at 7% of the programmatic budget, audit, M&E and UNDP operational costs, (total is USD$455,892.41), which equates to USD31,912.47

Important Note:

In APPEL, the GMS reported is €37,970.51; but there was a small discrepancy in the calculation and the GMS should be € 37,970.40. This revised figure needs to be updated in APPEL at the first interim reporting period (14 months). The final accurate numbers are in the PRODOC so that ATLAS will track the project accurately.

11 **Important Note:**

In APPEL, the contribution or co-financing by UNDP reported is € 42,234.14; but there was a small discrepancy in the calculation and the Contribution by UNDP should be € € 42,232.46. This revised figure needs to be updated in APPEL at the first interim reporting period (14 months). The final accurate numbers are in the PRODOC so that ATLAS will track the project accurately.

Co-financing can include time of key staff members at UNDP CO, PANAMA and any other UN agencies that provide technical input and guidance during the implementation of the project. UNDP operational and programmatic costs that exceed the 36,000 USD/29,520 euro budget to be charged to ECHO can also be applied to co-financing budget.

12 **Important Note:**

In APPEL, the TOTAL project costs (cash and co-financing) reported is €580,406.34; but there was a small discrepancy in the calculation and the TOTAL should be €580,404.66. This revised figure needs to be updated in APPEL at the first interim reporting period (14 months). The final accurate numbers are in the PRODOC so that ATLAS will track the project accurately.

XVI. ANNEX V – PROJECT QA ASSESSMENT

PROJECT QA ASSESSMENT: DESIGN AND APPRAISAL

OVERALL PROJECT

EXEMPLARY (5) ●●●●●	HIGHLY SATISFACTORY (4) ●●●●○	SATISFACTORY (3) ●●●○○	NEEDS IMPROVEMENT (2) ●●○○○	INADEQUATE (1) ●○○○○
At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary.	All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary.	At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The Principled criterion must be rated Satisfactory or above.	At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement.	One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement.

DECISION

- **APPROVE** – the project is of sufficient quality to be approved in its current form. Any management actions must be addressed in a timely manner.
- **APPROVE WITH QUALIFICATIONS** – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner.
- **DISAPPROVE** – the project has significant issues that should prevent the project from being approved as drafted.

RATING CRITERIA

For all questions, select the option that best reflects the project

STRATEGIC

1. Does the project's Theory of Change specify how it will contribute to higher level change? Select the option from 1-3 that best reflects the project) • **3:** The project has a theory of change with explicit assumptions and clear change pathway describing how the project will contribute to outcome level change as specified in the programme /CPD, backed by credible evidence of what works effectively in this context. The project document clearly describes why the project's strategy is the best approach at this point in time.	3	2
	1	
	Evidence 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	

• 2: The project has a theory of change. It has an explicit change pathway that explains how the project intends to contribute to outcome-level change and why the project is the best approach at this time, but is backed by limited evidence. • 1: The project does not have a theory of change, but the project document may describe in generic terms how the project will contribute to development results, without specifying the key assumptions. It does not make and explicit link to the programme/CPD's theory of change. **Note. Projects not contributing to a programme must have a project-specific Theory of Change. See alternative question under the lightbulb for these cases*	Trinidad and Tobago subjected to major flooding over the past year (2020). Draft National Integrated Water Resources Management Policy (2018) UNDP Strategy Plan. 2018-2021 UNDP Regional Programme Document for LAC (2018-2021)
2. Is the project aligned with the thematic focus of the UNDP Strategic Plan? Select the option from 1-3 that best reflects the project) • 3: The project responds to one of the three areas of development work as specified in the Strategic Plan; it addresses at least one of the proposed new emerging areas; an issues-based analysis has been incorporated into the project design; and the project's RRF includes all the relevant SP output indicators. *(all must be true to select this option)* • 2: The project responds to one of the three areas of development work as specified in the Strategic Plan. The project's RRF includes at least one SP output indicator, if relevant. *(both must be true to select this option)* • 1: While the project may respond to one of the three areas of development work as specified in the Strategic Plan, it is based on a sectoral approach without addressing the complexity of the development issue. None of the relevant SP indicators are included in the RRF. This answer is also selected if the project does not respond to any of the three areas of development work in the Strategic Plan.	3 | 2 1 **Evidence** Responds to UNDP SP Outcome #3: Build resilience to shocks and crises Respond to UNDP signature solution #3: Enhance national prevention and recovery capacities for resilient societies Responds to UNDP 2018-2021 Strategic Plan Indicator 3.3.1.1 Number of additional countries with operational end-to-end multi-sectoral early warning systems (EWS) to limit the gender-differentiated impact of (a) natural hazards (b) health shocks (c) economic crises and (d) other risk factors
RELEVANT	
3. Does the project have strategies to effectively identify, engage and ensure the meaningful participation of targeted groups/geographic areas with a priority focus on the excluded and marginalized? (Select the option from 1-3 that best reflects this project) • 3: The target groups/geographic areas are appropriately specified, prioritizing the excluded and/or marginalized. Beneficiaries will be identified through a rigorous process based on evidence (if applicable). The project has an explicit strategy to identify, engage and ensure the meaningful participation of specified	3 | 2 1 **Evidence** 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)

target groups/geographic areas throughout the project, including through monitoring and decision-making (such as representation on the project board) (all must be true to select this option) • 2: The target groups/geographic areas are appropriately specified, prioritizing the excluded and/or marginalized. The project document states how beneficiaries will be identified, engaged and how meaningful participation will be ensured throughout the project. (both must be to select this option). • 1: The target groups/geographic areas are not specified, or do not prioritized excluded and/or marginalized populations. The project does not have a written strategy to identify or engage or ensure the meaningful participation of the target groups/ geographic areas throughout the project. *Note: Management Action must be taken for a score of 1. *Projects that build institutional capacity should still identify targeted groups to justify support*	there are currently no streamflow stations or rainfall gauges Data on sex distribution and disabled persons per beneficiary community is available. Aggregate information presented at Table 2. Representatives of the municipal corporations for the beneficiary communities will be engaged on the Project Board
4. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? (Select the option from 1-3 that best reflects this project) • 3: Knowledge and lessons learned (gained e.g. through peer assist sessions) backed by credible evidence from evaluation, corporate policies/strategies, and/or monitoring have been explicitly used, with appropriate referencing, to develop the project's theory of change and justify the approach used by the project over alternatives. • 2: The project design mentions knowledge and lessons learned backed by evidence/sources, which inform the project's theory of change but have not been used/are not sufficient to justify the approach selected over alternatives. • 1: There is only scant, or no mention of knowledge and lessons learned informing the project design. Any references that are made are backed by evidence. *Note: Management Action or strong management justification must be given for a score of 1	3 | 2 1 **Evidence** The execution of the 4 result areas of this action will also 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 (See Section II (Strategy), sub heading "Proposed Approach". Lessons have been incorporated from DIPECHO I and II projects, the Regional Risk Reduction Initiative (R3i), IFRC's community early warning systems: guiding principles (2012) to note a few. See details in Section II (Strategy), sub heading "Proposed Approach".
	3 | **2** 1

5. Does the project use gender analysis in the project design and does the project respond to this gender analysis with concrete measures to address gender inequities and empower women? (Select the option from 1-3 that best reflects this project) • 3: A participatory gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men, and it is fully integrated into the project document. The project establishes concrete priorities to address gender inequalities in its strategy. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (all must be true to select this option) • 2: A gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (all must be true to select this option) • 1: The project design may or may not mention information and/or date on the differential impact of the project's development situation on gender relations, women and men, but the constraints have not clearly identified, and interventions have been considered.	Evidence
6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national partners, other development partners, and other actors? (Select the option from 1-3 that best reflects this project) • 3: An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project. It is clear how results achieved by relevant partners will contribute to outcome level complementing the project's intended results. If relevant, options for south-south and triangular cooperation have been considered, as appropriate. *(all must be true to select this option)* • 2: Some analysis has been conducted on the role of other partners where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project. Options for south-south and triangular cooperation may not have not been fully developed during project design, even if relevant opportunities have been identified. • 1: No clear analysis has been conducted on the role of other partners in the area that the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. There is risk that the project overlaps and/or does not coordinate with partners' interventions	3 | 2 1 Evidence The roles of the national agencies and their contribution to outputs have been discussed extensively in a participatory manner. Details on the roles of the agencies in supporting the various outputs are at Section III. Annex I highlights the roles of the agencies and their role in the project.

in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance. *Note: Management Action or strong management justification must be given for a score of 1	
PRINCIPLED	
7. **Does the project seek to further the realization of human rights using a human rights based approach? (Select from 1-3 that best reflects this project)?** • 3: Credible evidence that the project aims to further the realization of human rights, upholding the relevant international and national laws and standards in the area of the project. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. (all must be true to select this option) • 2: Some evidence that the project aims to further the realization of human rights. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget. • 1: No evidence that the project aims to further the realization of human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered. *Note: Management action or strong management justification must be given for a score of 1	3 / 2 / 1 **Evidence** See the checklist of potential social and environmental risks – Overarching principle Leave No One Behind. Human Rights. The project responded "No" to P1-P7.
8. **Did the project consider potential environmental opportunities and adverse impacts, applying a precautionary approach? (select from options 1-3 that best reflects this project)** • 3: Credible evidence that opportunities to enhance environmental sustainability and integrate poverty-environment linkages were fully considered as relevant and integrated in project strategy and design. Credible evidence that potential adverse environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. (all must be true to select this option). • 2: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Credible evidence that potential adverse environmental impacts have been identified and assessed, if relevant, and appropriate management and mitigation measures incorporated into project design and budget.	3 / 2 / 1 **Evidence** The flood modeling and maps developed under this project 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

• 1: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Limited or no evidence that potential adverse environmental impacts were adequately considered. *Note: Management Action or strong management justification must be given for a score of 1	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. See solution pathway diagram.
9. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? [If yes, upload the completed checklist as evidence. If SESP is not required, provide the reason(s) for the exemption in the evidence section. Exemptions include the following: • Preparation and dissemination of reports, documents and communication materials • Organization of an event, workshop, training • Strengthening capacities of partners to participate in international negotiations and conferences • Partnership coordination (including UN coordination) and management of networks • Global/regional projects with no country level activities (e.g. knowledge management, inter-governmental processes) • UNDP acting as Administrative Agent	Yes (3) / No (1) SESP not required **Evidence**
MANAGEMENT & MONITORING	
10. Does the project have a strong results framework? (Select from options 1-3 that best reflects this project) • 3: The project's selection of outputs and activities are at an appropriate level and relate in a clear way to the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators that measure all of the key expected changes identified in the theory of change, each with credible data sources, and populated baselines and targets, including gender sensitive, sex-disaggregated indicators where appropriate. (all must be true to select this option) • 2: The project's selection of outputs and activities are at an appropriate level but may not cover all aspects of the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of gender sensitive, sex-disaggregated indicators, as appropriate. (all must be true to select this option) • 1: The results framework does not meet all of the conditions specified in selection "2" above. This includes: the project's selection of outputs and activities are not at an appropriate level and do not relate in a clear way to the project's theory of change; outputs are not accompanied by SMART, results-oriented indicators	3 / 2 / 1 **Evidence** See Section V (Results Framework)

that measure the expected change, and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators.		
11. Is there a comprehensive and costed M&E plan with specified data collection sources and methods to support evidence based management, monitoring and evaluation of the project?	Yes (3)	No (1)
12. Is the project's governance mechanism clearly defined in the project document, including planned composition of the project board? (Select from 1-3 that best reflects this project) • 3: The project's governance mechanism is fully defined in the project document. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. (all must be true to select this option)). • 2: The project's governance mechanism is defined in the project document; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The prodoc lists the most important responsibilities of the project board, project director/manager and quality assurance roles. (all must be true to select this option) • 1: The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided. *Note: Management Action or strong management justification must be given for a score of 1	3	2 1 **Evidence** See Section VIII (Governance and Management Arrangement). Organogram included. TOR for Project Board is an Annex to the PRODOC.
13. Have the project risks been identified with clear plans stated to manage and mitigate each risk? (Select from options 1-3 that best reflects this project) • 3: Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis. Clear and complete plan in place to manage and mitigate each risk. (both must be true to select this option) • 2: Project risks related to the achievement of results are identified in the initial project risk log with mitigation measures identified for each risk.	3	2 1 **Evidence** The Risk Log and Social and Environmental Standards and Screening and 2 completed Annexes.

• 1: Some risks may be identified in the initial project risk log, but no evidence of analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and no initial risk log is included with the project document. *Note: Management Action must be taken for a score of 1		
EFFICIENT		
14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners. *(Note: Evidence of at least one measure must be provided to answer yes for this question)*	Yes (3) See section IV (Project Management), sub-section cost efficiency and effectiveness.	No (1)
15. Are explicit plans in place to ensure the project links up with other relevant on-going projects and initiatives, whether led by UNDP, national or other partners, to achieve more efficient results (including, for example, through sharing resources or coordinating delivery?)	Yes (3) Primarily through the project board. The TOR indicates agencies will be co-opted as needed. This includes UN and regional agencies such as CDEMA, CIMH, IFRC.	No (1)
16. Is the budget justified and supported with valid estimates? • 3: The project's budget is at the activity level with funding sources and is specified for the duration of the project period in a multi-year budget. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget. • 2: The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget. Costs are supported with valid estimates based on prevailing rates. • 1: The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget.	3 1 **Evidence** See Section VII (Multi-Year Work Plan)	2
17. Is the Country Office fully recovering the costs involved with project implementation?	3	2

• **3:** The budget fully covers all direct project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.) • **2:** The budget covers significant direct project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant. • **1:** The budget does not reimburse UNDP for direct projects costs. UNDP is a cross-subsidizing the project and the office should advocate for the inclusion of DPC in any project budget revisions. *Note: Management Action must be given for a score of 1. The budget must be revised to fully reflect the costs of implementation before the project commences.	1 **Evidence** See Section VII (Multi-Year Work Plan)
EFFECTIVE	
18. Is the chosen implementation modality most appropriate? (Select from options 1-3 that best reflects this project) • **3:** The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted, and there is evidence that options for implementation modalities have been thoroughly considered. There is a strong justification for choosing the selected modality, based on the development context. (both must be true to select this option) • **2:** The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted and the implementation modality chosen is consistent with the results of the assessments. • **1:** The required assessments have not been conducted, but there may be evidence that options for implementation modalities have been considered.	3 / 2 / 1 **Evidence**
19. Have targeted groups, prioritizing marginalized and excluded populations that will be affected by the project, been engaged in the design of the project in a way that addresses any underlying causes of exclusion and discrimination? • **3:** Credible evidence that all targeted groups, prioritising discriminated and marginalized populations that will be involved in or affected by the project, have been actively engaged in the design of the project. Their views rights and any constrains have been analysed and incorporated into the root cause analysis of the	3 / 2 / 1 **Evidence** See Section III (Results and Partnerships), sub-section: Stakeholder Engagement

theory of change which seeks to address any underlying causes of exclusion and discrimination and the selection of project interventions. • 2: Some evidence that key targeted groups, prioritising marginalized and excluded populations that will be involved in the project, have been engaged in the design of the project. Some evidence that their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change and the selection of project interventions. • 1: No evidence of engagement with marginalized and excluded populations that will be involved in the project during project design. No evidence that the views, rights and constraints of populations have been incorporated into the project.		
20. **Does the project conduct regular monitoring activities, have explicit plan for evaluations, and include other lesson learning (e.g. through After Action Reviews or Lessons Learned Workshops), timed to inform course corrections if needed during project implementation?** **YES** **NO**	Yes (3)	No (1)
21. **The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum.** *Note: Management Action or strong management justification must be given for a score of "no"	Yes (3)	No (1)
	Evidence	
22. **Is there a realistic multi-year work plan and budget to ensure outputs are delivered on time and within allotted resources? (select from options 1-3 that best reflects this project)** 3: The project has a realistic work plan & budget covering the duration of the project at the activity level to ensure outputs are delivered on time and within the allotted resources. 2: The project has a work plan & budget covering the duration of the project at the output level. 1: The project does not yet have a work plan & budget covering the duration of the project.	3	2
	1	
	Evidence See Section VII (Multi-Year Work Plan)	
SUSTAINABILITY & NATIONAL OWNERSHIP		
23. **Have national partners led, or proactively engaged in, the design of the project?** • 3: National partners have full ownership of the project and led the process of the development of the project jointly with UNDP.	3	2
	1	
	Evidence	

• 2: The project has been developed by UNDP in close consultation with national partners. • 1: The project has been developed by UNDP with limited or no engagement with national partners. • Not Applicable		
24. **Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted?)Select from options 1-3 that best reflects this project)** • 3: The project has a comprehensive strategy for strengthening specific capacities of national based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection and adjust the strategy to strengthen national capacities accordingly. • 2.5: A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities. • 2: A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment. • 1.5: There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned. • 1: Capacity assessments have not been carried out and not foreseen. There is no strategy for strengthening specific capacities of national institutions.	3 1 **Evidence**	2
25. **Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.,) to the extent possible?**	Yes (3)	No (1)
26. **Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation and communications strategy)?**	Yes (3)	No (1)

XVII. ANNEX VI -TERMS OF REFERENCE FOR THE PROJECT BOARD

Context: The specific objective of this project is to strengthen community and national capacities for generating impact-based flood early warnings and effectively planning and executing anticipatory projects. There are 7 communities targeted by this project, 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 project will target four key result areas (i) enhance capacities for detecting, monitoring, analysis and forecasting of flood hazards (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 in a crisis

Overall Objective: A Project Board will be established to oversee and to provide overall guidance to the implementation of the Project.

Roles and Responsibilities

Specifically the CFEWS PB will have the following responsibilities:

- Provide overall guidance on the project's strategic policy direction and management, including sustainability of the results;
- Quarterly review and assess the project's progress based upon a pre-defined monitoring and evaluation plan, including advances made towards measurable positive impacts on the environment;
- Discuss and review strategies for improving the sustainability of environmental and social benefits and replication drafted by the PMU;
- Monitor and review co-financing delivered to the project in line with donor and UNDP requirements;
- Review and approve annual Project Reports required by UNDP and the two interim and final reports required by ECHO;
- Annually review and approve the project's work plan and budgets, and provide strategic direction on the work plan;
- Review and approve the TORs for the final evaluation;
- Advise on appropriate mechanisms to strengthen interaction with beneficiary communities, vulnerable groups and national implementing partners;
- Review the extent and effectiveness of stakeholder involvement at the community and national level interventions, particularly among different government sectors that have an interest in or an impact on climate and disaster recovery;
- Review the quality of the outputs from the project against the quality criteria such as budget and time;
- Assess risks to the programme or project, and agree on management actions and resources to address them effectively; and
- Provide guidance and advice in mobilising additional funding to scale-up the CFEWS project in other communities;
- Approve the establishment of technical sub committees, which can provide support to the project manager in achieving specific outcomes of the project

Membership

The PB is proposed to be made up of representatives from, *inter alia*:

i. The Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO)
ii. Office of Disaster Preparedness and Management (ODPM)
iii. Ministry of Rural Development and Local Government (MRDLG)
iv. Water Resources Agency (WRA)
v. Trinidad and Tobago Meteorological Services (TTMS)

vi. Ministry of Works and Transport (MWT)
vii. Tobago Emergency Management Agency (TEMA)
viii. A representative of the DMUs for the regional corporations covering the 7 beneficiary communities on the Project

PB meeting will be made based on the quorum (50%+1). All members must designate alternates to attend if they are not available. Additional representatives may be invited to meetings as temporary participants, as required. These invitees will not have voting or decision-making rights. Additional members can be added to the PB as appropriate and following invitation from the Chair.

Frequency of meetings: the Project Board will meet twice annually (semi-annually). Ad hoc meetings may be convened if (i) the majority of members, submit a request for such a meeting to UNDP or (ii) at the request of the Project Management Unit, when required. The Board will be co-chaired by UNDP and ODPM. UNDP will also serve as the Secretary of the Project Board.

Modality of Meetings: the meetings can be face-to-face or online, pending developments as it relates to the COVID-19 pandemic.

Reporting: the Secretary of the Project Board will send out minutes within 10 working days.

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. Seven (7) communities are targeted to benefit, and they include: Couva Caroni, Maraval (upper and lower), Cunupia, Papurie, Diego Martin, Crooks River, Bacolet River; the first five are in Trinidad and the latter two communities are in Tobago. Majority of these communities are in areas very highly or highly susceptibility to flooding and are among the poorest. The action will target four Output 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 in a crisis

III. General Objective

The Project Coordinator will be responsible for the *day-to-day management* of the project, guiding project implementation and ensuring overall facilitation of activities with UNDP, implementing partners and the donor. The general objective of the consultancy will be supporting, promoting and coordinating the actions required for the successful development and the achievement of the results, outputs and targets, envisioned by the project, ensuring effective linkages between the beneficiaries and national institutions.

IV. Specific Objectives

1. Ensure the achievement of the objectives, goals and results of the project in its technical, budgetary, financial and legal requirements;
2. Support coordination and collaboration between UNDP and implementing partners;
3. Provide technical assistance and guidance to implementing partners at local, national, international level, as appropriate;
4. Participate and support the Communications Specialist in the coordination and organization of public events related to capacity building, awareness building; ensuring that the donors and key partners are appropriately recognized;
5. Provide oversight to the Communications Specialist in the execution of his/her duties, such as the preparation of the communication material of the project, as per UNDP and ECHO policies;
6. Elaborate the annual work plans; develop the substantive and budgetary project revisions;
7. Consolidate and prepare all the technical and financial progress reports such as the quarterly and annual reports required by UNDP and the interim and final reports required by ECHO, which has to be uploaded on APPEL;
8. Liaise with beneficiary communities for coordination, implementation, monitoring, verification and reporting on activities
9. Facilitate the necessary inputs for the financial management and execution of the project;
10. Promote synergies and linkages with programs/projects, governmental entities, stakeholders, non-governmental organizations (NGOs) and civil society organizations linked to the project;
11. Provide support to UNDP team during the selection and hiring process for consultants, preparing drafts of TORs ensuring the appropriate inclusion of performance standards and relevant obligations;
12. Coordinate with the UNDP gender focal point to ensure the key outputs of the project are adequately considering gender
13. Prepare the material and information that will be used in the meetings of the Project Board;
14. Coordinate the systematization and documentation of lessons learned
15. Supervise consultants hired to execute the project activities

16. Support resource mobilization and coordination efforts in disaster risk reduction	
V. Desired Results	
1. Achievement of the results specified in the project document 2. Supervision and guidance to the project team (Communications Specialist, Consultants, National Implementing agencies, Project Board) 3. Effective management of project execution and finalization 4. Ensure follow-up to the recommendations of the Project Board 5. Building of alliances with strategic actors at the community, national, regional and international levels, including Private Sector, NGOs and/or Academia 6. Support to Resource Mobilization in DRR 7. Support CO DRR efforts	
VI. Payment	
Payments will be made against delivery and approval of the supervisor of the deliverables.	
VII. Competencies and Critical Skills	
Education:	• Master's degree in environmental studies, development studies, or relevant area of social sciences
Experience:	• At least 5 years of professional experience in project design, planning, management, implementation and monitoring • At least 3 years of professional experience in disaster reduction/preparedness in the Caribbean • Familiarity with donor funded development projects is an asset; • Experience in early warning systems would be an asset • Experience of joint work and coordination with national government actors • Excellent organizational skills; strong analytical, writing and communication skills; • Strong interpersonal and communication skills; commitment to team work and to working across disciplines; able to work and build teams at a distance; • Able to work independently with no supervision
Language Requirements	• Excellent working level of English, both verbally and written.

XIX. ANNEX VII – TERMS OF REFERENCE FOR COMMUNICATIONS SPECIALIST

UNITED NATIONS DEVELOPMENT PROGRAMME
Trinidad and Tobago Country Office
TERMS OF REFERENCE

I. Information

Job Title:	Communications Specialist
Project:	Community Flood Early Warning System in Trinidad and Tobago
Contract Type	Service Contract
Languages Required	English
Duty Station	Trinidad and Tobago
Supervisor	Programme Officer-Energy, Environment and Disaster Management, UNDP, Trinidad and Tobago
Contracting Authority	United Nations Development Programme
Start Date	Aug, 2021
End Date	May 31st, 2023

II. Background

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; highlighting that flooding is a significant and recurring hazard for the country.

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. Further, activities such as illegal/unregulated quarrying, encroachment of river reserves, backfilling and illegal diversion of watercourses which contributes to sedimentation thereby reducing the capacity of rivers are some of the challenges faced despite over three hundred (300) desilting projects pursued by the Ministry of Works and Transport in recent years.

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. Seven (7) communities are targeted to benefit, and they include: Couva Caroni, Maraval (upper and lower), Cunupia, Papurie, Diego Martin, Crooks River, Bacolet River; the first five are in Trinidad and the latter two communities are in Tobago. Majority of these communities are in areas very highly or highly susceptibility to flooding and are among the poorest. The action will target four Output areas (i) enhance capacities for detecting, monitoring, analysis and forecasting of flood hazards in seven communities – two in Tobago and five 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 in a crisis

III. General Objective

The Communications Consultant will be responsible for developing a public awareness raising, communications and visibility strategy for the project. In addition they will be required to draft and edit public education and awareness and communication and visibility materials related to the Community Flood Early Warning System in Trinidad and Tobago Project in collaboration with the Project Manager and the DRR Focal Point, UNDP Trinidad and Tobago; and contribute to the emergency communications aspects of the flood early warning system

IV. Specific Objectives

1. Develop and maintain close working relations with the beneficiary communities and key implementing partners;
2. Ensure adherence to ECHO, UNDP and the Government of Trinidad and Tobago guidelines and policies for communication and visibility;
3. Develop a targeted Public Education and Awareness campaign for the Community Flood Early Warning Systems in close collaboration with the key project stakeholders;
4. Provide technical input in the design and development of the website for the hosting of live information from the streamflow and rainfall monitoring stations;
5. 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);
6. Develop original content on the progress of the project for the UNDP website and media outlets where relevant;
7. Organize public events related to capacity building and awareness raising ; ensuring that the donors and key partners are appropriately recognized;
8. Support monitoring and reporting of progress in beneficiary communities with the aim of assessing the progress of the project and adjusting the public awareness raising and communications campaigns as required
9. Coordinate with implementing partners to support communication related matters such as press releases, news stories, blogs;
10. Monitor and report on the analytics of the communications and public awareness campaigns
11. Support the project manager in other technical and administrative duties

V. Desired Results

1. Achievement of the results specified in the project document: PEA campaign, visibility products on the progress of the project; warning communication and dissemination channels, website for sharing of live information related to flooding; etc.
2. Effective management of the project's communication and visibility activities

3. Effective collaboration and involvement of key stakeholders of the project in the design of communication and visibility products, including channels for warning information dissemination 4. Ensure follow-up to the recommendations and feedback from key stakeholders on products related to communications and visibility; 5. Building of alliances with strategic actors at the community, national, regional and international levels, including Private Sector, NGOs and/or Academia; 6. Support DRR unit in DRR efforts in the Caribbean region in promoting visibility of work 7. Support Monitoring of project progress including achievement of key targets
VI. Payment
Payments will be made against delivery and approval of the supervisor of the deliverables specified in the ToRs.
VII. Competencies and Critical Skills

Education:	• Advanced Degree (Master's) or equivalent in communications, media, journalism, social sciences or related disciplines.
Experience:	• Minimum of 5 years of national/international professional experience in communication, media, journalism or innovative solutions for development. • Excellent writing, research and analytical. • Demonstrated experience working an international context with a variety of stakeholders, such as senior government officials and United Nations professionals, journalists, policy- and decision-makers • Proven experience in the use of social media platforms to communicate development results; • Experience in emergency communications would be an asset • Proven experience in working on LGBTI inclusion or Gender Equality. • Strong interpersonal and communication skills; commitment to team work and to working across disciplines; able to work and build teams at a distance (if required); • Able to work independently with no supervision
Language Requirements	• Excellent working level of English, both verbally and written.