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CLIMATE FINANCE

INVESTMENT STRATEGY AND INVESTMENT OPTIONS DEVELOPMENT OF PARTNER CITIES

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1. Introduction

The UN Habitat, through Building Climate Resiliency through Urban Plans and Design (BCRUPD) project, supports the national government and cities in improving policies, regulations, and capacities to adapt to climate change through capacity building technical assistance. Emerging from the activities are project proposals that detail climate-responsive sustainable urban development plans and designs, and are prepared by the BCRUPD's five partner cities¹.

BCRUPD, along with its implementing partners² recently conducted an Investment Forum that showcased and promoted the projects for financing. At the Forum, the financing institutions presented their climate finance windows while the cities raised their experiences in accessing climate finance. It became evident that current practices among investors have not served as a panacea to persistent issue of complexity in making climate finance flow to cities' climate adaptation action plans as most banks' investments converge around mitigation projects that generate revenue streams such as energy, transport and smart technology. Further, the currently available international Climate Funds are not being tapped successfully due to intricate approval processes.

This report presents possible investments strategies that can be attractive for varying financing sources. A list of possible active climate financiers as well as national agencies with their particular interests and available budgets (Annex A) was a key input into the financial structuring process. It also contains the investment needs of each City and evaluates the availability and suitability of the different climate finance sources, taking into account their main interests, different requirements, and budget availability.

2. Capital Funding Requirement

The total investment requirement is estimated to value at Php4.18 billion or USD86.91 million, to cover for well-defined projects aimed at addressing diverse climate and disaster risks (Table 1). The detailed costs of each project component that provide an analysis of the implementation programming are tabulated in Annex B while the suitability to the requirements of the financing/funding agency are tabulated in Annex C.

¹ Partner cities include the cities of Angeles, Cagayan de Oro, Legazpi, Ormoc and Tagum

² Institutional partners include the Department of Human Settlements and Urban Development (DHSUD), Department of Interior and Local Government (DILG), Climate Change Commission (CCC), National Economic and Development Authority (NEDA) and the League of Cities of the Philippines (LCP)

Table 1: Summary of Project Cost (amount in million)

	Project Name	Php	USD*
Angeles City	Makayamang Abacan Pangulu Project: Angeles Aquipark Climate Resilience Project	653.55	13.60
Cagayan de Oro city	LUNHAW: Building Climate Resiliency for Cagayan Oro de Oro City	1,130.16	23.52
Legazpi City	Legazpi Climate Resilient Urban Streetscape and Legazpi Green Village	1,333.23	27.74
Ormoc City	Ormoc City Urban Waterscape Project to Address Climate Change Impacts	310.98	6.47
Tagum City	Tagum Tagumpay Citywalk: Increasing the Climate Resilience of Tagum City	748.78	15.58
Total		4,176.70	86.91
<i>*converted at Php48.0551 per USD</i>			

3. Financial Packaging Considerations

While the identified projects aspire to get funded primarily through international climate finance, the cities acknowledge that timing of implementation may be accelerated with a combination of possible various sources namely: National and Local Government co-financing, or separate budget from each level of government (national or local city budget), land value capture, private investors and climate finance.

The TWG went over a packaging exercise to start outlining the financial structure of the projects. The exercise, which was done via a virtual workshop, was framed based on Figure 1.

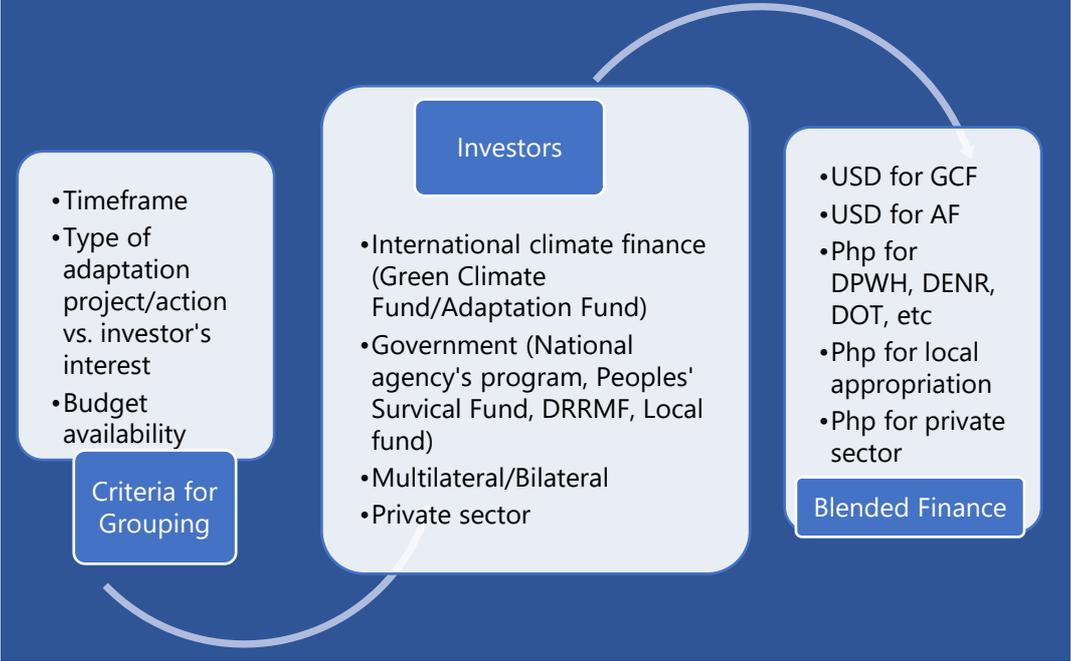
The first step requires grouping the project components based on their timing of implementation, then by sector (e.g., group all investments related to coastal resource, housing, water conservation and sanitation, etc.). Some projects maybe better grouped depending on budget availability from the national government.

Building on the first grouping exercise, investors and project components are matched based on their interest (e.g. sector focus, timing/urgency, bankability³). This track is to identify and cluster investments by funding or financing source. These combinations of investments may be tendered together and/or implemented together.

³ Projects defined at the level of Feasibility and Environmental and Social Impact Assessment

For each of these “groups or deals”, the cities can now develop full business case with assistance from UN Habitat or other organizations, for funding or financing by specific investor/s.

Figure 1: Concept for the Financial Structuring Workshop



4. Investment Strategies

This section provides an overview of the practical investment strategies structured based on a number of conditions:

Implementation Timeframe

Each proposed project sub-component within the planning horizon has been assigned in one, two or all of the three specific planning periods: Phase I for critically urgent components (2022-2023), Phase II (2024-2025), and Phase III (2026-2027). The assignment of these sub-projects into appropriate periods are depicted in Table 2, while Annex B shows all proposed projects per city along with their estimated costs based on 2019 price. A total of Php1.53 billion, representing 37% of total project cost will be implemented in Phase 1, Php1.27 billion (30%) in Phase 2 and Php1.37 billion (33%) in Phase 3. Timing had been determined according to:

- urgency of need
- practicality of getting the needed financing, and
- order or succession of implementation (others might require input of a prior infrastructure)

Table 2: Phasing of Implementation (all amounts in million)

	Phase 1		Phase 2		Phase 3		Totals	
City	Php	USD	Php	USD	Php	USD	Php	USD
Angeles City	217.78	4.53	217.78	4.53	217.78	4.53	653.33	13.60
% of city project cost	33%		33%		33%		100.0%	
Cagayan de Oro city	284.22	5.91	425.00	8.84	420.94	8.76	1,130.16	23.52
% of city project cost	25%		38%		37%		100%	
Legazpi City	449.87	9.36	346.69	7.21	536.68	11.17	1,333.23	27.74
% of city project cost	34%		26%		40%		100%	
Ormoc City	121.82	2.53	138.24	2.88	50.92	1.06	310.98	6.47
% of city project cost	39%		44%		16%		100%	
Tagum City	461.79	9.61	138.26	2.88	148.73	3.10	748.78	15.58
% of city project cost	62%		18%		20%		100%	
Grand Totals	1,535.47	31.95	1,265.96	26.34	1,375.05	28.61	4,176.48	86.91
% of Total	37%		30%		33%		100%	

Financing/Funding Source

To facilitate fund accessing, project components are grouped depending on the main interest of the fund source and budget availability.

Financiers consider the type of the adaptation project (i.e., flood protection, habitat restoration, coastal protection, resettlement of communities on high climate risk areas, water resource management, etc.) and determine if they belong to their priority list of projects. Green Climate Fund (GCF) focuses on innovative and transformative mitigation (low-emission) and adaptation (climate resilient) projects and programs while Adaptation Fund (AF) gives special attention to the most vulnerable communities, addressing survival and human security issues of affected communities. National government agencies (NGA) also follow their mandates and fund projects that will achieve their specific key results areas.

The sub-components that match the interests of the financier are packaged and to be proposed as consolidated project proposal. They have been grouped as follows:

- Sub-components for co-funding from NGA (Table 3.1):
- Sub-components for submission to GCF (Table 3.2)
- Sub-components for submission to AF (Table 3.3)

Following the grouping, sub-components totaling Php154.92 million (USD3.22 million) will be co-funded by the NGAs, Php1.64 billion (USD34.10 million), and

Php1.92 billion (USD39.89 million) will be submitted to GCF and AF, respectively for possible financing or funding (Table 3).

Table 3: Potential External Funding Sources

City	Amounts in Million			
	GCF	AF	National Government	Totals
Angeles City	650.33		-	650.33
Cagayan de Oro city	817.94	71.45	20.33	909.71
Legazpi City		1,040.05	119.59	1,159.64
Ormoc City	78.82	173.11	15.00	266.94
Tagum City	91.39	632.39	-	723.78
Grand Totals	₱ 1,638.47	₱ 1,917.00	₱ 154.92	₱ 3,710.39
Converted to USD (Php48.0551 per US\$)	\$ 34.10	\$ 39.89	\$ 3.22	\$ 77.21
% to total project cost of Php4,176.48 million or USD6.91 million	39%	46%	4%	89%
To be funded from internal sources (Php466.08 or USD9.7 million)				11%

Each of the cities has the following adaptation projects that will need further study and feasibility evaluation to ensure investments by the identified sources. Tables 3.1 - 3.3 detail these projects.

Table 3.1 Components for Co-funding from National Government Agencies (Amounts in million)

Cagayan de Oro City			Php	%
1	Developments in Isla de Oro to increase vegetation cover to reduce heat stress	DENR	20.33	13%
Legazpi City			Php	%
1	Provision of trees for easement on private properties along CRUS to reduce heat stress	DENR	38.09	
2	Shaded bike and pedestrian lane along CRUS to reduce heat stress	DENR/DPWH	65.75	
3	Improvement of drainage system along CRUS to mitigate flash flooding	DPWH	15.75	
Sub Total			119.59	77%
Ormoc City			Php	%
1	Shore improvements to protect against storm surge, improve open space, and build fishing infrastructure for the community and informal settlements	DPWH, DBM-LGSP	15.00	10%
Grand Total			154.92	100%
Converted to USD (Php48.0551 per US\$)			\$3.22	

Cagayan de Oro City will take the biggest chunk of the GCF fund at PhP817.94 million or 50% of the PhP1.64 billion total GCF application. Next to it is Angeles City at PhP650.33 million or 40%. The rest of the GCF possible funding will take less than 10% each of the total (5% for Ormoc City and 6% for Tagum City).

Table 3.2 Sub-components for Submission to Green Climate Fund (Amounts in million)		
Angeles City		
	Php	%
1	Improvements to raise water level at Abacan River	215.91
2	Developments to improve water quality and recharge aquifer	14.79
3	Developments to increase green cover and reduce heat stress	96.42
4	Developments to create pandemic-safe open spaces to promote safe recreation and other healthful practices	255.60
5	Support developments to open space - community facilities, amenities and security	67.61
Sub Total		650.33 40%
Cagayan de Oro City		
	Php	%
1	Development of Isla de Oro into pandemic-safe recreation area to prevent settlers coming back into flood danger zone, including developments on 'land side' to promote access and economic benefits	809.36
2	Developments in Isla de Oro to improve quality of water discharged into CDO River	8.58
Sub Total		817.94 50%
Ormoc City		
	Php	%
	Improvements to existing public areas to improve drainage, and rainwater harvesting for non-potable reuse	78.82 5%
Tagum City		
	Php	%
1	Development of tree-shaded Bikeway Infrastructure as alternative transport to promote exercise, reduce emissions, and reduce heat stress	91.39 6%
Grand Total		1,638.47 100%
Converted to USD (Php48.0551 per US\$)		\$34.10

For the AF application, Legazpi City will take the major share of the total PhP1.92 billion, requesting for PhP1.04 billion or 54%. Next is Tagum City with PhP632.39 million or 33%. The rest of the AF possible funding will go to CDO (4%) and Ormoc City (9%).

Table 3.3 Components for Submission to Adaptation Fund (Amounts in million)

Cagayan de Oro City		
	Php	%
1 Construction of upland retarding basins to reduce flooding downstream and as source of water	17.83	
2 Construction of upland impounding basins to reduce flooding downstream and as source of water (per Hectare cost, total area to be finalized)	53.62	
Sub Total	71.45	4%
Legazpi City		
	Php	%
1 Mangrove rehabilitation at Victory to retreat from sea-level rise and improve fishing livelihood	85.64	
2 Climate-resilient housing at Victory (from sea-level rise and storm surge)	954.41	
Sub Total	1,040.05	54%
Ormoc City		
	Php	%
1 Shore improvements to protect against storm surge, improve open space, and build fishing infrastructure for the community and informal settlements	173.11	9%
Tagum City		
	Php	%
1 Development of PENRO AREA to reduce flooding, reduce heat stress, and as pandemic-safe open space to promote safe recreation and other healthful practices	30.87	
2 Redevelopment of ROTARY PARK to reduce flooding, reduce heat stress, and as pandemic-safe open space to promote safe recreation and other healthful practices	84.40	
3 Improvement of OSMENA - ROTARY PARK ALLEY to help reduce flooding and serve as middle link in the Bikeway to promote bicycle use	19.60	
4 Improvement of TRADE CENTER AREA to reduce flooding, reduce heat stress by increasing green cover, and improve water quality at Magugpo Creek	277.90	
5 Development of Quezon, Bonifacio and Osmena Streets to reduce flooding, improve sanitation, and improve water quality at Magugpo Creek	16.94	
6 Development of Magugpo Creek easement along RIZAL ELEMENTARY SCHOOL to reduce flooding, improve water quality, and as demonstration urban agriculture area for food production	25.77	
7 Resilient Housing for ISF COMMUNITY along Magugpo Creek	43.96	
8 Improvement of GARCIAVILLE PARK to reduce flooding and improve water quality at Magugpo Creek	11.37	
9 Rehabilitation of Magugpo Creek to reduce flooding	121.59	
Sub Total	632.39	33%
Grand Total	1,917.01	100%
Converted to USD (Php48.0551 per US\$)	\$39.89	

5. Financial Structure

The preliminary assumptions with regards to possible sources of the Php4.18 billion (USD86.91 million) needed for the identified adaptation projects are summarized in Table 4. It is projected that 4% or Php154.9 million will be provided by the NGAs, 11% or Php466.1 million from the city governments, while 39% or Php1.6 billion will be applied with GCF and 46% or Php1.9 billion with AF. Please note that the costs may vary upon completion of the Pre-feasibility studies (PFS) or Feasibility studies (FS). The detailed calculation per city is shown in Annex C.

Table 4: Financial Structure

City	Amounts in Million				
	GCF	AF	City local budget	National Government	Totals
Angeles City	650.33		3.00	-	653.33
% of total city project cost	99.5%	0.0%	0.5%	0.0%	100.0%
Cagayan de Oro city	817.94	71.45	220.45	20.33	1,130.16
% of total city project cost	72%	6%	20%	2%	100%
Legazpi City	-	1,040.05	173.59	119.59	1,333.23
% of total city project cost		78%	13%	9%	100%
Ormoc City	78.82	173.11	44.04	15.00	310.98
% of total city project cost	25%	56%	14%	5%	100%
Tagum City	91.39	632.39	25.00	-	748.78
% of total city project cost	12%	84%	3%	0%	100%
Grand Totals Php	1,638.47	1,917.01	466.08	154.92	4,176.48
In USD (Php48.0551 per US\$)	34.10	39.89	9.70	3.22	86.91
% of Total	39%	46%	11%	4%	100%

GCF and AF are released based on a disbursement schedule. Each executing or co-executing entity will be required to open a bank account where the equivalent amount of money will be downloaded. Similar to an imprest system, only when the fund is utilized, that the next fund release is effected. Adhering to such procedure, the disbursements will certainly need to be tracked and monitored.

6. Accomplishments and Path Forward

In the months leading to the Investment Forum, the five cities have identified key actions outlined below, which are focused on ultimately preparing project proposals that can attract climate finance. The goal of the projects being proposed is to improve the cities' resilience by saving lives now and into the future through investments in

urban plans and designs that will reduce the risks and impact of disasters, with priority on the most vulnerable.

- In partnership with non-government entities at various levels and sectors, the cities assessed their vulnerabilities to climate change impacts with strong focus on climate projections based on science and evidence.
- The climate vulnerability assessments have resulted in concrete recommendations for local policy reforms especially around land use, integrated resources management, and climate resilience. However these proposed policy changes remain fragile unless there are infrastructure developments, particularly on urban plans and designs that will support climate resilience.
- Knowing that climate-friendly developments that display urban plans and designs are needful, the cities prioritized projects, with clearer definition as to their environmental, socio-economic benefits and governance.
- As cities identified the projects' specific sites, they prepared development plans capturing climate resilience design strategies of store, retain, resist and delay.
- City health checks were conducted to determine the capacity of the cities to implement projects.
- Capacity building of local government (Technical Working Group), and other government partners was conducted by UN Habitat professionals that resulted in significant gains in generating "buy-in" and support from the local executives.
- Budget requirements of the proposed projects were estimated and shown as Table 1, along with the analysis of the projects' total economic costs and benefits, with the knowledge that this activity remains a work in progress.
- Preparation of project proposals that became the basis of the investment brochures and materials presented at the Investment Forum.

While these are significant achievements, bringing the proposals to a level that will result in climate finance flow still need to be addressed.

- Cities must maintain a core competency of staff who have been identified to continuously deliberate and work on the project proposal. The staff's capability needs to be strengthened and refreshed regularly. Technical assistance and trainings on project feasibility preparation should be sustained.
- The incessant issue around local government's leveraging capacity to access international climate finance can be corrected by exploring innovative partnerships with the private sector and organizations that place importance on climate-friendly investments. Additionally, cities need to work within its own network of local, national and international organizations through intensive promotions or lobbying, to influence the national government agencies such as DPWH, DA, DENR, DHSUD and others to channel development funds for resilience projects.
- The project proposals require further development and work.

7. Potential Activities for Grants Funding

The project proposals are mostly defined at a conceptual level and will require further preparation and development to be considered bankable projects (i.e., projects defined at the level of Feasibility and Environmental and Social Impact Assessment).

Grant funds are critical to support detailed studies necessary to resolve the gaps, as follows:

- Additional data gathering in detailed budget estimation and calculation of additional benefits from resilience and other project co-benefits
- Pricing of perceived co-benefits on the informal settlers' health in terms of reduction on climate events related diseases
- Pricing of economic resilience (increase over baseline), resulting from increased coastal livelihood, jobs generated from new enterprises due to better urban design, increased annual income of the direct beneficiaries; increased contribution to local property and business taxes, among others
- Mangrove cover be assessed in terms of ability to sustain ecosystem services for the poor communities (increased biodiversity, better coastal water quality, higher fish production), or their cost effectiveness
- Study on gender development impact since poor women are more vulnerable to climate change
- More detailed description of operational arrangements following the completion of project construction

Annex A: Climate Finance & Other Sources

Climate finance refers to the financial resources mobilized to fund actions that mitigate and adapt to the impacts of climate change, including public climate finance commitments by developed countries under the United Nations Framework Convention on Climate Change (UNFCCC).⁴ There are several paths through which climate finance flows. The types of climate finance available vary from grants and concessional loans, to guarantees and private equity. The architecture of these options has different structures of governance, modalities and objectives.

The following climate-friendly investment options are available and are being tracked for the projects:

Green Climate Fund (GCF). The GCF is an international fund organized by the UNFCCC in 2010 to support “low emission (mitigation) and climate resilience (adaptation) projects and programs in developing countries”.⁵ The fund is mobilized in different forms such as grants, loans (concessional), equity, and guarantees.

The Climate Change Commission (CCC) is the National Designated Authority (NDA) of the GCF in the Philippines. As the NDA, CCC is responsible for the strategic oversight of GCF activities and “communicates the country’s priorities for financing low-emission and climate-resilient development.” Specifically, The CCC leads the process of issuing a No-Objection Letter, a requirement by GCF for every project proposal applied for funding. The No-objection Procedure is implemented on funding proposals and project preparation facility applications submitted to the GCF. The fund can be accessed through Accredited Entities. The LandBank of the Philippines (LBP) is the first GCF accredited Direct Access Entity (DAE) in the Philippines. Activities carried out by accredited entities include “development of funding proposals and the management and monitoring of projects and programs”.

As of November 2020, GCF has a total funding of USD7.2 billion, USD2.6 billion of which or 36% is for the Asia-Pacific Region. Of the total amount, 44% were in grants, 42% loans and the remaining 14% in equity, results-based payments and guarantees (Figure 1).

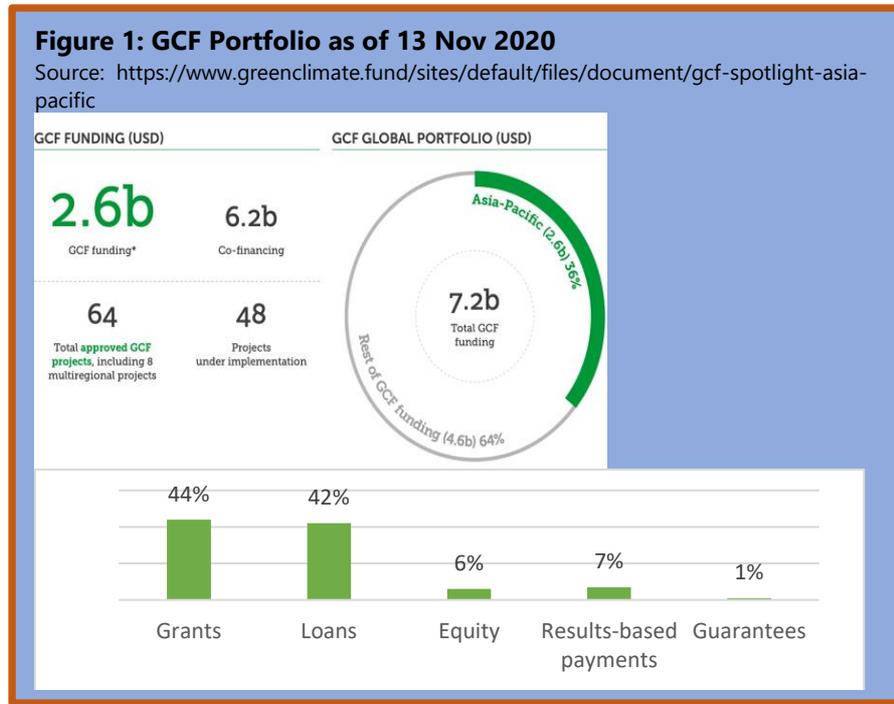
The Simplified Approval Process (SAP) can accelerate approval of small scale projects. Projects are eligible for the SAP if they meet three main eligibility criteria⁶: 1) Ready for scaling up and having the potential for transformation, promoting a paradigm shift to low-emission and climate-resilient development; 2) Project cost of not more than USD 10 million; and 3) The environmental and social risks and impacts are minimal. SAP can support the following activities that have been identified by cities in their project proposal:

⁴ <https://climatefundsupdate.org>

⁵ <https://climate.gov.ph/our-programs/climate-finance/green-climate-fund>

⁶ Source: Greenclimate.fund-asia-pacific

- Household-level facilities such as rainwater harvesting and small-scale renewable energy
- Small-scale rural and urban community-based projects such as village water supply and drainage, and
- Climate resilient agriculture



Adaptation Fund (AF). Established under the Kyoto Protocol of the UNFCCC, the AF finances projects and programs that help vulnerable communities in developing countries to build resilience and adapt to climate change.⁷ Any developing country that is a party to the Kyoto Protocol can access the AF by submitting a project proposal through a National Implementing Entity, a Regional Implementing Entity, or a Multilateral Implementing Entity (MIE). Accredited MIEs in the Philippines are the World Bank, Asian

Development Bank, and the United Nations Development Programme. Below tabulates the AF's portfolio as of June 2020.

APPROVALS CUMULATIVE	
Number of projects approved	107
	US\$ Million
Grant amount*	634.5
Execution costs**	49.7
Entity fees	56.4
Grant amount approved	740.6
Entity fees as % of grant amount approved	7.60%

* Represents only concrete adaptation projects and do not include other forms of grants such as project formulation grants and readiness grants

**Entity fee is capped at 9.5% of the total project cost. It is the fee requested by Implementing Entities for project cycle management services including project supervision.
 Source: Adaptation-fund.org

⁷ <https://www.gov.ph/web/green-climate-fund/adaptation-fund>

People's Survival Fund (PSF)⁸. The PSF was created under Republic Act (RA) No. 10174, which was signed into law in 2012 amending the Climate Change Act of 2009 but received its stipulated Php1-billion replenishable fund allocation under the GAA regular fund only in 2015. The Php1-billion replenishable annual allocation intends to provide support on top of the yearly appropriations to LGUs for climate change related programs and projects. According to the Department of Finance (DOF), among the activities eligible for funding by the PSF are projects on water resources management, land management, agriculture and fisheries, and health, along with other activities that serve as guarantee for the risk insurance needs of farmers, agricultural workers and other stakeholders.⁹

Based on a report from the Bureau of the Treasury (BTr), the PSF has received 172 project proposals from 129 proponents (local government units and local community organizations) all over the country, amounting to a total of Php14.57 billion worth of climate adaptation initiatives. However, most of the proposals submitted to the PSF have failed to pass the initial screening due to incomplete documents or because the project activities are not eligible.

PSF Board has so far approved Php310.34 million worth of projects benefiting six municipalities: Del Carmen, Siargao Island, Surigao del Norte; Lanuza, Surigao del Sur; San Francisco, Camotes Island, Cebu; Gerona, Tarlac; Sarangani Province; and Kitcharao, Agusan del Norte. To date, Php147.46 million of the approved financing has been disbursed to the LGUs. This low disbursement rate is due to delays in project implementation owing to uncontrollable events such as the COVID-19 pandemic, natural disasters affecting the project sites, and the conduct of national elections.

Of the approved projects, only the municipality of Del Carmen in Siargao Island, Surigao del Norte is on time in terms of implementation schedule, with the BTr already disbursing Php39.24 million (48.6%) of the Php80.7 million approved financing. The BTr has so far disbursed Php27.32 million of the Php39.08 million approved amount for the project of municipality of Lanuza in Surigao del Sur; Php5.41 million of the Php33.89 million for the town of San Francisco in Camotes Island, Cebu; Php5.71 million of the Php38.1 million for Gerona in Tarlac; and Php69.78 million of the Php93.6 million for the province of Sarangani. Nothing has been disbursed yet for the Php24.99 million project of the town of Kitcharao in Agusan del Norte because the LGU still has to submit the required documents for the release of the funds.

Reportedly, the difficulties encountered by the LGUs in submitting their revised work and financial plans, which should first be approved by the PSF Board before further disbursements can be made. To encourage more LGUs to access the PSF, the Board has simplified the requirements for submitting a valid proposal. The original 14 requirements were reduced to only four:

1. Letter of intent signed by the local chief executive, or head of the organization;
2. Accomplished project proposal template with Work and Financial Plan;

⁸ <https://climate.gov.ph/our-programs/climate-finance/peoples-survival-fund>

⁹ <https://www.dof.gov.ph/peoples-survival-fund-seeks-to-find-solution-to-climate-crisis/>

3. Any reference document such as enhanced Comprehensive Development Plan, enhanced Comprehensive Land Use Plan, Local Climate Change Action Plan, or any risk and vulnerability assessment; and
4. Annual Investment Plan

Green Financing Program (GFP) of the Development Bank of the Philippines (DBP)¹⁰

The loan under the Green Financing Program (GFP) is offered to private and government entities including local governments. The maximum repayment period is 15 years with up to 5 years grace period, and can cover up to 90% of the total project cost. Eligible projects from the five cities' proposals may include:

- Water Pollution Prevention and Control
- Resource Conservation, Resource Efficiency and Cleaner Production
- Climate Change Adaptation and Mitigation and Disaster Risk Reduction
- Other environmental/green projects/initiatives

Landbank (LBP). LBP is thus far the only Accredited Entity in the country to implement GCF projects. As an AE, it carries out activities that usually include the development of funding proposals and the management and monitoring of projects and programs. It also offers the **Smart City Development Lending Program** that allows cities, particularly highly urbanized cities, to adapt artificial intelligence, robotics, and information technology to make their cities more convenient and livable.

National Government Agencies

The following national government agencies have spending priorities for adaptation programs which may be tapped by the city governments to co-finance their projects. While the amounts are under the 2021 national budget, they are shown here as possible minimum appropriations in the succeeding budget years.

¹⁰ <https://www.dbp.ph/developmental-banking/environment-initiatives/green-financing-program/>
<https://www.dbp.ph/wp-content/uploads/2020/09/GFP.pdf>

National Agency	Program	Amount (in Billion)
Department of Public Works & Highways	Flood Management	₱ 101.80
National Irrigation Administration	Food Security	31.70
Department of Environment & Natural Resources	National Greening Program	5.15
Department of Human Settlements & Urban Development -NHA	Lot Development & Provision of Housing Community Facilities	2.00
Local Government Support Fund	Financial Assistance to LGUs for local roads, buildings/halls , drainage canals; sea wall or river wall; water system projects, public parks; street lighting or barangay electrification, etc.	12.40
	Total	₱ 153.05

Source: Department of Budget & Management, 2021 Budget

Annex B: Detailed Phasing of Implementation by City

Table 2.1 (all amounts in million)			Phase 1		Phase 2		Phase 3	
City	#	Project Sub-component	Php	USD*	Php	USD*	Php	USD*
Angeles City	1	Improvements to raise water level at Abacan River	71.97	1.50	71.97	1.50	71.97	1.50
	2	Developments to improve water quality and recharge aquifer	4.93	0.10	4.93	0.10	4.93	0.10
	3	Developments to increase green cover and reduce heat stress	32.14	0.67	32.14	0.67	32.14	0.67
	4	Developments to create pandemic-safe open spaces to promote safe recreation and other healthful practices	85.20	1.77	85.20	1.77	85.20	1.77
	5	Support developments to open space - community facilities, amenities and security	23.54	0.49	23.54	0.49	23.54	0.49
		Sub Total	217.78	4.53	217.78	4.53	217.78	4.53
	% of Sub-total		33%		33%		33%	

Table 2.2			Phase 1		Phase 2		Phase 3	
City	#	Project Sub-component	Php	USD*	Php	USD*	Php	USD*
Cagayan de Oro city	1	Construction of upland retarding basins to reduce flooding downstream and as source of water	17.83	0.37				
	2	Construction of upland impounding basins to reduce flooding downstream and as source of water (per Hectare cost, total area to be finalized)	53.62	1.12				
	3	Development of Isla de Oro into pandemic-safe recreation area to prevent settlers coming back into flood danger zone, including developments on 'land side' to promote access and economic benefits		-	404.68	8.42	404.68	8.42
	4	Developments in Isla de Oro to improve quality of water discharged into CDO River	8.58	0.18				
	5	Developments in Isla de Oro to increase vegetation cover to reduce heat stress	4.07	0.08	20.33	0.42	16.26	0.34
	6	Developments in Divisoria to reduce heat stress, promote healthy recreation activities, and connect physically to Isla de Oro recreation area	200.12	4.16				
		Sub Total	284.22	5.91	425.00	8.84	420.94	8.76
	% of Sub-total		25%		38%		37%	

Table 2.3			Phase 1		Phase 2		Phase 3	
City	#	Project Sub-component	Php	USD*	Php	USD*	Php	USD*
Legazpi City	1	Provision of trees for easement on private properties along CRUS to reduce heat stress	38.09	0.79	38.09	0.79		
	2	Shaded bike and pedestrian lane along CRUS to reduce heat stress	65.75	1.37	65.75	1.37		
	3	Improvement of drainage system along CRUS to mitigate flash flooding	15.74	0.33	15.74	0.33		
	4	Mangrove rehabilitation at Victory to retreat from sea-level rise and improve fishing livelihood	89.64	1.87		-		
	5	Climate-resilient housing at Victory (from sea-level rise and storm surge)	240.64	5.01	227.10	4.73	536.68	11.17
		Sub Total	449.87	9.36	346.69	7.21	536.68	11.17
	% of Sub-total		34%		26%		40%	

Table 2.4			Phase 1		Phase 2		Phase 3	
City	#	Project Sub-component	Php	USD*	Php	USD*	Php	USD*
Ormoc City	1	Improvements to existing public areas to improve drainage, and rainwater harvesting for non-potable reuse	72.68	1.51	28.05	0.58		
	2	Shore improvements to protect against storm surge, improve open space, and build fishing infrastructure for the community and informal settlements	49.14	1.02	110.19	2.29	50.92	1.06
		Sub Total	121.82	2.53	138.24	2.88	50.92	1.06
		% of Sub-total		39%		45%		16%

Table 2.5			Phase 1		Phase 2		Phase 3	
City	#	Project Sub-component	Php	USD*	Php	USD*	Php	USD*
Tagum City	1	Development of PENRO AREA to reduce flooding, reduce heat stress, and as pandemic-safe open space to promote safe recreation and other healthful practices					30.87	0.64
	2	Redevelopment of ROTARY PARK to reduce flooding, reduce heat stress, and as pandemic-safe open space to promote safe recreation and other healthful practices	102.40	2.13				
	3	Improvement of OSMENA - ROTARY PARK ALLEY to help reduce flooding and serve as middle link in the Bikeway to promote bicycle use	20.60	0.43				
	4	Improvement of TRADE CENTER AREA to reduce flooding, reduce heat stress by increasing green cover, and improve water quality at Magugpo Creek	277.90	5.78				
	5	Development of Q,B,O Streets to reduce flooding, improve sanitation, and improve water quality at Magugpo Creek	16.94	0.35				
	6	Development of Magugpo Creek easement along RIZAL ELEMENTARY SCHOOL to reduce flooding, improve water quality, and as demonstration urban agriculture area for food production			31.77	0.66		
	7	Resilient Housing for ISF COMMUNITY along Magugpo Creek	43.96	0.91				
	8	Improvement of GARCIAVILLE PARK to reduce flooding and improve water quality at Magugpo Creek					11.37	0.24
	9	Rehabilitation of Magugpo Creek to reduce flooding			60.79	1.27	60.79	1.27
	10	Development of tree-shaded Bikeway Infrastructure as alternative transport to promote exercise, reduce emissions, and reduce heat stress			45.69	0.95	45.69	0.95
		Sub Total	461.79	9.61	138.26	2.88	148.73	3.10
		% of Sub-total	62%		18%		20%	
Grand Total			1,535.47	31.95	1,265.96	26.34	1,375.05	28.61
%			37%		30%		33%	
*converted at Php48,0551 per USD								

Annex C: Detailed Financial Structure by Sub-component per City

All amounts in million

City	#	Project Sub-component	GCF	AF	City local budget	National Government	Amount	Totals
Angeles City	1	Improvements to raise water level at Abacan River	215.91					215.91
	2	Developments to improve water quality and recharge aquifer	14.79					14.79
	3	Developments to increase green cover and reduce heat stress	96.42					96.42
	4	Developments to create pandemic-safe open spaces to promote safe recreation and other healthful practices	255.60					255.60
	5	Support developments to open space - community facilities, amenities and security	67.61		3.00			70.61
		Sub Total	650.33		3.00	-	-	653.33
	% of Sub-total		99.5%	0.0%	0.5%		0.0%	100.0%
Cagayan de Oro city	1	Construction of upland retarding basins to reduce flooding downstream and as source of water		17.83				17.83
	2	Construction of upland impounding basins to reduce flooding downstream and as source of water (per Hectare cost, total area to be finalized)		53.62				53.62
	3	Development of Isla de Oro into pandemic-safe recreation area to prevent settlers coming back into flood danger zone, including developments on 'land side' to promote access and economic benefits	809.36					809.36
	4	Developments in Isla de Oro to improve quality of water discharged into CDO River	8.58					8.58

	#	Project Sub-component	GCF	AF	City local budget	National Government	Amount	Totals
	5	Developments in Isla de Oro to increase vegetation cover to reduce heat stress			20.33	DENR	20.33	40.65
	6	Developments in Divisoria to reduce heat stress, promote healthy recreation activities, and connect physically to Isla de Oro recreation area			200.12			200.12
		Sub Total	817.94	71.45	220.45	-	20.33	1,130.16
		% of Sub-total	72%	6%	20%		2%	100%
Legazpi City	1	Provision of trees for easement on private properties along CRUS to reduce heat stress			38.09	DENR	38.09	76.18
	2	Shaded bike and pedestrian lane along CRUS to reduce heat stress			65.75	DENR/DPWH	65.75	131.51
	3	Improvement of drainage system along CRUS to mitigate flash flooding			15.75	DPWH	15.75	31.49
	4	Mangrove rehabilitation at Victory to retreat from sea-level rise and improve fishing livelihood		85.64	4.00			89.64
	5	Climate-resilient housing at Victory (from sea-level rise and storm surge)		954.41	50.00			1,004.41
		Sub Total	-	1,040.05	173.59	-	119.59	1,333.23
		% of Sub-total		78.0%	13.0%		9.0%	100.0%
Ormoc City	1	Improvements to existing public areas to improve drainage, and rainwater harvesting for non-potable reuse	78.82		21.91			100.73
	2	Shore improvements to protect against storm surge, improve open space, and build fishing infrastructure for the community and informal settlements		173.11	22.13	DPWH, DBM-LGSP	15.00	210.24
		Sub Total	78.82	173.11	44.04	-	15.00	310.98
		% of Sub-total	25%	56%	14%		5%	100%

City	#	Project Sub-component	GCF	AF	City	NGA	Amount	Totals
Tagum City	1	Development of PENRO AREA to reduce flooding, reduce heat stress, and as pandemic-safe open space to promote safe recreation and other healthful practices		30.87				30.87
	2	Redevelopment of ROTARY PARK to reduce flooding, reduce heat stress, and as pandemic-safe open space to promote safe recreation and other healthful practices		84.40	18.00			102.40
	3	Improvement of OSMENA - ROTARY PARK ALLEY to help reduce flooding and serve as middle link in the Bikeway to promote bicycle use		19.60	1.00			20.60
	4	Improvement of TRADE CENTER AREA to reduce flooding, reduce heat stress by increasing green cover, and improve water quality at Magugpo Creek		277.90				277.90
	5	Development of Quezon, Bonifacio and Osmena Streets to reduce flooding, improve sanitation, and improve water quality at Magugpo Creek		16.94				16.94
	6	Development of Magugpo Creek easement along RIZAL ELEMENTARY SCHOOL to reduce flooding, improve water quality, and as demonstration urban agriculture area for food production		25.77	6.00			31.77
	7	Resilient Housing for ISF COMMUNITY along Magugpo Creek		43.96				43.96
	8	Improvement of GARCIVILLE PARK to reduce flooding and improve water quality at Magugpo Creek		11.37				11.37
	9	Rehabilitation of Magugpo Creek to reduce flooding		121.59				121.59
	10	Development of tree-shaded Bikeway Infrastructure as alternative transport to promote exercise, reduce emissions, and reduce heat stress	91.39					91.39
	Sub Total	91.39	632.39	25.00		-	-	748.78
	% of Sub-total	12%	84%	3%			0%	100%

Summary	GCF	AF	City	Various NGAs	NGA	Total
Grand Total	1,638.47	1,917.01	466.08	-	154.92	4,176.48
%	39%	46%	11%		4%	100%
<i>*converted at Php48.0551 per USD</i>						