GCF Investments in Climate Information and Early warning Systems



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Global Forum on International Development Cooperation for Climate Change Response in Asia, 3 June 2021

OUTLINE



- **1**. Background
- 2. Green Climate Fund
- 3. GCF Investment in Climate Information and Early Warning Systems
- 4. Case studies
- 5. Questions



1 BACKGROUND

HITHER YOU

GLOBAL CONTEXT



Climate Impacts

- □ In the last 50 years, storms (i), floods (ii), tropical cyclones (iii) and droughts (iv) caused 3.7 million deaths and 7.6 billion people were affected (Guha-Sapir 2018).
- Global economic losses during this period amount to more than 2.4 trillion US\$ - or 0.2% of world GDP each year.
- Relative to GDP, small island developing states and African countries experience the heaviest damages.
- Costs are increasing: 50 Bn US\$ / yr (2007); 70-100 Bn US\$ / yr (2010), 280-500 Bn US\$ / yr (2016).
- □ The cost of establishing and operating fitfor-purpose interventions (e.g. CIEWS) too expensive for developing countries.

INDC, NAPA, NAP

- All 13 Parties which have submitted NAPs as of June 2019 mention climate information.
- Early Warning Systems (EWS) are found in 50% of the NDCs submitted.
- Ambition is clear, but the identification of action is lacking, even in countries that are highly vulnerable to climate change.
- Quality of the information provided is low, in most cases superficial and incomplete.

Market assessment

- Lowest capacity in Africa, LDCs & SIDS.
- Growth driven by vibrant private sectors (energy, aviation, large scale agriculture, infrastructure resilience).

BARRIERS

Lack of enabling environment for **institutional effectiveness**

Lack of coverage and scale for effective service delivery in terms of quantity and quality of **hard infrastructure** and inadequate **soft infrastructure** for ensuring delivery and uptake of risk information.





Limited governmental finances and **budgets** allocation (e.g. NMHS & NDMA).

The complexities of - production, dissemination and uptake of risk information

> Market barriers to creating enabling conditions

OPPORTUNITIES IN DISASTER RISK REDUCTION AND CLIMATE RESILIENCE BUILDING



	Growing demand far exceeds supply (INDCs) - 77% of Africa and Middle East, 76%	
<u>/~</u>	of Latin America and the Caribbean 100% of Asia and Pacific	



Climate information and early warning services and broader resilience landscape have **market potential** for unlocking private sector investments and participation



Growing commitment across global, continental and national scales (Paris Agreement, Sustainable Development Goals, Sendai Framework, Global Framework for Climate Services)



Unique opportunity to enhance coherence and complementarity of investments



Leveraging private sector **finance**, public budgets and public-private **partnerships**



2 GREEN CLIMATE FUND





An operating entity of **the UNFCCC** fostering a **paradigm shift** to low-emission and climate-resilient development pathways in developing countries

GCF PORTFOLIO





10



PRIVATE SECTOR – FOCUS AREAS



Climate Funds

- Mobilize equity investment for climate through funds
- Deployment of funds with strong country ownership
- Promote finance for innovation across sectors



Financial Institutions

- Green lending and risksharing through FIs
- Create and support green banks and FI units
- Help mainstream climate change in the financial sector



Project Finance

- Life cycle financing for high impact projects
- Transformative and replicable investments at scale
- Promotion of market changing business models



Climate Markets

- Develop capital and carbon markets for impact
- Structured financing solutions at scale
- Mobilize institutional investment for new markets



Climate Technology & Innovation

- Investments in transformative climate technologies
- Support for local innovation and market accelerators
- Special projects

Five areas of practice to maximize mobilization and impact



GCF PORTFOLIO COMPOSITION





Flexibility in deployment: mitigation/adaptation, public/private, and financial instruments

WHAT DO WE LOOK FOR?





HOW DO WE WORK?





STRUCTURED APPROVAL PROCESS





Project approval process requires country-driven approach

3 GCF Investment in Disaster Risk Reduction & Climate Resilience Building – Focus on CIEWS

KEY PARADIGM-SHIFTING CONSIDERATIONS TO ENSURE SUSTAINABILITY OF INVESTMENTS



Transformational planning and programming

 Climate science informs strategic plans and country programming; implementation aimed at coherence and complementarity, efficiency and effectiveness.

Catalyzing climate innovation

 Innovations in GFCS, GBON, IBF, FBF, (IoT, Big Data, Cloud Computing) to underpin project design, create strategic partnerships, quality management and improve policy.

Mobilizing investment at scale

 Innovative financing options, enable blended finance and key partnerships to leverage and scale up investments

Expansion and replication of knowledge

<u>B</u>

 Knowledge brokering on climate investments, science and technology through institutional collaboration; monitoring, evaluation and learning to ensure impact evaluation

Synergetic action between government and private sector, enabled and facilitated by GCF

OPPORTUNITIES AND ROLE OF GOVERNMENT



Government not only a consumer but also as a **seller of services**, to [®] business and other consumers.

Dual synergies for both government and GCF:



The government can **provide important services** to society to improve cost effectiveness (e.g. related to relief expenditure, disaster management) **while maximising the performance of critical infrastructure**;



GCF can provide CIEWS for several countries, creating a strong pipeline of **climate mitigation and adaptation projects**.





The **distribution** varies across regions and country groupings. Asia Pacific 44%, Africa 34%; Latin America & Caribbean 20%; Eastern Europe 2%.



International entities continue to dominate the CIEWS portfolio, receiving about 94% of total GCF resources.



21 % of projects focus on modernization of hydromet services and 79% focus on sector applications (result areas)

4 CASE STUDIES

MULTI-HAZARD IMPACT-BASED FORECASTING AND EARLY WARNING SYSTEM (MH-IBF-EWS) FOR THE PHILIPPINES

Country	GCF financing	Accredited entity	Financial instrument	Year approved
Philippines	USD 10 million	LandBank	Grant	2018

• One of the most vulnerable countries to climate variability and change —with economy and livelihoods severely impacted annually by climate disasters (e.g. typhoons)

GREEN CLIMATE

- Proposed approaches uses state-of-the-art multi-hazard impactbased forecasting and forecast-based financing to reduce disaster risk
- Opportunity to leverage high-level political buy-in (presidency, parliament, municipal heads) to demonstrate value of GCF in climate action
- Focus on Most vulnerable people and communities; Health and wellbeing, and food and water security; Infrastructure and built environment; and Ecosystem and ecosystem services
- Directly benefits 14.5 million (14.3% of pop) and indirectly/potentially 100% of population





UNEP PACIFIC CIEWS MULTI-COUNTRY PROGRAMME

Country	GCF financing	Accredited entity	Financial instrument	Year approved
Cook Islands, Niue, Palau, Republic of the Marshall Islands and Tuvalu	USD 47.4 million	UNEP	Grant	2019

- Support increased climate-resilient sustainable development in 5 Pacific countries through targeted CIEWS investments
- CIS strengthening through capacity building and improved policy frameworks
- Investments in climate and marine infrastructure and data management
- Community-based EWS and disaster risk management
- Establishment of regional knowledge and data hub



SAFEGUARDING RURAL COMMUNITIES AND THEIR PHYSICAL ASSETS FROM CLIMATE INDUCED DISASTERS IN TIMOR LESTE

Country	GCF financing	Accredited entity	Financial instrument	Year approved
Timo-Leste	USD 22.36 million	UNDP	Grant	2018

- Impact-based Multi-hazard EWS for climate resilient rural infrastructure planning & management
 - Forecasting, risk modeling, communication & response
- Climate risk reduction & risk-proofing measures for strengthening resilience of small-scale rural infrastructure
 47 slope stabilization projects (216.94 km)
 - 38 enhanced water supply systems
 - 25 improved irrigation systems (54.18km)
 - 20 flood defenses (14.15 km)

CLIMATE FUND

300 ha of agroforestry and reforestation





CLIMATE INVESTOR ONE

Country	GCF financing	Accredited entity	Financial instrument	Year approved
Burundi, Cameroon, Djibouti, Indonesia, Kenya, Madagascar, Malawi, Mongolia, Morocco, Nigeria, Uganda, <i>Ecuador, Ethiopia, Mauritius, the</i> Philippines, Senegal, Tunisia and Zambia *	USD 100 million	FMO	Equity	2018

- Innovative blended equity fund offering end-to-end full project lifecycle financing for renewable energy projects
- Faster and cheaper delivery of 20-30 RE (solar, wind and RoR hydro) projects (25-75MW) than conventional project financing
- Potential for scaling and replication of CIO model across other markets
- Emission reduction of 40 million tCO₂e



* Countries in *italics* were added at B.27 in November 2020



Country	GCF financing	Accredited entity	Financial instrument	Year approved
Armenia, Jordan, Kazakhstan, Morocco, Serbia, Tunisia and Uzbekistan	USD 258 million	EBRD	Senior Loans, Sub-loans, Grants	2020

- GCF's first at-scale investment to promote the uptake of lowcarbon technologies in the industrial sector
- Interventions to target substantive process-related efficiency gains e.g. waste heat recovery and use
- Innovative concessional loan model to incentivize behavioral change at the corporate governance and management level
- Demonstration effect to enhance commercial viability of lowcarbon investments and drive more corporates to commit to potentially disruptive investment decisions
- Est. emission reductions of 17.2 million tCO2e





Raising ambition. Empowering action.

FIJ AGEROPHOTOVOLTAIC PROJECT IN OVALAU

Country	GCF financing	Accredited entity	Financial instrument	Year approved
Fiji	USD 5 million	FDB	Senior loan + Grant	2020

- Financing a 4MW solar agrophotovoltaic (APV) system and 5MW battery energy storage system
- Allows simultaneous development of solar power generation with battery storage and, as a co-benefit, local agricultural production
- Provides technical assistance to strengthen the capacity of relevant local communities and to establish a climate project financing facility within FDB.
- Est. emission reduction of 0.9 million tCO2e.



GCF CIEWS PORTFOLIO



21 % of projects focus on modernization of hydromet services and 79% focus on sector applications



GCF resources by region and country groupings

• LDCs, SIDs, African Countries • Other developing countries

Distribution of total investments by region

