



ADAPTATION FUND

Scaling up adaptation finance

Experiences and lessons learned
from the Adaptation Fund portfolio
of projects and programmes

OCTOBER 2022

Table of contents

Executive summary	1
I. Introduction	2
1. Defining scalability	2
A. Definition of scaling-up	2
B. Scaling-up approaches	3
2. Why scalability matters	5
3. Objective of the study	5
4. The role of the Fund in scaling up adaptation interventions	6
II. Methodology	8
III. Overview of scaled-up projects in the Fund portfolio: Case studies	9
1. “Adaptation to Coastal Erosion in Vulnerable Areas”, Senegal, Centre de Suivi Ecologique (CSE), USD 8.6 million (2010).	9
2. “Increasing Climate Resilience through an Integrated Water Resource Management Programme in HA. Ihavandhoo, ADh Mahibadhoo, and GDh. Gadhdhoo Island”, Maldives, UNDP, USD 9 million (2010).	10
3. “Reducing Risks and Vulnerabilities from Glacier Lake Outburst Floods in Northern Pakistan”, Pakistan, UNDP, USD 7.9 million (2010).	11
4. “Reducing Risk and Vulnerability to Climate Change in the Region of La Depresión Momposina in Colombia”, Colombia, UNDP, USD 8.5 million (2012).....	13
5. “Developing Climate-Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia”, Georgia, UNDP, USD 5.3 million (2011).	14
6. “Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise”, India, NABARD and UNDP, USD 0.7 million (2014).	15
7. “Reducing Vulnerability to Climate Change in North West Rwanda through Community-Based Adaptation”, Rwanda, Rwanda Ministry of Environment, USD 10 million (2013).	16

Table of contents

Analysis.....	17
1. Factors of scale-up success.....	17
A. Proof of concept.....	17
B. Financial and operational self-sustainability.....	19
C. Strong demand and engagement of local stakeholders.....	20
D. Applicability of the programme to a wider coverage	20
2. Factors of scale-up failures	21
A. Financing and cost constraints.....	21
B. Lack of involvement of local stakeholders.....	22
C. Lack of institutional support or stability.....	23
D. Information and knowledge constraints	23
E. Complexity Constraints.....	24
IV. Conclusions and recommendations	26
V. Annex: Questionnaires for entities that scaled up Fund-financed project	29
A. UNDP: “Increasing climate resilience through an Integrated Water Resource Management Programme in HA. Ihavandhoo, ADh Mahibadhoo and GDh. Gadhdhoo Island”, 2010.....	29
B. UNDP: “Reducing Risks and Vulnerabilities from Glacier Lake Outburst Floods in Northern Pakistan”, 2010.....	30
C. UNDP: “Reducing Risk and Vulnerability to Climate Change in the Region of La Depresión Momposina in Colombia”, 2012	32
D. UNDP: “Developing Climate-Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia”, 2011	34
E. UNDP/NABARD: “Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise”, 2014.....	36
VI. References	38

Disclaimer

The findings, interpretations, and conclusions expressed in this study do not necessarily reflect the views of the Adaptation Fund, the Adaptation Fund Board, or its secretariat. The Adaptation Fund does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. This material should not be reproduced or distributed without the Adaptation Fund's prior consent.

Acronyms

AF	Adaptation Fund
COP	Conference of the Parties
CSE	Centre de Suivi Ecologique
DA	Designated Authority
EWS	Early Warning System
FFEWS	Flood Forecasting and Early Warning System
GCF	Green Climate Fund
GEF	Global Environment Facility
GLOFs	Glacial Lake Outburst Floods
IMFFS	Integrated Mangrove Fishery Farming System
LAC	Latin America and the Caribbean
MIEs	Multilateral Implementing Entities
MoE	Ministry of Environment
MTS	Medium-Term Strategy of the Fund
NABARD	National Bank for Agriculture and Rural Development
NAPs	National Adaptation Plans
NDA	National Designated Authority
NDCs	Nationally Determined Contributions
NIEs	National Implementing Entities
OECD	Organisation for Economic Co-operation and Development
RIEs	Regional Implementing Entities
SANBI	South Africa National Biodiversity Institution
UNDP	United Nations Development Programme
WFP	World Food Programme
WHO	World Health Organization

Executive summary

Since becoming operational 15 years ago, the Adaptation Fund (the Fund) has pioneered an institutional approach that promotes the financing of small-scale pilots for innovative adaptation interventions through “Direct Access”. This approach enables Implementing Entities (IEs) to access finance directly from the Fund without an intermediary. In this way, adaptation pilots can be implemented more swiftly and efficiently, and knowledge is enabled at the institutional level. The Fund pilots aim to deliver robust demonstration of results and disseminate best practices and lessons learned on climate adaptation. As such, other funds and institutions choose to build upon these pilots, scaling them up into larger projects.

In recent years, potential for scale-up has become a criterion for receiving financing from many climate-focused multilateral funds. However, few studies have demonstrated what enabling factors could lead to scale-up, or how to plan scale-up options in project design. For this study, scaling-up is defined as increasing the impact of innovations, policies, programmes, and projects successfully tested in pilots by extending their outreach to more people, in different places over time, and ensuring this deliberate expansion is done sustainably by adapting to local context and fostering policy change and programme development on a lasting basis. In the realm of climate finance, mitigation interventions have been scaled up more frequently than those for adaptation (Kata et al., 2014).

This study aims to understand enabling conditions, best practices, and challenges to the scaling-up of adaptation interventions. Its overarching objectives are to increase awareness in countries and the wider adaptation community. Equally important, it seeks to generate and share knowledge on incentives and benefits of scaling up successful smaller pilot projects financed by one fund, with resources from other entities. The study also recommends how the Fund and its partners can continue to scale up adaptation activities.

The study finds that several factors and project-level strategies are central to the successful scaling-up of adaptation interventions. It also finds several common challenges to achieving scale. The main findings include:

- Success in scaling-up of adaptation projects relies on i) strong proof of concept to disseminate successful adaptation practices and innovations; ii) financial and operational sustainability; iii) the ability to generate strong demand and engagement from local stakeholders; and iv) on the applicability of activities to a wider coverage.
- Enabling factors to successful scale-up of adaptation projects are i) involvement, whenever possible, of the same stakeholders from the initial project (i.e., Implementing Entities [IEs] and Executing Entities [EEs]); ii) use of pre-existing governance structures, and/or the institutional and coordination networks established during the pilots to maximize effectiveness and facilitate cooperation among stakeholders.
- Failure to scale up adaptation action can arise from i) financing and cost constraints; ii) lack of involvement of local stakeholders; iii) lack of institutional support or stability; iv) information and knowledge constraints; and v) complexity constraints.

Introduction

1. Defining scalability

A. Definition of scaling-up

The field of sustainable development often uses the term “scaling-up,” but its definition in the literature varies. The Scaling Up Community of Practice, a platform for knowledge exchange among experts and practitioners on approaches to scaling-up of development interventions, was established in 2014 by Larry Cooley and Johannes Linn. It defines scaling as “achieving sustainable development impact at scale” (Scaling Up Community of Practice, 2022). In its simplest form, scaling-up increases “the dissemination and deployment of existing, proven technologies and systems” (Kata et al., 2014).

Hartmann and Linn (2008) tailored a definition used by the World Bank in 2005. They define scaling-up as “expanding, adapting, and sustaining successful policies, programmes, and projects in different places over time to reach a greater number of people.” This definition focuses on the quality of impact and its sustainability, a wider reach in terms of geography and beneficiaries, adaptation to specificities according to the local context, and achievement of impact through policies and programmes.

A WHO/ExpandNet report defines scaling-up as “deliberate efforts to increase the impact of innovations, successfully tested in pilot or experimental projects to benefit more people and to foster policy and programme development on a lasting basis” (WHO, 2010). According to this definition, scaling-up is a deliberate action, building on a successful pilot, to achieve greater reach with a clear goal to nurture an enabling environment for further adoption of the practice through policy change.

The latter two definitions highlight that scaling-up increases the impact of a successful pilot by extending its outreach to more people. It ensures sustainability over the long term by fostering an enabling environment through policy change and programme development. The first definition adds a geographical perspective, while emphasizing the need to adapt to the local context where the scaling is taking place. The second definition focuses on innovations and the need for scaling-up to be deliberate and thought out. It implies that a pilot project has already incorporated steps for scaling-up.

As all these properties are critical for long-lasting impact, this study has adapted parts of both definitions to inform its research: scaling up adaptation interventions means increasing the **impact** of climate change adaptation innovations, policies, programmes, and projects **successfully** tested in **pilots** by extending their **outreach** to more **people**, in different **places** over **time**, and ensuring this **deliberate expansion** is done **sustainably** by **adapting** to local context and fostering **policy change** and programme development on a **lasting** basis.

Based on this definition, the distinctive features of scaling-up are presented below:

- Impactful *“innovations, policies, programmes, and projects”* are successful climate adaptation solutions to locally identified problems, which achieved the intended results in pilots. They can be technical, technological, managerial, organizational, or institutional: the development of climate-resilient seeds, the dissemination of efficient irrigation measures, a new business model, incentives for adaptation measures carved out in policies, etc. (Anandajayasekeram, 2016).
- *“Successfully tested in pilots”* means that interventions are supported by locally generated evidence of programmatic effectiveness and feasibility obtained in pilot projects through monitoring and evaluation (Anandajayasekeram, 2016). This ensures the innovation or project is *“realistic to carry out, relevant, and worthwhile, and that the intervention has real benefits for potential users”* (Anandajayasekeram, 2016).
- *“Outreach to more people, in different places over time”* highlights the quantitative properties of scaling-up in terms of the number of beneficiaries reached, geographical replication or expansion, and the acknowledgement that this process is gradual and takes time (Marketlinks, 2014).
- *“Adapting to local context”* underlines that sought-after outcomes must be informed and shaped by the priorities and means of the end-beneficiaries, policymakers, and local stakeholders.
- *“Deliberate expansion done sustainably”* emphasizes the importance of a clear plan for scaling-up. The plan should ideally be established in the initial development of the pilot project and incorporated into implementation to ensure efficient and long-lasting impact (Hartmann and Linn, 2008). While spontaneous expansion is possible (refer to *“Scaling-up approaches”*), planned expansion is better suited to the mission of international development agencies that aim to maximize their impact in the long term. Hartmann and Linn (2008) argue that evaluations of donor performance in formulating and implementing scaling-up strategies should be requirements for any pilot projects financed by donors and aid organizations.¹
- *“Fostering policy change and programme development on a lasting basis”* refers to the need to involve local policymakers and relevant stakeholders and integrate the project components into wider programmes. This, in turn, creates an enabling environment conducive to the realization of the desired changes on a far-reaching and long-lasting basis. This is a key component to the sustainability of scaling up projects.

Sustainability is a critical theme underlying all the elements of scalability cited above. Sustainability is *“linked to the ability of an intervention to promote systemic changes such as imitation, buy-in, and repeat behaviour. Sustainability and scalability are deeply intertwined... Where a project is not sustainable ... it is not likely to be scalable”* (Anandajayasekeram, 2016).

B. Scaling-up approaches

Scaling-up involves a multidimensional process building on knowledge, collaboration, change, and adaptation. It is useful to follow a framework identifying four dimensions of scaling-up (Uvin, 1995; Hartmann and Linn, 2008; Anandajayasekeram, 2016).

1. *“Many aid agencies pursue development interventions as a one time intervention, as scaling up is not an issue for deliberate reflection by donors in their country strategies or at the start of a specific project. If there is any reflection on replication, the presumption usually is that a successfully completed pilot project will be replicated by someone else without any special initiative from the donor who implemented it.”* Hartmann and Linn, 2008

1. **Quantitative scaling-up** increases the geographical spread to more people and communities. It can refer to expanding size by replication in different places, or by increasing the beneficiary base in a given location. It is also called horizontal scaling-up, scaling out, expansion, or replication.
2. **Functional scaling-up** is expansion by increasing the scope of activity. New interventions are added to the initial pilot initiative. It is also referred to as diversification.
3. **Political scaling-up** is the expansion through the adoption of some objectives, ideas, or activities of the initiatives by public authorities, political parties, state agencies, or stakeholder groups, on a national or subnational level. It is achieved when the innovation or project is institutionalized through policies or national development plans. Political scaling-up entails greater influence of the initiative, potential wider reach, and protection against political and institutional change, which are all salient traits of sustainability. It is also called vertical scaling-up.
4. **Organizational scaling-up** is either the expansion of the organization implementing the intervention, the involvement of other institutions, or the creation of a new institution. It can involve both horizontal organizational expansion (whereby similar institutions are involved, which is also referred to as “replication”) or vertical organizational expansion (whereby hierarchically higher institutions are involved, and the project goes from community to local, to regional, national, or supra-national institutions). It is also called institutional scaling-up.

These dimensions are not exclusive and are often interrelated. For instance, in the present research, all cases studied are examples of organizational scaling-up; the expansion was always done by an entity other than the Fund. At the same time, there are many cases of quantitative scaling-up, whereby a larger base of beneficiaries was targeted, in other places, through larger financial contributions. Most Fund projects are also examples of functional scale-up, as the entity scaling up the pilot increases the initial scope of activity by adding new features, technical elements, or infrastructure engineering solutions. Scaling-up, therefore, does not necessarily mean achieving greater geographical scale. Climate change adaptation programmes, for example, are highly contextual. They often depend on the trust and operational systems established within communities. As a result, the scope of their geographical expansion may be limited.

Projects can also be scaled up in three other ways. Hierarchical scaling-up implements top-down, planned programmes, often driven by a strong central leadership. A bottom-up approach relies on individual actions through the mediation of markets. Finally, decentralized and participatory scaling-up relies on community engagement and empowerment (Hartmann and Linn, 2008).

These clear-cut institutional approaches are not exclusive either. In fact, in practice, they are best applied in combination. Achieving long-lasting scale often requires some form of institutional support and well-planned processes. However, it also needs innovation and leadership, which are spurred by individual actions and mediated through markets. At the same time, to be sustained, any project needs input from and accountability to the beneficiaries served (Hartmann and Linn, 2008).

These approaches provide a clear framework to understand the different processes at play in the scaling up of Fund projects. However, the definitions leave out the specifics of the environment for each pilot. Interventions can be hindered by systemic constraints or facilitated by enabling conditions. The specific context and operating environment of each project will shape the implementation of the interventions. “Horizontal scaling, i.e., simple replication or expansion, usually has to go hand in hand with vertical scaling, i.e., creating the required enabling conditions through systems change” (Scaling Up Community of Practice, 2022).

2. Why scalability matters

Achieving sustainable development impact at scale has increasingly been integrated into the mission, goals, and objectives of international development actors (Scaling Up Community of Practice, 2022). The scalability of financed projects is important for development organizations as it allows a targeted and efficient use of resources. For climate change adaptation projects, scalability also enables dissemination of knowledge and proof of concept. This allows more development actors to know about climate adaptation solutions and how to implement them. In addition, climate adaptation projects tend to have high up-front costs, with returns on investment that materialize in the long term. Follow-up and larger projects take advantage of the structures, innovations, and lessons learned from prior pilots and projects. Therefore, scaling adaptation interventions allows economies of scale and cost efficiency.

When successful pilots are scaled up, they can take full advantage of the stakeholder cooperation mechanisms previously established and lessons learned from the pilots. In this way, they lower some risks of scaled-up projects; this is the added value of building on a proven programme. According to Bradach (2003), “leveraging the knowledge developed by someone else can enable a new site to increase the speed of implementation and the odds of obtaining the desired outcomes. Replication can reduce the risk of failure.”

By building on proven projects or programmes, the replicated or scaled-up project can more readily access resources and expertise. This can take the form of allocation of funds, human resources, community engagement, technical information and data, feasibility studies, and knowledge generated by the pilots. Access to such resources and expertise increases the likelihood of a scaled-up project achieving the desired sustainable development impact.

Scalability also ensures the efficient use of financial resources, as larger financial contributions are only dedicated to projects built on previously successful pilots. In turn, bringing proven projects to scale creates a demonstration effect that is critical to mobilizing resources. Indeed, leveraging co-financing from other entities, particularly from private investors, is often a pre-requirement for interventions proposed by international development agencies. This is to ensure funded projects could leverage funding from other stakeholders. Such funding can bridge the financing gap for mitigation and adaptation projects, as well as cover “business-as-usual” activities required to support measures related to climate change. However, private sector interventions tend to be driven by “competitiveness, perceived risks and expected risk-adjusted returns” (Kata et al., 2014), which often limits blended finance opportunities in climate projects. Therefore, by providing repetitive evidence of proven initiatives, scaling-up and replication can help potential investors to overcome their familiarity, knowledge and perceived risk barriers. This, in turn, will increase their likelihood to invest in climate projects. Ultimately, scalability has the potential to decrease the need for public support for climate mitigation and adaptation projects in the long term.

3. Objective of the study

The present study offers an overview of the Fund’s experience in, and best practices of, scaling up projects. It seeks to increase awareness in countries and the wider adaptation community about scaling up. In addition, it aims to generate and share knowledge on incentives and benefits of scaling up successful smaller pilot projects financed by one fund with resources from other entities.

Through desktop research and the review of case studies from the Fund, the study analyses the enabling factors for scaling up successful projects, the incentives and benefits of countries to scale up projects, and the criteria to be met for scaling-up. Furthermore, the study looks at potential long-term benefits, including sustainability and impact generated through scaling-up, as well as the opportunities, barriers, and challenges in the scaling-up of Fund initiatives.

The intended audience is the Fund secretariat and Board, IEs, development agencies, government officials, the private sector, civil society groups, other climate funds interested in scaling up projects, other stakeholders, and the general public for whom the topic is of interest.

4. The role of the Fund in scaling up adaptation interventions

The Fund was established under the Kyoto Protocol of the UN Framework Convention on Climate Change. Since 1 January 2019, the Fund has also served the Paris Agreement as per the decision by the Conference of the Parties (COP) serving as the meeting of the Parties to the Paris Agreement during COP 24. To date, the Fund's overall project approvals have amounted to USD 932.2 million across more than 100 countries. This includes project formulation grants, readiness grants, and grants under its Medium-Term Strategy. Of this amount, the Fund has committed USD 923.5 million to concrete adaptation projects and programmes to strengthen the climate resilience of beneficiary countries. As of December 2021, there were 14 accredited Multilateral Implementing Entities (MIEs), seven Regional Implementing Entities (RIEs), and 33 National Implementing Entities (NIEs) to implement projects and programmes financed by the Fund.

The Fund doubled the amount of finance a country can access for concrete adaptation projects and programmes from USD 10 million to USD 20 million. This increase responded to higher demand from eligible countries and the desire to continue supporting vulnerable communities amid the ongoing climate crisis. In addition, countries can nominate and accredit up to two NIEs instead of just one initially established under the Fund's pioneering Direct Access modality.

Once accredited, IEs can apply for up to USD 20 million in funding per country for concrete single country adaptation projects for a maximum of USD 10 million per project. Alternatively, they could apply for a maximum of USD 14 million for a regional project/programme.

As of May 2022, the fund had a portfolio of 136 concrete projects, comprising 44 implemented by NIEs. In all, 23 projects have reached completion, amounting to USD 147.9 million. Another 89 projects are under implementation, representing USD 620.6 million.

Among the approved projects, funds are allocated across a variety of sectors. The most significant in terms of grant amount are agriculture, food security, and water management projects/programmes. Projects are also allocated across a variety of regions with the grant finance flowing mostly to Africa (40 per cent of total portfolio). Africa is followed by the Asia-Pacific (29 per cent), Latin America and the Caribbean (26 per cent) and Eastern Europe regions (4 per cent) (Adaptation Fund, 2021a).

The Fund is trying to build complementarity and coherence with other climate finance delivery channels. To that end, it promotes the scale-up of effective projects and programmes with support from other climate funds and finance channels, including the private sector. The Fund offers project

scale-up grants to provide readiness funding to support countries in planning, assessing, and enhancing capacities for designing and developing scale-up pathways for Fund projects or programmes. In addition, the Fund engages with other climate funds to operationalize approaches for scaling up its pilot projects and programmes.

Indeed, the Fund's independent overall evaluation found that its "design is appropriate to generate timely lessons about effective approaches to adaptation finance, especially with regards to 'direct access', and scalable and replicable actions benefiting the most vulnerable communities and social groups." The design further "supports pilot activities with substantial potential for scaling up impact at subnational, national and regional levels." As such, the Fund is an ideal platform to test and pilot certain adaptation interventions, which can then be scaled up by other climate funds (Adaptation Fund, 2021a).

To date, other funds/entities have scaled up 18 of the Fund's projects in a range of sectors, including climate-resilient water management and multi-hazard early warning systems (EWSs). Scaling-up contributes to the value chain of investments of increasing magnitudes over time. In addition, scaling-up between different actors responds to strong calls within the climate community for effectiveness and efficiency that can be achieved through streamlining finance and promoting synergies.

II. Methodology

The study was undertaken in three phases. The first phase – focused on a desk study of literature, policy, and project-related documents – involved the following steps:

- a review of scholarly and policy articles on the conceptual definition of scaling-up, and scaling up of development and adaptation interventions
- a content analysis of the Fund portfolio to identify projects and programmes that were scaled up by other entities
- a list of projects and programmes to examine as case studies, developed in consultation with staff of the Fund Board secretariat
- examination of annual project performance reports, mid-term/final evaluations, and other documentation from each project or programme, to highlight the different approaches taken for scaling-up, the enabling conditions required for success, and barriers and challenges encountered.

A second phase – focused on garnering more specific information through interviews – involved the steps below:

- semi-structured interviews with representatives of NIEs and MIEs of initial Fund-financed projects to collect information on enabling factors, challenges, and lessons learned from the projects that were later scaled up
- semi-structured interviews with representatives of NIEs and MIEs of projects scaled up by other climate funds to understand the enabling factors in place for scaling up successful projects, the incentives and benefits of countries to pursue such an approach, and the challenges and lessons learned from the scaled-up projects
- semi-structured interviews with secretariat staff of climate funds that have scaled up Fund pilots, to understand the collaboration between the Fund and other sources of climate finance, and the pre-requirements and different steps necessary to the scale-up of projects by these funds.

The third phase focused on data analysis and findings, and involved the following elements:

- cross-evaluating case study analyses and answers to interviews, to understand the specificities of each project and why it was scaled up
- analysing the factors or failures and successes for the scale-up of Fund projects, based on the information gathered during literature review, case studies, and interviews
- finalizing the study, including conclusions and recommendations.

III. Overview of scaled-up projects in the Fund portfolio: case studies

1. "Adaptation to Coastal Erosion in Vulnerable Areas", Senegal, Centre de Suivi Ecologique (CSE), USD 8.6 million (2010)

The objective of the project was to protect people, houses, and economic and cultural infrastructure against coastal erosion in three Senegalese cities, namely Rufisque, Saly, and Joal (Adaptation Fund, 2010).



Main achievements

- construction of 234 m of dike with Fund support and 496 m of dike with two additional sources of funding, to protect the coastal areas of Rufisque
- quarterly cleaning-up of two canals (total length of 523 m), which have since been connected to the sea and/or dike
- construction of nine seawalls to protect hotels and villages in Saly
- rehabilitation of the fishing dock in Saly, including provision of drying grids, washing basins, access to potable water, and solar lighting
- rehabilitation of the fish processing area in Joal, with the addition of 90 improved fish smoking kilns, a wastewater disposal system, wells, drying grids, and shed infrastructure
- provision of tools (spades, shovels) and donkey cart to seven coastal sanitation committees
- training at each intervention site: institutional management (44 participants), understanding of coastal erosion (31 participants), coastal management (40 participants), reforestation (42 participants)
- design of the Environmental Code and revision of the Law on the littoral
- launch of awareness-raising campaign on new laws
- broadcast of 41 radio programmes to raise awareness.



Enabling factors for scale-up

The project covered some costs related to adaptation to sea-level risk in the three cities, including the financing of coastal protection infrastructure, awareness-raising campaigns, and training on coastal erosion protection. In so doing, it acted as a catalyst for adaptation actions against coastal erosion in Senegal. Awareness-raising efforts have increased the capacity of local stakeholders to implement the appropriate approaches to adapt to climate change. They have also taught local communities to maintain the newly built coastal protection infrastructure, thus ensuring long-lasting and sustainable impact.

The project was the first experience of CSE and the various executing agencies in coastal protection infrastructure. Drawing on the **acquired knowledge and technical capacity in implementing such projects** with the Fund, CSE and the executing agencies were able to showcase their expertise to other multilateral funds. Indeed, this increased capacity contributed to CSE's **fast track accreditation to the Green Climate Fund** (GCF). This, in turn, led to the implementation of a scaled-up project by CSE on coastal erosion, financed by the GCF (GCF, 2015a). Undoubtedly, this additional funding of USD 8.2 million channelled towards adaptation to coastal erosion further helped shed light on successful adaptation practices in Senegal, a critical step to eventually mainstream climate adaptation interventions.

2. “Increasing Climate Resilience through an Integrated Water Resource Management Programme in HA. Ihavandhoo, ADh Mahibadhoo, and GDh. Gadhdhoo Island”, Maldives, UNDP, USD 9 million (2010)

This Integrated Water Resource Management (IWRM) programme sought to ensure consistent, safe, and equitable access to freshwater for all island communities. It did this in the difficult context of variable rainfall, extreme weather events, salinization, and pollution of aquifers. To achieve its objectives, the programme aimed to establish (i) a sustainable freshwater supply system, incorporating desalination and rainwater harvesting technology; (ii) a sustainable groundwater management system, incorporating groundwater recharge and wastewater management technology; (iii) an increasing participation of local communities in the development, allocation, and monitoring of freshwater use; and (iv) the replication and scale-up of climate-resilient freshwater management. It was noteworthy that the programme planned to replicate and scale up across the country from inception.



Main achievements

- construction of two to three communal rainwater harvesting tanks in each island with a total collection capacity of 550 m³ on each island
- installation of a reverse osmosis plant for desalinated water supply
- successful demonstration of water management approaches that could be applied to the islands and alleviate the water scarcity pressures faced by local communities
- overcoming challenges related to the lack of proven methods and technical issues for the installation of artificial groundwater recharge systems; the need for ex-post additional retrofits to the communal rainwater harvesting; and, some deficiencies in the involvement and training of local stakeholders, all of which led scaling up to other islands through a USD 28.2 million project financed by the GCF in 2015 (GCF, 2015b).



Enabling factors for scale-up

The **involvement of the same stakeholders from the pilot project in the follow-up projects** was a key enabling factor to scale up the intervention in the Maldives. Indeed, the stakeholders could build on

lessons learned and avoid previous operational and implementation challenges, while capitalizing on the achievements of the pilot.

UNDP, as IE for both programmes, applied lessons learned in the pilot to build on successful interventions. For instance, it was decided to i) change the water distribution model from centralized to decentralized, considering cost-efficiencies; ii) introduce a water tariff to cover operations and maintenance cost for the water utility; and iii) to forego groundwater harvesting, following recommendations from the feasibility studies by the Fund project. Such improvements could have only been achieved thanks to the lessons learned from the Fund pilot.

The Ministry of Energy and Environment acted as the EE in both programmes. As such, the ministry built on its previous experience with managing Fund activities to execute the GCF-funded activities in other islands. This undoubtedly led to resource efficiency. The involvement of local authorities resulted in a commitment to subject all future approved projects to technical review on IWRM, a critical step towards generalizing climate resilience and adaptation practices.

In addition, as water management is extremely relevant for the country, the government made it a priority and strongly supported the project to be scaled up by the GCF. This was critical to overcome operational and technical difficulties, as all stakeholders were determined to find solutions to make the project work.

3. “Reducing Risks and Vulnerabilities from Glacier Lake Outburst Floods in Northern Pakistan,” Pakistan, UNDP, USD 7.9 million (2010)

The aim of this project was to reduce risks and vulnerabilities from Glacial Lake Outburst Floods (GLOFs) and snow-melt flash floods in two districts of Northern Pakistan (GCF, 2016). The total project size of USD 7.9 million included a grant of USD 3.9 million from the Fund, and co-financing of USD 3.5 million from the Government of Pakistan and USD 500,000 from UNDP. The project’s objective was achieved by developing the technical capacity of public institutions and vulnerable communities to understand and address immediate GLOF risks.

The project had several approaches for accomplishing these goals. It sought to understand the nature and extent of GLOF risks and their effects on human and economic development in all sectors. To that end, it developed the capabilities of local-level institutions (agriculture, livestock and forest departments of Gilgit Baltistan and Chitral) and federal-level institutions (Ministry of Kashmir Affairs and Gilgit Baltistan, Ministry of Environment and National Disaster Management Authority). It also took steps to improve risk mapping, early warning planning, and disaster prevention. And it demonstrated and documented GLOF risk management at the village and district levels to provide evidence for replication and upscaling in other communities.



Main achievements

- establishment of disaster risk management committees, offices, and community-based disaster risk committees in all three sites
- establishment of 26 village-based hazard watch groups

- strengthening of 14 indigenous EWSs
- establishment of community-based Disaster Risk Management Endowment Fund in all three project sites with input of PRs 2.2 million for each
- construction of 12 protection walls (gabions)
- development of two river diversion spurs
- development of seven GLOF Monitoring Trails
- bioengineering in 32 places for use as demonstration sites to provide knowledge to local communities
- planting of 37,000 saplings of local tree species for use as demonstration plots
- convening of 85 workshops/meetings in the community to spread awareness
- convening of 22 workshops on GLOF for women
- convening of nine disaster risk management trainings for local community leaders
- development of Watershed Management Plan for the three project valleys
- holding 170 capacity building activities for disabled and elderly persons
- installation of five automatic weather stations, three meteorological manual weather station, and five automatic rain gauges
- installation of six automatic river discharge measuring systems
- installation of two glacier monitoring sensors/cameras and two glacial lake monitoring sensors.



Enabling factors for scale-up

The decision to **work directly through existing government structures** rather than through parallel project structures was an enhancing factor for the success of the programme and its potential for scale-up. Indeed, the two institutions involved (the Climate Change Division and the Pakistan Meteorological Departments) are both under the Ministry of Climate Change. This facilitated the cooperation work between governmental entities, allowing them to take full ownership of most of the project's outputs.

The successful execution of the Fund project and the strong involvement of public agencies (evidenced by the government co-financing) strengthened the credibility of the Ministry of Climate Change in the eyes of other multilateral funds. This led to a scaled-up project of USD 37.5 million financed by the GCF to extend the interventions piloted in the two districts to 12 districts (GCF, 2016).

The scale-up took advantage of the coordination networks and institutional and management frameworks established in the Fund pilot to deploy its resources more efficiently. These synergies were a clear asset to the scale-up initiative, as the GCF project built upon the experiences, data, information, and coordination networks of the Fund pilot. Expanding the scope of the Fund interventions allowed the GCF project to be more cost-effective than a separate new initiative. Strengthened local capacities allowed the GCF project to maximize effectiveness in other areas as well. These comprised cost-effective hiring of specialized technical staff, coordination of data and information, training for operations and maintenance of equipment, forecasting techniques, and tailored advisories and warnings, as well as in the effective use of communications and standard operating procedures (GCF, 2016).

On top of using the effective coordination networks established by the Fund project (such as governmental cooperation and community-led GLOF management groups), the GCF also added USD 1.2 million to the community-based endowment fund. This Fund project had set up an initial endowment of USD 9,800 and further increased it to USD 26,600 through contributions by local communities and governments.

4. “Reducing Risk and Vulnerability to Climate Change in the Region of La Depresión Momposina in Colombia”, Colombia, UNDP, USD 8.5 million (2012)

The project aimed to minimize destruction from future flooding and to protect the biological diversity in three Colombian municipalities known for their rich variety of species and ecosystems (Adaptation Fund, 2021c). To achieve this, the project first needed to develop models, mapping, and systems to better anticipate floodings.



Main achievements

- replacement of 11 conventional stations by automated hydrological and meteorological stations
- installation of 18 community limnometric stations
- formation and update of the EWS committees, and delivery of the hydrodynamic modelling studies to municipal, environmental, and educational institutions
- development of analysis of climate variability and climate change for La Mojana region
- analysis of risk scenario
- development of comprehensive action plan for flood risk reduction
- provision of technical advice to public entities for the management and interpretation of the information generated
- hydraulic rehabilitation of the priority caños in the project area (32.4 km), benefiting 3,586 families, including 15,603 people (7,285 women and 8,318 men)
- rehabilitation of 954 ha of the three main prioritized wetland complexes for La Mojana
- establishment of 1,987 family gardens, for a total of 90,872 ha
- completion of one community centre, with nine others in construction phase, and 14 educational centres with structural measures adapted to provide children with water in times of drought
- installation of rainwater harvesting system in 501 houses
- establishment of agrosilvopastoral systems in 271 ha, upgrading of three model farms with three elevated tanks for water storage with distribution network to drinking fountains
- engagement of 42 communities in climate risk management and adaptation planning, and strengthening of 21 institutions in the implementation of climate adaptation and risk management
- incorporation of climate change considerations in plans of 11 public entities.



Enabling factors for scale-up

The project was highly relevant for all stakeholders involved, given the high vulnerability of the region to risks of floods and droughts. National- and community-level institutions were already looking for scenarios to adapt to climate change prior to the project’s implementation. As such, the project was relevant for all. Since the Fund project responded to stakeholders’ needs, it gained strong local support. **The alignment of institutional interests among all stakeholders** was an enabling condition to strengthen implementation.

Furthermore, the **project governance was highly participatory** and transparent, which allowed an active involvement of stakeholders through community associations.

In addition, the involvement of the same institutions in the scale-up project, namely UNDP (IE) and the National Adaptation Fund of Colombia (EE), enabled efficient use of resources and lessons learned. As one objective, the Fund project sought to promote replication of the successful initiatives and integrate them into local and regional planning policy. This was achieved through the organizational scale-up led by the GCF to a USD 117.2 million project, including a USD 38.5 million grant from the GCF (GCF, 2017). The GCF project considers the pilot as a blueprint. It aims to scale up its most successful interventions to all 11 municipalities of La Mojana (quantitative scale-up). For instance, the GCF project will provide solutions compatible to the community needs and integrate best practices as identified in the Fund pilot. Key areas include wetlands restoration, home gardens, silvopastoral systems, water management, and community outreach.

The GCF project strongly relies on the **governance structure established in the Fund** pilot. This includes community groups (community council, dialogue platforms, and community organizations) and project management unit. Together, these aim to collect local knowledge of wetland management and establish community restorations plans and agreements on long-term maintenance. Such synergies facilitate coordination for the scale-up. Building on these experiences, the GCF also incorporates additional features and technical elements to its project (functional scale-up).

Finally, the GCF project greatly benefited from the strong involvement of the National Adaptation Fund of Colombia as EE. The latter built on its prior experience with the Fund and UNDP, allowing it to expand and scale up its responsibilities to the GCF project efficiently. The strong involvement and empowerment of the National Adaptation Fund is evident in its co-financing of USD 56.2 million to the GCF project for investments in drinking water access and sanitation, resilient livelihoods, and wetland restoration. This is a clear demonstration of political scale-up, which is likely to ensure sustainability of climate adaptation efforts in Colombia first financed by the Fund and GCF.

5. “Developing Climate-Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia”, Georgia, UNDP, USD 5.3 million (2011)

The project aimed to assist government officials in six municipalities of the Rioni River Basin in Georgia by introducing a floodplain development policy (Adaptation Fund, 2019).



Main achievements

- development of high-quality floodplain zoning policy framework and policy guidance notes
- development of roadmap document for implementation of the policy
- production of hazard and inundation maps for the whole basin
- finalization of land use development policy
- review of building codes and presentation of recommendations for flood-resilient building codes to relevant authorities

- trainings on hydraulic modelling, use of GIS on hazard mapping and risk assessment, flood forecasting and early warning, and climate risk management
- development of an innovative flood insurance model
- completion of 10 structural measures (flood defence structured)
- design of an employment guarantee scheme involving 160 local people
- planting of 11 ha for agroforestry, including different tree species
- installation of 35 monitoring stations/posts
- introduction of Flood Forecasting EWS, directly benefiting 283,162 people at risk.



Enabling factors for scale-up

The final evaluation report identifies two key enabling factors for success.

First, the project was inclusive and participatory, responding to the expressed needs and priorities of local municipalities and villages. This enabled these municipalities and villages to build capacity through their engagement in the completed activities. Indeed, **local communities helped** define measures to be undertaken, respecting and incorporating local-level knowledge and expertise.

Second, the training in modelling was critical to develop both the **theoretical** and the **operational capacity of the government and municipalities** to properly forecast floods and flash floods. Such measures are essential to ensure the long-term impact and sustainability of the interventions.

The GCF scaled up the successful interventions on the Rioni River Basin in 2018 (GCF, 2017). It aimed to deploy the piloted prototypes to other river basins and regions of Georgia, and to scale up the national multi-hazard EWS to further improve community resilience. This case of organizational and quantitative scale-up is also evident in the increased scale of the project in terms of both budget and beneficiaries. The budget increased from the initial USD 5.3 million to USD 70.3 million for the scaled-up project, including a grant of USD 27.1 million from the GCF, and various grant and in-kind co-financing from other entities. It also expanded the number of beneficiaries from the initial 500,000 in the Fund project to 3.6 million people for the scaled-up project.

6. “Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise”, India, NABARD and UNDP, USD 0.7 million (2014)

The project aimed at overcoming the consequences of salinization and erosion of coastal areas in the Krishna delta in the state of Andhra Pradesh, India, by implementing adaptation strategies (Adaptation Fund, 2021b). The increase in cyclonic storms and storm surges had caused salinization and erosion. The project proposed to offset sea-level rise and seawater inundation by restoring degraded mangroves and demonstrating Integrated Mangrove Fishery Farming System (IMFFS).



Main achievements

- trainings of 145 members (community members and forest department staff) in mangrove restoration to provide greater awareness of local community about climate change
- development of three village annual microplans for optimal use of resources, one-quarter of the goal of 12 developing microplans
- initial restoration of degraded mangrove forest, including restoration of 200 ha of mangroves and planting (and survival) of 3.5 lakhs saplings
- development of 50 ha of IMFFS farms, where the community cultivates sea bass, crabs, and prawn.



Enabling factors for scale-up

Three enabling factors secured the success of the project. First, the local community was already aware of the potential of mangrove conservation and management against coastal erosion and to increase fishery production. Second, the project made consistent efforts to engage the community. For example, it prepared brochures in local languages and conducted exposure visits to similar projects so community members could learn technical aspects. Third, most interventions were self-sustainable, financially and operationally.

Given the low budget of USD 0.7 million, the project sought mainly to serve as a model for management of unprotected mangroves that could be replicated in similar areas. The demonstration effect worked, as the GCF scaled up the project in 2018. The total budget of USD 130.3 million included a grant of USD 43.4 million from the GCF (GCF, 2022). This resulted in an impressive instance of quantitative scale-up. The GCF funding proposal mentioned that the Fund pilot was “an important source of learning and demonstrating replicable models of community-based mangrove restoration.” The project used these best practices to scale up protection and restoration of India’s natural ecosystems such as mangroves and seagrass in 24 target ecosystems across 12 coastal districts.

7. “Reducing Vulnerability to Climate Change in North West Rwanda through Community-Based Adaptation”, Rwanda, Rwanda Ministry of Environment, USD 10 million (2013)

The project aimed to increase the adaptive capacity of natural systems and rural communities living in exposed areas of North Western Rwanda to climate change impacts (Adaptation Fund, 2021d). It targeted factors that exacerbate the effects of intense rainfall and lead to flooding and landslides, including erosion and unsustainable farming practices linked to demographic pressure on natural resources.



Main achievements

- increased awareness of local community to adopt risk reduction measures
- complete mitigation of deaths and house destruction caused by landslides or floodings
- decrease in crop losses due to climate variability

- development and implementation of eight community-based adaptation plans, one per sector
- formation and operationalization of 107 community groups for adaptation planning (initial goal of 55 groups)
- reduction of time spent by women in fetching water to less than 30 minutes (vs. 1 hour before project implementation) thanks to 1,045 new rainwater harvesting tanks
- creation of 83 water user groups to manage ponds and rainwater harvesting tanks
- rehabilitation of 503 ha of bench terraces and 850.5 ha of progressive terraces with erosion control measures.



Enabling factors for scale-up

Three distinct factors are to be acknowledged for the success of this project.

First, the **commitment and ownership of project activities by beneficiaries, community animators, and local government authorities** strongly contributed to the project's progress.

Second, **the involvement of women in all components of the project** resulted in the involvement of the whole family and community. This consequently ensured sustainability of the interventions.

Finally, through a Memorandum of Understanding, the Ministry of Environment (MoE) of Rwanda requisitioned the National Reserve force to implement manual adaptation work such as terracing. This avoided long procurement processes and ensured a smooth implementation of these activities. The latter shows how **relying on a strong centralized organization can foster efficient use of resources and clear management guidelines**. The **good track record of the ministry in resource management and in developing robust and efficient systems during the Fund project** showed that **channelling funding directly through national entities could be more effective than through multilateral agencies**. This, in turn, led to the accreditation of the MoE as direct access entity to the GCF. With support from the MoE, the GCF funded a USD 32.8 million scaled-up project in Northern Rwanda. This was not simply a replication of the pilot. Rather, it built on the community-based adaptation interventions piloted and expanded practices to other parts of the country.

Analysis

A synthesis of findings, based on the literature review, the case studies, and the interviews with the different IEs of scaled-up Fund projects is provided below.

1. Factors of scale-up success

A. Proof of concept

All questionnaires and interviews stress that pilots that deliver a **“proof of concept” – a reliable demonstration of good practices for specific adaptation interventions** – are likely to be more successful in leveraging additional funding for scale-up. The questionnaire on the Maldives project (Annex 1.A) highlights that the pilot acts as a “testing ground” for innovative adaptation action, namely a space for trial and error, learning, and demonstration.

As such, the pilot is the prototype model, as defined in the questionnaire on the India project (Annex 1.E). It is used to acquire lessons learned and best practices, and to disseminate the information about positive results achieved. The pilot is therefore critical in the demonstration of successful adaptation activities to stakeholders, as well as in the explanation of the barriers yet to be overcome in certain contexts.

This **demonstration effect** helps raise awareness among stakeholders interested in scaling-up, either national institutions, multilateral funds or private investors, and to generate popular buy-in. Therefore, the proof of concept demonstrated in the pilot is a powerful tool to overcome the information and knowledge barrier, as well as to foster community and institutional support.

Indeed, a proven track record tends to promote stronger engagement from local stakeholders. In Colombia, for instance, the good results from the pilot facilitated creation of new partnerships for scale-up. Stakeholders were eager to be associated with a project that built on this initial success (Annex 1.C). Further, once information, stakeholder, and institutional support constraints are lifted, potential investors may be keener to participate. At the same time, supportive national institutions may more willingly allocate resources to scale up efforts. Therefore, demonstrating proof of concept makes it easier to access funding.

In the questionnaire on the Georgia project (Annex 1.D), the UNDP representative mentions that a successful proof of concept tests and implements the proposed technical and/or institutional solutions at a smaller scale, builds trust among national stakeholders in the proposed solution, tests implementation approaches, assesses bottlenecks and risks, reduces risks, and designs risk management strategies for larger interventions.

Demonstrating that a particular adaptation intervention can function effectively in a given context is important for scaling-up and replication. Indeed, the European Bank for Reconstruction and Development has applied the demonstration effect as one of its criteria to appraise transformational impact of climate-related projects (Kata et al., 2014).

As highlighted in the questionnaire on the Colombia project (Annex 1.C), providing proof of concept depends highly on the **generation of knowledge products with a strong scientific basis**. This can foster trust in the results and knowledge disseminated. In addition, the pilot should clearly assess the remaining needs or existing barriers. These may have been overlooked during design but identified during implementation. In this way, solutions can be incorporated in the design of the scaled-up project. For instance, the Fund pilot in Colombia was initially designed to manage flooding risks (Adaptation Fund, 2020a). However, impacts from drought-like conditions were discovered during implementation. This led to the realization that comprehensive climate change adaptation interventions in La Mojana should also focus on water management. Water management practices were therefore incorporated in the GCF scaled-up project (GCF, 2017). Similarly, the interview about the Maldives project shows that the Fund pilot faced significant operational and implementation hurdles. However, the GCF scale-up took note of these lessons learned and addressed the operational, institutional, and financial barriers identified.

As emphasized in the questionnaire on the Pakistan project (Annex 1.B), the lessons learned and best practices derived from the pilot should be fully acknowledged and acted upon to ensure a successful scale-up. This requires adequate and transparent implementation support mechanisms. In particular, strong project management units and technical expertise are needed for implementation.

In addition, scale-up projects that rely on coordination mechanisms for implementation (either established by pilots or pre-existing to pilots) tend to be more successful. Such mechanisms increase efficiency and lessen the complexities of cooperation between institutions. Since the entities are used to working together, it facilitates coordination of activities for the scale-up. In the Pakistan project (Adaptation Fund, 2021c), the decision to work directly through existing government structures – as opposed to establishing parallel project structures – was identified as an enabling condition to programme efficiency and country ownership. Therefore, successful scale-up relies on evidence-based knowledge sharing, and strong collaboration of stakeholders on the ground (Mollins, 2021).

B. Financial and operational self-sustainability

As access to finance and costs have been identified as key constraints to scalability, it is evident that **financial self-sustainability** is critical to a decision to scale up a project. Indeed, an intervention has more chances to be successful in the long term and scaled up if it follows a commercial business model. In such a model, revenues are generated from the implemented activities, which can therefore be sustained without raising additional funding (Scaling Up Community of Practice, 2022). As a key enabling factor, financial sustainability should be considered in the project design. This can occur through targeted instruments or vehicles such as the establishment of an endowment fund in the Pakistani GLOF project (Adaptation Fund, 2021c). In one key lesson from the Fund’s portfolio monitoring missions, “to ensure success of projects, it is key to **include the provision of economic incentives to communities**, to improve livelihoods and increase resilience of communities and ecosystems” (Adaptation Fund, 2018).

Operational self-sustainability is also of paramount importance for the successful expansion of adaptation interventions. Indeed, local stakeholders must be equipped with the **technical knowledge and operational experience to maintain adaptation systems and infrastructure**. This can include management of EWSs and the handling of equipment, including operation and maintenance. The GLOF project in Pakistan (Adaptation Fund, 2021c), for example, sought to develop the human and technical capacities of vulnerable communities and public institutions to understand and address GLOF risks. This was achieved by involving community members in the establishment and management of the EWS, enabling users to understand and appropriate the technology. Similarly, information from the EWS was shared with the Meteorological Department. This enabled public entities to build capacity to understand and manage the system, and eventually expand its coverage nationally.

Georgia (Adaptation Fund, 2019) put a strong focus on training government and municipality staff to use floodplain zoning when developing climate-resilient policies and to learn how to model and operate EWSs for flooding. Such theoretical and operational capacity building enabled the Georgian government to develop a nationwide multi-hazard EWS independently, and to mitigate flooding risks. In so doing, it created a strong basis and readiness for scale-up.

As perfectly summarized by Hartmann and Linn (2008), successful pilots must ensure operational self-sufficiency by going “beyond conventional training, twinning and expert advice, in assuring that local expertise is actually created and sustained, through long-term support for learning by doing, and by stressing reform of institutional incentives and accountabilities to assure there is actually a demand for the capacity to be created at the country level.”

The South African National Biodiversity Institute (SANBI), a Fund NIE, also highlights that “capacity building is not only aimed at creating an understanding of climate change adaptation, but also **developing institutional, financial, and administrative competence**. Grant recipients must be supported, in an enabling and empowering way, to develop and execute their grants, as informed by skills audits and training needs assessments” (SANBI, 2021). Self-sustainability is undoubtedly a critical prerequisite to scale up, and it is thus not surprising that sustainability is one of the key criteria used by the Global Environment Facility to evaluate projects’ impact (GEF, 2020).

C. Strong demand and engagement of local stakeholders

All the Fund pilots that have successfully been scaled-up have showcased **strong buy-in from local communities** and were **defined as a priority for governments**. For Pakistan, home to the largest ice mass reserves outside polar regions in the form of glaciers, GLOF risks are very specific to the country. The impacts of climate change are expected to exacerbate these risks (Annex 1.B). The good results of the pilot on a regional scale garnered the support of local communities and government entities, notably because the project successfully addressed the real needs of the population. This was facilitated through comprehensive stakeholder engagement plans and consultations, representing the views, concerns, and needs of all stakeholder groups.

The Colombia project followed the same approach (Annex 1.C). Vulnerability assessments supported stakeholder consultations to identify the needs and gaps to be bridged in the implementation of the project. **Engaging local stakeholders through consultations, stakeholder engagement plans, and vulnerability assessments** is considered best practice and critical to any adaptation project. Such steps should ensure that all stakeholders are involved, particularly women and Indigenous populations. Strong local stakeholder engagement facilitates the devolvement of decision-making to local actors, which is critical to improve local adaptation management and empower those impacted by climate change to make decisions during the implementation of adaptation responses (SANBI, 2021). Engagement of local communities also ensures that local and indigenous knowledge are integrated into the project, and that women are strongly involved in its design and implementation. In addition, strong community ownership of the project that recognizes the cost of climate adaptation inaction at the local level can also help citizens pressure their governments and public authorities to act. This, in turn, can build stronger momentum for national climate adaptation interventions and their scale-up (United Nations Climate Change, 2019). As such, community ownership is crucial to ensure sustainability of adaptation action.

Adaptation interventions that rely on strong demand from stakeholders create important community and government ownership. **Government ownership is critical to the scale-up**. This is true both for consideration by multinational funds, and for pushing and representing the interests of the country and its stakeholders, facilitating coordination of all actors, and actively campaigning to investors for the scale-up of interventions. For instance, despite mitigated operational results, the Maldives project for water management was strongly supported for scale-up by the government because water scarcity is a real problem in the islands (Annex 1.A). Similarly, in Colombia, floodings and water management was so relevant to the countries’ adaptation priorities that government representatives provided national expertise during the design of the scale-up and mobilized civil society domestically (Annex 1.C). Georgian government representatives also contributed data for the design of the scale-up, and strongly lobbied for national entities to provide co-financing (Annex 1.D).

Political buy-in is clearly a prerequisite to the integration of adaptation action into national strategies (Kata et al., 2014). Thus, strong national ownership is a key enabling factor for successful scale-up of adaptation interventions. This can be evident if the proposed interventions are embedded in national priorities or climate strategies, such as Nationally Determined Contributions (NDCs) or National Adaptation Plans (NAPs).

Strong support from national stakeholders will also help overcome the financing barrier. Government and national entities are more likely to contribute to the scale-up if it aligns with their priorities. In fact, co-financing from the national government, along with funds from multilateral funds, is considered a good practice to scale up adaptation finance. Co-financing ensures that domestic spending and government priorities are aligned with adaptation needs (United Nations Climate Change, 2019).

D. Applicability of the programme to a wider coverage

Pilot interventions that can be applied regionally, nationally, or in other countries of similar context are more likely to be scaled up. For instance, in Georgia, the solution piloted in the Rioni Basin appeared to be efficient and relevant to the rest of the country's 11 river basins (Annex 1.D). The EWS and the integrated approach to climate and disaster risk management were scalable in two ways that facilitated its scale-up. In terms of geographic coverage, they had potential to cover the other river basins. In terms of climate hazards coverage, they had potential to include new climate hazards. In addition, the floodplain zoning policies and technical guidance developed in the Fund pilot were scalable nationwide. In Pakistan, pilot interventions in two valleys were scaled up to 12 valleys in the country because of their applicability to other glaciers. Similarly, in Colombia, the successful interventions in some communities were scaled up to all communities of the La Mojana region, which were characterized by rich biodiversity and vulnerability to flooding. This enabling factor is therefore highly contextual.

2. Factors of scale-up failures

A. Financing and cost constraints

According to the literature, activities for adaptation to climate change tend to receive less financing than mitigation. In the case of adaptation, "it may be difficult to quantify or attribute specific benefits to specific adaptation interventions" (Kata et al., 2014) as the benefits tend to be seen in the long term in the form of reductions in expected losses. As such, up-front costs for adaptation measures are not clearly compensated by a direct return on investment. This is a barrier to private sector investors who are driven by competitiveness and expected risk-adjusted returns.

In addition, since the consequences of climate change cannot be projected with complete accuracy, it is uncertain when and how the benefits of adaptation investments will be reaped, or who will benefit. Even when benefits can be quantified and monetized, the time lag between investment and results leads to the perception that adaptation offers fewer benefits than mitigation due to the time value of money model used in cost benefit analyses. This model implies a discount rate on future gains (Kata et al., 2014).

Such barriers were also mentioned in the questionnaire answers from the UNDP representative for the GLOF

project in Northern Pakistan (Annex 1.B). For these reasons, adaptation interventions that require extensive and costly measures to achieve impact at scale are less likely to be scaled up (Scaling Up Community of Practice, 2022). As such, the **lack of financial self-sustainability** is assessed as a key barrier to scaling up adaptation interventions.

Another clear financing barrier to scale-up is **the lack of funds to develop and prepare scaled-up proposals for investors**. These proposals must rely on concrete analyses such as feasibility studies, economic and financial analyses, environmental and social management frameworks, gender analyses, etc. As highlighted in the questionnaire on the UNDP project in Colombia (Annex 1.C), this analysis requires the mobilization of funds to hire experts and finance field trips, which is often a challenge. The preparation of feasibility studies and analyses can be an especially big hurdle for small NIEs of multilateral funds. Such NIEs might not have the capacity to enable good projects to be upscaled. The “complexity of and costs involved in preparing scale proposals” is also mentioned as a key barrier in the questionnaire related to the NABARD/UNDP project (Annex 1.E). Indeed, although funds like the GCF may cover such costs through “readiness” programmes, financing support is still needed at the domestic level to develop a project proposal.

The questionnaires on the UNDP projects in Pakistan (Annex 1.B) and Georgia (Annex 1.D), as well as the discussion with SANBI, all mention the availability of domestic resources as a key limitation for scale-up. Indeed, “financing is needed for all the tasks involved in going to scale and sustaining delivery at scale, not only for the one-off costs of initial testing, adoption, capacity building and systems change” (Anandajayasekeram, 2016). Therefore, when a viable, long-term funding model is not part of the design of the initial pilot – i.e., when a scale-up project is not thought-through from the start – it complicates the work of domestic stakeholders. They then have to raise additional funding for the scale-up, often with limited resources. The administrative processes associated with accessing international climate finance are often notoriously complex and lengthy. They often do little to alleviate the financial and resource pressures faced by local stakeholders.

B. Lack of involvement of local stakeholders

All interviews and questionnaires reinforce that the project must answer challenges faced by local stakeholders. When local communities are not fully integrated into project design, they are not fully engaged, and inconsistencies and misunderstanding result. If the very beneficiaries of the adaptation intervention do not feel a sense of ownership and involvement, it is very unlikely the project will be sustainable or scaled up. In the questionnaire related to the GLOF project in Pakistan (Annex 1.B), the UNDP representative asserts that “if the needs [of local stakeholders] are not taken into account or [are] misrepresented, the project runs into trust deficit and faces major challenges during implementation.” In the case study on the UNDP project in the Maldives, for example, consultations with the local community for system design had been limited. This resulted in a misunderstanding of the community’s willingness to pay for the water services (Adaptation Fund, 2016). If community relations are damaged, it can lead to local distrust in the project, which is always to be avoided.

In addition to being involved in project design, beneficiaries must also be taught and trained to use the new adaptation systems to ensure sustainability. The lack of a strong knowledge management system, whereby local stakeholders are not included and trained to implement activities, is a key barrier to scale-up as it hinders sustainability of the initial project. If beneficiaries do not understand how to use or repair a new technology, it will likely fall into disrepair or disuse as soon as international project implementers are gone. Subsequently, no significant impact will be achieved in the long term.

Lessons learned from the UNDP Maldives project (Annex 1.A) demonstrate that local communities and staff must be involved in the design and set-up of interventions. For instance, operational manuals must be written in the local language to ensure sustainability of established systems. Long-term arrangements with public institutions in charge of implementation must ensure that locals are hired and trained to maintain the new technology. This will increase the technology transfer potential and the dissemination of knowledge among local stakeholders (Adaptation Fund, 2016).

C. Lack of institutional support or stability

Lack of country ownership is a key barrier to scaling up a project. Government and public authorities may have many competing issues that need immediate actions and resources. If the adaptation intervention is not perceived as a priority for authorities, it is unlikely to be sustained or scaled up. For many multilateral funds, like the Fund and the GCF, country ownership is a prerequisite to consideration of a project for financing. For instance, the Fund only considers proposals with a letter of endorsement from the Designated Authority (DA), and which comply with relevant national policies and strategies. Similarly, the GCF ensures that all projects considered for scale-up have strong country ownership. Such an approach entails a lot of administrative steps, which can sometimes be lengthy and bureaucratic. However, they safeguard against projects that would not be in line with a country's priorities.

Even when public authorities support adaptation interventions, constraints related to the **instability of such support** can put a project at risk. Such constraints can stem from **political transitions, which threaten the durability of governments and their policy priorities**. The questionnaire about the UNDP project in Colombia (Annex 1.C) notes a successful intervention and national priority for one administration can be quickly abandoned by the following government. It thus loses political momentum and buy-in for scale-up. Adaptation action is best evaluated in the long term, and scalability takes time. This process can be at odds with political mandates, which rarely look beyond five years and whose priorities may change or be conflicting. However, long-term policies to support implementation of national adaptation strategies are critical elements of an enabling environment. As such, they are necessary to attract financing and sustain interest in climate change adaptation, which, as previously mentioned, often remains overlooked and under-funded.

Further, a successful small-scale intervention may not be scaled up unless it is integrated into the wider country context. Such lack of integration may result from lack of institutional support for the intervention. The particularities of the region or communities where the intervention takes place may also be quite different from the rest of the country. The replication of activities on a wider or national scale can therefore be limited. Since adaptation actions tend to be highly contextual, lack of replicability might thwart scaling-up. Therefore, adaptation interventions are more likely to be scaled up if they fit into larger programmes and policies rather than remaining one-off projects (Kata et al., 2014). Clear policy, legal, and investment frameworks towards adaptation action enhance a country's enabling environment and its attractiveness to international sources of climate finance. This further increases the odds of scaling up successful interventions if they are coherent with national priorities.

D. Information and knowledge constraints

Information and knowledge constraints appear to be a key barrier to the scale-up of successful adaptation interventions. First, as previously mentioned, investors tend to shun adaptation measures because the return

on investment is less straightforward than for mitigation measures. This mainly comes from a lack of information about the benefits of adaptation actions, and existing technologies and their implementation. Therefore, investments in adaptation are largely hindered by the lack of knowledge of investors, or “familiarity barriers” (Kata et al., 2014). These tend to focus on the perceived risks of climate change adaptation interventions.

In the questionnaire for the Colombia project (Annex 1.C), the UNDP representative highlights lack of technical, scientifically based information critical to generate proof of concept as the main barrier to scale-up. Indeed, if the project had only provided surface-level knowledge, it would not have had access to the level of information required to objectively demonstrate its success as an adaptation model. The questionnaire on the India project (Annex 1.E) also emphasizes the need to “scientifically demonstrate the justification for scaling-up, including adequate measurement tools” to overcome the information barriers to further investments into adaptation action. As highlighted in the Georgia project (Annex 1.D), a pilot with weak knowledge management, which does not measure impact in quantifiable terms through technical and scientific analyses, will be unable to share lessons and knowledge widely. Consequently, the pilot intervention will not generate a “proof of concept,” which is often the spark that leads to scale-up. Indeed, as our definition of scaling-up highlights,² successful innovations in the pilot phase are a prerequisite to scale-up. Success can only be measured through thorough monitoring and evaluation based on sound analysis. In addition, information needs to be properly disseminated. This allows those seeking scaling-up or replication to adapt information to their context, especially in the case of scale-ups by other entities or countries (Kata et al., 2014).

Further, information barriers also come from the lack of resources and knowledge of local stakeholders, such as local communities, and regional and national institutions. The questionnaire on the Pakistan project (Annex 1.B) highlights that public institutions often fail to drive adaptation work effectively and coherently. They might not have access to all information to fully understand the challenges and opportunities at stake. As a result, adaptation is often left to communities, which also lack resources and knowledge to deal with the magnitude of climate change–related impacts. That is why, a pilot needs to include beneficiaries in the design and implementation, and systematically build their capacity to understand and manage the effects of climate change through adaptation measures. Otherwise, interventions are unlikely to be sustainable in the long term and will compromise scale-up. Further, a project should not only focus on building the capacities of local communities, but also of public agencies and local governments. This will enable them to pursue replications independently and scale up interventions to a regional or national scale efficiently. Indeed, “domestic capacities of a country will influence its ability to access, absorb, and channel climate finance” (Kata et al., 2014). Without dissemination of information and knowledge to local stakeholders, community or country ownership are virtually unachievable.

E. Complexity constraints

The literature reminds us that **complexity is an important constraint to the scaling-up of adaptation** interventions. In general, the more complex a project, the less likely it is to be sustainable once its execution is left to local stakeholders. Consequently, scaling-up is less likely. The elements that contribute to complexity include “the number of decision-makers; the degree of departure from existing practices and behaviours; required changes to values and practices; level of technical sophistication; and the requirements for

2. “Scaling-up means increasing the impact of innovations, policies, programs and projects successfully tested in pilots by extending their outreach to more people, in different places over time, and ensuring this deliberate expansion is done sustainably by adapting to local context and fostering policy change and program development on a lasting basis.”

technology, infrastructure, and facilities” (Anandajayasekeram, 2016).

The **complexity of accessing international climate funds can also become a barrier to scale up projects.** Interviewees mention that the bureaucracy, length of processes, and number of intermediaries involved in the submission and approval processes of projects require domestic stakeholders to allocate significant financial and human resources to scale-up efforts. This can also be a deterrent to co-financing from private investors, who tend to favour clarity and speedy decision-making (Kata et al., 2014).

As highlighted in Kata et al. (2014), “the institutional structures used by some key sources of climate finance can lead to significant delays in climate finance disbursement.” Such delays can be worsened when it comes to organizational scale-up, i.e., when another fund scales up projects first piloted by another institution. This is the case for all projects studied in the present research. Indeed, when processes and information are not streamlined between organizations, it can lead to repetitive or inefficient procedures. For instance, IEs or EEs in a Fund-supported project might differ from the ones in a GCF scale-up project. This can lead to loss of knowledge and efficiency in implementation of the adaptation activities. Facilitating cooperation and coordination among multiple actors, although challenging, is identified as key to enhance the scalability and replicability of interventions (Kata et al., 2014).

IV. Conclusions and recommendations

Conclusions



Features that can be scaled up

- **Proof of concept.** Successful adaptation pilots demonstrate a proof of concept, acting as a testing ground for learning and best practices. This can then be used to showcase the results and incentivize others to scale up successful interventions.
- **Financial sustainability.** Financially self-sustainable interventions that generate revenue are more likely to be scaled up. This includes the transfer of knowledge so local communities can operate systems in the long term.
- **Local ownership.** Successful scale-ups also entail strong demand and engagement from local stakeholders, including local communities and public authorities. Indeed, the most successful scale-ups provide a feasible answer to an acute adaptation need from the local community. They engage transparently and in a participatory way with local stakeholders to find practical solutions together.
- **Replicability.** In addition, to be successfully scaled up, the practices or systems developed need to apply to a wider coverage.



Challenges

- **Financing and cost constraints.** Lack of financing can hinder scale-up. This can occur when up-front costs are high; if return on investment is uncertain; if the project lacks a financially self-sustainable business model; or when a scale-up proposal to a climate fund needs additional risk or feasibility studies and other documentation.
- **Lack of local engagement.** Lack of involvement of local stakeholders in the project design and its implementation is also a cause of failure to scale up. The involvement of local stakeholders is fundamental to the sustainability of any project.
- **Country ownership.** Most international climate funds require country ownership as a prerequisite for funding. However, even with institutional support, the project may lack institutional stability as governmental priorities tend to change often.
- **Information and knowledge gaps.** Technical assistance and capacity can counter information and knowledge gaps that block scale-up. Knowledge sharing platforms can also disseminate knowledge on successful adaptation interventions.
- **Complexity.** More complex projects are less likely to be scaled up than simpler interventions.



Key enabling factors

- Consistent partners. Whenever feasible, scale-up initiatives should involve the same stakeholders from the pilots, including IEs, EEs, or public authorities. This can leverage knowledge acquired and lessons learned, efficiency gains and cost-effectiveness in terms of implementation structures, recruitment, and training, among others.
- Pre-existing mechanisms. When possible, existing structures (such as governmental structures, non-governmental organizations, or community-led associations) have proven more helpful than creating new ones for the project. These structures can facilitate coordination between stakeholders, and increase efficiency and community ownership. In addition, any successful coordination network, governance structure, or institutional and management framework established during the initial pilot should be used as much as possible in the follow-up projects. This will maximize effectiveness and facilitate cooperation. In other words, not all projects need to reinvent the wheel. On the contrary, the projects relying on pre-existing structures appeared to be more successfully scaled up.

Recommendations



Plan scale-ups at the design stage

Scaling up adaptation interventions requires a significant commitment of financial, human, and time capital. Although most climate projects financed by multilateral funds aim to be replicated and scaled up, the literature suggests there is little systematic evaluation of a fund's performance in planning or implementing such scale-up. The following quote from Hartmann and Linn (2008) is relevant:

"Many aid agencies pursue development interventions as a one-time intervention, as scaling up is not an issue for deliberate reflection by donors in their country strategies or at the start of a specific project. If there is any reflection on replication, the presumption usually is that a successfully completed pilot project will be replicated by someone else without any special initiative from the donor who implemented it. Gradual build-up of programs with systematically laying out scaling up paths remains the exception, rather than the rule."

Hartmann and Linn are convinced that a strategy for scale-up must be part of project design to ensure adequate replication or expansion. In other words, they believe scale-up should be strategically planned by the fund piloting the intervention. Indeed, measures to sustain project benefits after the conclusion of the project should be considered and integrated into project design and support processes. The findings of the present study, acknowledging the substantial preparatory work needed to develop scale-ups and the many barriers to successful implementation, concur with this assessment. Potential for scale-up should be planned during pilot design – not only through dissemination of information – but through additional concrete means such as, among others:

- establishing ex-post stakeholder cooperation groups, gathering representants of all beneficiaries, decision-makers, and potential additional entities who could expand the project
- collecting clear information from all stakeholders about the remaining needs to enable them to

- achieve the next level of independence in terms of climate change adaptation
- mapping all potential localities, regions, or countries with similar contexts where these adaptation practices could be applied (for quantitative, geographical expansion)
- mapping potential sectors and fields where similar intervention models could be applied (innovative financial instrument, community-participatory model, business or funding model).

Such steps could ensure that scale-ups are planned, and would facilitate the collaboration between stakeholders to learn from past experiences and best practices. To ensure efficient allocation of resources, this ex-post component could depend on the success of the pilot according to several elements. These could include strong country ownership and stakeholder engagement, proof of concept, and financial and operational sustainability.

Once the pilot is deemed successful, the ex-post component could be activated to plan potential scale-ups, potentially financed through Fund project scale-up grants or Fund/GCF readiness grants. This implies that scale-up should only be started once the pilot is completed, and interventions and results have been fully monitored and evaluated to assess concrete achievements. This approach is supported by the literature, as only successful innovations should be scaled up.



Streamline multilateral climate finance

Given the significant complexity constraints in scaling up adaptation projects, the processes of multilateral sources of climate finance should be streamlined to increase efficiency and enable swift implementation of scale-up. The establishment of a scaling-up approach between the Fund and other major sources of climate finance, particularly the GCF, will support the streamlining and increase efficiency of scaling-up Fund pilots. The scale-up framework, now being operationalized, would allow for Fund to share ex-post results of pilots (recommended above) directly with relevant stakeholders in the GCF network to facilitate scale-up. This framework will establish a common approach for identifying eligible projects for scale-up, ensuring more efficient use of resources.

Convening a broad range of local stakeholders is important. Scaled-up projects could involve different stakeholders than the initial IEs and EEs of the Fund pilot. In addition, in some cases, the Fund DAs are different from the National Designated Authorities (NDAs) of the GCF. This can lead to cumbersome processes.

One way to streamline this consultation process would be to include DAs/NDAs of different multilateral funds in the proposed ex-post stakeholder cooperation groups. This would promote discussion and brainstorming among the national entities. In so doing, it could help achieve consensus at the country level of the responsibilities of each institution in the scale-up. The same procedure can select IEs and EEs. The fast tracking of Fund IEs to the GCF accreditation process is already a positive step to ensure more efficient scale-up of successful adaptation pilots. Further alignment between the two funds, and more efficient internal approval processes and stakeholder collaboration, could lead to more timely approval and implementation of scale-ups.

V. Annex

Questionnaires for entities that scaled up Fund-financed projects

A. UNDP: “Increasing climate resilience through an Integrated Water Resource Management Programme in HA. Ihavandhoo, ADh Mahibadhoo and GDh. Gadhdhoo Island”, 2010

1. Why has this particular project been scaled up?

The Integrated Water Management Project for the Maldives has been scaled up through additional funding from the GCF and now through government funding led by the Ministry of Planning and Infrastructure.

2. Based on your experience, what are the key enabling factors that need to be in place for scaling up to firstly be considered and secondly be successful?

It was clear from the onset that water production and distribution in the Maldives will largely remain subsidized and a full-cost recovery due to high production costs and lack of economy of scale would be highly unlikely. Therefore, the upscaling strategy piloted a good practice demonstration to enable the future replication through the leveraged additional funding from the donors and the government. A good practice ultimately meant a cost-effective model that secures an all-year-round water availability considering increased climate variability, uncertain rainfall distribution, and amounts across the seasons and atolls. The introduced integrated water production model was geared towards the cost reductions and cost-effectiveness across all stages in the system. An integrated system introduced by the project eliminated the cost of imported fossil fuel by switching to a solar system. It also blended desalinated water, which is an expensive technology with high cost of operation and maintenance, with harvested rainwater which further lowered an overall cost of water production. Expansion of rainwater harvesting capabilities at the target islands also reduced the ratio of water desalination needed. The Fund project was a testing ground for the water production and management technology and practice in the Maldives. It generated a proof of concept with important lessons learned and much better understanding of further needs for improvements in the technology, as well as the gaps in policies, regulatory framework, and institutional capacities to enable a full uptake and dissemination of such technology. Although the project did not set up financing mechanisms for replication, it has successfully demonstrated the key features of cost-effective and affordable technology, generated knowledge, and advocated for further action for an uptake and leveraging additional GCF and public funding.

3. What are the main barriers which prevent the scaling up of adaptation initiatives?

4. How much did the needs/input of the target country contribute to the scaling up of a project or intervention (i.e., did country support for scaling up play a major role)?

Water security has been a critical priority for the Maldives where the population relies on seasonal water

emergency distributions every year. Therefore, the project has drawn lots of attention and a strong buy-in by the government at all levels. Indeed, country needs and a strong buy-in largely condition the potential for an uptake and replication.

5. What were the existing incentives at the country level for scaling up the AF-funded project? Also, what were the benefits to pursue scaling-up of the project?

The Fund project provided for a prototype model to solve the water access and scarcity issues in the face of increasingly unreliable rainfall and risks of groundwater pollution from seawater salt intrusion. This instilled greater confidence for the government to mobilize additional GCF grant funding and leverage public investment towards further scaling up.

6. Why other of your agency AF projects have NOT been scaled up?

There might be various reasons why scaling up may not be possible:

Inability of the project to effectively adapt to the new circumstances, where the initially made assumptions no longer hold valid. Especially, if the circumstances change at a mature stage of project progress. Such changes may also relate to the eruption of conflict or major changes in the government institutions and policies, and related government priorities.

Unlike the GCF, the Fund has country allocations that set a single project budget at a maximum of USD 10 million. A total budget of each single project is typically much lower. This may somewhat restrict the vision and level of project ambition for scalability. On the other hand, these country allocations are well justified and important to ensure equitable access by all eligible parties. Project proponents, however, also encouraged by the donor, often set higher targets than it is plausible to achieve given the resources allocated. Therefore, Fund projects often serve as a learning and demonstration ground for further upscaling strategies through the GCF or other funding options.

B. UNDP: [“Reducing Risks and Vulnerabilities from Glacier Lake Outburst Floods in Northern Pakistan”, 2010](#)

1. Why has this particular project been scaled up?

Pakistan being home to the largest ice mass reserves anywhere outside polar regions, the risk of Glacial Lake Outburst Floods (GLOFs) is a very specific one, which is expected to be further exacerbated by the impacts of climate change. The GLOF project implemented with funding from the Adaptation Fund produced some good results/impacts – it allowed raising awareness of key stakeholders and the general population about GLOFs. The term GLOF, rarely used in any official documents or communication at project completion, found its way into all major climate change– related legislation, directives, and media jargon. However, the task of addressing the risk of GLOFs in Pakistan is much larger than one pilot project could address. The focus of the Fund project was only on two to three valleys in the vast northern Gilgit Baltistan and Khyber Pakhtunkhwa regions of Pakistan. Therefore, the project was scaled up with funding from the Green Climate Fund (GCF), with strong commitment of the government.

2. Based on your experience, what are the key enabling factors that need to be in place for scaling up to firstly be considered and secondly be successful?

First, the issue being addressed needs to strongly reflect real needs of stakeholders on the ground. Without strong demand and engagement, development interventions and their impacts are usually short-lived.

Second, political will and commitment of the government is a prerequisite to consider and ensure successful scaling-up.

Third, it should bring about transformational change at sectoral level, and not be confined to any limited project area or a set of stakeholders.

For scaled-up interventions to be successful, they need to fully utilize best practices and lessons learned from the pilot phase. The scaled-up phase should not be rushed into implementation. A very robust inception phase should be factored in. As the name suggests, since the scaled-up phase is usually a much larger one, it requires adequate and transparent implementation support mechanisms, in particular a strong project management unit and technical expertise for implementation, as well as a good stakeholder engagement plan.

3. What are the main barriers which prevent the scaling up of adaptation initiatives?

Unlike mitigation, where results can be easily quantified, adaptation initiatives are often left at the backburner of public investment. Therefore, it is difficult to mobilize domestic public finance for adaptation initiatives. While adaptation initiatives have clear long-term benefits, immediate costs of adaptation are very high and therefore there is reluctance to invest.

Since public and private actors are involved in the implementation of adaptation measures, decision-making barriers (such as transaction costs) reduce the desired level of adaptation.

While there is consensus that climate is changing, there is uncertainty around the scale of these changes. Scientific knowledge will continue to grow, but, as for many other types of risks, we will never have precise forecasts of the magnitude and timing of climate risks. It will be important to adopt an approach to planning that acknowledges and can accommodate uncertainty.

Further, weakness of local- and national-level institutions is a major limitation for effective adaptation. Public institutions need to drive adaptation work effectively and coherently through deep horizontal cross-sectoral and vertical coordination, which is not always the case. Due to this, adaptation is often left to communities, which lack resources and knowledge to deal with the magnitude of climate change-related impacts.

4. How much did the needs/input of the target country contribute to the scaling up of a project or intervention (i.e., did country support for scaling up play a major role)?

As outlined above, the needs and input of the host country at all levels and stakeholder groups (national, provincial, and local) are a key ingredient of success of any scaled-up intervention. If the needs are not

taken into account or misrepresented, the project runs into trust deficit and faces major challenges during implementation. Support from the target country should therefore not only be reflected in formal required documentation through letters of support but also be real. Such support should be the result of comprehensive stakeholder consultations representing the views, concerns, and needs of all stakeholder groups.

5. What were the existing incentives at the country level for scaling up the AF-funded project? Also, what were the benefits to pursue scaling-up of the project?

A strong incentive was readiness and commitment of the government and limited domestic financial resources to address GLOF risk reduction. It is expected that following completion of the scaled-up phase of the project, the government will be equipped with the technical knowledge and operational experience to maintain infrastructure (handling of equipment and EWS, including its operations and maintenance).

The results and awareness generated through the Fund project were instrumental in garnering government and stakeholder support.

The institutional set-up and coordination mechanisms for implementation at local level was already well-established. Therefore, coordination of activities for the current scale-up initiative is easier.

6. Why other of your agency AF projects have NOT been scaled up?

One key limitation is availability of resources. The project may have achieved excellent results, and have strong government commitment, but it may not have necessary domestic finance to be scaled up.

As discussed above, adaptation initiatives are often lower down in the list of priorities of governments, which have many competing issues that may need immediate actions and resources.

Scaling-up does not always happen in a linear way – that is, through the same project design. Multilateral development banks such as Asian Development Bank, World Bank and others rely on experience, lessons learned, and best practices coming out of UNDP-implemented initiatives. Therefore, they do scale up UN interventions, slightly modifying design, scope and implementation modalities. In essence, those could still be considered scaling up.

[C. UNDP: “Reducing Risk and Vulnerability to Climate Change in the Region of La Depresión Momposina in Colombia”, 2012](#)

1. Why has this particular project been scaled up?

This project was scaled up from the UNDP-supported Adaptation Fund (Fund) Project “Reducing Risk and Vulnerability to Climate Change in the Region of La Depresión Momposina in Colombia.”

The Fund project created an important baseline on its initial community and nature-based approach for disaster risk management to flooding. Its approach upon implementation was seen as successful to both local communities, and regional and national authorities. It provided an important value-add in how risk in

the past had been attended to. The products developed by the project provided an important case study that could be scaled and the knowledge management products had a sufficiently scientific basis to be used to provide a proof of concept.

However, as the project was implemented, more was known about risk management and how climate was affecting the region. Potential needs that perhaps had not been well-identified at the onset were identified. This meant a larger project could build upon this information and lessons learned. For example, the project was originally designed to manage flooding; however, as it was being implemented, the impact from drought-like conditions in the region also became noticed, as dry months seemed to be getting longer. These were consistent with climate change projections and pointed to a need for a greater focus on water management.

2. Based on your experience, what are the key enabling factors that need to be in place for scaling up to firstly be considered and secondly be successful?

Appropriate knowledge management that allows for a clear identification of the climate impacts and how these were managed based on the project's solutions. This needs to be done through a scientific approach that identifies the climate impact and then compares the benefits that have been gained by the project. For example, in the case of the Colombia project, food security was identified as a climate impact that was attended to by the project through home gardens and recovery of local seeds. These benefits were identified in terms of crop productivity, diversity, income potential, and beneficiary perception. This information was key to the financial analysis that was required.

Strong local presence and community buy-in. This allowed the project design team to mobilize to garner information needs and gaps as well as facilitate consultations and correctly identify local needs based on vulnerability assessments. This information was key in providing an insight into how the project should operate and demonstrated its feasibility for upscaling. It also created an important amount of government ownership in pushing for the project's upscaling.

Perception of a successful project by project implementers. The Fund project provided concrete benefits to local communities and clearly advanced national priorities for disaster risk management and adaptation. This created a sense within project implementers and national authorities that it was important for this project to be upscaled and be seen as a model for adaptation and development. The proven track record also facilitated partnerships that needed to be developed in the upscale as it was a project that people wanted to be associated with.

3. What are the main barriers which prevent the scaling up of adaptation initiatives?

Lack of technical information to allow proof of concept. The project benefited in that it had invested in a valuation of ecosystem services. It had also supported national efforts in developing a hydrological flow model for the wetland and it had systematized information in terms of costs and benefits. Had it only developed "feel good" "anecdotal" knowledge management stories, the project would not have had access to the information required to objectively demonstrate its success as an adaptation model.

Funds. Scaling up a project requires access to funds to be able to present the proposal to investors and develop the various products that are required for its presentation. In this case, the project invested in a

feasibility study, an economic and financial analysis, an ESMF and gender analysis, etc. This required the mobilization of funds to hire correct expertise and to fund mission travel. This is not always available and is a key barrier in allowing good projects to be upscaled, particularly for GCF.

Political transitions. When managing internationally developed projects, political support is key. Hence, what may be a successful project for one government administration may not be considered to address priorities for another. Hence, political momentum and buy-in for upscale is lost.

4. How much did the needs/input of the target country contribute to the scaling up of a project or intervention (i.e., did country support for scaling up play a major role)?

The country played an important role in the scale-up, providing in some cases national expertise during the design and actively encouraged UNDP to work on this scale-up. Colombia government representatives also actively lobbied for this project and its importance during the GCF meetings and with board members based on the Fund baseline project results. It was also able to mobilize civil society to lead during the free, prior, and informed consent process per national norms.

5. What were the existing incentives at the country level for scaling up the AF-funded project? Also, what were the benefits to pursue scaling-up of the project?

I am not really sure what the question is asking in terms of incentives. In this case, the incentives were the successful results and existing barriers that had yet to be attended to enable resilience in a clearly evident climate-vulnerable area. These results created a sense of encouragement by all actors to look for an upscale with the benefits being the continued and deepening impact based on lessons learned.

6. Why other of your agency AF projects have NOT been scaled up?

The barriers identified in question 3 are the main reasons, particularly the lack of funds to invest in the scale-up, as well as information gaps that may exist that require further investment needs.

D. UNDP: [“Developing Climate-Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia”](#), 2011

1. Why has this particular project been scaled up?

The Fund project in Georgia has piloted several climate/disaster risk management solutions – both technological and institutional – at one of the larger river basins in Georgia (Rioni River). In particular, the project demonstrated an integrated flood risk management approach and Flood Forecasting and Early Warning System (FFEWS) in the Rioni River Basin. The piloted solutions appeared to be efficient and relevant to the rest of the country’s 11 river basins. The EWS and the integrated approach to climate/disaster risk management were scalable both in terms of geographic coverage (potential to cover the other river basins), as well as in terms of climate hazards coverage (potential to include new climate hazards). The Fund project created a number of enabling policies (e.g., floodplain zoning) and technical guidance scalable nationwide.

The Fund project invested in institutional capacity building and training of the key national and local stakeholders, which created a strong basis and readiness for scaling up. The project has also built up a very strong national ownership and a coalition of the national entities/organizations willing to scale up this successful initiative.

As a result, as soon as the country received an opportunity to access and programme GCF resources, the Government of Georgia initiated development of a nationwide climate risk management project building upon the results of the Fund initiative.

2. Based on your experience, what are the key enabling factors that need to be in place for scaling up to firstly be considered and secondly be successful?

The following factors enable replication and scaling-up:

- A successful proof of concept: a pilot that tests/implements proposed technical and/or institutional solutions at a smaller scale, builds trust among national stakeholders in the proposed solution, tests the implementation approach, helps assess bottlenecks and risks, reduces risks and designs risk management strategy for a larger intervention.
- An investment in capacity building and learning among the national and local stakeholders in order to create readiness for scaling-up.
- Strong national ownership behind the initiative: the proposed intervention needs to be embedded in the national priorities/climate strategies (e.g., NDC, NAP, etc.) and to be supported by the national stakeholders.
- Sufficient preparatory financing for the development of feasibility study/investment proposal for the scaled-up interventions building upon a successful pilot.
- Access to finance for scaling-up.

3. What are the main barriers which prevent the scaling up of adaptation initiatives?

- Lack of finance for scaling-up and/or for the development of scaled-up interventions.
- Insufficient institutional capacities, staff turnover in the national institutions responsible for the pilot, which results in the deterioration of knowledge.
- Changing or conflicting political priorities.
- Poor exit strategy, weak knowledge management by the initial pilot.
- Poor assessment of risks for scaled-up intervention: what works well on a smaller/local scale may fail during scaling-up if financial, institutional, political, etc. risks are not adequately assessed/managed.
- Insufficient investment in management and coordination of a larger investment.

4. How much did the needs/input of the target country contribute to the scaling up of a project or intervention (i.e., did country support for scaling up play a major role)?

Yes, in the case of the Georgian Rioni project, the country support and ownership played an absolutely key role in the design and mobilization of the GCF-funded scaling-up. The national partners, including the GCF NDA, the implementing partners and sectoral ministries, worked together to secure national co-finance, negotiate with the GCF, contribute data for the design of the scaled-up proposal.

5. What were the existing incentives at the country level for scaling up the AF-funded project? Also, what were the benefits to pursue scaling-up of the project?

The key incentive was the dire need of the country to improve management of climate disaster risks due to climate change. Georgia has been experiencing increasing losses from hydrometeorological disasters, including human and economic losses. The Fund-supported Rioni project demonstrated approaches to reduce the losses through improved climate information and preparedness.

Other incentives at the level of partner institutions included an interest in enhancing technological and knowledge base and to attract additional investments in disaster resilience/protection.

6. Why other of your agency AF projects have NOT been scaled up?

Many Fund projects beyond the Georgian Rioni project are being scaled up at different levels – either through local, national, or international funding. Scaling-up could happen after the project ends and/or in sequential phases depending on the availability of funds.

The Fund-supported project in Turkmenistan laid the ground for an SCCF-funded adaptation project and to the second phase Fund project focusing on nationwide climate-resilient extension services (submitted to the Fund but not funded due to expiration of UNDP's accreditation). The Fund-supported project in Uzbekistan has a very strong potential for scaling-up; one of its components related to Drought EWS has already been scaled up through a GCF-funded MHEWS project approved last year.

E. UNDP/NABARD: [“Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise”](#), 2014

1. Why has this particular project been scaled up?

The project was scaled because the previous project had successfully demonstrated that the choice of adaptation measures on coastal ecosystems and communities had been the right one. A combination of mangrove restoration with alternative climate-resilient livelihoods for coastal fisher folk.

2. Based on your experience, what are the key enabling factors that need to be in place for scaling up to firstly be considered and secondly be successful?

- A successful prior project that has provided strong impact on the ground and demonstrated best practices in the field.
- Community buy-in and ownership of the project is also an important factor for scaling-up.
- Country and government ownership of the project with an alignment with national priorities.

3. What are the main barriers which prevent the scaling up of adaptation initiatives?

- Capacity and technical knowledge to be able to demonstrate scientifically the justification for scaling-up including adequate measurement tools.
- Access to public funds such as the vertical funds is very complex and technical for some.
- Governments and the availability of funding is limited to be able to scale up such projects.

4. How much did the needs/input of the target country contribute to the scaling up of a project or intervention (i.e., did country support for scaling up play a major role)?

Country ownership and country support for scaling-up is crucial, in order to identify the communities and regions that are most in need of the intervention, and to provide the right amount of co-finance to support baseline activities.

5. What were the existing incentives at the country level for scaling up the AF-funded project? Also, what were the benefits to pursue scaling-up of the project?

- The impact of the previous project had motivated the government both locally and nationally to pursue similar benefits on a larger scale.
- Extending the benefits of the previous project to a larger number of communities and ecosystems.

6. Why other of your agency AF projects have NOT been scaled up?

Similar to Q3 limited technical knowledge and expertise, the complexity of and costs involved in preparing scale proposals have been the main constraints in scaling other projects.

VI. References

- Adaptation Fund (2010a). *Adaptation to Coastal Erosion in Vulnerable Areas*. Washington, D.C. <https://www.adaptation-fund.org/project/adaptation-to-coastal-erosion-in-vulnerable-areas/>
- _____ (2010b). *Increasing Climate Resilience through an Integrated Water Resource Management Programme in HA*. Ihavandhoo, ADh. Mahibadhoo and GDh. Gadhdhoo Island. Washington, D.C. <https://www.adaptation-fund.org/project/increasing-climate-resilience-through-an-integrated-water-resource-management-programme-in-ha-ihavandhoo-adh-mahibadhoo-and-gdh-gadhdhoo-island/>
- _____ (2011). *Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Pichincha Province and the Jubones River basin*. Washington, D.C. <https://www.adaptation-fund.org/project/enhancing-resilience-of-communities-to-the-adverse-effects-of-climate-change-on-food-security-in-pichincha-province-and-the-jubones-river-basin/>
- _____ (2014a). *Building Resilience in the Greater uMngeni Catchment, South Africa*. Washington, D.C. <https://www.adaptation-fund.org/project/building-resilience-in-the-greater-umngeni-catchment/>
- _____ (2014b). *Taking Adaptation to the Ground: A small Grants Facility for 2014*. Washington, D.C. <https://www.adaptation-fund.org/project/taking-adaptation-to-the-ground-a-small-grants-facility-for-enabling-local-level-responses-to-climate-change/>
- _____ (2016). *Final Evaluation: Increasing Climate Resilience through an Integrated Water Resources Management Programme*. Washington, D.C. <https://www.adaptation-fund.org/projects-document-view/?URL=https://pubdocs/en/482751535657063674/42-Maldives-Final-Evaluation-FINAL-140216-clean.pdf>
- _____ (2017). *Final Evaluation Report: Developing Climate Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia*. Washington, D.C. <https://www.adaptation-fund.org/projects-document-view/?URL=https://pubdocs/en/417801538084506791/pdf/52-4583-terminal-evaluation-report-Georgia-final.pdf>
- _____ (2018). *Adaptation Fund – Lessons Learned and Successful Approaches Captured from Portfolio Monitoring Missions*. Washington, D.C. <https://www.adaptation-fund.org/wp-content/uploads/2018/11/Lessons-Learned-from-PMM.pdf>
- _____ (2019). *Developing Climate Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia*. Washington, D.C. <https://www.adaptation-fund.org/project/developing-climate-resilient-flood-and-flash-flood-management-practices-to-protect-vulnerable-communities-of-georgia/>

_____ (2020a). *Reducing Risk and Vulnerability to Climate Change in the Region of La Depression Momposina in Colombia*. Washington, D.C. <https://www.adaptation-fund.org/project/reducing-risk-and-vulnerability-to-climate-change-in-the-region-of-la-depresion-momposina-in-colombia/>

_____ (2020b). *Final Project Evaluation: Risk and Vulnerability Reduction towards Climate Change in the Momposina Depression Region in Colombia*. Washington, D.C. <https://www.adaptation-fund.org/projects-document-view/?URL=https://pubdocs/en/967671608345243488/57-4805-Report-Final-Eval-Kyoto-Eng-final.pdf>

_____ (2020c). *Local Leadership in Adaptation Finance: Learning from Locally-led Action in Adaptation Fund Projects and Programmes*. Washington, D.C. <https://www.adaptation-fund.org/wp-content/uploads/2020/09/Local-Leadership-in-Adaptation-Finance-publication-1.pdf>

_____ (2021a). *Annual Performance Report for the Fiscal Year 2021*. Washington, D.C. https://www.adaptation-fund.org/wp-content/uploads/2021/10/AFB.EFC_28.3_Annual-Performance-Report-for-Fiscal-Year-2021.pdf

_____ (2021b). *Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise*. Washington, D.C. <https://www.adaptation-fund.org/project/conservation-and-management-of-coastal-resources-as-a-potential-adaptation-strategy-for-sea-level-rise/>

_____ (2021c). *Reducing Risks and Vulnerabilities from Glacier Lake Outburst Floods in Northern Pakistan*. Washington, D.C. <https://www.adaptation-fund.org/project/reducing-risks-and-vulnerabilities-from-glacier-lake-outburst-floods-in-northern-pakistan/>

_____ (2021d). *Reducing Vulnerability to Climate Change in North West Rwanda through Community Based Adaptation*. Washington, D.C. <https://www.adaptation-fund.org/project/reducing-vulnerability-to-climate-change-in-north-west-rwanda-through-community-based-adaptation/>

Anandajayasekeram, Ponnia (2016). *Scaling up and Scalability: Concepts, Frameworks and Assessment*. Vuna Research Report, Pretoria. https://beamexchange.org/uploads/filer_public/2d/dd/2dddfe2a-8715-42c8-9c21-b0819356d8ed/scaling-up-and-scalability-concepts-frameworks-and-assessment-report-anandajayasekeram-p_compressed.pdf

Bradach, Jeffrey L. (2003). Going to scale: the challenge of replicating social programs. *Stanford Social Innovation Review*, Spring. https://ssir.org/articles/entry/going_to_scale

Green Climate Fund (2015a). *FP003: Increasing the Resilience of Ecosystems and Communities through the Restoration of the Productive Bases of Salinized Lands*. Songdo. <https://www.greenclimate.fund/project/fp003>

_____ (2015b). *FP007: Supporting Vulnerable Communities in Maldives to Manage Climate Change-induced Water Shortages*. Songdo. <https://www.greenclimate.fund/project/fp007>

_____ (2016). *FP018: Scaling-up of Glacial Lake Outburst Flood (GLOF) Risk Reduction in Northern Pakistan*. Songdo. <https://www.greenclimate.fund/project/fp018>

_____ (2017). *FP056: Scaling up Climate Resilient Water Management Practices for Vulnerable Communities in La Mojana*. Songdo. <https://www.greenclimate.fund/project/fp056>

_____ (2018). *FP068: Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia*. Songdo. <https://www.greenclimate.fund/project/fp068>

_____ (2022). *FP084: Enhancing Climate Resilience of India's Coastal Communities*. Songdo. <https://www.greenclimate.fund/project/fp084>

Global Environment Facility (2020). *Annual Performance Report 2020*. Washington, D.C. <https://www.thegef.org/council-meeting-documents/annual-performance-report-2020>

Hartmann, Arntraud, and Johannes F. Linn (2008). *Scaling up: a framework and lessons for development effectiveness from literature and practice*. Working Paper, No. 5. October. Washington, D.C.: Wolfensohn Center for Development, Brookings Institution. https://www.brookings.edu/wp-content/uploads/2016/06/10_scaling_up_aid_linn.pdf

Kata, Takayoshi, and others (2014). *Scaling up and replicating effective climate finance interventions*. Climate Change Expert Group, Paper No. 2014(1). COM/ENV/EPOC/IEA/SLT (2014)1. Paris: Organisation for Economic Co-operation and Development.

Marketlinks (2014). Interview by Jeanne Downing with Dr. Dunn on the role of markets in bringing innovations to scale. Brownbag Series USAID & Leveraging Economic Opportunities, 4 November. <https://www.marketlinks.org/blogs/driving-innovation-scale-agriculture-market-systems>

Mollins, Julie (2021). *Finding the sweet spot: how to scale up and finance ecosystem-based adaptation*. *CIFOR Forests News*, 22 November. <https://forestsnews.cifor.org/75392/finding-the-sweet-spot-how-to-scale-up-and-finance-ecosystem-based-adaptation?fnl=>

Scaling Up Community of Practice (2022). *Scaling principles and lessons: a guide for action to achieve sustainable development impact at scale*. Position Paper, 22 February. Washington, D.C. <https://www.scalingcommunityofpractice.com/scaling-principles-and-lessons/>

South Africa National Biodiversity Institute (2021). *A blueprint for enhanced direct access in South Africa – as informed by the experiences and lessons of the Taking Adaptation to the Ground: A Small Grants Facility for Enabling Local Level Responses to Climate Change project*. <https://www.sanbi.org/wp-content/uploads/2022/01/Final-Blueprint-for-Enhanced-Direct-Access-in-South-Africa-For-Circulation.pdf>

United Nations Climate Change (2019). *Experts in Bonn shine a light on scaling up adaptation finance*. 31 July. <https://unfccc.int/news/experts-in-bonn-shine-a-light-on-scaling-up-adaptation-finance>

Uvin, Peter (1995). *Fighting hunger at the grassroots: paths to scaling up*. *World Development*, vol. 23, No. 6, pp. 927–939. https://econpapers.repec.org/article/eeewdevel/v_3a23_3ay_3a1995_3ai_3a6_3ap_3a927-939.htm

World Health Organization (2010). Nine steps for developing a scaling-up strategy.
http://apps.who.int/iris/bitstream/handle/10665/44432/9789241500319_eng.pdf;jsessionid=739FFD2D8A9151E0BFBE2C1E8387EE99?sequence=1



ADAPTATION FUND