Frankfurt School
FS-UNEP Collaborating Centre
for Climate & Sustainable Energy Finance

Edition 5, June 2021

Increasing private sector engagement in adaptation

The Updated Strategic Plan of the GCF aims to maintain a balance between adaptation and mitigation financing and to increase the amount of money channelled through the Private Sector Facility. In response to several Board Members' concerns at the 28th Board Meeting of the GCF (B.28), the Secretariat noted that experiences so far demonstrate that there are trade-offs, among others between aiming for more private sector- and more adaptation projects. So far, almost all of the GCF's private sector projects are mitigation projects. This GCF Monitor assesses the broader options to engage the private sector in adaptation. It demonstrates that the GCF engages the private sector much more in adaptation than its current indicators demonstrate.

Key messages

- It is a strategic priority of the GCF to significantly increase portfolio level mobilisation from the private sector. To measure progress here, the GCF tracks the amount of private sector co-finance and the number of projects by private sector entities. On adaptation, the GCF scores very low on both criteria.
- The GCF should look beyond these criteria in order to enhance private sector engagement in adaptation. Accredited Entities, National Designated Authorities, Executive Entities and other relevant partners in developing countries have various roles in adaptation. Engaging the private sector throughout the project chain will foster the development and visibility of bankable adaptation models. In turn, this can lead to more projects by private sector entities and more private sector co-financing.
- More private sector engagement in adaptation can be achieved by addressing market imperfections For example, asymmetric/incomplete information can be identified in Country Programmes and addressed though project adjacent advisory services or information partnerships. Imperfect financial markets can be addressed through mechanisms like revolving community funds or financial product diversification though partnerships with local financial institutions. Positive externalities can be addressed in project design, for example by including grants, or tariffs or tolls/fees to raise funds from the externalities in order to improve the risk-return profile of a project.

About the GCF

The Green Climate Fund (GCF) is the largest dedicated multilateral climate fund. It was set up in 2013 by the 194 countries who are parties to the United Nations Framework Convention on Climate Change (UNFCCC). It aims to deliver equal amounts of funding to limit or reduce greenhouse gas emissions in developing countries and to help vulnerable societies adapt to unavoidable climate change impacts.

The GCF's initial resource mobilisation in 2014 received pledges worth US$ 10.3 billion. As part of the ongoing replenishment of the GCF, 31 countries and two regions pledged to provide an additional US$ 9.99 billion for the next four years (status: May 2020).

The GCF Secretariat is based in Songdo, South Korea. The fund is governed by a board of 24 members with equal representation from developing countries and developed countries. See: http://www.greenclimate.fund

GCF Monitor

The GCF monitor reviews the progress of the GCF's efforts to respond to the challenge of climate change. Each edition analyses and briefly describes a unique topic selected because of its high importance at the recent Board meeting or other relevant event. The GCF Monitor is produced by the FS-UNEP Collaboration Centre of the Frankfurt School of Finance and Management.

This GCF Monitor is based on extensive ongoing research (Stoll et al., in review).

Introduction

Mobilising private finance is essential to achieve the goals of the Paris Agreement and to achieve the paradigm shift that is at the core of the GCF mandate and vision. The 'Independent evaluation of the adaptation portfolio and approach of the Green Climate Fund' was published shortly before B.28. It concludes that among the climate funds, the GCF has the strongest private sector focus and the best ability to scale projects through its large fund size, risk appetite and flexible suite of financial instruments. However, it also concludes that the GCF has not fully utilized this opportunity to date. It mentions that only 20 per cent of the Accredited Entities (AEs) are private sector entities (Binet et al., 2021). Of the 173 projects in the GCF portfolio, 34 are from private sector entities, only two of which on adaptation.

The second indicator that the GCF uses for its private sector engagement is the mobilisation of private co-finance. In an earlier GCF Monitor, we demonstrated that by early 2020, only 11 per cent of the GCF's overall co-finance was mobilised in adaptation projects, as compared to 48 per cent in mitigation projects and 41 per cent in cross-cutting projects. Furthermore, less than 1 per cent of all private co-finance addressed adaptation (Grüning et al., 2020).

According to the IEU evaluation, stakeholders mention a variety of reasons for the low private sector engagement in adaptation, such as fewer investable opportunities and predictable return flows than for mitigation projects, reactive business models, a lack of predictability and the up-front costs (Binet et al., 2021). Mobilising private investments in adaptation is known to be challenging. Scientific literature has discussed financial-, institutional-, information– and other barriers. Pauw et al. (2021) note that a focus on these barriers has major limitations: they are descriptive rather than explanatory, sometimes mix cause and effect, and tend to focus on eliminating obstacles, rather than adapting efficiently. They suggest to focus on three market imperfections instead that create distortions in the risk/return profiles of investments and that can result in under-investment in adaptation: positive externalities; incomplete/asymmetric information; and imperfect financial markets (as explained on the next page).

This GCF Monitor analyses to what extent the GCF's adaptation projects address these imperfections and how this helps to increase private sector engagement in adaptation. 'Increasing' is defined here by moving upwards on a five-level scale of private sector engagement in adaptation, thus going beyond the GCF indicators of projects led by private sector AEs and private sector co-

Table 1. *5-level ordinal scale of private sector engagement. The right column includes all GCF adaptation projects approved to date.*

Private Sector engagement level	Description	Number of projects
I No Private Sector En-	Purely public project.	3
II Private sector as implementing partner	Private sector involvement only as a paid planning or implementing entity. No contribution/investment by private sector or long-term	28
III Mobilisation of private sector engagement	Development of programs/projects specifically for private sector engagement. Efforts primarily go from the creation of new programs/ committees/units, over to staffing, and capacity building (for example through workshops, feasibility studies) with the clear goal to incentivize private sector engagement.	30
IV Private sector as co-financier/ contributor	Active private sector participation with own resources (financial and/ or non-financial): business case/ bankability and contribution. Includes Public-private partnerships (PPPs)	10
V GCF Private Sector project	Strict private sector definition of the GCF: All financial resources that are provided for the implementation of a Funded Activity from entities that are more than 50% owned and/or controlled by private shareholders.	2

This approach allows for a broader perspective on potentially relevant private sector actors. Adaptation literature defines the private sector as ranging from large international and domestic corporations to micro, small, and medium-sized enterprises (MSMEs) and smallholder, thus including private sector actors in both the financial sector and the real economy. The sector constitutes a large share of countries' economies and societies. In Africa, for example, the private sector provides almost 67 per cent of the continent's investment, 75 per cent of its economic output and 90 per cent of its formal and informal employment (AfDB, 2011). It is also in the self-interest of private actors to adapt its own operations and assets to climate change and to invest in new business opportunities to achieve business sustainability (Pauw et al., 2021).

Looking at private sector engagement more granularly is important for two reasons. First, it can help the GCF to better understand how to engage the private sector in adaptation. Growing experience with private sector engagement will lead to a better mutual understanding of public-private value creation. Over time, this might also stimulate deeper cooperation. For example, a private sector actor that 'only' serves as an executing entity now, might learn more about risks and returns in the field of adaptation, adjust its own business model and potentially provide co-finance or apply for accreditation in the future. Second, in a broader perspective, for a society to adapt to climate change, it is also required that the private sector adapts because it forms an integral part of that society. Any private sector engagement in adaptation can contribute to that, not just finance or other engagement in the context of the GCF. A private sector actor might learn about adaptation in the context of a GCF project and replicate or scale up elsewhere, independent of the GCF.

Box 1. Method used for the statistical analysis.

Methodology

To empirically examine the relationship between the level of private sector engagement and the addressal of market imperfections, a regression analysis was carried out. For each of the 73 GCF adaptation projects (the "sample"), the funding proposal was analysed with a close look at the envisioned activities of the project. Each project was then assessed by its level of private sector engagement on the ordinal scale introduced in Table 1. The sample was also assessed using a set of criteria that looked at the three market imperfections, yielding a "1" if a given market imperfection was addressed, and a "0" otherwise. Together with country and project specific indicators, the data were then analysed using an ordinal regression due to the nature of the dependent variable (level of private sector engagement). A high pseudo R-squared (McFadden of 0.445) speaks for a very good fit of the model and the variables used.

1. Addressing market imperfections to increase private sector engagement

As a multilateral fund, the GCF has limited options to directly address market imperfections directly by modifying the market environment, for example through policy and regulatory reform. The GCF is better suited to address the consequences of market imperfections, for example through compensation and concessional approaches.

- **Positive externalities** occur when private investments generate public goods: benefits to society that do not necessarily generate additional cash flows. Therefore, financial returns on the investment do not reflect the full value of undertaking the activity. This can be addressed through project-specific instruments/ mechanisms that develop an additional source of funding or risk mitigation. For example, projects use grants (e.g. FP113, Kenya), tariffs (e.g. FP043, Morocco) or tolls/fees (e.g. FP075, Tajikistan) to raise funds from the externalities in order to improve the risk-return profile.
- **Incomplete or asymmetric information** occurs when critical information is unavailable, inaccessible, or distributed unevenly among different actors. In adaptation, this occurs when actors such as investors, farmers, or businesses are unaware of the risks and impacts exacerbated by climate change, and the measures available to adapt to these risks. Projects can integrate actions that increase knowledge and understanding of risks, impacts and adaptation options/opportunities. We identified activities that 1) target the private sector; and 2) are continuous or otherwise intensive.

Examples include the climate forecast services (e.g. FP002, Malawi), value chain and business advisory (e.g. FP011, Gambia; SAP003) and comprehensive training leading to income diversification (e.g. FP072, Zambia).

- **Imperfect financial markets** can limit adaptation in many ways. For example, adaptation investments may require long-term debt because climate risks often materialize on longer time-horizons. However, the market generally has short-term maturity preferences and developing countries in particular often lack a liquid, long-term financial market. Projects can offer services that improve or facilitate the access to finance for private sector actors. For example, cooperation with (micro-) finance institutions can help to provide special loans, revolving financing facilities or community trust schemes (e.g. FP069, Bangladesh).

An analysis of the GCF's 73 adaptation projects indicates that private sector engagement is much larger than previously thought. Two projects are categorised as private sector projects by the GCF and an additional ten mobilise private co-finance or non-financial private contributions. Beyond these two indicators, we demonstrate that an additional 58 projects engage the private sector in other ways (see Table 1). Furthermore, the higher the private sector engagement level, the more frequent the market imperfections are addressed (see Fig. 1).

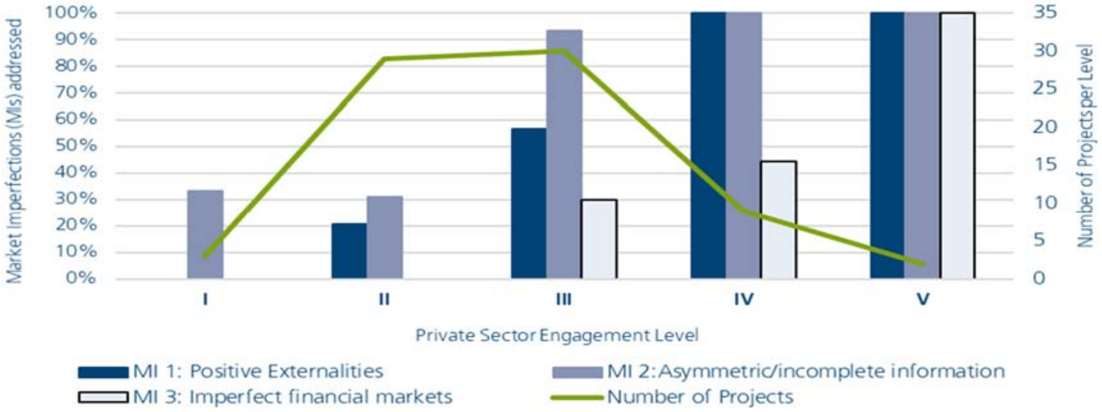
Our empirical analysis also demonstrates that addressing market imperfections has a positive and significant effect on private-sector engagement in the GCF's adaptation portfolio.

Our findings indicate that addressing **positive externalities** increases private sector engagement in the GCF's adaptation projects (99 per cent confidence level). The marginal effects indicate that addressing positive externalities increases the likeliness of a GCF project scoring high (level IV) on private sector engagement by more than 12 per cent and, in turn, decreases the likeliness of a project being in the lowest two levels of private sector engagement by 4.4 and 23.0 per cent respectively.

Asymmetric/incomplete information also increases private sector engagement in adaptation (99 per cent confidence level; even more pronounced positive coefficient). This is the most widely addressed market imperfection (see Fig. 1): more than two thirds of the project proposals include activities such as advisory offerings, business model improvements and information services developed specifically for the private sector.

Finally, also at a confidence level of 99 per cent, addressing **imperfect financial markets**, i.e. improving access to finance, indicates a high potential impact in mobilizing the private sector. Addressing the issue of imperfect financial markets empirically increases the likelihood of high private sector engagement (level IV) by 17.1 per cent.

Fig 1. Number of GCF adaptation projects per private-sector engagement level (green line), based on scale of Table 1. The bars show the share of these projects that address market imperfections.



However, only 21 per cent of the GCF adaptation projects exhibited mechanisms to address this market imperfection.

These results demonstrate very clearly that it would help the GCF to engage the private sector if more funding proposals would address the three market imperfections explained above. In turn, stronger private sector engagement could increase the impact of the GCF and ensure long-term impacts of projects.
A focus on market imperfections should, however, not be confused with arguing in favour of an 'adaptation market' or with laissez-faire economics. In addition, there are many adaptation-related areas where market principles should not play a dominant role. Governments also have purely distributional responsibilities, including reducing the vulnerability of the most marginalised. This will be the challenge for the GCF: addressing market imperfections with the aim to improve the resilience of the society, including its most vulnerable.

Recommendations

The GCF needs to increase private sector engagement in adaptation. We suggest that the GCF looks beyond the binary classification of private versus public projects and the mobilisation of private co-finance. Instead, the GCF should work with AEs, NDAs, Executive Entities and other relevant partners in developing countries to mobilize private sector engagement in a broad sense.

Our portfolio analysis demonstrates that addressing market imperfections helps to mobilise such broader private sector engagement in adaptation. The GCF is well suited to address the consequences of market imperfections. asymmetric/incomplete information is, for example, being addressed in some projects through climate forecast services, value chain and business advisory and training. It could also be addressed identifying climate change impacts and adaptation options in Country Programmes.

Some projects already address Imperfect financial markets by offering services that improve or facilitate the access to finance for private sector actors. The GCF's Readiness activities can also be used to address this market imperfection, for examples by supporting micro-finance institutions to develop products for mitigation and adaptation financing.

Finally, positive externalities can be addressed in project design by integrating instruments/mechanisms that develop an additional source of finance or risk mitigation, such as grants, tariffs and tolls/fees in order to improve the risk-return profile of a project.

The broader perspective on the roles of the private sector in adaptation that we propose here can enhance private sector engagement in adaptation projects. This will increase the private sector's experience with adaptation. Over time, this can lead to increased private sector co-finance and private sector projects under the GCF.

References

AfDB (2011). African Development Report 11: The Role of the Private Sector in Africa's Economic Development, Abidjan: African Development Bank.

Binet et al., (2021). Independent evaluation of the adaptation portfolio and approach of the Green Climate Fund. Evaluation Report 9, GCF, Songdo.

Grüning, C., Pauw, W.P. & Zamarioli, L. (2020). Mobilising public and private co-finance. GCF Monitor, ed. 1.

Pauw, W.P., Kempa, L., Moslener, U., Gruening, C. & Çevik, C. (2021). A focus on market imperfections can help governments to mobilise private investments in adaptation. Climate & Development, DOI: 10.1080/17565529.2021.1885337

Authors

This GCF monitor is written by:

Philip Stoll

Dr. W. Pieter Pauw

Farah Tohme

Dr. Christine Grüning

The GCF Monitor provides an independent analysis by the FS-UNEP Centre for Climate & Sustainable Energy Finance of the Frankfurt School of Finance & Management. It is published with financial support of the German Federal Ministry of Economic Cooperation and Development (BMZ).