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Synthesis of the main findings and recommendations of the study commissioned by the French Facility for Global Environment (Fonds Français pour l'Environnement Mondial – FFEM)

Outlines

Executive Summary

The present report provides a synthesis of the main findings and recommendations of the study commissioned by the French Global Environment Facility (Fonds Français pour l'Environnement Mondial – FFEM), to inform its strategy regarding the financing of adaptation to climate change in developing countries. Since 2007, FFEM has co-financed adaptation projects. This study seeks to provide the FFEM with an analytical framework for the implementation of adaptation by identifying and assessing new funding projects, according to the 2013-14 Strategic Programming Framework (hereafter, referred as SPF). The latter represents a major strategic evolution compared with previous SPFs with the development of six thematic areas: sustainable agriculture, sustainable urban territories, biodiversity funding mechanisms, sustainable energy in Africa, integrated management of littoral and marine zones, and forests. All of these have significant synergies with the cross-cutting issue of adaptation, which need to be exploited in a more effective manner.

More broadly, this study aims to initiate a dialogue on this very important topic with the FFEM's member institutions (French Ministry of Economy and Finance, Ministry of Foreign Affairs, Ministry of Environment and Sustainable Development, Ministry of Higher Education, and the French Agency for Development)[1] along with the various partners involved in the FFEM's adaptation operations.

A series of recommendations are hereby presented with a view to guide the FFEM in its strategic position on adaptation to climate change. This takes into account its overall strategy, existing tools, needs and comparative advantages, while attempting to avoid duplication or dispersal of efforts and resources. A summary of these recommendations is provided below. It is a question above all of making FFEM interventions more visible and coherent without losing sight of the means at its disposal and the 'added value' it might provide in this area.

These recommendations are primarily based on the following:

- An **analysis of the main adaptation challenges faced by developing countries**,
- A **summary of the ongoing debates and discussions about adaptation within international bodies**, particularly under the United Nations Framework Convention on Climate Change (UNFCCC),
- A **comparative analysis of the strategies and instruments used by the main international and French development partners** in this area,
- An **analysis of a portfolio of ten adaptation projects co-financed by FFEM** between 2007 and 2011, particularly with regard to their relevance from an adaptation perspective, and
- **The consultation of approximately 30 stakeholders** (see

[1] French acronyms are in order of appearance as follows : MEF (Ministère de l"Economie et des Finances), MAEE (Ministère des Affaires Etrangères et Européennes), MEDDTL (Ministère de l'Ecologie, du Développement Durable, des Transports et du Logement), MENRT (Ministère de l'Education Nationale de la Recherche et de Technologie) and AFD (Agence Française de Développement).

- Annex 1 for the full list).

An interim meeting was also held on 11 March 2013 with a number of stakeholders (including the Ministries of Foreign Affairs, Ministry of Environment and Sustainable Development, the French Development Agency or AFD, GERES[2], GRET[3] and the French national climate change focal point- the ONERC[4], with a view to presenting the main findings and engaging in a discussion about preliminary recommendations.

Some of the key messages of this study are summarised below.

Key messages 1: the main challenges faced by developing countries and ongoing debates within the UNFCCC

- **Making a distinction between 'adaptation projects' and other kinds of development projects is an important point of difficulty for development partners**, such as the FFEM. Indeed, adaptation and development form a continuum of related, complementary interventions. Or in the words of Stern (2009) 'development in a hostile climate'. This requires a different approach to traditional development assistance.

- **Over the next ten years, priority must be given to improving the adaptive capacity of beneficiaries to build their resilience to current climatic variability and future climate change risks**. Early measures primarily correspond to 'soft' adaptation, such as institutional capacity building, insurance schemes promoting adaptation, and better hydromet data. As such, they are no-regrets measures that are likely to pay-off whatever the scale of future climate change. However, there is a need for dedicated and often 'hard' adaptation measures taken with climate change in mind. Fast-growing countries take many long-term investment decisions, for example on infrastructure investments or the location of economic activity. These decisions lock countries into a particular vulnerability profile and should therefore be made with future climate change in mind.

- **Since the early 2000s, adaptation has been at the top of the UNFCCC agenda.** Knowledge-sharing programmes such as the Nairobi work programme have helped to improve understanding of the impacts of climate change and make better informed decisions on adaptation priorities and actions. The Adaptation Committee has an ambitious three-year work programme, recently approved in Doha, which enhances the knowledge sharing process and aims to promote action in a coherent and structured manner.

- **However, funding is perhaps the most pressing concern on the adaptation front, given the extent of the needs of the most vulnerable countries.** According to a recent study by the World Bank, the estimated net cost of adapting to the 2-degrees global warming scenario by 2050 is in the range of USD 70 to 80 billion a year. Governments around the world have dedicated only USD 30 billion of Fast Start Finance (FSF) between 2010 and 2012, most of which was earmarked for mitigation. It remains to be seen whether the prospective Green Climate Fund will live to its expectations- channelling most of the envisaged USD 100 billion in annual climate finance by 2020.

Key messages 2: Comparative analysis of international and French strategies and instruments

- **To date, the majority of adaptation funding is channelled through five funds dedicated solely or predominantly to adaptation: Adaptation Fund (AF), Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), Pilot Program for Climate Resilience (PPCR), and Global Climate Change Alliance (GCCA).** Together these account for USD 1.2 billion of the total 1.4 billion earmarked for adaptation. The LDCF has the highest number of approved projects while the AF has the least. Although the PPCR is the most significant in terms of both funding and scope with over USD 1 billion pledged to date, it has the least disbursed. Regional development banks and other multilateral initiatives rely heavily on the PPCR and the funds administered by the UNFCCC (i.e. AF, LDCF/SCCF). Bilateral actors committed to deliver USD 30 billion in FSF over the period 2010-2012; however most of it was pledged or committed to mitigation activities. They also direct a high proportion of their financial resources to the specialised climate funds.

- **The most vulnerable countries do not necessarily receive most of the finances- there is a mismatch between need and direction of funding.** To date, Sub-Saharan Africa has received just under half the total adaptation finance to date. Asia and the Pacific have received a quarter of all approved adaptation funding to date, followed by Latin America and the Caribbean with 14% of the total.

- **In terms of the breakdown by sector, management of water resources, agriculture/food security, and integrated management of coastal areas have received most of the funds**, with health and infrastructure tending to receive less attention.

[2] French acronym stands for: Groupe Énergies Renouvelables, Environnement et Solidarités - Group for the Environment, Renewable Energy and Solidarity

[3] French acronym stands for: Groupe de Recherches et d'Echanges Technologiques

[4] French acronym stands for: Observatoire National sur les Effets du Réchauffement Climatique

- **French initiatives in terms of adaptation to climate change in developing countries mainly relate to funding from the French Agency for Development (AFD).** Between 2005 and 2011 the total climate change pledges of AFD amounted to almost EUR10 billion, including 1.8 billion earmarked for adaptation purposes (AFD, 2011). **Of note, Sub-Saharan Africa accounts for almost half of French funding for adaptation.** French instruments have a competitive advantage in French-speaking West Africa, given the numerous French technical partners based in the region. By contrast, the Middle East region and North Africa, which is the second largest beneficiary region of French funding for adaptation, remains less of a priority for international instruments. In terms of sectors, **both French and international equally target water resources as a priority sector**, followed by agriculture and food security.

Key messages 3: Analysis of a portfolio of ten projects co-funded by FFEM

- **The analysis of a portfolio of ten projects co-funded by FFEM reveals a certain number of problems associated with how projects are structured. Many projects prove to be ambitious considering the time and budget allocated. There are also difficulties relating to project management and the availability of co-funding.** It should be noted however, that to date, only one project was subject to a final evaluation: the Acclimate project (see Box 7 for more information about this project). All other projects analysed as part of this study are either underway or are still to be launched. As a consequence, the negative aspects tend to overshadow the positive ones, given the lack of opportunity to step back and take stock.

Recommendations

Based on these findings, strategic recommendations for the FFEM are presented below.

Recommendation 1: Within each core thematic area, the FFEM could integrate the co-funding of activities specifically dedicated to adaptation through one or more specific components regarding adaptation.

First, it is recommended that the FFEM integrates the co-funding of activities specifically dedicated to the adaptation of these thematic areas or consisting of one or more specific components regarding adaptation. In the short run, this implies initially amending the templates of the Project Identification Notes (PINs) used by the FFEM with a view to providing the Secretariat and Steering Committee members guidance to identify potential climate risks that might impact projects under consideration, as well as the specific beneficiaries and ecosystems targeted by these projects.

This is especially important given that all of the six thematic areas of the 2013-2014 SPF have significant synergies with the cross-cutting issue of adaptation, hence the need to exploit them more efficiently.

Recommendation 2: Provide financial support for 'pilot' adaptation projects across the six thematic areas of the 2013- 2014 SPF, according to the following three cross-cutting areas:

- **Partnerships with the private sector for adaptation to climate change (Axis 1)**
- **Risk sharing and transfer mechanisms for adaptation to climate change (Axis 2)**
- **Strengthening North-South decentralised cooperation for adaptation to climate change (Axis 3)**

This refers to the implementation of projects specifically dedicated to adaptation (as the main objective) or 'adaptation projects'. These should be demonstrated as innovative and provide a potential for replication in other contexts and on a different scale. These three cross-cutting axes represent areas largely unaddressed by international instruments or considered as highly innovative in the main geographical zones where French instruments operate.

It is also recommended that the use of call for tenders is extended to projects dedicated to adaptation in order to exploit their innovation potential, as under the new Facility for the Private Sector for the Climate (Facilité pour le secteur privé Climat – hereafter, referred as FISP-Climat). Indeed, FISP-Climat, which was launched in 2012, was conceived as an important tool to leverage private funding for adaptation (see Box 4 in Section 3).

Recommendation 3: Enhanced support in coastal and littoral zones and urban territories as geographical zones particularly vulnerable to climate change in West Africa and Mediterranean countries.

In these geographical areas traditionally targeted by French Overseas Development Aid (ODA) and where existing efforts must be pursued, this primarily consists in 're-dimensioning' the FFEM operations around specific territories while targeting climate 'hot spots' (i.e. areas highly vulnerable to climate change). By comparing the strategic priorities of the FFEM with the needs of beneficiary countries, we have been able to identify two geographical zones where FFEM should concentrate its efforts:

- Coastal and littoral zones, particularly in the major deltas of West Africa, and SIDS (Hot spot 1).

– Urban territories, particularly the major African mega-cities (Hot spot 2).

The analysis of the ten FFEM projects labelled 'adaptation' questions projects co-financed by the Fund, consisting in operations in more than one country (CEDEAO, IOC, CPS projects) or at the level of a whole continent (VigiRisc project), given the modest resources of the FFEM and its desire to be visible. This does not, however, undermine the importance of seeking synergies at a regional level, particularly through vertical integration between the local, national, and regional levels.

In the light of the results from the analysis of the portfolio of ten FFEM projects, **a series of recommendations** not specifically referring to the subject of adaptation, **but aiming to enhance the effectiveness and sustainability of the FFEM operations in this area** is also provided:

- Enhancing existing diligence procedures at the project identification stage, particularly with regard to the capacities of the implementing entity and the availability of co-finances.
- Ensuring end-beneficiaries' ownership and 'buy-in'.
- Placing more emphasis on the communication and sustainability aspects of projects.

The rest of this report is structured as follows:

- Major adaptation challenges faced in developing countries,
- Overview of the UNFCCC negotiations on climate change adaptation,
- The international adaptation finance landscape,
- The French adaptation finance landscape,
- Recommendations for a strategic positioning of FFEM on climate change adaptation.

Major adaptation challenges faced in developing countries

Least developed countries are likely to be the most vulnerable to climate change. This point was made powerfully by, among others, the World Bank (World Bank 2010a) and it is evident already in the uneven vulnerability to today's climate (e.g., Raddatz 2009; Dell et al 2008).

The higher vulnerability to climate change is closely intertwined with the level of development. Lower levels of development exacerbate vulnerability, for example by limiting adaptive capacity, while climate change impacts can set back development achievements, putting at risk the Millennium Development Goals. This implies the need for close collaboration between development institutions and organisations with an environmental mandate, such as FFEM. Adaptation and development form a continuum of related, complementary interventions (McGray et al. 2007; see Figure 1). Or in the words of Stern (2009), adaptation is "development in a hostile climate".

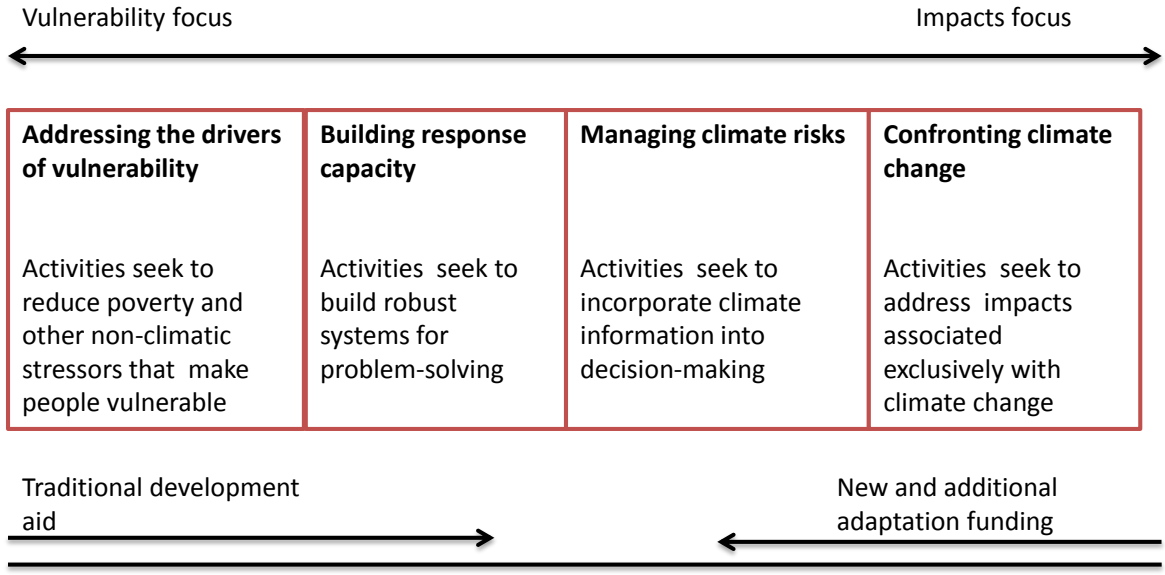

Figure 1: Adaptation and development as a continuum. Source: Klein and Persson (2008)

Treating adaptation as "development in an adverse climate" implies a different approach to adaptation from standard climate change assessments. It requires an approach that starts with development objectives and asks how climate risks change the approach to development (Vivid Economics 2010; Bowen et al. 2012). Such a policy first approach (Ranger et al 2010) is distinct from the traditional science-first approach common to climate change impact assessments, which starts with the climate hazard, determines risks and derives appropriate (remedial) adaptation actions.

To understand adaptation as a policy challenge, adaptation and development practitioners need to address four basic questions. They are:

- **Where the main vulnerabilities to climate are change and how are they linked to development?** Understanding the link between development, vulnerability and climate change will permit to take a risk-based approach to climate-resilience.
- **What are the main adaptation priorities over the next 5-10 years?** Adaptation is a long-term process and the worst impacts of climate change are yet to be felt, but it is important to identify key actions that cannot wait and need to be initiated now.
- **Who are the main adaptation agents and therefore the main partners of adaptation agencies?** Households, business and society have always had to deal with climate risks. It is important to identify where and how public sector agencies (international organisations and national governments) need to help private agents adapt.
- **How to embed good adaptation into development and investment decisions?** Good adaptation is about initiating a process that addresses the analytical and policy challenges of climate-resilient development on an on-going basis, including how to incorporate climate risks into decision making.

The link between development and sensitivity to climate change is less clear cut. On the one hand, economic development will often reduce sensitivity to climate change, for example if it results in diversification away from climate-sensitive sectors like agriculture. On the other hand, there are factors associated with rapid economic development that may increase vulnerability. Examples include the development of hazard zones, such as flood plains or coasts, increased strain on water resources, and growth-related pressure on the natural environment. This is why development

achievements, such as the Millennium Development Goals, need to be protected against climate change (see Fankhauser and Schmidt-Traub 2011 on climate-proofing the MDGs).

Global indicators find that climate change impacts may be highest in Africa, low-lying deltaic regions and, for the reasons given above, SIDS. **Figure 2** shows the results of an index of relative climate change impacts in developing countries. The index is based on a limited set of four impacts only: sea level rise, agriculture, health and exposure to extreme weather events. As such the insights are of an indicative nature only, but they are broadly consistent with the literature (e.g., Parry et al. 2007). As climate vulnerability is a function of both a society's *sensitivity* to climate events and its *adaptive capacity*, it is important to also consider the capacity of countries to adapt to these impacts.[5] Global indicators find that adaptive capacity is significantly lower in low-income countries, notably in the least developed countries of Africa (see **Figure 3** referring to Barr et al., 2010).

[5] The literature associates the ability to cope with climate stress with basic development indicators, such as income per capita, literacy, the quality of institutions, trade openness and the depth of financial markets (Barr et al 2010; Brooks et al 2005; Noy 2009; Tol and Yohe (2007.

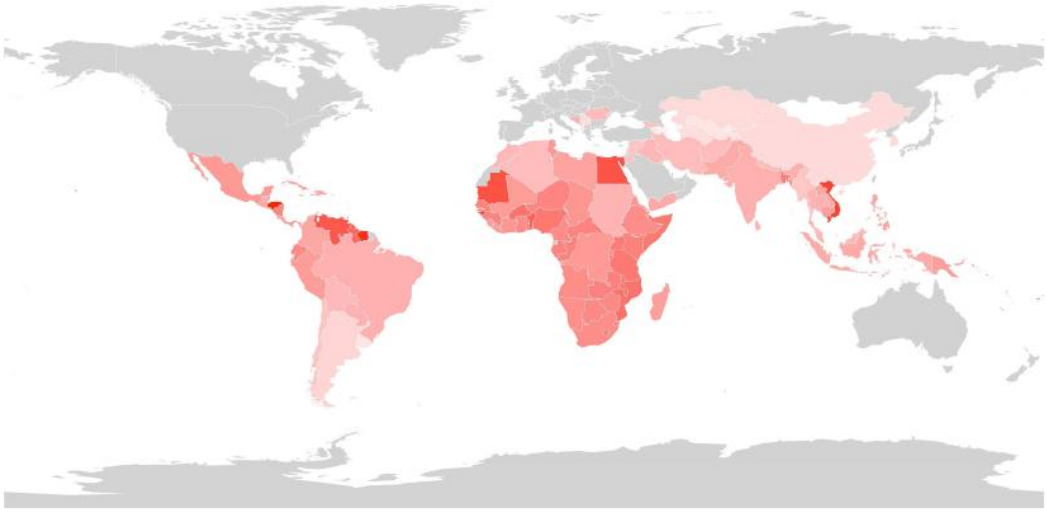

Figure 2: Indicators of physical impacts of climate change. Source: Barr et al (2010).[6]

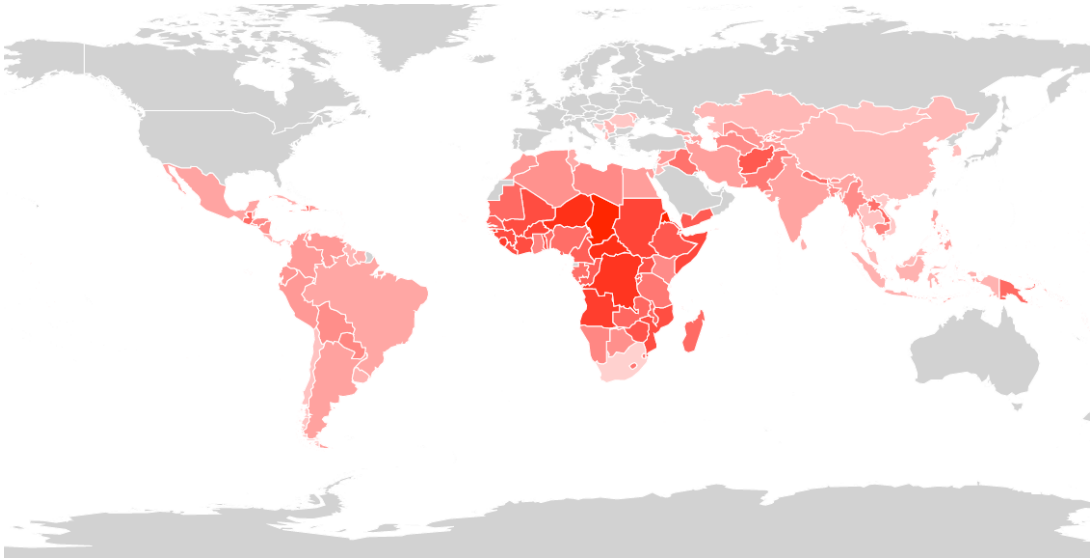

Figure 3: Indicators of adaptive capacity worldwide. Source: Barr et al (2010).[7]

[6] Note: Darker colours denote higher impacts. Countries in gray were not included in the analysis. The indicator is based on four impact categories: coastal zones, agriculture, health and extreme events.

[7] Note: Darker colours denote lower adaptive capacity. Countries in grey were not included in the analysis. The indicator is based on data about literacy, income, income distribution, health systems, access to credit, governance and institutions.

Many of the priority adaptations over the coming decade have in fact strong development aspects. Many build adaptive capacity that helps with respect to both current and future climate shocks – such as improvements in institutional quality, insurance schemes, or better hydromet data. As such, they are no-regrets measures that are likely to pay off whatever the future climate outcome.

Early adaptations also often fall into the category of soft adaptation, that is, they concern institutional, behavioural or regulatory adjustments, rather than hard physical investment.

However, there is a need for dedicated, and often hard, adaptation measures taken specifically with climate undertaken by private agents – households, firms and civil society. But we still know very little about how best to incentivise private adaptation.

Much more learning and information sharing will be required to build up a global knowledge base on adaptation. Early adaptation actions should put an emphasis on knowledge discovery and knowledge sharing. Adaptation is a long-term process, and given the intricacies of the challenge it is important to build learning and knowledge sharing explicitly into adaptation projects.

The emerging experience with implementing adaptation in practice has already yielded important lessons. Among the most important ones are:

- **Treating adaptation as additional**. Although adaptation activities are often indistinguishable operationally from broader development activities, the international negotiations remain concerned with ensuring the additionality of any finance provided for adaptation. In theory, the identification of adaptation measures should be straightforward. One would identify the development trajectory, and associated costs, without climate change and then the additional costs associated with adapting to climate change would be assessed. However, the practice is considerably more complicated. Many developing countries are poorly equipped for coping with current climate events i.e. they suffer from an adaptation deficit. It can then become very difficult to identify whether or not a certain activity which helps to address a current adaptation deficit should be classified as a baseline development activity or an adaptation activity. This is why the literature talks of an adaptation-development continuum, as was illustrated in **Figure 1**

- **Tracking adaptation funding**. Currently international climate funds (except the Adaptation Fund, which is financed through a levied on the CDM, and part of the German International Climate Initiative which is financed through the auction of emissions allowance) rely on ODA.[8] The issue of additionality is thus salient when it comes to tracking ODA flows. The OECD Development Assistance Committee (OECD DAC), the entity responsible for reporting on all ODA finance, is reliant on donors attaching 'Rio Markers' to their climate change funding. Mitigation markers have been applied since 1998, however adaptation markers only since 2010.[8]

- **Securing private finance for adaptation.** Most international adaptation funding to date has come from the public sector. There are several explanations. First, Least Developed Countries (LDCs) receive very little private sector finance for any purpose, and low-to-middle income countries do not attract significant flows either. Private sector finance is concentrated in a small number of resource-rich emerging countries such as China, Brazil and India.[9] Second, few of the sectors identified as adaptation priorities in NAPAs appear to be of interest to private lenders, such as water and agriculture.[8] Excluding China and Latin America, there have been very few private investments in the water sector at all.[9] A third issue raised by the private sector is the administration cost associated with bureaucratic procedures when a fund such as the PPCR is administered by a government ministry. A report prepared for the International Finance Corporation suggests ring-fencing separate funding for adaptation projects for the private sector, administered for example by the IFC, would be more attractive to

change in mind. Fast-growing countries take many long-term investment decisions, for example on infrastructure investments or the location of economic activity. They lock countries into a particular vulnerability profile and should therefore be made with future climate change in mind. How to climate-proof future development is not straightforward, however, given how little we know about the exact nature of future climate change at the local level.

Adaptation will involve all elements of society, and adaptation agencies need to engage with both the public, private and third sector. It would be wrong to treat adaptation as primarily as a public sector issue. Most adaptation will be

[8] Brown, Bird and Schalatek (2010). Climate finance additionality: emerging definitions and their implications. Available online here

[9] Atteridge (2011). Will Private Finance Support Climate Change Adaptation in Developing Countries? Available online here

- corporate lenders.[10] The GCF will have a private sector facility to directly or indirectly finance private sector activities.[11]
- **Monitoring and evaluation of adaptation activities.** One of the key lessons from the IEG's assessment of the World Bank experience in adaptation is that developing practical performance indicators of project outcomes remains a challenge.[12] Suggested indicators by the IEG include measures of household, vulnerability and resilience (such as the proportion of households whose consumption and health under predefined critical thresholds), measures of institutional capacity (for example a well-functioning hydromet system), measure of water use and depletion (e.g. satellite-based measures of gravity) and measures of exposure to or resilience to long-term climate change (for example the proportion of population exposed to a one-meter rise in sea level).[12]

[10] Asian Tiger Capital Partners (2010) A Strategy to Engage the Private Sector in Climate Change Adaptation in Bangladesh. Report prepared for the International Finance Corporation. Available online here

[11] Schalatek et al., (2012). The Green Climate Fund. Climate Finance Fundamentals 11. November 2012. Climate Funds Update. Heinrich Boll Stiftung. Available online here

[12] Independent Evaluation Group (2012). Adapting to Climate Change: Assessing the World Bank Group
Experience. Phase III. Available online here

2. OVERVIEW OF THE UNFCCC NEGOTIATIONS ON CLIMATE CHANGE ADAPTATION

Adaptation has been at the top of the United Nations Framework Convention on Climate Change (UNFCCC) agenda since the early 2000s. The UNFCCC aims to provide "the basis for concerted international action to mitigate climate change and to adapt to its impacts" (UNFCCC 2006).[13] Article 4 of the Convention refers to adaptation, and specifically states that all parties shall:

- "Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods". Art 4.1 (e).

Furthermore, the Convention states that:

- "The developed country Parties [...] shall also assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects". Article 4.4.

Knowledge sharing programmes such as the Nairobi work programme have helped to improve understanding of the impacts of climate change and make better informed decisions on adaptation priorities and actions. The Adaptation Committee has an ambitious 3-year work programme, recently approved at Doha, which enhances the knowledge sharing process and aims to promote action in a coherent and structured manner. However, the realisation of the work programme is highly dependent on adequate funding.

Funding is perhaps the most pressing concern on the adaptation front and for the implementation of identified priority measures. According to a recent World Bank study, the estimated net cost of adapting to the 2-degrees global warming scenario by 2050 is in the range of USD 70 to 80 billion a year. Governments around the world have dedicated only USD 30 billion of FSF between 2010 and 2012, most of which was earmarked for mitigation. It remains to be seen whether the prospective Green Climate Fund (GCF) will live to its expectations – channelling the envisaged USD 100 billion in annual climate finance by 2020.

While adaptation has always been a key priority, it became central to the negotiations in the early 2000s. Table 1 presents the chronology of key adaptation decisions at UNFCCC negotiations, starting from 2001 with the 7th Conference of Parties (COP), where two major adaptation funds were established: the Least Developed Countries Fund (LDCF) and the Special Climate Fund (SCCF).

Three years later, at COP10, the Subsidiary Body for Scientific and Technological Advice (SBSTA) was requested to develop a structured 5-year programme of work on impacts, vulnerability and adaptation to climate change. The programme was launched in 2006, at COP12 and became known as the Nairobi work programme on '*Impacts, vulnerability and adaptation to climate change*', bringing adaptation at the top of the agenda.

[13] Quoted in UNFCCC (2007) Climate Change: Impacts, vulnerabilities and adaptation in developing countries. Available online here.

COP	Year	Adaptation outcomes
COP7 Marrakech	2001	The Least Developed Countries Fund and the Special Climate Fund were established, the former with a work programme dedicated to the preparation and implementation of NAPAs, and the latter with a view to finance programme and measures related to climate change that are complimentary to the climate change focal area of Global Environment Facility
COP10 Buenos Aires	2004	The Subsidiary Body for Scientific and Technological Advice (SBSTA) was requested to develop a structured 5-year programme of work on impacts, vulnerability and adaptation to climate change
COP12 Nairobi	2006	SBSTA launched at Nairobi the 5-year work programme on 'I*mpacts, vulnerability and adaptation to climate change*'
COP13 Bali	2007	The Bali Action Plan was launched, which called for enhanced action on adaptation
COP14 Poznan	2008	The Adaptation Fund was launched
COP15 Copenhagen	2009	Developed countries pledged USD 30 billion for the period 2010-2012 for mitigation and adaptation activities in developing countries
COP16 Cancun	2010	The Cancun Adaptation Framework established • the Adaptation Committee • a process enabling Least Developed Countries (LDCs) to prepare and implement National Adaptation Plans (NAPs) • a work programme which purposes to consider "approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change" (UNFCCC/CP/2010/7/Add.1)
COP17 Durban	2011	The Green Climate (AF was launched
COP18 Doha	2012	Recognition of the plight vulnerable developing countries face from loss and damage caused by climate change Initial review of the Adaptation Fund The draft 3-year work plan of the Adaptation Committee was approved

Table 1: Conference of the Parties Adaptation Timeline. Sources: COP7: UNFCCC/CP/2001/13/Add.1, available here; COP10: Decision 1/CP.10, available here; COP12: COP12 website; COP13: COP13 website; COP14: COP14 website; COP15: COP15 website; COP16: COP16 website; COP17: COP17 website; COP18: COP18 website.

COP13 in 2007 launched the Bali Action Plan, which called for enhanced action on adaptation, including consideration of international cooperation to support urgent implementation of adaptation actions, risk management and risk reduction strategies, disaster reduction strategies, climate resilient economic diversification and ways to strengthen the role of the Convention in supporting adaptation in a coherent and integrated manner.[14] The Adaptation Fund Board (AFB) was also established at Bali.

At the Poznan COP in 2008 (COP14), the Adaptation Fund was formally launched. The funding mechanism was innovative – instead of relying on voluntary contributions, it was decided the Fund would be financed by a 2% levy on projects under the Clean Development Mechanism. A further innovative feature was the granting of direct access to the Fund to developing countries.[15] More detail on the Adaptation Fund and other funding mechanisms are to be found in the next section.

At COP16 in 2010, the Parties agreed on the Cancun Adaptation Framework, which established the Adaptation Committee with a view to enhance and promote the implementation of stronger, more cohesive adaptation actions.[16] A work programme on approaches to loss and damage associated with climate change impacts in particularly vulnerable developing countries was also established and the Subsidiary Body for Implementation (SBI) was requested to agree on activities to be undertaken and to make recommendations to the Parties for its consideration at COP18.[17]

Also at COP18 in Doha, the draft 3-year work plan of the Adaptation Committee was approved, and Parties were encouraged to make available sufficient resources for the successful and timely implementation of the workplan.

An initial review of the Adaptation Fund was also undertaken. The Parties recognised the effectiveness of the interim secretariat of the Adaptation Fund Board and decided to extend the interim arrangements until June 2015; this effectively means the International

[14] UNFCCC/CP/2007/6/Add.1. Available online here

[15] UNFCCC COP14 website. Accessed 10th December 2012

[16] UNFCC COP16 website. Accessed 10th December 2012

[17] UNFCCC Cancun Adaptation Framework, Loss and damage website. Accessed 8th January 2013

Bank for Reconstruction and Development (the World Bank) will continue as an interim trustee of the Adaptation Fund. The Parties also requested the Adaptation Fund Board to further improve its direct access modality to funding.[18]

[18] Initial Review of the Adaptation Fund, Draft decision -/CMP.8, Advanced unedited version. Accessed 8th January 2013

Box 1: The Green Climate Fund (GCF)

While adaptation funding will be provided through a number of channels, the key institution for UNFCCC-administered funding going forward will be the GCF. The latter was proposed at COP 16 and launched at COP 17 as a vehicle to help realise the goal expressed in the Copenhagen Accord, and as the UNFCCC's main financial instrument it is intended to channel the envisaged USD 100 billion in annual climate finance by 2020.[19]

The Fund will "receive guidance from the COP, including on matters related to policies, programme priorities and eligibility criteria, and matters related thereto"[19] and is expected to become operational by 2014.[20]

The Governing Instrument of the GCF provides a number of insights on the possible modalities and procedures of the GCF[21]. Five aspects are particularly salient:

- **Types of activities to be funded**. "The board will balance the allocation between adaptation and mitigation activities under the Fund and ensure appropriate allocation of resources for other activities". Mitigation and adaptation will each have their own funding window; it is further mentioned that the Board will consider the need for additional windows.
- **Criteria for allocation of financial resources.** "In allocating resources for adaptation, the Board will take into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change, including LDCs, SIDS and African States, using minimum allocation floors for these countries as appropriate".
- **Direct access to the Fund**. The Governing Instrument explicitly notes that it will allow for 'direct access' by national institutions to the GCF resources. This means that accredited national institutions (in addition to multilateral bodies) will be able to implement projects and programmes approved by the GCF Board.
- **Types of financing offered.** The Fund will provide grants and concessional loans, as well as other financial instruments as approved by the Board.
- **Engaging the private sector**. "The Fund will have a private sector facility that enables it to directly and indirectly finance private sector mitigation and adaptation activities". The Governing Instrument also notes that the facility will support activities to enable private sector involvement in SIDS and LDCs.

The GCF is currently the smallest of the main multilateral climate funds, with only USD 7.5 million pledged to date.[22] The biggest challenge for the GCF is therefore to secure long-term financial resources.

[19] As committed in the Copenhagen Accord in 2009. Climate Funds Update (2012). *Ten things to know about climate finance in 2012*. Available online here. Accessed 10th December 2012

[20] Climate Funds Update, Green Climate Fund profile. Accessed 10th December 2012

[21] Governing instrument for the Green Climate fund, available online here. Accessed 10th December 2012

[22] Correct as of November 2012. Climate Funds Update (2012). *Ten things to know about climate finance in 2012*. Available online here. Accessed 10th December 2012

The international adaptation finance landscape

This section provides an overview of the strategies and instruments of the main multilateral and bilateral donors financing climate change adaptation activities in developing countries.

3.1. UNFCCC and multilateral initiatives

The majority of adaptation finance comes from public sources and is channelled through dedicated funds such as the Adaptation Fund (AF), the Least Developed Country Fund (LDCF) and the Special Climate Change Fund (SCCF), all administered by the UNFCCC. All these funds are presented below. Also of note is the Pilot Programme for Climate Resilience (PPCR) of the World Bank with over USD 1 billion pledged to date. It should be noted that regional development banks rely heavily on the PPCR and the UNFCCC-administered funds to finance their adaptation activities. Few have their own dedicated funds such as the ClimDev- Africa Special Fund (CDSF) launched by the African Development Bank (AfDB), although they also provide technical assistance to countries in their region.

The Adaptation Fund (AF) was set up specifically to finance 'concrete' adaptation projects and programmes in developing countries that have signed the Kyoto Protocol and are particularly vulnerable to climate change. The innovation in terms of funding sources is that it is financed via a 2 per cent levy on the sale of Certified Emission Reductions (CERs). To date, it has approved USD 166 million in grants for 25 adaptation projects over the last two years.[23]

The AF has some unique characteristics that differentiate it from other international financing mechanisms. These features are: direct access for developing countries, innovative source of funding and its governance structure.[23] Applications for funding must be made via a National, Regional, or Multilateral Implementing Entity, examples of which are the World Bank, the African Development Bank, the UN's International Fund for Agricultural Development, UNDP, and UNEP are all approved Multilateral Implementing Entities.

Institutionally, the AF is supervised and managed by a 16-member (and 16 alternate members) board, with a majority of members (69 per cent) drawn from developing countries. Egypt, Senegal, Burkina Faso, and Lesotho are currently represented as full members, Kenya, South Africa, Ghana and Mali as alternate members, so that a full quarter of the board is currently from Africa. The World Bank acts as trustee of the AF, while the Global Environment Facility (GEF) provides secretariat services.

Within the broader umbrella of adaptation, the AF has set no specific priorities, and all adaptation actions are in principle eligible for funding. The operational guidelines state that projects and programmes should be coordinated with national development and adaptation plans, and should pay special attention to 'the particular needs of the most vulnerable communities'.[24] In the past it has supported a wide range of agricultural adaptation activities, including improved water management, construction and climate-proofing of rural infrastructure (e.g. flood defences or irrigation projects), biodiversity conservation, the creation and dissemination of adaptation knowledge, and strengthening and climate-proofing institutional capacity and policy frameworks.

The AF reported in December 2012 that for the first time since its operationalization, demand for funds by Multilateral Implementing Entities (MIEs) outstripped resources available for implementation.[25] This is due to a sharp fall in revenue numbers from sales of Certified Emission Reductions (CERs) and to the operational decision of the AF to cap the cumulative budget allocation for MIEs at 50 per cent of total resources. Figure 9 depicts the financial status of the AF in

[23] Adaptation Fund website and brochure ; accessed 5th December 2012

[24] Adaptation Fund (undated) Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund

[25] Adaptation Fund Press Release, December 2012. Accessed 28th January 2013

August 2012.

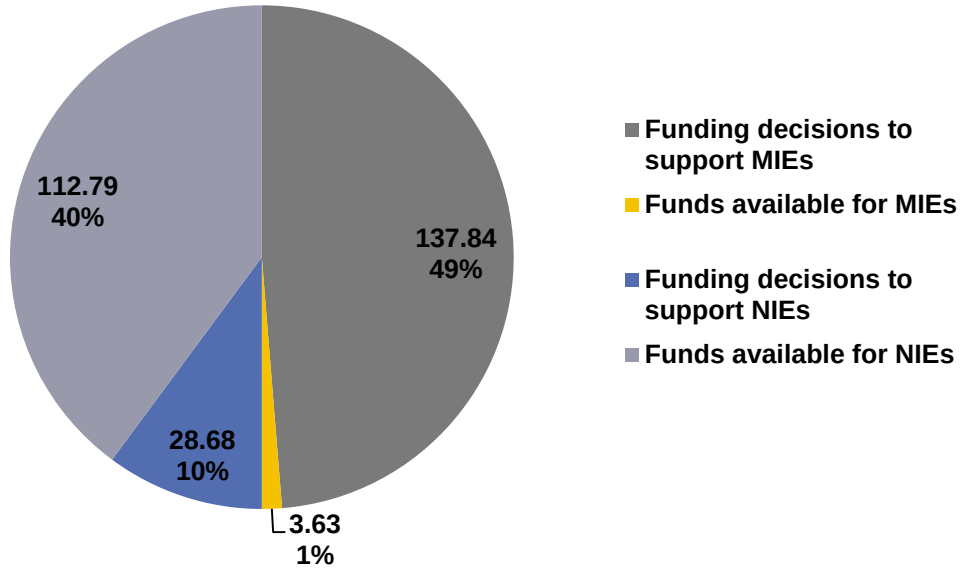

Figure 4: Adaptation Fund committed and available funds (USD million), correct as of 15 August 2012. Source: Adaptation Fund Projects and Programmes, Funding Status. Accessed 28th January 2013.

The Special Climate Change Trust Fund (SCCF) was created in 2001 specifically to address the needs of developing countries under the UNFCCC. Contributions to the SCCF are voluntary, and as such unpredictable.

The SCCF is managed by GEF and became operational in October 2002, with two main objectives: supporting adaptation and supporting technology transfer, each with its own funding window. The adaptation window supports both long-term and short-term adaptation action in the following areas: agriculture, water resources management, land management, health, infrastructure development, fragile ecosystems, integrated coastal zone management and climatic disaster zone risk management. UNDP and the World Bank have been the main multilateral entities active for the SCCF.

SCCF distributes its funds solely as grants. However, these grants are not intended to cover full programme or project costs; rather they are intended to leverage further funding. As of June 2012, the adaptation window of the fund had approved USD 162 million for 39 project and 3 programmes to date, leveraging USD 1.25 billion in co-financing.

The Least Developed Countries Trust Fund (LDCF), also managed by GEF, is fully focused on adaptation. Its mission is described as "financing the preparation and implementation of National Adaptation Plans of Action (NAPAs)", and it is the only existing fund whose sole mandate it is to finance the preparation and implementation of NAPAs. In terms of sectors, it focuses on the following: water, agriculture and food security, health, disaster risk management and prevention, infrastructure, and fragile ecosystems.

As of June 2012, USD 537 million had been pledged to the LDCF, of which USD 346 million have already been approved for projects and programmes, and USD 1.54 billion have been mobilised in co-financing. However, the current size of the Fund is small; the cost of implementing NAPAs is estimated at around USD 2 billion. Like the SCCF, the LDCF is funded by voluntary contributions. The lack of predictability of financial resources has been a significant limitation to the effectiveness of the LDCF and SCCF.

To date, the LDCF and the SCCF have approached funding on a project by project basis. In the future, both funds plan on using a programmatic approach that will likely "continue to include investments in adaptation activities directly on the ground, but will also, to a much larger degree than what is currently the case, include policy support aimed at helping countries to mainstream adaptation into policies and planning, creating the capacity necessary to absorb and utilize adaptation technology transfer, and supporting a process to achieve more climate resilient economies".

3.2. Bilateral actors

Bilateral actors such as developed country governments or their dedicated initiatives committed to deliver USD 30 billion in FSF over the period 2010-2012; however most of it was pledged or committed to mitigation activities. Bilateral entities as well direct a high proportion of their financial resources to the specialised climate funds. The main bilateral actors (namely, the European Union, Germany and the United Kingdom) have their own initiatives. Nonewithstanding, it is important to note that they direct a high proportion of their financial resources to the specialised climate funds (e.g. the UK's International Finance Initiative pledges GBP 2.9 billon for the period 2011-2015, of which GBP 312 million to the PPCR).[26] Therefore, a simple summation of pledges from bilateral entities and resources pledged to climate funds is inappropriate; care needs to be given to avoid double counting.

EU – Global Climate Change Alliance (GCCA)

The Global Climate Change Alliance (GCCA), funded by the European Union, provides technical and financial support to partner countries to integrate climate change into their development policies and budgets. It explicitly includes adaptation as one of its main priorities, listing it second out of its five main priority areas (after 'Mainstreaming climate change into poverty reduction and development efforts').

[26] UK Fast Start Climate Finance Brochure 2012. Accessed 17th of December 2012

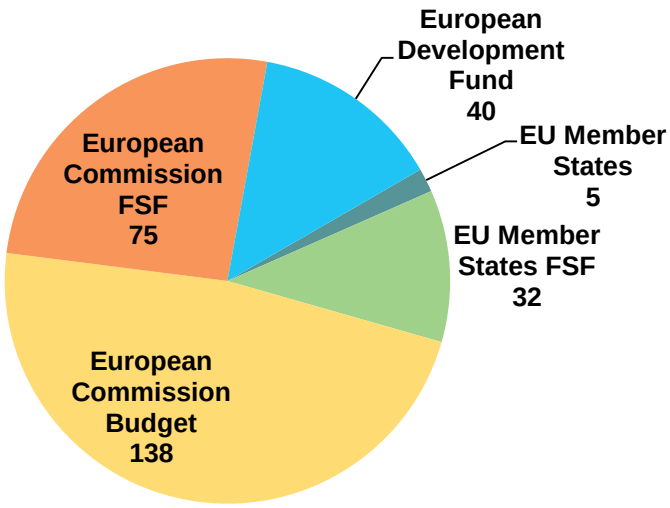

Figure 5: Sources of funds for the GCCA. Source: European Commission (2012).[27]

The GCCA is built on two pillars: a platform for dialogue and cooperation and a technical and financial support pillar. Adaptation is one of five priority areas for technical support. As of 2012, 29 interventions supported adaptation, 22 mainstreaming, 13 REDD, 9 DRR and 7 CDM.[27]

In terms of sectors, 25 interventions supported agriculture, land management food security and fisheries 24 had an overall development and poverty reduction aim, and 18 supported forests and natural resources.[28]

The GCCA is committed to the aid effectiveness principles, demonstrated by the range of delivery modalities and approaches, ranging from project approach, to sector programme and budget support and to general budget support.[28]

Germany – International Climate Initiative (ICI) and KfW General lending activities

Germany has pledged USD 1,260 million in FSF for the period 2010-2012.[29] Of the funds allocated, EUR 240 million were distributed to adaptation activities (28 per cent of the total). The FSF contributions are additional to the level of climate finance provided in 2009. They are in part derived from the auctioning of emission certificates in Germany, which account for a third of the FSF contributions. The channelling institutions are: the German bilateral development cooperation, multilateral funds and the International Climate Initiative. Further information on the latter is provided in **Erreur ! Source du renvoi introuvable.**.

Recently, Germany contributed a further EUR 9.4 million for climate investment readiness, to be allocated through the SCCF Fund.[30]

The KfW (Kreditanstalt für Wiederaufbau) provides financial support to both mitigation and adaptation projects in developing countries. Funding is extended to projects across a range of sectors, covering energy, water, waste, forest protection, transport, climate monitoring, and urban development.[31] In 2011, KfW's development arm committed USD 597 million to adaptation.[32] Besides financing support, KfW also provides technical assistance both for individual projects and for government policy across entire sectors.[33]

[27] European Commission (2012) Paving the Way for Climate Compatible Development: Experiences from the Global Climate Change Alliance. Available online by clicking here. Accessed on 25 January 2013
[28] Ibid. A total number of 80 interventions were split across 7 sectors, 3 of which are quoted in this report.
[29] World Resources Institute (2012) Developed Country Fast-Start Climate Finance Pledges: A Summary of Self-Reported Information.
[30] Climate Investment Funds website. Accessed on 9th January 2013
[31] Kfw website. Accessed on 17th of December 2012
[32] UNEP (2012). Bilateral Finance Institutions and Climate Change: A Mapping of 2011 Climate Financial Flows to Developing Countries.
[33] Kfw website. Accessed on 17th of December 2012

Box 2: The International Climate Initiative (ICI)- Germany

The International Climate Initiative (ICI) was set up by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, in December 2007.[34] It focuses on four areas: building a climate-friendly economy, adaptation, conservation of carbon sinks, and biodiversity projects in developing, transitioning and newly industrialising countries. As of August 2012, the ICI has initiated 296 projects, disbursing a total of EUR 717 million, of which EUR 95 for adaptation[35]. Going forward it has been allocated an annual budget of EUR 120 million[36]. The initiative seeks to leverage other funding streams through its investments, particularly from the private sector: as of December 2010, approximately EUR 1.56 billion from other sources have flowed into ICI-funded projects[37]. The ICI disburses its funds as grants only.

Projects are distributed across the globe, with 27 per cent of projects located in South and South East Asia, 21 per cent covering multiple regions/global, 20 per cent in Central and South America, 16 per cent in Central and Eastern Europe, Central Asia and Turkey, and 5 per cent in the Middle East and North Africa. 12 per cent of all projects are in Africa. There is a slight focus on BASIC countries (Brazil, South Africa, India and China) plus Russia, with nearly a third of all projects located there. In terms of sectoral focus, the ICI's priority lies in mitigation, which accounts for approximately 60 per cent of all projects. 14.5 per cent of the total, or approximately EUR 92 million, have been allocated to adaptation projects (4% to ecosystem-based adaptation, 8% to adaptation strategies); however, ICI has stated that the proportion of adaptation projects is on the rise.[35] Another 27% of the total has been allocated to forest conservation (REDD+) and other carbon reservoirs.

[34] Climate Funds Update website. Accessed on 5th December 2012
[35] BMU website. Accessed on 17th December 2012
[36] Climate Funds Update website. Accessed on 5th December 2012
[37] Total funding of EUR 2.19 billion minus ICI funding of EUR 634 million. BMU website. Accessed on 17th December 2012

United Kingdom (UK) – International Climate Fund (ICF)

The UK has committed GBP 2.9 billion in climate finance between April 2011 and March 2015, going beyond the FSF commitment period.[38] The majority is channelled through multilateral institutions – the UK contributed GBP 715 million to the Climate Investment Funds (CIFs), the largest share of its FSF commitment.[38] Grants and related instruments amount to GBP 236 million.[38]

Definitions of FSF differ between countries; private finance is not included in the UK's definition of FSF (whereas in Japan's it is). Not all the funding pledged can be classed as new and additional, as the UK has not yet surpassed the ratio of ODA to GNI of 0.7 per cent. Furthermore, the CIFs contributions were pledged prior to the start of the FSF period.[38]

The UK FSF is currently administered by the International Climate Fund (ICF), details of which can be also found in **Erreur ! Source du renvoi introuvable.** below. The ICF is funded as follows: GBP 1.8 billion from the Department for International Development (DfID), GBP 1 billion from the Department for Energy and Climate Change (DECC), and GBP 100 million from the Department for Food and Rural Affairs (DEFRA).

Around GBP 426 million (44 per cent) of the UK FSF went to Africa, GBP 248 million to Asia and GBP 171 million to Latin America and the Caribbean. The general tendency for UK FSF sponsored programmes is for them to be international rather than country specific, even when excluding contributions to multilateral climate funds.[38]

Adaptation is largely financed though the PPCR, the AF and the LDCF.

[38] Nakhooda, Smita and Taryn Fransenwith Allister Wenzel, Alice Caravani, and Kirsten Stasio. 2012. "The UK Fast-Start Finance Contribution." Working Paper.World Resources Institute, Washington DC, and Overseas Development Institute, London. Available online here

Box 3: The International Climate Fund (ICF)- United Kingdom

The International Climate Fund (ICF), a UK initiative, became operational in 2011. It has a budget of GBP 2.9 billion for the period from April 2011 to March 2015[39]. The ICF is funded as follows: GBP 1.8 billion from the Department for International Development (DfID), GBP 1 billion from the Department for Energy and Climate Change (DECC), and GBP 100 million from the Department for Food and Rural Affairs (DEFRA).[40]

Adaptation is a key priority for the ICF; the fund will aim to allocate 50% of its resources to adaptation, 30% to low carbon development (30%) and 20% to forestry.[41]

Specific sectors identified for funding within the adaptation area include agriculture (food and farming systems); disaster preparation; water resources management; and infrastructure and urban development. Three example projects are highlighted in the ICF Brochure: protecting food supplies in areas of climate stress, by introducing new crop varieties and production technologies that increase food production; preparing for extreme weather events by funding improved early warning systems, building shelters, and setting up insurance schemes for farmers and families.[42]

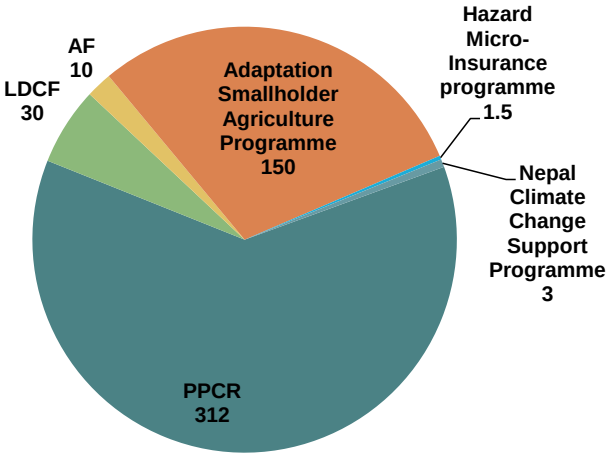

Figure 6: Distribution of adaptation funding for UK ICF in GBP million. Source: DfID, DECC and Defra (2012) *UK Fast Start Climate Change Finance* Brochure.[43]

3.3. Regional and sectoral distribution of international adaptation funding

Sub-Saharan Africa received just under half the total adaptation finance to date. Asia and the Pacific has received a quarter of all approved adaptation funding to date, followed by Latin America and the Caribbean with 14 per cent of the total. However, it is important to note that **the most vulnerable countries do not necessarily receive the most finances – there is a mismatch between need and direction of funding**.

Overall, the distribution of finance is not equal: twenty countries of the 119 countries receiving adaptation finance were awarded just over half of total adaptation funding to date.[44] Countries like Haiti and Zimbabwe, which according to the Climate Change Vulnerability Index are in the top three of the world's most vulnerable countries, have received to date only USD 6.6 and USD 6.9 million respectively for adaptation from dedicated climate funds.**Erreur ! Signet non défini.** Niger comes top for the PPCR and for the total across all funds, followed by Ethiopia and Mozambique.

[39] UK DECC website. Accessed on 5th December 2012
[40] Nakhooda, Smita and Taryn Fransenwith Allister Wenzel, Alice Caravani, and Kirsten Stasio. 2012. "The UK Fast-Start Finance Contribution." Working Paper.World Resources Institute, Washington DC, and Overseas
Development Institute, London. Available online by clicking here
[41] International Climate Fund (ICF) *Implementation Plan 2011/12 – 2014/15* Technical Paper (undated), available online here
[42] UK Departments for International Development, for Energy and Climate Change, and for Environment and Rural Affairs (undated) *UK International Climate Fund – Tackling climate change, reducing poverty*
[43] Available online here
[44] Schalatek et al. (2012). *Climate Finance Thematic Briefing: Adaptation Finance*. A Climate Funds Update publication

Figure 7: Regional distribution of total approved adaptation finance to date. Vivid Economics based on data from Climate Funds Update (online here). Accessed 2nd December 2012[45]

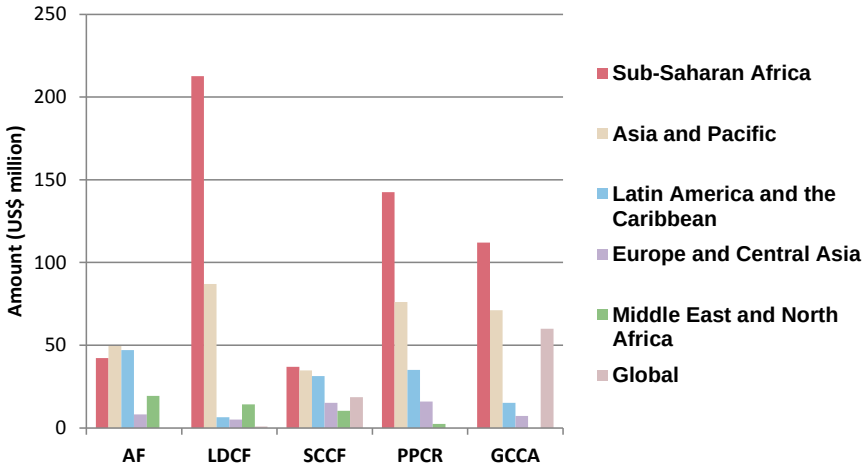

Figure 8: Regional distribution of approved funding. Note: GCCA funding includes adaptation and multiple foci, as the majority of their projects are multiple foci rather than adaptation or mitigation only. Source: Vivid Economics based on Climate Funds Update data. Accessed 2nd December 2012

Water resources management, agriculture/ food security and integrated coastal zone management have received the most funding, whilst infrastructure and health have received the least.

Other adaptation funds or initiatives are more difficult to break down by sector. GCCA sponsored projects for example, tend to be multi-sector and have multiple foci. Only five out the twenty-five adaptation projects listed on their website target one specific sector. Sectors include agriculture, coastal zone management, land management and water and sanitation.

PPCR programs are built on NAPAs and other national plans, as such they support a wide range of activities, from improving agricultural practices and food security to building climate-resilient water supply and sanitation infrastructure or conducting feasibility studies for climate-resilient housing in coastal areas.[46] The sectoral breakdown is thus country (or region) specific.

To give an example, the PPCR program for the Pacific region has three components:[47]

- the mainstreaming climate change adaptation (CCA) and associated disaster risk reduction (DRR) strategies into national and local development policies and plans;the integration CCA and DRR into sectoral plans, with two main foci – infrastructure development (e.g. coastal zones) and food security (e.g. oceanic fisheries); and support for all 14 Pacific island countries, specifically on-demand advice and capacity building in CCA and DRR.

A contrasting example is Bolivia, who has different vulnerabilities to climate change. The PPCR program for Bolivia therefore has slightly different priorities to the Pacific region program:[48]

- strengthening Bolivia's capacity to integrate climate resilience in public planning, management, investment, monitoring and evaluation;
- increasing the resilience of the entire water supply system of La Paz and El Alto (one of the objectives being the implementation of a pilot Integrated River Basin Management project); and
- increasing resilience to climate change in two pilot sub-basins of the Rio Grande basin.

[45] Note:Total approved adaptation finance to date stands at USD 1.4 billion
[46] PPCR website. Accessed 9th January 2013
[47] Strategic Program for Climate Resilience for the Pacific Program – regional track. Meeting of the PPCR Sub-Committee, 30th April 2012. Available online here
[48] Strategic Program for Climate Resilience for Bolivia. Presentation to the PPCR Sub-Committee Meeting, 2nd November 2011. Available online here

It is instructive to look at the disbursement rate of the main funds and their ability to raise co-financing. In doing so, we focus on the five main funds, which have contributed USD 1.2bn in approved adaptation financing to a total pledge of USD 1.4bn. The LDCF has approved the largest number of projects and the AF the least. Although the PPCR has the highest total for resources pledged and deposited, it has disbursed the least amount.

It is worth remembering here that multilateral and bilateral agencies channel most of their finances through the four adaptation-specific funds.

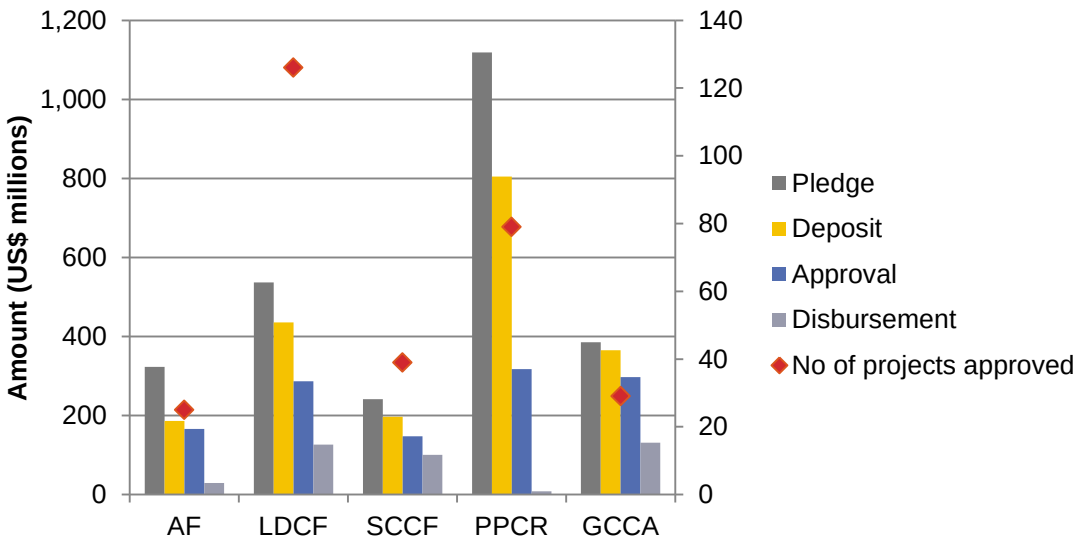

Figure 9: Funds pledged, deposited, approved and disbursed by the main adaptation funds. Source: Vivid Economics based on Climate Funds Update data (online here). Accessed 2nd December 2012

The private sector is not yet a significant contributor, a situation that is likely to continue for the reasons analysed in section 2.5. Indeed, Buchner et al. (2011) argue there is hardly any private adaptation financing.[49] The two main sources of private adaptation support are the UNFCCC Adaptation Private Sector Initiative and the adaptation activities of the International Finance Corporation. On the bilateral side, the UK ICF is encouraging private sector involvement through the Climate Public Private Partnership (CP3). The initiative is on the mitigation side, the UK investing in two private equity funds that will chose "best investments in sectors, such as water, renewable energy, energy-efficiency, low carbon transport and clean technology, to support developing country economies grow and prosper".[50]

The ICF also launched the Capital Markets Climate Initiative (CMCI) with the aim of accelerating and scaling up private climate finance flows to developing countries by bringing together policymakers and institutions in the finance and investment sectors (such as institutional investors, investment banks, multilateral development banks and professional services) in the scope of addressing the barriers and constraints currently inhibiting development of markets for low carbon investments.[50]

[49] Atteridge (2011). Will Private Finance Support Climate Change Adaptation in Developing Countries? Available online here

[50] Available online here

Box 4: Private finance initiatives

Adaptation Private Sector Initiative

Through the Private Sector Initiative (PSI), the UNFCCC "aims to catalyse the involvement of the private sector in the wider adaptation community". The PSI was launched under the Nairobi work programme and is essentially an exchange platform "for businesses to contribute in a sustainable and profitable manner to a strong and effective response, both in their own adaptation efforts and, importantly, in those of the most vulnerable countries and communities around the world". [51] Examples of adaptation activities: [52]

- The Munich Climate Insurance Initiative (launched by Munich Re and partners in 2005) aims to support developing countries in adapting to climate change through the development of innovative insurance-related risk management tools;
- Disaster preparedness, local capacity building, and planning (Riverside Technology). For example in Bangladesh, the latest flood warning technologies were adapted to suit local characteristics.

International Finance Corporation

- Private sector adaptation in the World Bank is spearheaded by the International Finance Corporation (IFC), the private lending arm of the World Bank Group. The IFC's approach in climate adaptation is "to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation".[53] The IFC operates through the PPCR, alongside other multilaterals. Examples of projects sponsored and implemented by the IFC within the PPCR programs: [54]
- Bangladesh: USD 262,000 for *Promoting Climate Resilient Agriculture and Food Security* and USD 50,000 for a *Feasibility Study for a Pilot Program of Climate Resilient Housing in the Coastal region;*
- Nepal: USD 8.7 million from the PPCR fund for *Building Climate Resilient Communities through Private Sector Participation*. The IFC will bring in extra funds and aim to leverage additional private investment.

The Green Climate Fund

Under the new GCF, the creation of a Private Sector Facility is underway with a view to directly or indirectly finance private sector activities. However, concerns are raised over the consistency of private sector actions with national priorities.[55]

With the advent of "direct access" – piloted in the AF and likely to be an important modality in the GCF – countries have started to set up dedicated climate funds to attract and manage climate finance, including adaptation finance. In some of them, such as the Bangladesh Climate Change Trust fund (BCCTF), international funding is supplemented by national government sources.

However, it is worth reinforcing the conclusion of the previous section: the need for extra funds. Funding is perhaps the most pressing concern on the adaptation front and for the implementation of identified priority measures.

[51] UNFCCC PSI website. Accessed 9th January 2013
[52] PSI case studies database. Accessed 9th January 2013
[53] IFC website. Accessed 17th December 2012
[54] PPCR website, country links for Bangladesh and Nepal. Accessed 9th January 2013
[55] ODI Climate Finance Fundamentals. The Green Climate Fund.. Accessed 9th January 2013.

The French adaptation finance landscape

France has committed itself to mobilising EUR 1.26 billion (EUR 420 million a year) in terms of FSF negotiated under the 2009 Copenhagen Agreement (out of a total European Union commitment of 7.2 billion euros). This commitment has been delivered by mobilising EUR 420 million euros a year of FSF between 2009 and 2012, mainly through the bilateral contribution (76%) (DGEC, 2012). In addition, France increased its contribution to the main multilateral instruments, particularly through the fifth replenishment of GEF (2011-2014) with EUR 215 million (a 40% increase in comparison to its contribution to the fourth replenishment). Regarding adaptation, a target of 11% has been set compared with 45% for mitigation and 20% for REDD+.[56] This also includes EUR 13 million earmarked for adaptation, while most of the bilateral activity in 2010 in this area was focused on water resources in Africa (DGEC, 2012).

On the other hand, it should be noted that in 2010 adaptation only accounted for around 20% of France's climate-related funding (MEDDTL, 2010) so it received far less support than mitigation or even the fight against deforestation (MAEE, 2011).

French initiatives in terms of adaptation to climate change in developing countries mainly relate to funding from the AFD group (69% in 2011) (WRI, 2012). As such, the AFD is the favoured instrument for implementing the French bilateral funding commitments on adaptation. Between 2007 and 2011 the funding granted by AFD and Proparco to development projects and programmes where *adaptation was a co-benefit* accounted for more than EUR 1.8 billion (in contrast, mitigation accounted for 7.8 billion euros) (AFD, 2011).

This section starts by providing an overview of the strategy and operations of AFD in this area, before describing the FFEM. This includes a summary of the analysis of the ten adaptation projects co-funded by the latter.

3.4. AFD, principal instrument for funding adaptation activities in developing countries

The AFD, as the main agency of French ODA, is a major contributor of adaptation funding. In 2005, the AFD developed a strategic framework on climate change. Between 2005 and 2011 the total commitment of AFD in terms of climate change accounted for almost EUR 10 billion, including 1.8 billion earmarked for adaptation (AFD, 2011). It is in 2007 that the AFD started funding its first 'adaptation projects'. Of the total commitment made by the AFD group, Proparco contributed EUR 179 million during 2011 with six projects (AFD, reference document 2011). All these projects, however, were earmarked for mitigation.

Its new 2012-2016 climate change action plan aims to ramp up these efforts. Over this 4-year period, the French agency commits 50% of its annual grants made to beneficiary countries to climate change (mitigation and adaptation alike) and 30% of the grants provided through its private sector arm, Proparco. The amount dedicated to adaptation is not specified.

Almost all (90%) of the commitment by the AFD to adaptation relate to the conservation of water resources. The disproportionately high sums committed to preserve water resources are hardly surprising, given that these initiatives are often considered as 'no-regrets' in a context of already considerable water stress in a number of regions, particularly in Africa and the Mediterranean, which are the agency's two priority regions. The 2012-2016 climate change action plan confirms this trend by envisaging that most grants will be allocated to this sector. The agricultural and natural resources sectors are also expected to receive a significant proportion of this funding, but to a lesser extent.

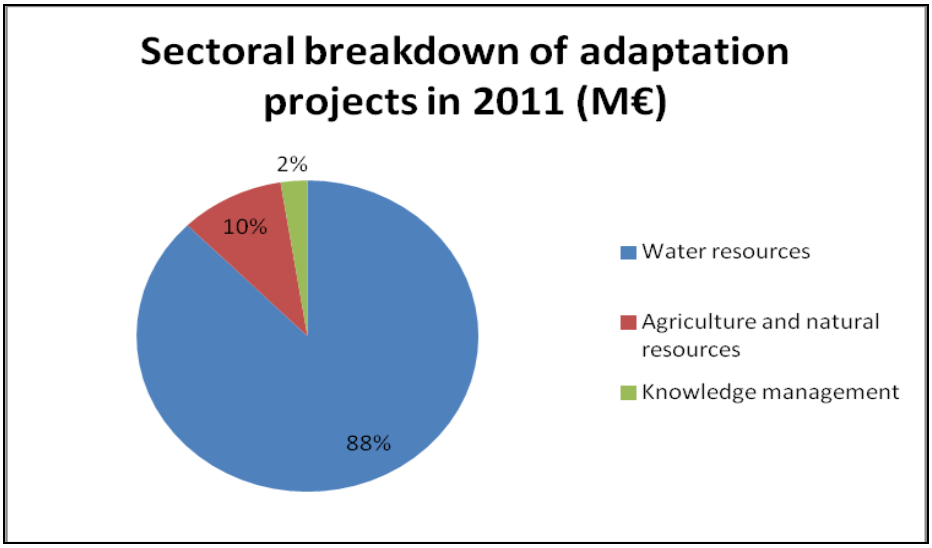

Figure 10: Breakdown by sector of adaptation projects in 2011 (in € millions). Source: AFD, reference document 2011.

The geographical distribution of the AFD commitments for adaptation is largely dominated by Sub-Saharan Africa (representing 65% of these commitments) and the Mediterranean (25%), followed by arid and semi-arid zones particularly vulnerable to water stress. This breakdown is consistent with the most urgent needs for adaptation, given that these regions are considered among the most vulnerable to a changing climate. Compared with previous years, there has been a significant reduction in the commitments in Latin America. This tendency can be largely explained by the fact that a significant integrated project for managing water resources in Columbia has come to a close. It should also be noted that commitments in Asia fell from 46% to 5% in 2011. The 2012-2016 climate change action plan confirms that 30% of the AFD commitments in Sub-Saharan Africa will have to include a climate-related co-benefit.

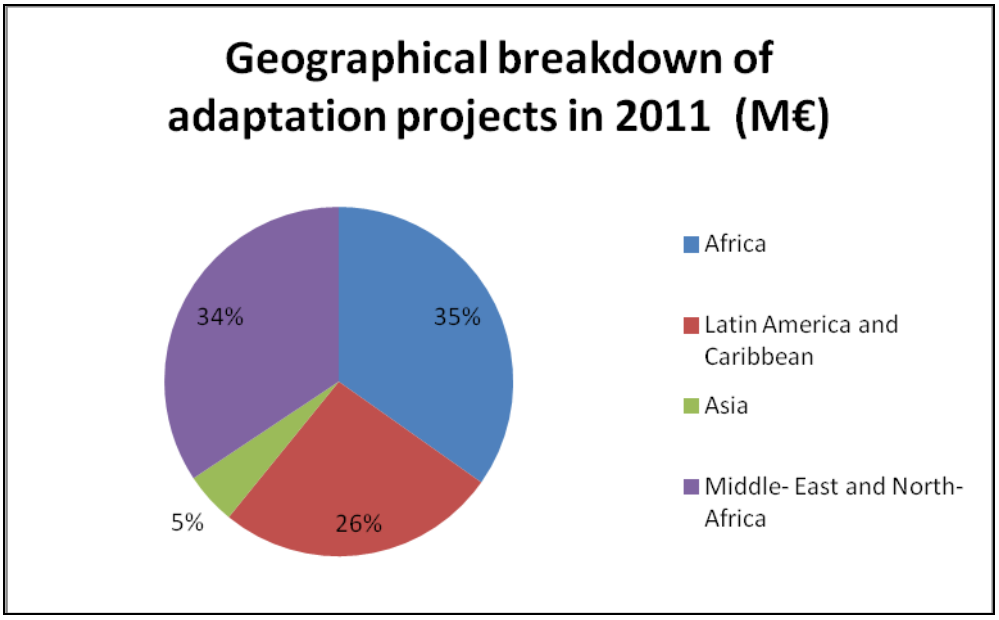

Figure 11: Geographical breakdown of adaptation projects in 2011 (in € million). Source: AFD, reference document 2011.

As part of its new 2012-2016 action plan on climate change, the AFD has clarified its position on the close but blurred links between development and adaptation. This is done by defining what accounts as an 'adaptation project'[57] :

> *'An adaptation project is a development project which contributes to the reduction of the vulnerability of goods, people, or ecosystems to the impacts of climate change.' (AFD, 2012)*

The implications of this definition are clear: there are no pure adaptation projects, but only development projects which may or may not have climate-related co-benefits. This position is consistent with the strategy of the French government, which recognises funding for adaptation to climate change as traditional development assistance.[58] This implies that climate-related funding from France accounts as ODA.

This approach raises the question of the additionality of adaptation funding. However, AFD has developed a tool for analysing vulnerability since 2007 (see

[57] This is based on the OECD definition of the initiative which states: 'An adaptation project is a development project which reduces the vulnerability of assets, people, or ecosystems to climate risks'; cf. OECD (Organisation for Economic Co-operation and Development) (2010) Evaluating Development Cooperation: Summary of Key Norms and Standards. Second Edition. Paris, OECD.

[58] The framework document for the French strategy for development-related cooperation for 2011 (MAEE, 2011) commits the French government and public agencies involved in the issue of climate change to ensure that '*development policies are adapted to reflect the new pressures created by climate change, while supporting developing countries in their efforts to mitigate climate change and adapt to this change, as well as promoting innovation and the transfer of clean technologies*.'

'climate screening' for AFD development activities

majority of international development partners (GIZ, DFID, JICA, USAID, etc.), AFD aims to its entire development investment portfolio.

gency has developed specific guidance for project managers to help them analyse the development operations or investments, based on the type of impact/vulnerability er resources, extreme events, soil degradation, rising sea levels) and intervention areas frica, Asia, Mediterranean and Middle East, Central and South America, small islands).

1) the existing vulnerabilities in the geographical area under analysis and (2) the type of ation interventions based on the vulnerability it seeks to address or the resilience it seeks in the intervention area, two typologies were developed:

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To facilitate its use by project managers, the guidance is currently being revised. This integration of new diligence into the internal environmental and social diligence procedu cycle of the agency.

The guidance (the 2007 version) is available on line on the AFD website. A new tool fo vulnerability to climate change of AFD projects, which include enhanced climatic and tec and more practical recommendations is currently being piloted.

), in a similar fashion to most international actors, both bilateral (GIZ, JICA, DFID, KfW, etc.) and multilateral (GEF, AF, WB), who aim to *climate-screen* their entire development investment portfolio.

Box 5: Towards 'climate screening' for AFD development activities

In line with the majority of international development partners (GIZ, DFID, JICA, USAID, etc.), AFD aims to '*climate screen*' its entire development investment portfolio.

As such, the agency has developed specific guidance for project managers to help them analyse the vulnerability of development operations or investments, based on the type of impact/vulnerability concerned (water resources, extreme events, soil degradation, rising sea levels) and intervention areas (Sub-Saharan Africa, Asia, Mediterranean and Middle East, Central and South America, small islands).

By comparing: (1) the existing vulnerabilities in the geographical area under analysis and (2) the type of potential adaptation interventions based on the vulnerability it seeks to address or the resilience it seeks to increase within the intervention area, two typologies were developed:

- A typology of vulnerabilities to climate change in each country or region, based on data available at an international level (IPCC, UNFCCC, UNDP, World Bank) or other sources of reliable local data.
- A typology of different types of adaptation interventions to identify in a targeted and restricted way which part of a project may be effective in adaptation terms, based on the type and level of vulnerability concerned (water stress, etc.).

By comparing information provided by these two typologies (vulnerability by region or country and the characteristics of the project under analysis), a project manager can ensure that a project reduces the vulnerability identified in the project area. However, it should be recognised that data on the vulnerability of specific countries and geographical zones is still of uneven quality, highly subjective, and lacking in detail. The intention therefore is for this typology to become progressively more accurate and thereby more robust. It will also be constantly updated in order to reflect new developments in our knowledge with regard to the impacts of climate change.

To facilitate its use by project managers, the guidance is currently being revised. This will include the integration of new diligence into the internal environmental and social diligence procedures and project cycle of the agency.

The guidance (the 2007 version) is available on line on the AFD website. A new tool for analysing the vulnerability to climate change of AFD projects, which include enhanced climatic and technical modules and more practical recommendations is currently being piloted.

4.2 FFEM's financing of adaptation in developing countries

As one of the main funding instrument of the French government to the major global environment conventions, FFEM[59] focuses on six areas of intervention for the production of global public goods as defined under the

[59] FFEM is technically a strand of the state's budget. It is dedicated to

following major international conventions or other related international forums:

- Combating climate change, with a particular focus on adaptation,
- The preservation and management of biodiversity and natural resources,
- The protection of international inland and marine waters,
- Combating desertification and land degradation, including desertification and deforestation,
- Combating chemical pollutants, particularly mercury,
- Elimination of substances detrimental to the stratospheric ozone layer.

Its mode of governance – a Steering Committee with representatives from its six member institutions[60] – enables the main French ministries to be involved in decisions regarding projects and in defining its strategic orientations. The latter are set out in a document known as the 'Strategic Programming Framework' (SPF), the most recent covers the period from 2013 to 2014.

It is also important to note that during 2013-2014, the FFEM Steering Committee is expected to examine a new way of implementing projects based on calls for tenders. A study will examine the possible options for this kind of mechanism.

supporting initiatives addressing global environmental problems associated with sustainable development in developing countries (FFEM was created at the same time as the Global Environment Facility) and its administrative functions are provided by AFD.

[60] This is made up of France's Ministries for the Economy, of Foreign Affairs, of Sustainable Development, Research and Agriculture, and the French Agency for Development, and its Scientific and Technical Committee.

FFEM's new SPF for 2013-2014 represents a significant development compared with previous SPFs through the emergence of six 'thematic areas', all of which offer significant synergies with the cross-cutting issue of adaptation:

1. Sustainable agriculture. It specifies in particular that sustainable agriculture must address the twin issues of mitigation and adaptation to climate change,
2. Sustainable urban territories, particularly with regard to the adaptation of towns and cities vulnerable to climate change in Africa,
3. Mechanisms to finance biodiversity,
4. Sustainable energy in Africa,
5. Integrated management of littoral and marine zones, and
6. Forests.

The new Innovation Facility for the Private Sector (Facilité d'Innovation pour le Secteur Privé) relating to climate change (FISP-Climat), which was launched in 2012, also represents a significant innovation that may become an important tool when it comes to mobilising private-sector funding for adaptation. Further information on the FISP-Climat is provided in Box 6 below.

Box 6: The new Innovation Facility for the Private Sector (Facilité d'Innovation pour le Secteur Privé) in the field of climate change (FISP-Climat)

As announced in the 2013-2014 SPF and approved by the Steering Committee on 23 November 2012, the new Innovation Facility for the Private Sector (Facilité d'Innovation pour le Secteur Privé - FISP) in the field of climate change aims to provide grants to fund innovations in the field of climate change (mitigation and adaptation alike) that are being delivered by the private sector in partnership with local actors in target countries.

FISP- Climat was created in response to the collapse of the international carbon market, which was promoted as the main tool for mobilising the private sector and switching to 'low-carbon' technologies. Designed to support innovatory processes in these areas, the Facility has a total maximum budget of EUR 5 million for the 2013-2014 period, which will be distributed through two Calls for Expression of Interest (CEIs) – allowing to fund approximately ten projects. A similar facility is envisaged under the auspices of the GCF in order to mobilise additional climate-related funds at the international level, as a result of strained public budgets. The Nordic Climate Facility (NDF), at the initiative of the Nordic Environment Finance Corporation (NEFCO), is one example of an existing facility.

Regarding adaptation, it is important to note the following:

- At least 50% of the projects will have to target ACP countries (Sub-Saharan Africa, Caribbean, Pacific), which are amongst the most vulnerable regions and are classified as high priority in AFD's intervention framework on adaptation. North Africa and the Mediterranean are considered as the second highest priority.
- The only eligible sector in the area of adaptation is water resources. This includes: *industrial water management, optimisation of waste water treatment and water distribution networks and water pumping from natural resources.*

Secondary recommendation: the broadening of eligible sectors and technologies should be considered, particularly in the areas of desalination technologies, coastal cartography, drip irrigation systems, coastal erosion-monitoring stations, and fire-prevention technologies.

In 2007, FFEM started to provide ad hoc funding for adaptation projects. At the same time, the French government and AFD were developing their own strategies in this growing area.

As part of this study, ten projects co-funded by FFEM on adaptation were assessed regarding their stated objectives and activities, as well as the implementation procedure that was used for these projects.

Using the 'development-adaptation continuum' of McGray et al. (2007) presented earlier, the objectives of projects analysed are twofold: (1) 'build the adaptive capacity', (2) 'manage climate risks', placing this portfolio in the middle of the continuum.

Regarding specific activities concerned, most projects explicitly include measures on awareness-raising and training of actors, changing policies and practices, research and studies, and pilot adaptation initiatives. In contrast, the creation of partnerships and networks receives less attention.

So far, a few initial results have been identified. These include a number of weaknesses relating to problems associated with how the project is structured, as opposed to the issue of adaptation itself. For example, many projects are proving to be too ambitious for the time and budget allowed. There are also difficulties relating to project management and the disbursement of co-funding.

It should be noted that only one of the projects reviewed, the Acclimate project is now finished and has undergone a final evaluation (see Box 7). Four projects have just been or are still to be launched. Given the lack of opportunity to step back and take stock, the negative aspects tend to overshadow the positive ones.

However, a certain number of projects are associated with promising and particularly innovative approaches: the ACFAO, PRGDT, PNQ, and RESSCUE projects, realised as a result of the implementation of innovative funding mechanisms and the adoption of an ecosystem approach. It is too soon, however, to draw any conclusions. All these projects are presented in the full report (available in French).

Box 7: The Acclimate project under the auspices of the Indian Ocean Commission (IOC)

Given their singular geographic, economic, and socio-cultural characteristics, the member states of the Indian Ocean Commission (IOC) - all of which are island states – are particularly vulnerable to a changing climate. This calls for a regionally concerted response, by which climate change is integrated into the various areas of the regional cooperation agenda implemented by the IOC.

The Acclimate project, co-funded by FFEM (EUR 1 million) aimed to establish regional cooperation between the member states of the IOC in the area of adaptation to climate change. The project was implemented between 2008 and 2012.

In particular, it aimed to build the capacities of the IOC and its member states (Comoros, Réunion/France, Madagascar, Mauritius, and Seychelles) in the area of adaptation to climate change in the short term, as well as developing long-term projects and policies. The project comprised the following four main elements:

(1)Enhancing the capacities for the monitoring and understanding of climate change (climate science)
(2) A study on the effects of climate change and vulnerability assessment, as well as a review of national arrangements for early warning systems
(3) Elaboration of a regional strategy on adaptation to climate change
(4) Coordination, project management and technical assistance to the IOC

The project evaluation presented the following key **successes** :

- The project laid the foundations for pursuing region-wide initiatives on adaptation to climate change according to the following motto: 'Understand, Inform, Adapt'. Pilot initiatives such as the creation of a regional observatory and a regional resource centre for adaptation to climate change are currently being discussed with the ONERC, along with the development of a regional climate modelling capacity, climatology database, and research programme with Météo-France (Réunion).
- An enhanced understanding of the regional climate and its impacts also represents a major contribution of the project, mainly by conducting vulnerability studies in each member country. This also includes a review of national early warning systems to improve the capacity of the meteorological services in IOC member states.
- As a result of this project, the IOC is now recognised by the UNFCCC to represent its members at Conference of the Parties sessions, alongside other regional organisations (e.g. CCCCC, SPREP). This is realted to the signature of two MoUs (Memorandums of Understanding) for improved South-South collaboration between the Small Island Developing States (SIDS).
- Finally, the project led to the adoption on 17 January 2013 by the IOC Council of Ministers of the 2013-2020 regional adaptation strategy.

A series of **weaknesses** were also identified:

- The failure to consult all of the stallholders and beneficiaries in the design phase undermined the regional ownership and buy-in of the project.
- The IOC failed to promote the project, which limited the 'operational' capacity of the project. It should be noted that the IOC has limited technical and human capacities to promote this issue and the IOC's policy mandate in this area was still to be defined at the start of the project.
- In addition, the project was too ambitious with regard to the time allowed and the financial resources available. This was also linked to the fact that the subject of adaptation was still very new in the region.
- Finally, the project was characterised by insufficient training activities, apart from the ECCTDI workshop on the regional climate trends and the SWIOCO workshop on seasonal forecasts for the Western Indian Ocean.[61]

Website: http://www.acclimate-oi.net/

[61] The assessment report on Acclimate states the following: 'The project has had no significant impact in terms of building technical capacities or expertise because of the limited number of training activities and involvement of stakeholders in the few activities which could have had a domino effect'.

The next section presents our detailed recommendations to FFEM regarding a strategic position on the subject of adaptation.

Firstly (subject of Recommendation 1), it is recommended that FFEM takes a more systematic approach towards the integration of adaptation into its entire projects portfolio. In addition to operations specifically dedicated to adaptation (i.e. projects that target adaptation as their main objective), the Fund should support projects that are 'adapted' (i.e. projects that address adaptation as a secondary objective).

Although it is important to underscore the Fund's desire for innovation and more visibility, it should be noted that the relative modesty of its resources (an average of EUR 1 million per project with a leverage ratio in the order of 4.5), undermines its ability to support projects implemented in more than one country (ECOWAS, IOC, SPF projects) or even at the level of a continent (VigiRisc project). This calls for a reconsideration of the Fund's relative 'added value' to projects implemented by other international actors.

The undeniable advantages of the FFEM relate to:

- Its mandate to deliver global environment benefits, which tends to promote an 'ecosystemic approach' targeting terrestrial, marine, and forest ecosystems particularly vulnerable to climate change, and
- Its ability to mobilise its member institutions and other French actors involved in international development cooperation.

It is therefore recommended that the Fund consider 'refocusing' its initiatives across:

- Three cross-cutting axes that address the Fund's desire for innovation, while remaining consistent with its strategy and those of other French actors (Recommendation 2)
- Two geographical zones particularly vulnerable to climate change or 'hot spot' zones within geographical areas traditionally targeted by French ODA (West Africa and the Mediterranean) (Recommendation 3)

The last section presents more general recommendations, not directly relating to the subject of adaptation.

5.1 Specific recommendations on the subject of adaptation

The recommendations below suggest strategic areas for the FFEM to consider in redefining its support to adaptation in developing countries.

5. Recommendations for a strategic positioning of FFEM on climate change adaptation

Recommendation 1: Within each core thematic area, FFEM could include the co-funding of activities specifically dedicated to adaptation through one or more specific components regarding adaptation.

Climate change affects all the various areas of the FFEM operations. This requires taking into account potential climate risks in the design of all the projects it co-funds, going beyond projects focusing specifically on adaptation. It should be as well noted that the various development partners, including the FFEM, find it very difficult to distinguish 'adaptation' projects from traditional development projects. As highlighted previously, there is a continuum between adaptation and development assistance. As such, this is mainly a question of adopting a different approach to development or 'development in a hostile climate', as Nicholas Stern put it.

It is recommended therefore that the FFEM systematically assesses climate risks during the instruction of new projects, across all core thematic areas (see FFEM's 2013-2014 SPF). This is the approach adopted by AFD and many other international development partners (GIZ, KfW, DFID, USAID, etc.). GEF is also exploring the possibility of using this systematic approach in terms of the GEF-5 strategy and its integration into its project cycle. Indeed, the GEF's Council has recommended to the GEF Secretariat that it should provide additional support for all GEF-5 projects classified as 'highly vulnerable' or located in areas particularly at risk in the face of a changing climate or 'hot-spot' areas, whilst providing additional resources to facilitate the identification and assessment of climate risks along the project cycle.

In the short run, this implies initially amending the templates of the Project Identification Notes (PINs) used by the FFEM with a view to providing the Secretariat and Steering Committee members guidance to identify potential climate risks that might impact projects under consideration, as well as the specific beneficiaries and ecosystems targeted by these projects. [62]

It should be noted that the SPF for 2013-2014 represents a major strategic development when compared with previous SPFs, with the emergence of six thematic areas: sustainable agriculture, sustainable urban territories, biodiversity funding mechanisms, sustainable energy in Africa, integrated littoral and marine zone management, and forests. All of these having significant synergies with the cross-cutting issue of adaptation, hence the need to exploit them more efficiently.

[62] For example, increased risks of coastal flooding as part of an integrated management project for coastal zones.

This mainly consists of maximising the co-benefits and enhancing the overall coherence between the various FFEM projects. This could take the form of a checklist like the one developed by the German cooperation agency (GIZ).[63] In 2011, the GEF conducted a review of various methodologies used by international development partners which could be adapted to suit the needs of the FFEM (GEF, 2011).

Recommendation 2: Provide financial support for 'pilot' adaptation projects across the six thematic areas of the 2013- 2014 SPF, according to the following three cross-cutting areas:

- **Partnerships with the private sector for adaptation to climate change (Axis 1)**
- **Risk sharing and transfer mechanisms for adaptation to climate change (Axis 2)**
- **Strengthening North-South decentralised cooperation for adaptation to climate change (Axis 3)**

Based on a review of international and French instruments active in adaptation finance, these three axes represent areas that remain largely unaddressed by international instruments in the Fund's geographical areas of intervention and as such, represent 'niches'. They can be used as cross-sectoral axes across all the FFEM core thematic areas.

This would consist of funding activities specifically dedicated to adaptation (as the main objective). The FFEM should play a leading role in promoting development that is resilient to a changing climate in its recipient countries. The comparative advantage of the FFEM mainly lies in it support to projects that are proven to be innovative and replicable in other contexts and on a different scale. Indeed, FFEM sees itself as a 'showcase' for French expertise in the field of international cooperation. It is therefore imperative that as far as its portfolio of adaptation projects is concerned, the FFEM tests new innovative projects, with a view of replicating and potentially upscaling them. However, the current process for selecting projects restricts the scope for innovation, whether this relates to adaptation or to other cross-cutting topics.

In 2010, an evaluation of the Fund that was commissioned by the Ministry of Foreign Affairs, recommended that the Fund should explore the possibility of implementing calls for tenders system to identify new project operators, facilitate learning and knowledge transfer, and generate new ideas and innovative topics.'[64] It should be noted that this is also the model adopted by the Fund's Small-scale Initiatives (SSIs) programme, as well as the FISP- Climat, which aims to support innovative projects on climate change (mitigation and adaptation alike) by mobilising the private sector in recipient countries (see Box 4).

It is therefore recommended that the use of calls for tenders is extended to projects dedicated to adaptation.

It is also suggested that the range of sectors and technologies eligible to the FISP- Climat is broadened, for instance by including in the list of eligle technologies: *desalination technologies, coastal cartography, drip irrigation systems, monitoring stations for coastal erosion, and fire-prevention technologies*. Currently, the only eligible sector in the area of adaptation is water resources. This includes: *water management in industry, the optimisation of waste water treatment and water distribution networks and the pumping of water from natural resources* (see Box 6).

[63] The abbreviation used for the German Gesellschaft für Internationale Zusammenarbeit.

[64] Study available on the website of the French treasury (DG Trésor).

Axis 1 - Partnerships with the private sector for adaptation to climate change

To date, most international efforts on adaptation have focused their attention on the role of the public sector. However, engagement with the private sector is receiving increasing interest from development, although it is still mainly seen as a potential source of funding and investment. It is important to highlight, however, that adaptation efforts required will largely exceed the public budgets available. On the other hand, the involvement of the private sector as a 'provider of solutions' is still at an early stage, even though it would be accurate to assume that the majority of the initiatives to be implemented involve actors from the private sector. Beyond the question of adaptation, those initiatives that attempt to engage the private sector are also promising in terms of their wider benefits for local economic development. It is therefore primordial to gain a better understanding of how the public sector can facilitate and encourage greater participation from the private sector in this area.

There are several potential approaches that are still at the experimental stage, particularly public-private partnerships (PPP)[65] in the field of risk transfer and insurance for adaptation to climate change (see Axis 2). To date, these mainly relate to the agricultural sector. Traditionally, PPPs are used to leverage funding from the private sector in the area of infrastructure investment, although less obvious benefits include the expertise the private sector brings to the table or the fast implementation of projects. Small and Medium-sized Enterprises (SMEs) must be the primary target, since they account for 80% of the economic activity in less advanced countries and the majority of local employment.

[65] Cooperation agreements between a public body and a private enterprise regarding planning, funding, and implementation of a project in developing and transition countries. PPPs create a win-win situation by implementing solutions which are both financially profitable and lead to sustainable development at the same time. Source : http://www.adapcc.org/en/ppp.htm

shows an example of a PPP, applied adaptation. The

Box 8: Cafédirect and GIZ PPP: Adaptation for Smallholders to Climate Change (AdapCC)[62]

Since 2005, Cafédirect and Gesellschaft für Internationale Zusammenarbeit (GIZ, formerly GTZ) have been implementing a PPP at Michimikuru in Kenya to strengthen coffee and tea smallholders' capacity to cope with climate-related risks, to manage uncertainties and to adapt to changing climate conditions. "Adaptation for Smallholders to Climate Change" (AdapCC) supports coffee and tea farmers in developing strategies to cope with climate change risks. The aim of the PPP was to develop exemplary adaptation strategies from smallholder organisations in East Africa and Latin America.

The pilot initiative was implemented between April 2007 and February 2010, with project finance shared by Cafédirect (52%) and the PPP programme (48%) through the German Federal Ministry for Economic Cooperation and Development (BMZ). The successful pilot project will be extended and continued by Cafédirect, together with several regional and international public and private institutions.

'AdapCC' project supported by the German agency for technical cooperation (GIZ) suited both the requirements of Cafédirect in terms of securing its supplies of fair-trade coffee and tea and the interest of GIZ in promoting sustainable development amongst smallholders vulnerable to the climate variability in the poorest rural zones. Although these existing projects are mainly in the agricultural sector, they could potentially be tested and replicated in other areas of intervention of the FFEM. One example could be the flexible management of the coastline to dvelop coastline management policies using a mutli-satekholder approach- bringing together actors from the public (local governements and the central government) and private sectors.

There should be a particular emphasis on favouring initiatives intended to develop financially viable products and services associated with adaptation to climate change, since these provide clear co-benefits in terms of local economic development. For example, the AEAO project is currently testing a tele-irrigation system in Niger, based on mobile telephony. The potential economic benefits of this project have yet to be demonstrated, but are of obvious interest.

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The pilot initiative was implemented between April 2007 and February 2010, with project finance shared by Cafédirect (52%) and the PPP programme (48%) through the German Federal Ministry for Economic Cooperation and Development (BMZ). The successful pilot project will be extended and continued by Cafédirect, together with several regional and international public and private institutions.

Axis 2 - Risk sharing and transfer mechanisms for adaptation to climate change

As a specific area for private sector participation, insurance offers specific solutions for adaptation in the form of innovative products designed to manage climate-related risk and costs. For example, index-based insurance products[66] are being increasingly used to insure agricultural activities around the world. However, there are many obstacles preventing the market penetration in the poorest countries, particularly the lack of meteorological data and information on climate risks. Although there is little opportunity to step back and take stock, a number of barriers hindering their development can be identified, such as the high up-front costs, the limited capacities of the various local actors, including the insurance industry, implementing agents, government representatives, and the final clients themselves.

This type of insurance product provides a clear price signal to clients, regarding the economic benefits of adaptation and building climate resilience. They can also be easily adjusted as climate conditions change and knowledge improves.

Box 9 shows an example of an Oxfam America pilot project aimed at testing the implementation of index-based insurance products in Ethiopia. Sponsored by Swiss Re and other companies from the insurance industry, this project also provides a particularly innovative approach for adaptation-related partnerships with the private sector.

Box 9: Horn of Africa Risk Transfer for Adaptation (HARITA)[67]

To reduce the risk climate change poses to agricultural communities in developing countries, Oxfam have partnered with leading actors in the insurance sector to create a weather index insurance project to help farmers reduce their risk of disasters and become better prepare for a changing climate.

- Established in 2008 to provide affordable drought insurance for farmers in Ethiopia
- Oxfam America project, sponsored by Swiss Re and others in the insurance sector
- Provides weather insurance through an innovative labour-for-premiums scheme
- Community-led climate adaptation initiatives in return for insurance cover (e.g. Reforestation and crop irrigation projects)

This innovative risk management approach has allowed a growing number of rural households, many led by women, to benefit from insurance. Since the launch of the project in 2008, uptakes have increased rapidly, from an initial 200 households in the first year to 13,000 households in 2010.

[67] According to IFAD, index-based insurance or insurance based on a climate-related index is 'a financial product linked to an index which accurately reflects local yields. Indemnity is triggered by specific agreed trends in the index rather than by actual yields. This reduces the risk of moral hazard and anti-selection, while removing he need to carry out assessments in the field.' Source: IFAD, 2010. Available online here

Axis 3 - Strengthening North-South decentralised cooperation for adaptation to climate change

To date, North-South decentralised cooperation has shown very little interest in the issue of climate change and even less in adaptation. The FFEM could promote this type of initiatives by supporting projects which feature (as a main or secondary objective) a partnership approach between local authorities or towns and cities from developed and developing countries. The decentralised cooperation agreement between the Nord-Pas-de-Calais region and the state of Minas Gerais (see below) is an example of such a project which could be applied to promote adaptation. Projects which incorporate this aspect of decentralised cooperation may take the form of technical and/or financial assistance agreements between a local authority in France and one in a developing country, whether for the purpose of adaptation planning (for example, development of an integrated coastal zone management framework integrating adaptation) or for the implementation of specific adaptation measures (for example, restoration projects of coastal ecosystems or natural buffer zones).

ed cooperation agreement between the Nord-Pas-de-Calais region and the state of Minas Gerais

ord-Pas-de-Calais region and the state of Minas Gerais signed a decentralised cooperation three key areas: the green and blue belt, reforestation, and climate change. This agreement is cific projects: the 'Climate Energy Plan' for the state of Minas Gerais and a carbon accounting' dministrative headquarters (covering no less than 17,000 civil servants).

o France, the state of Minas Gerais is highly dependent on economic activities associated with cious stones) and is already thinking ahead about the future when these would be exhausted; it o combat climate change for several years now.

stage, the 'Climate Energy Plan', supported by the Nord-Pas-de-Calais region and the French ADEME), will define the arrangements required to stabilise emissions and the legal and financial d with new climate-friendly policies.

ed to the state of Minas Gerais that it should seek assistance amongst French public and private sary technical expertise deleiver the three key areas of collaboration under the partnership.

Box 10: A decentralised cooperation agreement between the Nord-Pas-de-Calais region and the state of Minas Gerais[68]

In April 2009 the Nord-Pas-de-Calais region and the state of Minas Gerais signed a decentralised cooperation agreement based on three key areas: the green and blue belt, reforestation, and climate change. This agreement is translated in two specific projects: the 'Climate Energy Plan' for the state of Minas Gerais and a carbon accounting' assessment for the administrative headquarters (covering no less than 17,000 civil servants).

Comparable in size to France, the state of Minas Gerais is highly dependent on economic activities associated with mining (iron, zinc, precious stones) and is already thinking ahead about the future when these would be exhausted; it has been committed to combat climate change for several years now.

Currently at a draft stage, the 'Climate Energy Plan', supported by the Nord-Pas-de-Calais region and the French environment agency (ADEME), will define the arrangements required to stabilise emissions and the legal and financial instruments associated with new climate-friendly policies.

The AFD has suggested to the state of Minas Gerais that it should seek assistance amongst French public and private actors with the necessary technical expertise deleiver the three key areas of collaboration under the partnership.

[68] Available online here

Recommendation 3: Enhanced support in coastal and littoral zones and urban territories as geographical zones particularly vulnerable to climate change in West Africa and Mediterranean countries.

The geographical distribution of the ten 'adaptation' projects analysed is consistent with the geographical priority areas of the 2013-2014 SPF: Priority is given to Africa (particularly West Africa) and the Mediterranean (the less developed or emerging countries). However, our analysis of the ten 'adaptation projects' co-founded by the FFEM questions the Fund's capacity to support projects mlemented in more than one country (CEDEAO, IOC, CPS projects) or even at the level of an entire continent (VigiRisc project), given the modest resources of the FFEM and its desire to be visible. This does not, however, undermine the importance of seeking synergies at a regional level, particularly through vertical integration between the local, national, and regional levels. It is a question therefore of 'redimensioning' the FFEM interventions to a sub-national and national level whilst targeting 'hot spots', or in other words, geographical areas highly vulnerable to climate change.

By comparing the priority intervention areas of the FFEM with the needs of beneficiary countries, we have been able to identify two geographical zones where FFEM could concentrate its efforts:

- Coastal and littoral zones, particularly in the major deltas of West Africa, and SIDS (Hot spot 1)

- Urban territories, particularly the major African mega-cities (Hot spot 2)

Focusing on these 'hot spots' should not, however, undermine the importance of seeking synergies at a regional level, particularly through vertical integration between the local, national, and regional levels.

These geographical areas have been until now, largely unaddressed by international development partners in the priority geographical areas of intervention of the Fund (i.e. West Africa and the Mediterranean, particularly in French-speaking countries).

Hot spot 1: Coastal and littoral zones

Climate change is likely to have a significant impact on coastal communities and marine ecosystems, with rising sea levels, sea water intrusion (in the great deltas, for example), storm surges, and rising ocean temperatures likely to disrupt sensitive marine ecosystems (fish, coral), affect the livelihoods of coastal communities (highly dependent on fishing/aquaculture, agriculture, tourism), and damage human installations and other infrastructure along the coasts. Fishing and aquaculture will be affected by changes in water temperature, which lead to changes in the distribution of species and their life cycle and make waters more welcoming to invasive species.

In particular, flooding events will become more frequent and severe in coastal and littoral areas. The IPCC announced, with a high level of certainty, that flooding will increase in zones already vulnerable to flooding (IPCC 2012).[69] Flooding of coastal zones is particularly prevalent during high tides and major storms. Rising sea levels associated with climate change will intensify these phenomena, threatening human habitats, agricultural land, and the infrastructure on which coastal populations depend.

In the face of sea level rise, three main types of adaptation strategies can be distinguished: protection, 'accommodation', and strategic withdrawal in favour of preserving coastal ecosystems and protecting human habitats. Integrated Coastal Zone Management (ICZM)[70] offers particularly promising solutions to the increased risks of flooding, particularly with regard to the flexible management of the coastline.

Hot spot 2: Urban territories

Urban zones are also very vulnerable to climate change in the form of rising temperatures, changes in rainfall, and more frequent storms. These impacts will only aggravate existing problems faced by major African mega-cities, such as the heat island effect, buildings comfort levels during hot seasons, heatwaves and hot spells, flooding, drinking water supplies and urban drainage, poor public infrastructure, and endemic public health problems. However, there has been little research on these impacts within the context of developing countries, and the solutions require an integrated approach, because the cross-sectoral nature of sustainable cities (affecting water and sanitation, energy, pollution control and health, and transport, to name just a few).

There are, however, examples of sustainable urban planning projects, in which the intention is to prepare major urban centres for the increased risks of flooding, longer periods of drought, and other impacts associated with climate change. For example, the URAdapt project[71] shows that attempts aimed at adapting water management practices to climate change must take many different types of usage and users into account, while aiming to integrate existing mechanisms for using this resource in an efficient and sustainable manner. This requires the optimisation of ecosystems and the conservation or creation of green areas. Adaptation of urban territories must therefore be seen in a context of sustainable development, based on three main pillars: an ecosystemic approach, 'intelligent' planning, and efficient systems for water drainage and usage. These should also be accompanied by initiatives to promote buildings that are more resilient to climate change, especially by providing the right incentives to actors from the private sector (households and businesses).

[69] IPCC 2012, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Summary for Policymakers. Available online here

[70] According to France's Littoral Environment Commission (Commission Environnement Littoral) (2002), ICZM is defined as a 'dynamic, ongoing, and repeated process designed to promote the sustainable development of coastal zones.' Source : MEDDE website

[71] IDRC, Looking upstream and down: Addressing climate change impacts in Accra and Addis Ababa, available online here

5.2 General recommendations

The following recommendations area derived from the analysis of the FFEM 'adaptation' portfolio. Strictly speaking, these do not really concern the heart of the matter, namely the aim of the intervention (i.e. adaptation), but the way in which the project is structured.

Recommendation 4: Enhancing existing diligence procedures at the project identification stage, particularly with regard to the capacities of the implementing entity and the availability of co-finances

The analysis of the FFEM adaptation portfolio has shed light on salient issues associated with the selection of the implementing entity, concomitant with the scale of the project, and the availability of co-funding.

This mainly implies ensuring that the project will be able to achieve its objectives and implement the envisaged activities by performing a more rigorous assessment when investigating the available sources of co-funding and the prospective capacities of the implementing entities.

It is essential that the latter have the motivation, the political legitimacy, and the required operational capacity to ensure the project comes to fruition, namely human, financial, and logistical resources. We have found this is not always the case.

These requirements are especially important for regional projects involving multiple countries. The Acclimate project, for example, shows how difficult it can be for a project for which project management has been entrusted to a regional authority (in this case the IOC) to bring together the regional dimension (the IOC) and the national dimension (the island members of the IOC) in a harmonious and effective manner.

This requires adjusting general diligence procedures for the instruction of new projects. This can result in:

- Reinforcing the capacity building aspects of projects, in contrast to projects attempting to implement specific adaptation measures (e.g. early warning systems); or
- The non-selection of projects; or
- Integrating assistance[72] or capacity-building of the implementing entity as a specific element of the projects: Specific activities aiming at building the human, technical, or financial capacities of the implementing institution or agency.

Regarding the availability of co-funding, it is important that the FFEM ensures that co-funding expected is disbursed at the beginning of the project (particularly when funding local authorities in least developed countries), that due diligence processes are put in place by (i) channelling available funding and/or (ii) minimising co-funding to activities viewed as priority or more 'strategic' (in such a way that the overall project does not come to a standstill if it temporarily loses or suffers a reduction in funding).

Recommendation 5: Ensuring end-beneficiaries' ownership and 'buy-in'

Ownership buy-in must be secured at least at two levels, namely at the levels of the implementing or executing entity and final beneficiary.

The analysis of the FFEM portfolio of adaptation projects has highlighted situations, in which the implementing institution has failed to take sufficient ownership of the project. The evaluation report for the Acclimate project states the following: 'The project has not always been given a high level of priority within the IOC and has faced some difficulties in establishing itself within the organisation.' The same is true in several of the countries targeted by the Acclimate project (i.e. the member countries of the IOC), particularly Madagascar. This failure to secure ownership and buy-in of the project at the *national* level forms one of the most striking weaknesses associated with this project.

It is therefore essential that the diligence procedures performed at the instruction phase include this among the criteria for the selection of implementing entities and when designing the project.

The lack of ownership and buy-in from end- beneficiaries relates to the lack of communication about and in relation to the project. This is the subject of the next recommendation.

[72] The report on Acclimate states in this regard that 'the cell (of the IOC, with responsibility for the project) should have consisted of a project manager supported by experts within a PMA framework throughout the duration of the project. This would have made it possible in particular to avoid certain pitfalls concerning certain studies delivering insufficient benefits.'

Recommendation 6: Placing more emphasis on the communication and sustainability aspects of projects

Adaptation to climate change should be viewed as a process, rather than an outcome, given the long term and uncertain nature associated with climate change and its impacts. This calls for sustainability (of the positive outputs of public intervention) as a key principle of any adaptation projects. This is even more critical than in the context of traditional development projects.

Within the normal duration of the FFEM projects (3-4 years), it is possible to set the scene and lay the foundations for changes in existing policies and practices, but this is not sufficient to embed these into national development agenda and sustain the project outcomes in the longer run. In the case of the Acclimate project, this issue is particularly salient. There is no silver bullet to the issue of sustainability, but it is clear that the institutional aspects, the adoption of policies and regulations, the availability of human and financial resources are all critical ingredients for the long term sustainability of the project outcomes, along with the a move towards more programmatic approaches.

Communication is also a key element when it comes to promoting the long term sustainability of a project. The evaluation report of the Acclimate project shows that this project is 'relatively unknown' by the wider public, despite the project having a dedicated website. It is therefore recommended to integrate public outreach and communication activities targeting all the stakeholders (including the end- beneficiaries).

Annex 1- List of key stakeholders consulted

In total, 30 stakeholders were consulted as part of this study, through semi-structured interviews and emails.

Organisation name	Contact name	Organisation name	Contact name
ACMAD	Cheikh Kane	GERES	Vanessa Laubin
AFD	Carl Bernadac Christophe du Castel Guillaume Chiron Nicolas Rossin Isabelle Vincent	GRET	Céline Allaverdian
AGHRYMET	Timothée Ourbak Pibgnina Bazié Ablassé Bilgo	IDDRI	Alexandre Magnan
Agence Nationale de la Recherche	Michel Griffon	IRAM	Frédéric Bazin
CDC Climat	Alexia Leseur	MAEE	Anne Bourdy Odette Tomescu
CILSS	Philippe Zoungrana	MEDTL	Romain Dissaux Frédéric Schafferer
CIRAD	Emmanuel Tourquebiau	Memoris (Groupe FIT)	Olivier Deloumeau
CIRED	Stéphane Hallegatte, maintenant à la Banque Mondiale Vincent Vigué	Météo France	Marc Gillet
COI	Brice Montfraix, anciennement chargé de projet Acclimate	ONERC	Nicolas Bériot Bertrand Reysset
FFEM	Julien Calas	TEC Conseil	Ghislain Dubois (évaluateur du projet Acclimate de la COI)

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