



# Green Finance in the Mediterranean

---

**Developed by:**  
eco-union and IEMed

**Authors:**  
Jeremie Fosse, Kristian Petrick, Fabio Fiorucci, Margaux Moulet (all eco-union)  
Javier Albarracín, Maria Relea Jubert (all IEMed)

**Contact:**  
[Jeremie.fosse@ecounion.eu](mailto:Jeremie.fosse@ecounion.eu), [Kristian.petrick@ecounion.eu](mailto:Kristian.petrick@ecounion.eu)  
[www.medgreeneconomy.org](http://www.medgreeneconomy.org)  
[www.ecounion.eu](http://www.ecounion.eu)

## Table of content

Table of content .....	2
Executive Summary .....	4
<b>1 Definitions and Frameworks .....</b>	<b>5</b>
1.1 Introduction .....	5
1.2 Key Definitions .....	5
1.2.1 Green Economy.....	5
1.2.2 Green Finance.....	7
1.2.3 Climate Finance.....	9
1.3 Policies and Instruments.....	12
1.3.1 Environmental Policies.....	13
1.3.2 Green Finance Instruments.....	14
1.3.3 Conclusions.....	18
<b>2 Actors and Funds .....</b>	<b>19</b>
2.1 Introduction .....	19
2.2 Multilateral Development Banks.....	19
2.2.1 World Bank Group .....	19
2.2.2 The European Investment Bank .....	23
2.2.3 European Bank for Reconstruction and Development.....	26
2.2.4 African Development Bank .....	29
2.2.5 General Assessment .....	31
2.3 European Union .....	34
2.3.1 Strategy.....	34
2.3.2 Implementation .....	35
2.3.3 Examples.....	37
2.4 Multilateral Climate Funds .....	38
2.4.1 Overview.....	38
2.4.2 Instruments .....	41
2.4.3 Examples.....	42
2.4.4 General Assessment .....	42
<b>3 National Development Agencies .....</b>	<b>43</b>
3.1 France .....	44
3.1.1 French Agency for Development (AFD).....	44
3.2 Spain.....	49
3.2.1 Spanish Agency for International Cooperation and Development (AECID) .....	49
3.3 Germany .....	49
3.3.1 German Development Agency (GIZ) .....	50
3.3.2 KfW .....	51
3.4 Italy .....	53
3.4.1 Cassa Depositi e Prestiti (CDP) .....	53
3.5 Morocco.....	55
3.5.1 Sustainable Development and Climate Change Strategies.....	55
3.6 Egypt .....	57
3.6.1 Egyptian Environmental Affairs Agency.....	57
3.7 Turkey .....	59
3.7.1 Climate Change Strategy .....	59
<b>4 Green Finance in the Private Sector.....</b>	<b>61</b>
4.1 Introduction .....	61
4.2 Definition, Challenges and Barriers .....	61
4.2.1 Need for a Financial Return .....	61
4.2.2 Need for a Clear Definition .....	64
4.3 Industry Overview .....	66
4.3.1 Credit Sector and Purely Financial Sector .....	66
4.3.2 Actors .....	67
4.3.3 Instruments .....	68
4.4 Trends and Outlooks.....	70

4.4.1	Trends in the Market .....	70
4.4.2	Generational Price Premium for the Environment .....	72
4.5	Good practices in Mediterranean Countries .....	73
4.5.1	Green Corporate Bonds .....	74
4.5.2	Green Activities of Banks .....	75
4.5.3	Ethical Finance .....	77
4.6	Conclusions.....	79
<b>5</b>	<b>Results from the survey.....</b>	<b>81</b>
5.1	Actors and Barriers .....	81
5.1.1	Who are the Main GCF Actors? .....	81
5.1.2	What is their Level of Commitment? .....	81
5.1.3	What are the Main Barriers? .....	82
5.2	Instruments .....	82
5.2.1	What are the Most Relevant Tools? .....	82
5.3	Strategy .....	83
5.3.1	What are the Main Economic Sectors Related to GCF? .....	83
5.3.2	Are there National GCF Strategies?.....	83
5.3.3	What about the Quality of Those Strategies? .....	84
5.4	Summary.....	84
5.4.1	What is the Overall State of GCF at Regional Level? .....	84
<b>6</b>	<b>Overall Conclusions and Recommendations.....</b>	<b>85</b>
6.1	Findings.....	85
6.2	Recommendations.....	86
6.3	General Conclusion .....	87
<b>7</b>	<b>Bibliography.....</b>	<b>89</b>
<b>8</b>	<b>Acknowledgement .....</b>	<b>92</b>

## Executive Summary

---

The emergence of critical environmental issues, from global warming to biodiversity loss, requires a deep integration of sustainability concerns into the mechanisms of the global economy. The current need to implement sustainable development involves the use of new forms of finance, both in the public and private sector. In the Mediterranean region, green finance holds the promise of a widespread and integrated way to address environmental challenges. The aim of this study is to analyse the dynamics of green finance in the Mediterranean countries and to identify the current state of the art, future trends and possible recommendations for policy-makers.

**Chapter 1** analyses the various conceptual **definitions of green finance** in the broader context of the green economy, referring to institutional and academic frameworks. In general, the boundaries of the concept of green finance are not yet defined accurately, and it would be advisable to provide a more precise classification even at the theoretical level. The general field of green finance, covering all forms of financing of the green economy, can be distinguished from the specific sub-category of climate finance, which finances activities aimed at fighting climate change under the Paris Agreement.

**Chapter 2** is a review of **green finance actors and funds** in the Mediterranean, focusing on supranational public institutions describing their strategies, instruments and concrete examples of funded projects. The activities of multilateral development banks, the European Union and multilateral climate funds are described. These international institutions play a key role in promoting various forms of green finance, including leveraging private investment in green projects. In the context of the Mediterranean it is crucial to develop coordinated actions between the various actors to tackle common problems, also promoting the development of the southern countries in a sustainable way.

**Chapter 3** describes **green finance activities of actors** in a number of Northern and Southern Mediterranean countries through the work of development agencies, ministries and other national institutions. As far as European countries are concerned, there are many national initiatives that aim to financially support green projects in developing countries, including those in the Southern Mediterranean. In the case of Morocco, Egypt and Turkey, the analysis focuses on strategies and environmental projects implemented by national governments, often with the financial collaboration of other international institutions.

**Chapter 4** examines the initiatives in the field of **private green finance**, a rapidly expanding industry that is crucial for the future of the green economy. In a time of increasing constraints on public budgets, market-based financing could provide the capital needed to bridge the financial gap that green projects tend to face. Forecasts for the coming years indicate further growth in private green financial flows, especially for green bonds. Examples and good practices of green finance by private companies, banks and other financial operators in the Mediterranean are described.

**Chapter 5** summarises the results of a **qualitative survey** of key national and regional green finance practitioners conducted in order to get a practical idea on the green finance perception among different types of financial actors, regions and countries. The results show the lack of commitment of stakeholders and the need for increasing awareness and developing innovative financial tools.

In the final part, the report presents **conclusions and recommendations** for policy-makers and actors in order to overcome the barriers identified and allow the development of the green finance sector. The priorities are to establish clear definitions for green and climate finance, ensure strong leadership to achieve the finance sector's commitment, scale up funding and improve transparency in the private sector. Only by succeeding in integrating the financial system into a sustainable economy perspective will it be possible to address the challenges that current environmental problems bring to us.

# 1 Definitions and Frameworks

---

## 1.1 Introduction

The Paris Agreement on Climate Change and the 2030 Sustainable Development Goals (SDGs) agenda approved in 2015 were major turning points in global governance, translating the growing environmental awareness into a low carbon, inclusive and green economy. While the green economy concept has been attracting increased attention at the international and national level over the past years, it has become clearer that the key for success will be the ability to finance this new economy.

Green finance is an indispensable means to implement a green economy as there is a massive need in investments to finance this transition. Therefore, the ability to mobilise and leverage different forms of public and private finance from domestic and international sources is key to deliver a low-emission and climate-resilient economy. This requires not only more and better capital flows dedicated to green initiatives but also the need to regulate and frame global and national policies to leverage investments and achieve an effective cooperation between private financing and public intervention.

The OECD estimated the need in cumulative capital expenditure at around \$53 trillion in 2035<sup>1</sup> to get the world onto a 2°C greenhouse gases emission path.<sup>2</sup> This amount is needed to dramatically extend sustainable energy services in rapidly growing emerging economies and developing countries as well as renewing the energy infrastructure of developed countries. Moreover, The New Climate Economy Report estimated the need for infrastructure investments to reach around \$90 trillion in the next 15 years.<sup>3</sup> Seeing the scale of this investment, it is therefore inevitable to rely largely on mobilising private capital and institutional investors. This financial gap therefore requires mobilising additional financial capital and achieving a climate-friendly reallocation of existing invested capital.

This research study aims to provide an overview of green and climate finance in the Mediterranean region. In particular we assess these issues in four countries from the northern shore (France, Italy, Germany and Spain) and three countries from the southern shore (Morocco, Egypt and Turkey). It reviews the major financial actors both at regional and domestic level, the instruments and tools used, identifying barriers, gaps and challenges, and suggesting actions to promote green investments in the Mediterranean region.

## 1.2 Key Definitions

### 1.2.1 Green Economy

Several green economy and sustainable development concepts and initiatives have been developed and promoted at global and regional level. We have chosen to present those more relevant to the Mediterranean region, mainly coming from major intergovernmental organisations such as the United Nations Environment Programme (UNEP), the Organisation for Economic Co-operation and Development (OECD), the European Union (EU), and from major financial institutions like the World Bank.<sup>4</sup>

#### *UNEP*

The United Nations Environmental Programme (UNEP) has been leading the development and dissemination of the green economy concept at the global level. According to UNEP, the green economy is an economy whose aim is “to improve human well-being and social equity while significantly reducing environmental risks and ecological scarcity.” In this type of economy, revenue growth and employment come from public and private investments that reduce carbon emissions and pollution, enhance the

---

<sup>1</sup> International Energy Agency (2014), World Energy Investment Outlook, <https://www.iea.org/publications/freepublications/publication/WEIO2014.pdf>

<sup>2</sup> The New Climate Economy Report (2016), The Sustainable Infrastructure Imperative, Financing for Better Growth and Development, [http://newclimateeconomy.report/2016/wp-content/uploads/sites/4/2014/08/NCE\\_2016Report.pdf](http://newclimateeconomy.report/2016/wp-content/uploads/sites/4/2014/08/NCE_2016Report.pdf)

<sup>3</sup> <http://newclimateeconomy.report/>

<sup>4</sup> See also report eco-union (2016), Green Economy in the Mediterranean, <http://www.medgreeneconomy.org/assets/downloads/greeneconomy-med-web.pdf>

rational use of resources and energy efficiency and prevent loss of biodiversity and environmental services. In 2012, in the context of the United Nations Conference on Sustainable Development (UNCSD), which took place in Rio de Janeiro (the so-called Rio+20), the UNEP published a Green Economy Report<sup>5</sup> which claimed, for example, that with 2% of global Gross Domestic Product (GDP) invested in green economic sectors it would significantly increase the GDP growth rate, as well as reduce energy and water demand compared to a business-as-usual scenario.

### *OECD*

In 2009, the Organisation for Economic Co-operation and Development (OECD) ministers demanded a Green Growth Strategy in order to set a common guideline for the governments of OECD countries and partner economies to bring in line economic development and environmentally and socially sustainable growth. Implemented in 2011, the Green Growth Strategy<sup>6</sup> now serves as a framework for OECD members to recover economic growth and foster job creation, hand in hand with respect for the planet's natural limits. According to the OECD, green growth is "economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services vital to human well-being."

### *World Bank*

In 2012, the World Bank published its report Inclusive Green Growth: The Pathway to Sustainable Development.<sup>7</sup> In this publication, the World Bank claims that inclusive green growth is the gateway to sustainable development. The report blames market, policy and institutional failures for the inefficient and wasteful use of the Earth's natural capital resources and for the huge gap between the rich and the poor. Despite the fact that economic growth has lifted more than 660 million people out of poverty over the past 20 years, a large number of the world's citizens have been excluded from economic wealth, which shows that inclusivity might be the key to social equality.

### *EBRD*

According to the European Bank for Reconstruction and Development (EBRD), a green economy is a market economy in which public and private investments are made with a specific concern to minimise the impact of economic activity on the environment and where market failures are addressed through improved policy and legal frameworks aiming at accounting systematically for the inherent value of services provided by nature, at managing related risks and at catalysing innovation.<sup>8</sup>

### *General Assessment*

In the aftermath of Rio+20, governments and international organisations have adopted the language of "Inclusive Green Growth". The World Bank has noted that "welfare gains" are the aim of green growth while the OECD and UNEP have shown the benefits of the green economy for the poorest, including healthy soils, clean water supplies, less pollution and the creation of green jobs.

However, there remain some important conceptual distinctions between notions for "inclusive green growth" and a broader understanding of a "green economy":

- First, green growth does not explicitly address equity issues and for the most part assumes that trickle-down economics will improve the living standards of the poorest.
- Second, green growth aims at resource efficiency and more sustainable patterns of consumption and production but is not informed or guided by ecological limits.
- Finally, green growth tends to put more emphasis on economic tools, market instruments and metrics rather than on changing and greening the economic model as a whole.

In this report we will use the definition of a green economy as proposed by the European Environment Agency (EEA), such as the one that **generates increasing prosperity while maintaining the natural**

---

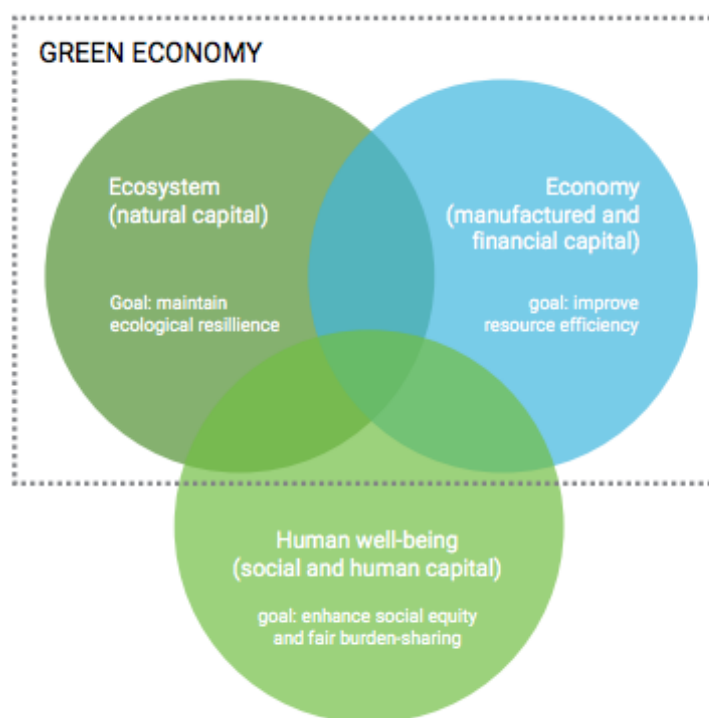
<sup>5</sup> <https://www.unep.org/greeneconomy/resources/green-economy-report>

<sup>6</sup> <http://www.oecd.org/env/towards-green-growth-9789264111318-en.htm>

<sup>7</sup> [http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive\\_Green\\_Growth\\_May\\_2012.pdf](http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive_Green_Growth_May_2012.pdf)

<sup>8</sup> [www.ebrd.com/investment-of-choice.pdf](http://www.ebrd.com/investment-of-choice.pdf)

## systems that sustain us.



**Figure 1: EEA Green Economy Framework.** Source: European Environment Agency

### 1.2.2 Green Finance

What emerges from a literature review in the area of green growth, green economy or climate finance is that there is little available on the definition of “green finance”. This lack of conceptualisation makes the assessment problematic as terms are not used consistently and data cannot be easily compared across sources.

#### OECD

The OECD does not give a clear definition of green finance but embodies it in the terms “investment in the green economy”. The OECD created the Centre on Green Finance and Investments in 2016 in order to support and help implement the objectives of the Paris Agreement and the SDGs.<sup>9</sup> Its mission is “to help catalyse and support the transition to a green, low-emission and climate-resilient economy through the development of effective policies, institutions and instruments for green finance and investment.” It will do so by leveraging the OECD’s policy and economic expertise and providing a platform engaging key players and tackling the marketplace intelligence of the private sector. The OECD Centre aims to develop rigorous, innovative and compelling analysis and practical recommendations, organise high-impact events and engage effectively in the wider policy debates and arenas, helping to support the rapid scaling-up of green investment and financing flows on a scale commensurate with the challenge.

#### G20

The G20 uses the term “green finance” as a broad umbrella term regarding the major required shift in financial flows in order to support projects benefiting the environment and more generally society. The work of the Green Finance Study Group (GFSG) work consists of the support for the G20’s strategic goal of strong, sustainable and balanced growth. According to the GFSG, “green finance can be understood as financing of investments that provide environmental benefits in the broader context of environmentally sustainable development.”<sup>10</sup> Green finance therefore aims at the internalisation of environmental externalities as well as at risk adjustment in order to promote environmentally-friendly investments and

<sup>9</sup> <http://www.oecd.org/cgfi/>

<sup>10</sup> <http://unepinquiry.org/g20greenfinancerepositoryeng/>

to reduce harmful ones. Apart from public finance instruments, the report states that large-scale private investment will be an indispensable driver for the transition towards a green economy.

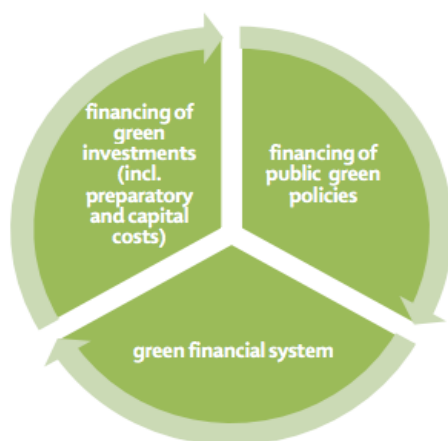
### Industry

The Business Industry Advisory Committee (BIAC) is the voice of business at the OECD. They released a discussion paper in 2016 on Green Finance and Key Business Considerations for Financing a Sustainable and Low-Carbon Economy.<sup>11</sup> This is a sign that the industry is acknowledging the existence and importance of the transition toward a green economy through finance. They highlight the lack of definition and refer to it as a broad term encompassing *“financial initiatives and processes designed to promote environmentally sustainable investments across financial asset classes, as well as specific products and services that seek to promote environmentally sustainable investments – including energy sources, low-carbon technologies, products, projects, industries, and businesses.”*

A major private consulting company gave a definition of green finance for the banking sector in 2013, highlighting once again the tendency of mainstreaming this term in all sectors. They therefore referred to green finance as *“financial products and services, under the consideration of environmental factors throughout the lending, decision-making, ex-post monitoring and risk management processes, provided to promote environmentally responsible investments and stimulate low-carbon technologies, projects, industries and businesses.”*<sup>12</sup>

### General Assessment

Considering the lack of an international consensus on the definition of green finance, we made a general assessment regarding the meaning we should give this term in our research. In this study we therefore refer to green finance broadly as the set of financial mechanisms, tools and programmes to implement a green economy. Therefore, green finance is here the financial instruments to reduce environmental pollution and greenhouse gas emissions, minimising waste and improving efficiency in the use of natural resources.



**Figure 2: Green finance scope.** Source: Nannette Lindenberg, *Definition of Green Finance*

Moreover, green finance includes, but is not limited to, the financing of public and private green investments in environmental goods and services and prevention, minimisation and compensation of damages to the environment and to the climate, the financing of public policies (including operational costs) that encourage the implementation of environmental and environmental-damage mitigation or adaptation projects and initiatives and components of the financial system that deal specifically with green investments, such as the Green Climate Fund (GCF).

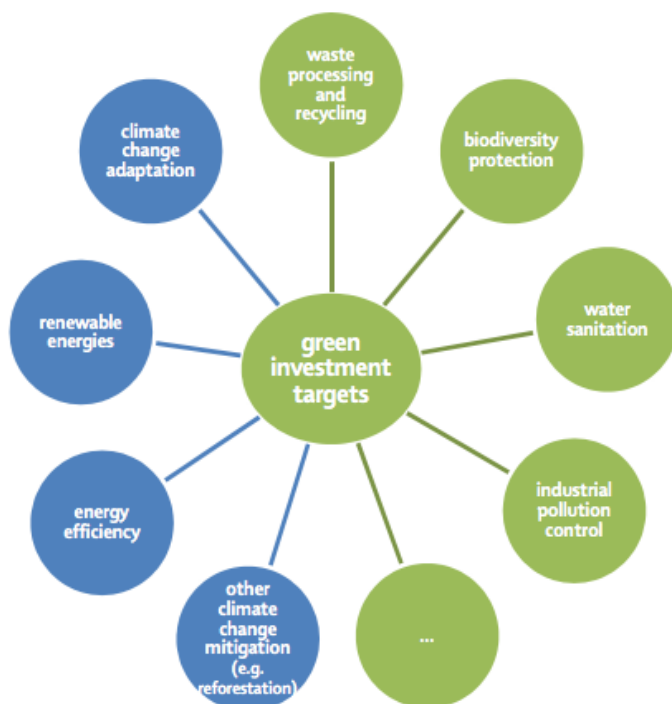
<sup>11</sup> [http://biac.org/policy\\_groups/finance/](http://biac.org/policy_groups/finance/)

<sup>12</sup> <http://www.pwchk.com/en/publications/exploring-green-finance-incentives-in-china.html>



Today, only a small fraction of bank lending is explicitly classified as green according to national definitions. Less than 1% of global bonds are labelled green and less than 1% of the holdings by global institutional investors are green infrastructure assets.<sup>13</sup>

The conceptual border with climate finance being thin, we choose to present both terms but we are focusing particularly on climate finance as most environmental projects have been climate-related since the Paris Agreement.



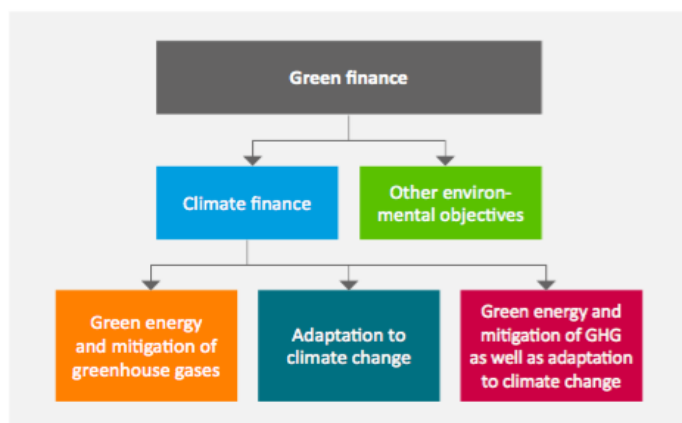
**Figure 3: Green investments targets.** Source: Nannette Lindenberg, *Proposal for the BMZ*

### 1.2.3 Climate Finance

Climate finance is a key part of the green economy transition and is definitely a crucial piece of the climate change policy puzzle. It can be seen as a more specific branch of green finance focusing explicitly on climate change in terms of mitigation, adaptation and research investments. In a broad definition, climate finance is described by the Climate Policy Initiative as “referring to the financial resources paid to cover the costs of transitioning to a low-carbon global economy and to adapt to, or build resilience against, current and future climate change impacts.”<sup>14</sup> But there is no existing consensus on a clear definition of climate finance so we have chosen to present the different visions of key institutions and to comment on them in our analysis.

<sup>13</sup> [https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report\\_en.pdf](https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report_en.pdf)

<sup>14</sup> Climate Policy Initiative (2014), *What is Climate Policy?*



**Figure 4: IDFC Green finance categories.** Source: IDFC Green Finance Mapping for 2014, Figure 2, p. 4

### 1.2.3.1 Main Actors and Agreements

#### Paris Agreement

With its long-term ambition to keep global warming under 2°C and to “pursue efforts to limit it to 1.5°C,” the Paris Agreement sent a strong signal to the public and private finance sector to make all financial flows consistent with a pathway towards low-emission and climate-resilient development and generally mainstream all finance toward climate change.

However, although it is definitely a strong signal overall, it can also be seen as weak in terms of finance because the Paris Agreement does not contain any compulsory language or real constraints in order to scale up climate finance, it mostly reiterates the commitment decided in Copenhagen in 2009 of the annual 100\$ billion goal of the Green Climate Fund (GCF) and promised the setup of a new target for 2025, placing this number as a floor for financial contributions rather than a ceiling.

#### OECD

For the OECD, “in its broadest definition, the concept of ‘climate finance’ refers to financial flows expected to contribute to the reduction of emissions and to the adaptation to current climate variability as well as future climate change, encompassing private and public funds domestic and international flows.” But it can also refer to the “concepts of incremental investment (which is the additional capital expenditure required for embedding a mitigation and/or adaptation dimension in a project) and incremental cost (cost of capital of the incremental investment and any additional [net] operating costs) which should not be confused with the macroeconomic cost of mitigation.”<sup>15</sup>

#### UNFCCC

For the United Nations Framework Convention on Climate Change (UNFCCC), “climate finance refers to local, national or transnational financing, which may be drawn from public, private and alternative sources of financing. Climate finance is critical to addressing climate change because large-scale investments are required to significantly reduce emissions, notably in sectors that emit large quantities of greenhouse gases. Climate finance is equally important for adaptation, for which significant financial resources will be similarly required to allow countries to adapt to the adverse effects and reduce the impacts of climate change.”<sup>16</sup>

Under the auspices of the UNFCCC, climate finance therefore refers more specifically to financial flows to developing countries, which encompass public flows pledged for mitigation or adaptation purposes as well as associated private flows.

<sup>15</sup> <https://www.oecd.org/env/cc/50293494.pdf>

<sup>16</sup> [www.unfccc.int](http://www.unfccc.int)

### 1.2.3.2 Adaptation Finance

Adaptation finance represents the funds directed to adapt human activities to the current environmental challenges in order for it to comply with the Paris Agreement regulations. This area of green finance is particularly important in developing countries, where the resources are limited. These funds help countries adapt to the impacts of climate change and lower the risk posed by its consequences. It involves taking practical actions to manage risks from climate impacts, protect communities and strengthen the resilience of the economy. They include large-scale infrastructure changes – such as building defences to protect against sea-level rise or improving the quality of road surfaces to withstand hotter temperatures – as well as behavioural changes, such as individuals using less water, farmers planting different crops and more households and businesses buying flood insurance.

Adaptation measures can help reduce vulnerability – for example by lowering sensitivity or building adaptive capacity – as well as allowing populations to benefit from opportunities of climatic changes, such as growing new crops in areas that were previously unsuitable. These types of funds are lower in numbers than mitigation finance due to the high cost and complexity of funding adaptation infrastructure. However, the challenge and the willingness is to move towards a more adaptive climate finance, rather than mitigative.

### 1.2.3.3 Mitigation Finance

Mitigation funds represent the great bulk of green finance and are directed at tackling existing climate issues that already have effects on the environment. Mitigation addresses the root causes of climate change by reducing greenhouse gas emissions. These types of actions include renewable energy and energy efficiency programmes, and more sustainable transport systems. Activities classified as mitigation are the ones that promote “efforts to reduce or limit greenhouse gas (GHG) emissions or enhance GHG sequestration.” Mitigation activities or projects can consist of a stand-alone project, multiple stand-alone projects under a larger programme, a component of a stand-alone project, or a programme financed through a financial intermediary.

According to a study conducted by Oxfam,<sup>17</sup> mitigation funds represent 67% of the total invested in climate finance, while adaptation funds barely reach 17% of this share. This number has grown in the last few years but adaptation is still being neglected in favour of mitigation. However, the objective is to increase this number in order to really tackle the roots of climate change and reach the engagement of doubling the adaptation climate funds by 2020, committed in the roadmap to \$100 billion.

### 1.2.3.4 General Assessment

Overall, climate finance brings together a number of very different issues (private financing, public intervention, North-South financing, etc.) and covers three distinct objectives: mitigation, adaptation, as well as coverage of losses and damage (an issue we will not discuss in our analysis because it is not strictly recognised). There is a need to make a clear distinction between global climate financing and the financing of the transformation of domestic economies:

- Global climate finance is mainly a subject of negotiations within the international arena, especially in the UNFCCC, and therefore refers to financial flows coming from developed countries to developing countries in terms of mitigation and gradually expanding to adaptation. Basically, it translates the need in capital to be able to implement the Intended Nationally Determined Contributions (INDCs) relying on international support and investments following the common but differentiated responsibility concept. This global climate finance is mainly embodied through multilateral institutions and specialised international funds.
- On the other hand, the transformation of economies in order to finance the energy transition and the adaptation toward a low-carbon climate-resilient inclusive economy remains principally a domestic matter. Indeed, “an estimated \$90 trillion in infrastructure investment across transport, energy and water systems, much of it in cities, will be needed in the next 15 years to meet global

---

<sup>17</sup> Oxfam (2016), Climate Finance Shadow Report 2016: Lifting the Lid on Progress towards the \$100 Billion Commitment.

infrastructure needs, while ensuring the transition to a low-carbon economy.”<sup>18</sup>

The Standing Committee on Finance of the UNFCCC estimated that in 2014 the total flows dedicated to climate finance reached around \$741 billion. This number represented an increase of almost 15% since 2011-2012.<sup>19</sup> From this number, around three quarters remain in the original country (up to 90% for private flows). This shows that, for all infrastructure investments, domestic resources by far outweigh external development finance, which reflects the fact that domestic sources of both public and private capital are very important and it is of key importance to get domestic policy right in order to catalyse those investments. Moreover, while mitigation finance represented more than 70% of public finance in developing countries, adaptation finance provided to developing countries accounted for about 25% of the total finance. However, more than 80% of investments by multilateral development banks (MDB) focused on mitigation, and less than 20% on adaptation. There are therefore two types of challenges: reforming the international financing system along with reforming the domestic economies and local infrastructures.

The following figure shows the trend of the financial flows that move in the context of climate finance, both in the public and private sector.

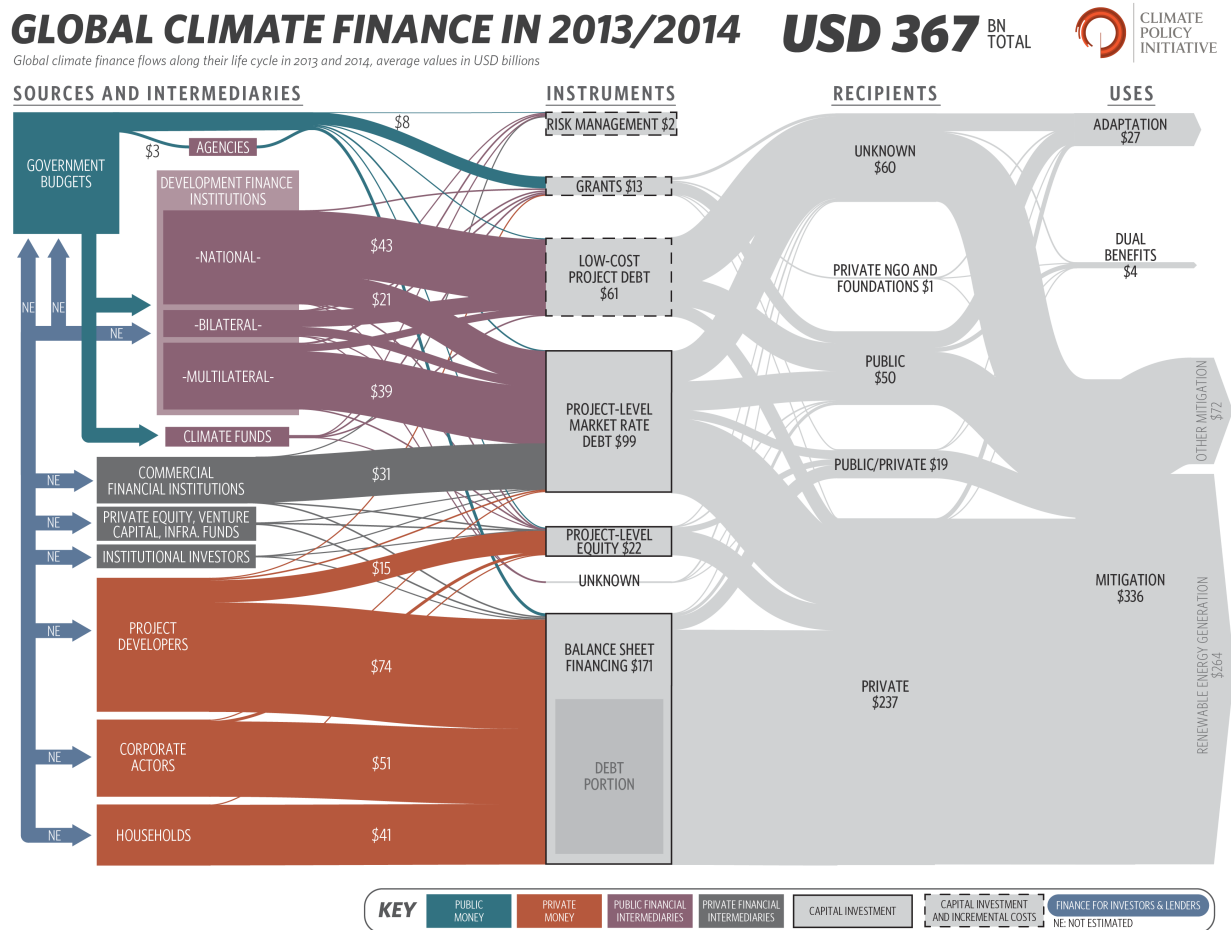


Figure 5: Current climate change and financial flows. Source: Climate Policy Initiative, 2016

### 1.3 Policies and Instruments

In this chapter we review the existing policies, tools and instruments to promote the green economy. In the first place, we describe general green financial policies put in place by governments or international

<sup>18</sup> Rydge, J., Jacobs, M., & Granoff, I. (2015), Ensuring New Infrastructure is Climate-Smart. Contributing paper for Seizing the Global Opportunity: Partnerships for Better Growth and a Better Climate, New Climate Economy, London and Washington, DC.

<sup>19</sup> UNFCCC (2016), 2016 Biennial Assessment and Overview of Climate Finance Flows.

institutions. Moreover, we focus on the available financial instruments that promote a green economy and environmental sustainability.

### 1.3.1 Environmental Policies

Environmental policies are among the key tools needed to implement the Paris Agreement and the SDGs and to help mobilise financing for climate action. This term includes pricing instruments that encourage broad-based action to reduce environmental damage as well as analysis and reforming of policies in order to implement and facilitate the green economy transition. A broader use of environmental taxation or other pricing instruments such as emission trading systems is one of the most efficient and effective ways to promote green growth.



**Figure 6: Environmental policy tools.** Source: OECD website<sup>20</sup>

There are other non-monetary instruments to tackle the consequences of climate change. These include regulations (norms and legislation implemented by governments or public institutions to directly influence the behaviour of economic agents); specific taxes such as carbon taxes and tradable emission schemes are another product. This one is much used by multilateral institutions, namely the EU, which has its own European Trading System (ETS).

#### *Environmental Taxation*

Environmental taxes provide incentives for further efficiency gains, green investment and innovation and shifts in consumption patterns. Increased or more effective use of environmental taxes can drive growth-oriented reform by shifting the tax burden away from more distortive taxes, e.g. on corporate or personal income, and contribute to fiscal consolidation. Environment-related taxes increase the cost of polluting products or activities, which discourages their consumption and production – regardless of whether this was the intended purpose of the tax or not.

<sup>20</sup> <http://www.oecd.org/greengrowth/tools-evaluation/>

## Trading Systems

Emission trading systems contribute to economic efficiency by facilitating emission reductions where it is cheapest to achieve them. Polluters who would find it costly to reduce their emissions are allowed to buy emission allowances from polluters that can abate at lower costs. The EU ETS works on the “cap and trade” principle and is under revision with a 2015 legislative proposal for the post-2020 period. This reform is a first step to deliver on the greenhouse gases emissions reduction target of the EU to cut at least 40% domestically by 2030 in line with the 2030 climate and energy policy framework and as part of its contribution to the Paris Agreement.

## Carbon Pricing

There are several paths governments can take to price carbon. They begin to capture what are known as the external costs of carbon emissions – costs that the public pays for in other ways, such as damage to crops and health care costs from heat waves and droughts or to property from flooding and sea level rise – and tie them to their sources through a price on carbon. A price on carbon helps shift the burden for the damage back to those who are responsible for it and can reduce it. Instead of dictating who should reduce emissions, where and how, a carbon price gives an economic signal and polluters decide for themselves whether to discontinue their polluting activity, reduce emissions or continue polluting and pay for it. In this way, the overall environmental goal is achieved in the most flexible and least costly way to society. The carbon price also stimulates clean technology and market innovation, fuelling new low-carbon drivers of economic growth.

### 1.3.2 Green Finance Instruments

#### 1.3.2.1 Definitions

A financing instrument is a tradable asset of any kind; either monetary, evidence of an ownership interest in an entity, or a contractual right to receive or deliver money or other financing instrument. In this study we focus on green and climate finance instruments. The kinds of tools that target a green economy are of multiple typologies, the Green Climate Fund (GCF) distinguishes four large categories of financial instruments in this area.<sup>21</sup>

- Debt (senior and subordinated loans provided at concessional rates and extended maturities)
- Guarantees (comprehensive, partial risk and partial credit)
- Non-debt risk-bearing instruments (such as equity based on grants)
- Insurance products (e.g. for the provision of disaster and weather insurance)

A broad definition of green finance can also include non-tradable instruments, such as grants. The great majority of green finance resources are concentrated between loans and grants, loans being the most numerous in absolute value. According to the Overseas Development Institute, between 2013 and 2014 around \$10 billion were invested in grants, which represented only 25% of the reported climate finance during that period.<sup>22</sup> Climate funds largely offer grants and concessional loans, but the use of guarantees and equity investment is increasing, particularly as funds seek to enable private investment.

The resources can either be devoted to the adaptation of infrastructure to climate change or to mitigate the effects of climate change.

#### 1.3.2.2 Traditional Instruments

Having introduced the main distinction between the types of climate finance, we focus on a series of financial products made available by international institutions, climate funds, national governments and the countries themselves and other institutions (from governments, private sector actors).

<sup>21</sup> [https://www.greenclimate.fund/documents/20182/24934/GCF\\_B.04\\_06\\_-\\_Business\\_Model\\_Framework\\_\\_Finacial\\_Instruments.pdf/7b8e96dd-4e06-46fd-b986-1b8743efa15b](https://www.greenclimate.fund/documents/20182/24934/GCF_B.04_06_-_Business_Model_Framework__Finacial_Instruments.pdf/7b8e96dd-4e06-46fd-b986-1b8743efa15b)

<sup>22</sup> Baudienville, G. (2009), Beyond Grants: Climate Finance in Developing Countries, Overseas Development Institute.

### *a) Grants*

Grants are non-refundable financial assistance given by international or regional institutions directed at specific projects that tackle the green economy. This type of assistance is interest-free and mostly directed to developing countries or more vulnerable countries. The advantages of this type of finance is that it ensures that those more affected by climate change and with fewer resources are better assisted and can obtain the help they need. Grants ensure the free and equal access to adaptation and mitigation efforts to tackle climate change.

However, according to Oxfam International, grant-based assistance remains too low compared to other types of financing.<sup>23</sup> This type of financial product is decreasing in favour of less direct ones such as debt. The least developed countries and small island countries suffer most from this shift in the financing of green finance as they have fewer financial resources. There have been strong arguments suggesting that climate finance should be provided in the form of grants, especially given that the effects of climate change are mostly due to the exploitative policies of industrialised countries. This would go in line with the “polluter-pays principle” of compensating developing countries for the damage done by developed countries.

The financial needs of these countries in terms of green adaptation and mitigation goes far beyond the capability of these grants and do not take into account the absolute volume of funds required, or the range of climate-related activities to be funded. Which is why some experts<sup>24</sup> recommend that donors consider using grants as a way to leverage larger funding volumes, notably through the use of concessional loans, rather than viewing grants as an end in themselves. Pure grants may be best suited to the funding of specific technical assistance, capacity-building and training needs; projects that have a low or no return.

### *b) Loans*

Another type of product belonging to the spectre of green finance is debt. Concessional loans or other types of lending facilities represent in absolute terms the largest part of the total of climate finance invested. Debt finance is divided between public and private debt. Public debt finance is mostly delivered by national development banks (NDB), multilateral development banks (MDB), and export credit agencies (ECA). Private debt is delivered by international banks, domestic banks and infrastructure funds. Public loans are mostly delivered by MDBs such as the World Bank (WB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the African Development Bank (AfDB) being the ones who act in the Mediterranean region; and other multilateral institutions such as the EU or specialised climate funds.

The majority of these products are concessional loans, meaning they have very convenient conditions and quite an extended maturity in order to allow governments to utilise the money properly and facilitate the countries to dispose of that money for as long as possible and give them time to monetise the investment. Depending on the region of the world and the type of country, this type of financial product is more or less convenient. These are more useful for developing countries with a larger financial capacity and a need for more mitigation finance (which is less costly). Concessionary loans can, for example, be adapted to fund projects that show rates of return below market rates, but positive nonetheless, through the provision of cheaper credits.

## **1.3.2.3 Innovative Instruments**

### *a) Green Bonds*

lbonds have been identified as a key instrument of climate finance. These are financial instruments that use the debt capital market to raise funds to finance or re-finance large-scale low-carbon, climate resilient (LCR) infrastructure projects, assets or business strategies, such as energy efficiency, renewable energy, clean water, low-carbon transport, smart grid as well as sustainable agriculture and forestry projects.

---

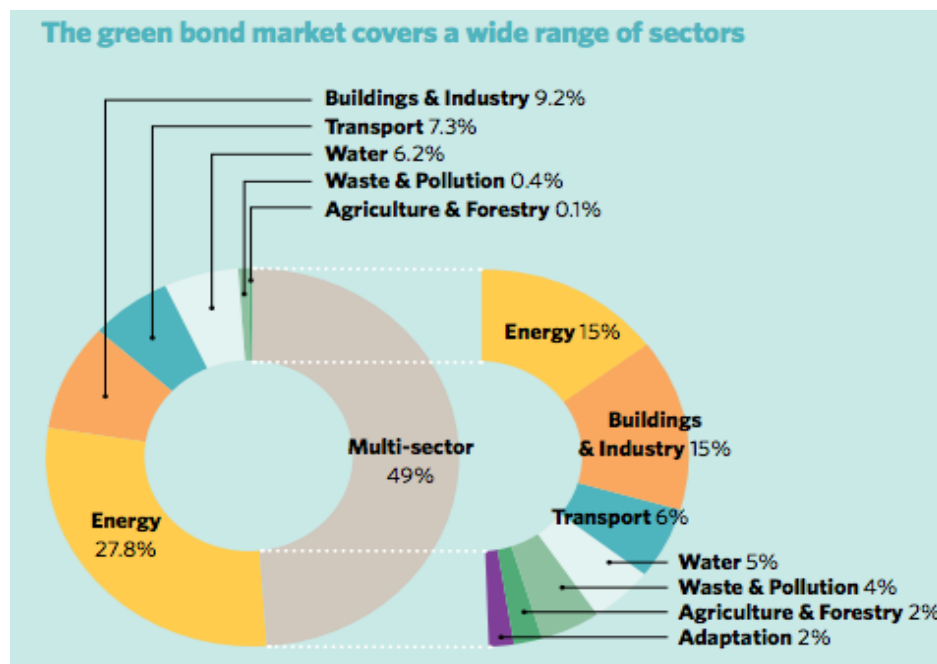
<sup>23</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-climate-finance-shadow-report-031116-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-climate-finance-shadow-report-031116-en.pdf)

<sup>24</sup> Ibid.

They differ from regular bonds solely from the specific use of the funds raised, as they are specifically labelled to finance climate-related or environmental projects. Many institutions have started commercialising them, in particular MDBs. In 2008 the European Investment Bank and World Bank issued the first bonds labelled as “green”,<sup>25</sup> and it increased in 2013 with the issuance of the first corporate green bonds, which inflated the market size to \$11bn.

Those bonds have several benefits for green projects and investors as they might represent a source of financing for green purposes and provide long-term financing. Green bonds are often also used as a source of re-financing for green projects already in place and previously funded by ordinary financial instruments, not labelled as green. However, they also bring some disadvantages. Labelling a bond “green” incurs costs related to administrative certification, verification and monitoring, which can give rise to “greenwashing” and highlight the investor’s need for more information than green labels provide. Indeed, according to KPMG,<sup>26</sup> the lack of clear regulations and standardisation of green definitions led to shared doubts about the issuers’ credibility and to accusations of so-called “greenwashing” among the investors. Finally, the introduction of the Green Bond Principles (GBP) by a coalition of banks in 2014 was a key step in the development of the green bond market and transparency and disclosure guidelines. These clear principles helped the market grow and triple in size with \$36.6bn. According to the OECD report Green Bonds (2015), the issuance of labelled green bonds grew further in 2015 with \$40bn issued, whereas the amount of “climate-aligned” but (yet) unlabelled bonds accounted for \$600bn.

Project bonds are a specific and relatively small subset of the larger green bond market. Project bonds provide a means for infrastructure project developers to attract long-term debt financing from the international or domestic bond markets. This can be done by creating a special purpose vehicle, supported by a degree of equity from a sponsor (often pooled from project developers). Based on an assessment of the financial viability of the underlying projects, a credit rating can be secured for the vehicle and, if it is sufficiently high, bonds issued.



**Figure 7: The green bond market.** Source: *Bonds and Climate Change. The State of the Market in 2016*, CBI

The sectors covered by the green bond market are obviously related to environment and climatic issues. This figure shows that the green bond market mostly covers energy followed by building and industry.

<sup>25</sup> International Bank for Reconstruction and Development/The World Bank (2015), What are Green Bonds, [http://treasury.worldbank.org/cmd/pdf/What\\_are\\_Green\\_Bonds.pdf](http://treasury.worldbank.org/cmd/pdf/What_are_Green_Bonds.pdf)

<sup>26</sup> KPMG (2016), Mainstreaming the green bond market: pathway towards common standards, <https://assets.kpmg.com/content/dam/kpmg/nl/pdf/2016/advisory/Mainstreaming-the-green-bond-market.pdf>



### *b) Guarantees*

Even though guarantees have already been used as a financial green instrument for a while, they are considered innovative instruments due to their nature. The credit guarantee scheme is based on sharing the credit risk of a project by the guarantor and the lender. The guarantor, typically a public institution, takes all or part of the losses incurred by the lender in the event of default by the borrower. This contributes to lowering the residual credit risk for the lender, which is why guarantee schemes are often used to unlock cases where a market is underserved by the financial sector because of the real or perceived risks. In the green market sector, this kind of financial instrument could prove very useful, in particular to scale up finance. A study by the World Bank (2009)<sup>27</sup> concluded that credit guarantees are useful instruments as credit risk is perceived to be the key barrier to accessing finance.

Guarantees have a series of advantages. Their objective is to encourage lenders to provide financing to a specific target group or increase their exposure to such a group by sharing their credit risk. Moreover, they often help kick-start a lending business among financial institutions. Guarantees serve to bridge the initial phase of uncertainty and enhance the creditworthiness of a project. These tools are also used as a way to channel public intervention, as all guarantee schemes contain some element of subsidy. They are useful for their ability to generate financial leverage and are potentially more attractive than other instruments from a fiscal point of view.<sup>28</sup> There is a general suggestion of expanding the use of these instruments,<sup>29</sup> especially because they can help “crowd in” private sector resources and would be particularly useful in the context of low-carbon development finance due to their ability to partially underwrite risks.

### *c) Green Equity and Venture Capital*

Green equity and venture capital are both innovative financial products that contribute to financing green or sustainable projects. They also allow private institutions to invest in sustainability. Equity investors can invest in green projects through mutual funds, exchange-traded funds and stocks. These kinds of investments are important at the earlier stage of infrastructure projects, and they can play a key role in assisting with initial public offers (IPOs) for clean technology providers, carbon credit developers and other firms marketing environmental products and services. Furthermore, they can represent an investment option for institutional investors once projects are operational.

Venture capital is used by early stage businesses that seek profitable ways to meet environmental needs, prior to being traded publicly. It can help firms secure the funding required to grow, and ultimately lead to healthy returns for shareholders. Investment banks can then help growing firms to go public.

### *d) Green Investment Banks*

A green investment bank (GIB) is a public entity established especially to facilitate private investments into domestic low-carbon, climate-resilient infrastructure (LCR) and leverage the impact of available public resources while overcoming investment barriers. GIBs are a tool to mobilise private investment including from institutional investors, such as pension funds, insurance companies, sovereign and mutual funds, which are a large pool of capital still representing excessively small number of investors but that are a growing alternative source of financing the green transition. They are created at national, sub-national, county or even city level by governments.

GIBs differ in size, scope and approach but share some core characteristics with a narrow mandate focusing on mobilising private LCR investment with risk reduction and a transaction enabling structure, they also share innovative transaction structures as well as local and market expertise and they are all under an independent authority with a degree of latitude to design and implement interventions; and a focus on cost-effectiveness and performance. This private investment mobilisation can complement policies but not replace core climate policies. If enabling policies for low-carbon investment are in place – such as a robust and credible carbon price, reform to phase out fossil fuel subsidies, well-designed

<sup>27</sup> <https://openknowledge.worldbank.org/handle/10986/2627>

<sup>28</sup> Inter-American Development Bank (2014), Guarantees for Green Markets Potential and Challenges, <http://fs-unep-centre.org/sites/default/files/publications/cmfmonguaranteesforgreenmarkets.pdf>

<sup>29</sup> ODI (2017, March), Six development finance proposals to expand climate investment.

renewable energy incentive policies and clear, long-term climate policy goals – GIBs and other institutions can play a supportive role in overcoming remaining investment barriers. To get on a path toward zero net emissions by the middle of this century, governments need to consider how institutions like GIBs can help them pick up the pace. Thirteen GIBs or GIB-like entities exist today and are mainly created in countries that do not have a development bank.

### **1.3.3 Conclusions**

This introductory chapter sought to clarify and describe the concepts that are used and explored in our study. Having defined and reframed the main green finance notions, instruments and policies used to promote green economy, we now focus on the main actors and their strategies to implement green finance in the Mediterranean.

## 2 Actors and Funds

---

### 2.1 Introduction

This chapter describes the main green finance actors and funds in the Mediterranean region. It reviews four multilateral development banks (WB-IFC, EIB, EBRD, AfDB), the European Commission and the action of the main multilateral climate funds active in the region, the CTF. For each of them the following questions are covered:

- What is their green/climate strategy?
- What are the instruments applied to implement the strategy?
- What are examples of green/climate finance?
- What can be concluded from the analysis?

Based on the descriptions and assessment of each player as well as the input from finance experts received through a survey, we draw some general conclusions and propose recommendations for policy-makers and the financial sector.

### 2.2 Multilateral Development Banks

Financial institutions have a critical role in supporting the transition to a green economy that requires diverse and adaptable investments into green infrastructures, businesses and activities. This chapter reviews the most relevant actors and their potential contribution to this green transition. Multilateral development banks (MDB) are among the biggest actors of climate financing and leveraging. Since the Paris Agreement they have been formulating specific approaches and proposals to improve their role. Although nowadays there is a need to diversify green finance and leverage private sector resources, it remains clear that international financial institutions still play a major role in the battle against climate change. As the survey undertaken proves, the financial institutions are largely chosen as the main actors implementing green climate finance in the Mediterranean region, of which 44% are at the national level (public and private together).<sup>30</sup>

#### 2.2.1 World Bank Group

The World Bank Group (WBG), part of the UN System, is an international financial institution and major actor in the field of sustainable development globally. It is composed of five agencies<sup>31</sup> but this study focuses on the main lending facilities of the group in the Mediterranean region: the World Bank itself and its private sector arm the International Finance Corporation (IFC).

##### 2.2.1.1 Climate Strategy

###### *General Climate Strategy*

The World Bank Group's Climate Change Action Plan adopted in April 2016 lays out concrete steps to meet the commitment of helping countries tackle climate change and deliver on their national climate plans submitted for the Paris Agreement, the Intended Nationally Determined Contributions (INDCs). The Action Plan describes the activities to be carried out by the group and what instruments the institution uses for such a purpose. The WBG aims to increase the climate-related share of its portfolio from 21% to 28%, up to \$29 billion a year by 2020.<sup>32</sup>

---

<sup>30</sup> Survey questionnaire, see annex.

<sup>31</sup> World Bank Agencies: International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), International Centre for Settlement of Investment Disputes (ICSID).

<sup>32</sup> <http://pubdocs.worldbank.org/en/677331460056382875/WBG-Climate-Change-Action-Plan-public-version.pdf>

As part of the Action Plan, the WBG is scaling up financial leverage in operations for resilience and mitigation by improving the preparation of projects and de-risking private investments. Moreover, the WBG is developing new principles for concessional climate finance, including targeting transformational opportunities, using long-term engagements to effect policy and institutional changes, and leveraging private capital wherever possible. To help countries address their climate change challenges, the WBG is focusing on five priorities:<sup>33</sup>

1. Helping countries integrate climate change into development, achieve their NDCs and set the stage for further ambition;
2. Accelerating the energy transition;
3. Facilitating the expansion of sustainable infrastructure;
4. Boosting the climate resilience of communities, economies and ecosystems;
5. Unlocking trillions in climate finance.

In order to achieve these objectives the WBG is committed to help countries meet the climate challenge and, between 2011 and 2016, it committed \$63 billion, an average of more than \$10 billion a year, to more than 1,000 climate-related projects that help countries adapt to a changing climate and mitigate the impacts of climate change.

#### *International Finance Corporation*

The International Finance Corporation (IFC), the private sector financial arm of the WB group, has its own implementation plan with 4 objectives:<sup>34</sup>

- Scale climate investments to reach 28% of IFC's annual financing by 2020;
- Catalyse \$13 billion in private sector capital annually by 2020 to climate sectors through mobilisation, aggregation, and de-risking products;
- Maximise impact through GHG emissions reduction and resilience;
- Account for climate risk – both the physical risk of climate impacts and the carbon asset risk in the IFC's investment selection.

#### *Actions in the Mediterranean Region*

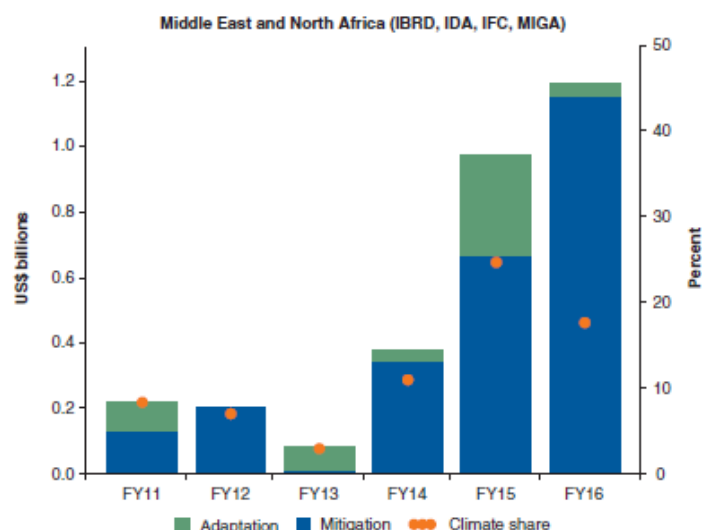
The WBG has specific projects dedicated to the Middle Eastern and North Africa region, mainly in countries such as Morocco and Egypt. In the period between 2011 and 2015, the average climate funding was \$400 million per year, with activities mainly focused on mitigation. Between 2015 and 2016, this number rose by 29%.<sup>35</sup> But there is still great potential to grow WBG climate co-benefits in this region in agriculture, cities and water. The main priorities are the shift towards clean energy in power, transport and urban development and water, and the rationalisation of energy resources.

---

<sup>33</sup> <http://www.worldbank.org/en/topic/climatefinance>

<sup>34</sup> International Finance Corporation, WBG (2016), IFC Climate Implementation Plan, [https://www.ifc.org/wps/wcm/connect/5f5402804c60b510b6bbbbeaccf53f33d/IFC\\_Climate\\_Implementation\\_Plan\\_03152016\\_WBG\\_v2.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/5f5402804c60b510b6bbbbeaccf53f33d/IFC_Climate_Implementation_Plan_03152016_WBG_v2.pdf?MOD=AJPERES)

<sup>35</sup> Ibid.



**Figure 8: Middle East & North Africa Lending, 2011-16.** Source: WBG

### 2.2.1.2 Instruments

To comply with its commitments, the WBG makes use of a variety of financial instruments, from concessional climate finance, carbon pricing, innovative tools (green bonds), risk management instruments (for example, guarantees) and blended finance. As for most multilateral development banks, the WBG's main instruments are concessional loans, issued mostly by the International Bank for Reconstruction and Development (IBRD). Moreover, through its private financial branch, the IFC, the group finances a variety of projects on climate resilience and other environment-related projects also through credits and grants (as well as loans). In addition, other innovative instruments are also used such as guarantees, equity funds and green bonds. The following describes some of the most important tools and instruments that the WB uses to finance green economy projects.

#### a) Investment Project Financing

Here, the WBG provides loans, credits, grants and guarantees to governments for activities that create physical or social infrastructures necessary to create sustainable development. There is a concentration of this instrument in infrastructure and agriculture focusing on the long term. This instrument also serves as a vehicle for sustained, global knowledge transfer and technical assistance.

#### b) Development Policy Financing (DPF)

Through the DPF, the WBG provides credits, grants and guarantee budget support to governments in order to strengthen public financial management, improve the investment climate and leverage resources. The Bank's use of DPF is determined in the context of the Country Partnership Framework. In the Mediterranean region, this is a financial tool to fund a variety of projects from energy reform to the promotion of better water management.

#### c) Trust Funds and Grants

Trust funds and grants allow for a scaling up of activities and also enable the WBG to provide support in extreme and urgent situations or for specific purposes or thematic activities. In the environment area, we can distinguish a few specific funds such as the Global Environment Facility (GEF) or the Climate Investment Fund (CIF). They are partnerships between multilateral institutions and receive funds from these organisations. They are also used to "crowd-in" non-governmental and private sector partners and link their knowledge and financing to the WBG's capacity to deliver solutions. We later dedicate a chapter to their work.

#### d) Carbon Finance Unit

Carbon trading systems are today a widespread instrument to tackle climate change. The WBG has its own carbon finance unit to contribute with funds to governments and companies in order to purchase

Emission Reduction Credits (ERCs) within the framework of the Kyoto Protocol's Clean Development Mechanism (CDM) or Joint Implementation Mechanism (JIM).

The World Bank's six most recent carbon instruments aim to scale up emission reductions, focus on readiness for market-based carbon initiatives, increase access to energy in least developed countries, and reduce emissions from deforestation and forest degradation. These carbon initiatives have a total fund allocation of more than \$1 billion and \$0.5 billion committed for technical assistance.<sup>36</sup>

#### *e) Green Bonds*

Green bonds are an innovative financing tool that serves as a very useful mechanism to promote sustainable investments. The World Bank has its own bag of green bonds with its own Green Bond Project Selection Criteria. The eligible projects are selected by World Bank environment specialists and have to meet specific criteria for low-carbon development. The World Bank and IFC are among the world's largest issuers of green bonds. As of April 2017, the World Bank had issued a total of 130 green bonds worth over \$10 billion.<sup>37</sup> As of April 2017, the IFC had issued 77 green bonds worth \$5.8 billion across 12 currencies.<sup>38</sup>

#### **2.2.1.3 Examples**

The projects financed by the WBG in the Mediterranean are generally related to energy or water.

**Jordan:** A good example of a concessional lending project is the Jordan Energy and Water Sector Reform financed through a Development Policy Loan of \$250 million issued by the IBRD in 2014. The Bank is helping Jordan diversify its fuel supply for power generation and shift power generation away from heavy fuel oil and diesel to cleaner renewable energy options and through scaling up the development of renewable energy resources and gas-fired generation, increasing efficiency in energy and water.<sup>39</sup>

**Tunisia:** In Tunisia, a project to promote better water management, the Second Water Sector Investment financed by the IBRD between 2009 and 2015 with €27.3 million, contributed to improve the efficiency of water use in irrigation and increased the capacity for climate adaptation. The project promotes more efficient use of irrigation water and drinking water supply in rural areas and increased capacity to plan for the current and future water management challenges, including climate change.<sup>40</sup>

**Morocco:** The Moroccan Agency for Solar Energy, the government agency established to put into practice the country's solar ambitions, used a \$43 million World Bank-Global Environment Facility (GEF) grant to test the viability of solar thermal technology at Ain Beni Mathar, in the northeast of the country, and encourage its replication nationwide. This laid the groundwork to scale up and secure the more than \$3 billion needed for the Noor-Ouarzazate complex from the World Bank, the Climate Investment Funds' (CIF) Clean Technology Fund (CTF), the African Development Bank and European financing institutions. The approach accelerated cost reduction and the commercial adoption of large-scale, low greenhouse gas-emitting generation technologies while testing the viability of solar thermal technology to encourage its replication in Morocco and elsewhere.<sup>41</sup>

**Turkey:** The CTF invested \$100 million alongside \$500 million from the World Bank for the development of small hydro and wind energy facilities, and pioneered industrial-scale energy efficiency through the Industrial Development Bank of Turkey and the Development Bank of Turkey. Following the successful implementation of its initial \$500 million loan, the World Bank approved an additional \$500 million loan in November 2011. Overall, the \$100 million in CTF financing leveraged \$1.53 billion, and the Development Bank of Turkey and Industrial Development Bank of Turkey were able to attract an additional \$1 billion for renewable energy and energy efficiency from other international financiers. The

<sup>36</sup> <http://www.worldbank.org/en/topic/climatechange/brief/world-bank-carbon-funds-facilities>

<sup>37</sup> <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>

<sup>38</sup>

[http://www.ifc.org/wps/wcm/connect/corp\\_ext\\_content/ifc\\_external\\_corporate\\_site/about+ifc\\_new/ifc+governance/investor+relations/grnbond-overvw](http://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/about+ifc_new/ifc+governance/investor+relations/grnbond-overvw)

<sup>39</sup> IBRD Program Document for Proposed Loan for Jordan.

<sup>40</sup> <http://projects.worldbank.org/P095847/second-water-sector-investment?lang=en>

<sup>41</sup> <https://www.thegef.org/news/follow-sun-how-morocco-pioneered-investment-clean-energy>

project has financed 960 megawatts (MW) of renewable energy capacity and achieved energy savings of 2,100 Tcal for a total greenhouse gas emission reduction of 3.3 million tons of carbon dioxide equivalent per year.<sup>42</sup>

#### 2.2.1.4 General Assessment

Recently, some voices have claimed the need to innovate in the climate finance aspect and new ways of financing green economy are suggested in order to make this challenge a common one. Guarantees and venture capital, for example, are taking the lead in this field. An expansion of the use of green bonds is also called for as well as encouraging development financial institutions to invest in clean technology deployment. However, other voices also call for increased lending from MDBs to reach capital ratios.

The WBG plans to dedicate 28% of its portfolio to climate finance by 2020. However, the remaining 72% is still used for other purposes and the investment in this sector remains low compared to other sectors.

### 2.2.2 The European Investment Bank

The European Union addresses climate change through the European Investment Bank (EIB) as the EU bank to finance the transition towards a low-carbon, environmentally-friendly and climate-resilient global economy and to implement the Paris Agreement. Thus, the Bank's global mission is "mobilising the finance needed to achieve the worldwide commitment to keep global warming to below 2°C above pre-industrial levels and to adapt to the impacts of climate change."<sup>43</sup>

#### 2.2.2.1 Climate Strategy

##### *General Climate Strategy*

The climate action work of the EIB is guided by its climate strategy published in 2015 to help implement the Paris Agreement inside and outside the EU and contribute to the EU 2030 Climate and Energy Framework.<sup>44</sup>

The EIB aims to do so by focusing on three strategies:

1. Reinforcing the impact of climate financing on high impact projects, financial innovation and further support for the green bond market.
2. Building resilience to climate change by focusing on adaptation projects as well as the development of tools to assess climate risk and vulnerability.
3. Integrating climate change considerations across all of the Bank's standards, methods and processes by mainstreaming climate change in all investments project.

The EIB committed to increase its lending for action in developing countries to 35% of total lending by 2020, working closely with the Green Climate Fund.<sup>45</sup> Today, the EIB has a commitment of "at least" 25% of its lending portfolio to low carbon and climate-resilient growth, which mostly concerns energy and transport sectors inside and outside the EU.<sup>46</sup> In the period 2010-2014, the Bank provided more than €90 billion to climate action projects and in 2016, the EIB provided €16.9 billion to support environmental projects and over €19 billion to help mitigate climate change, which represents 26% of total EIB lending.

##### *Strategy Toward the Mediterranean Region*

The EIB has been active in the MENA region for more than 30 years, taking action in three distinct areas: (i) the growth of the private sector, (ii) developing socioeconomic infrastructure and (iii) supporting climate actions. In this regard, the EIB is applying its green finance strategy in the EU Mediterranean

<sup>42</sup> <http://pubdocs.worldbank.org/en/677331460056382875/WBG-Climate-Change-Action-Plan-public-version.pdf>

<sup>43</sup> EIB Climate Strategy, Mobilising finance for the transition to a low-carbon and climate-resilient economy.

<sup>44</sup> EIB (2015), The EIB Group operational plan 2016-2018.

<sup>45</sup> EIB (2016), EIB Climate Strategy, Mobilising finance for the transition to a low-carbon and climate-resilient economy.

<sup>46</sup> EIB website, Climate and Environment.

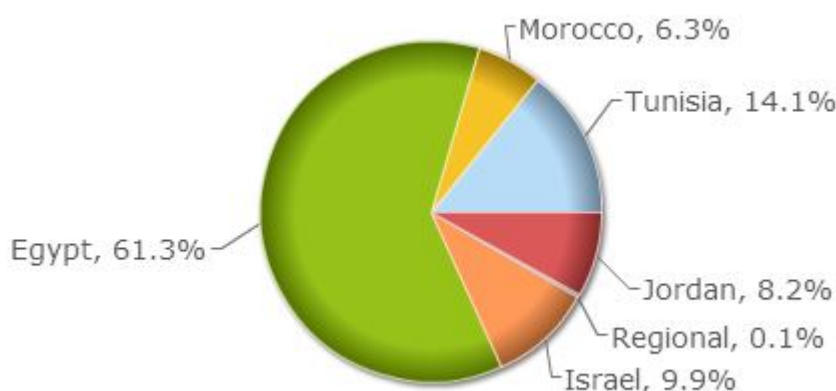
Partner Countries (MPCs): Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria and Tunisia.<sup>47</sup>

#### *Facility for Euro-Mediterranean Investment and Partnership (FEMIP)*

In 2002 the EIB created the Facility for Euro-Mediterranean Investment and Partnership (FEMIP) in support of development in the MPCs. Within the framework of the European Neighbourhood Policy (ENP) and the Union for the Mediterranean (UfM), FEMIP encourages the modernisation and opening up of the MPCs' economies, focusing on private sector support and the creation of an investment-friendly environment.<sup>48</sup>

For the period 2014-2020, FEMIP has been allocated €9.6bn in lending in support of projects in the MPCs. The focus is therefore economic growth oriented under its climate action strategy. Since 2014, over 30% of the operation was in favour of climate action in sectors including transport, energy, water and private sector credit lines.

An additional €20 million climate envelope has been created under the FEMIP Trust Fund,<sup>49</sup> which is a multi-donor, multi-purpose and multi-sector fund to support development processes in the Mediterranean Partner Countries focusing on four priority sectors for 2014-2020: 1. Finance and micro, small and medium-sized enterprises (MSMEs); 2. Infrastructure; 3. Environment; 4. Human capital and Research Development and Innovation.



**Figure 9: EIB activities by country in the Mediterranean region in 2015, Source: EIB<sup>50</sup>**

This graph shows the share of lending in the MENA region independently of its relation to green projects, where we can see that Egypt was the country attracting most investments in 2015.

#### **2.2.2.2 Instruments**

The EIB is financing large projects with direct project loans and indirectly supports smaller projects through credit lines to local banks or other local intermediaries. It also has innovative financial products that complement these loans, including risk reduction and private finance tools.

##### *Innovative Climate Financial Tools*

- **Infrastructure funds providing equity**, such as the Copenhagen Infrastructure II fund, which is a private equity fund drawing institutional investors into areas where they would have hesitated to invest. It is a €2 billion fund (mainly from Scandinavian pension funds) with an EIB contribution of €75 million.

<sup>47</sup> EIB (2015), EIB activity in the Mediterranean.

<sup>48</sup> EIB (2014), FEMIP instruments.

<sup>49</sup> EIB (2015), EIB activity in the Mediterranean.

<sup>50</sup> FEMIP in 2015 – an overview, European Investment Bank website.



- **Layered-risk funds, usually offering debt.** The main investment fund is the Global Energy Efficiency and Renewable Energy Fund (GEEREF), which is mobilising private capital to invest in clean energy projects in developing countries. It is a fund-of-funds of €222 million supervised by the EIB.
- **Natural Capital Financing Facility and the Private Finance for Energy Efficiency scheme,** which is a financial instrument taking on the risk of green investments to encourage commercial banks to join.
- **Capital market activities,** such as:
  - Climate Awareness Bonds (CABs): green bonds launched in 2007 to stimulate green investment from institutional investors. CABs focus on projects in the field of renewable energy and energy efficiency. In 2015, the EIB issued €4 billion in CABs, which makes it the largest issuer globally in the green bond market.<sup>51</sup>
  - Carbon Pricing: The EIB systematically introduces the cost of carbon into its project appraisal.

### 2.2.2.3 Examples

A total of more than €3 billion has been spent in the region since 2015 with more than a third directed to Egypt followed by Tunisia and Morocco. €2 million has been spent on projects directed at the regional level in the Mediterranean.<sup>52</sup> These numbers show that investments are being made in the region but without real visibility on the “green” objectives and share of those investments.

**Table 1: EIB Investment by country, 2015-2017**

Countries	From 2015 To 2017 in EUR
Algeria	€ 0,00
Egypt	€ 1.911.686.321,73
Palestine	€ 0,00
Israel	€ 253.073.342,74
Jordan	€ 115.979.381,44
Lebanon	€ 259.085.865,04
Mediterranean Countries	€ 2.000.000,00
Morocco	€ 419.000.000,00
Regional - North Africa	€ 0,00
Syrian Arab Republic	€ 0,00
Tunisia	€ 608.100.000,00
<b>Total Amount</b>	<b>€ 3.568.924.910,95</b>

**Egypt:** In 2017 a new Wind Farm Project in the Gulf of Suez<sup>53</sup> was signed. This project bringing together different financial institutions involves the design, construction and commissioning of a large wind farm reaching 57 km<sup>2</sup>, which will help meet the growing electricity demand using sustainable wind energy. The EIB is the main actor in this project, lending €115 million, in addition to KfW (€72 million), AFD (€50 million), and the European Commission providing a grant of €30 million to the project.

**Morocco:** The EIB is part of the Noor Ouarzazate Project, one of the biggest solar power complexes in the world, which is expected to reduce carbon emissions by 17.5 million tons over 25 years. It aims to reverse the situation of Morocco, which currently imports 97% of its energy, leading to the production of sufficient carbon-free energy and creating potential for green exports. The EIB takes part in this project with €217.5 million and, in total, European funds amount to up to 60% of the project cost.

**Turkey:** The project Isbank Climate Change Facility II released in 2016 is a framework loan for the financing of eligible sub-projects in Turkey in the field of renewable energy and energy efficiency. The project would contribute to renewable energy and environmental policy goals, in particular with regards to climate targets. The EIB is providing loans of around €150 million of the €300 million necessary for this project,

<sup>51</sup> EIB taps Climate Awareness Bond (CAB) to a record €2bn, February 2014, EIB website.

<sup>52</sup> <http://www.eib.org/projects/loan/regions/5?from=2015&to=2017>

<sup>53</sup> EIB Database of Projects Financed.

most of which are expected to fall under Annex II of the Environmental Impact Assessment (EIA). Moreover, the EIB will provide technical assistance to ensure that the Isbank will finance projects in compliance with EU environmental laws.<sup>54</sup>

#### 2.2.2.4 General Assessment

The EIB is a big player in the financing of climate economy and is a vital actor to make the targets set in Paris realisable. Its objective for 2020 is to show its will to be more involved in greening investments. However, there is still more effort to be made to cease investments in fossil fuel infrastructure.<sup>55</sup> In fact, since the Bank revised its energy lending criteria in 2013 the support for fossil fuel remained at a high level (in total €8.5 billion), especially considering the high targets set in 2015 toward complete decarbonisation. At the end of 2016, the European Fund for Strategic Investments had granted €1.8 billion to fossil fuel infrastructure projects, mostly for gas and leveraging at least €5 billion in additional investment for such projects.<sup>56</sup>

### 2.2.3 European Bank for Reconstruction and Development

The European Bank for Reconstruction and Development (EBRD) is a multilateral development investment bank owned by 65 countries and the EU institutions. It invests mainly in private enterprises, together with commercial partners. The Bank primarily supports countries within its region of operation (from Central Europe to Central Asia and the Southern and Eastern Mediterranean).<sup>57</sup>

Like other international financial institutions, the EBRD mandate evolved towards environmental sustainability and the green economy. According to the Bank, “the shift to an environmentally sustainable economy is centred on the transformation of markets, behaviours, products and processes, technological deployment and new skills.”<sup>58</sup> The EBRD is the first multilateral development bank to have an explicit requirement in its mandate to ensure environmentally sound and sustainable development.

#### 2.2.3.1 Strategy

##### *Green & Climate Strategy*

The EBRD released its Green Economy Transition (GET) approach at the end of 2015. The GET approach aims to address the transition gap to increase the level of financing in sustainable resources to some \$4 billion per year which means increasing its green financing to at least 40% of total annual investments by 2020.<sup>59</sup>

Following the business model of the Bank, between half and two thirds of this GET financing is expected to come from the private sector.<sup>60</sup> The sustained focus of the EBRD’s investment is on energy efficiency improvement in cities, industries and utilities. The 2015 annual report stated that, in 2015, 30% of its total €9.4 billion were dedicated to sustainable investments in energy and resource finance.<sup>61</sup> The Bank is also increasing its activity in climate adaptation financing, providing close to €1 billion (worth around €3.6 billion) for adaptation measures, of which almost 40% was spent in the private sector.<sup>62</sup>

Aside from its financial investments, the Bank also provides technical assistance with a dedicated pool of in-house technical experts,<sup>63</sup> developed to help overcome barriers to private finance through market

<sup>54</sup> EIB Database of Projects Financed.

<sup>55</sup> Briefing for the EIB Board of Directors for the seminar with civil society organisations on 30 January 2017.

<sup>56</sup> <http://bankwatch.org/news-media/for-journalists/press-releases/eib-climate-action-undermined-banks-fossil-fuel-lending>

<sup>57</sup> EBRD (September, 13), From Central Europe to Central Asia and the Southern and Eastern Mediterranean, Guide to EBRD Financing.

<sup>58</sup> GET, p. 4.

<sup>59</sup> Pledges Roadmap to 100\$ Billion, [http://www4.unfccc.int/Submissions/Lists/OSPSubmissionUpload/261\\_295\\_131233554162587561-Roadmap%20to%20the%20US\\$100bn%20\(UNFCCC\).pdf](http://www4.unfccc.int/Submissions/Lists/OSPSubmissionUpload/261_295_131233554162587561-Roadmap%20to%20the%20US$100bn%20(UNFCCC).pdf)

<sup>60</sup> EBRD, 2015 GET approach.

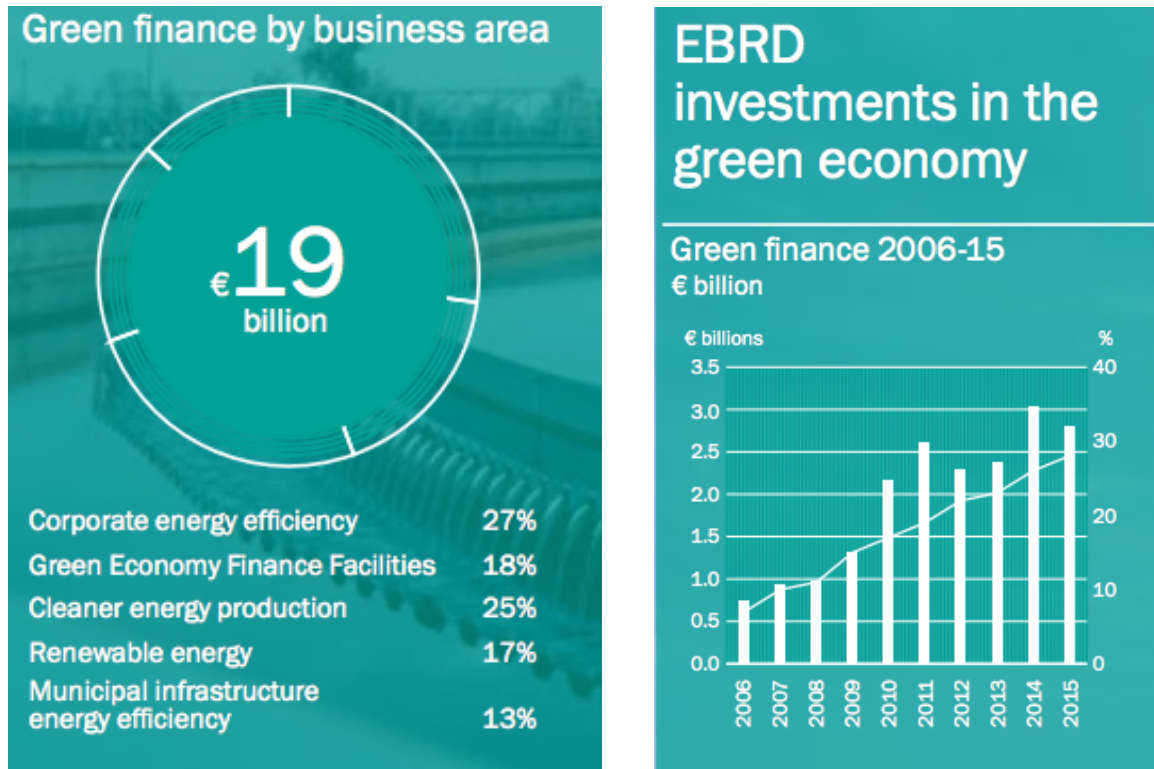
<sup>61</sup> Sustainable Resources and Climate Change (2016), EIB website.

<sup>62</sup> Sustainable Energy Initiative (SEI), Climate Change Adaptation, EIB website.

<sup>63</sup> EBRD (2014), Integrated Carbon Programmes, Input for Role 2015 Agreement in Mobilising Climate Finance.

analysis, resources audits and training and awareness building along with policy dialogue supporting the development of stronger institutional and regulatory frameworks.<sup>64</sup>

Internally, the Bank is screening its investments for its “green potential” and classifies projects as “not green”, “100% green” or “partially green” with an estimation made on the energy savings, renewable energy production, GHG emission reductions, water savings or waste reduction. This is part of the tracking in its monitoring, reporting and verification (MRV) system, which also defines the characteristics of green projects.<sup>65</sup> Finally, the Bank is actively involved in working on the harmonisation of the approach for tracking green finance and reporting it.



**Figure 10: EBRD investments in the green economy.**<sup>66</sup> Source: EBRD

### *Mediterranean Strategy*

Since 2012, the Bank has extended its activities to four Mediterranean countries: Egypt, Morocco, Tunisia and Jordan. The focus in this region is largely on developing economic growth by opening “open and sustainable market economies” and making their economies “more competitive and resilient.” There is no general green finance strategy or focus as such but the Bank is supporting renewable energy and energy efficiency in the region.<sup>67</sup> It has so far invested €3 billion in about 100 projects in the region but without making a clear distinction between which of those investments could be labelled as “green”. However, the Bank is cooperating with the Global Environment Facility (GEF) and the Climate Investment Funds (CIF) involved in many projects within this region.

<sup>64</sup> Sustainable Resources and Climate Change (2016), EIB website.

<sup>65</sup> Measuring the impact of the EBRD’s Green Economy Transition, EIB website.

<sup>66</sup> EBRD (2016), Green Economy Transition.

<sup>67</sup> The Southern and Eastern Mediterranean region, EIB website.

## Climate finance provided by the EBRD in partnership with the CIF

(US\$ million)

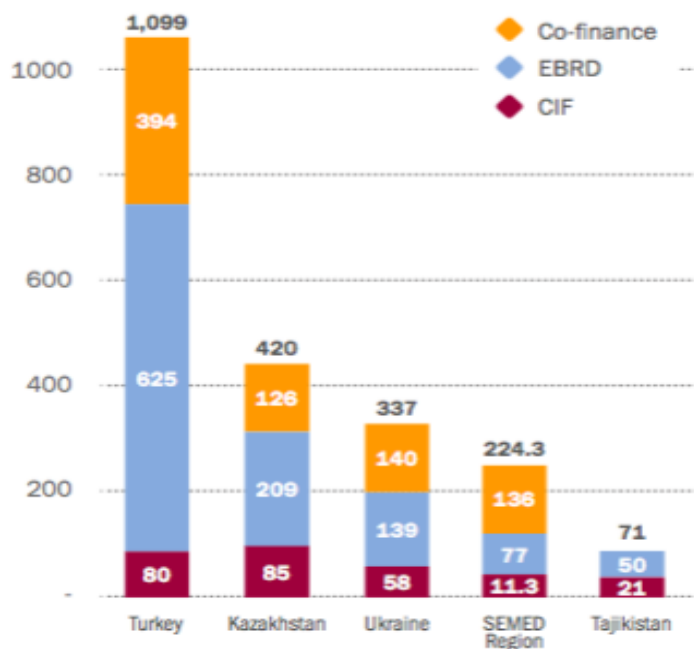


Figure 11: Climate finance provided by the EBRD in partnership with CIF<sup>68</sup>

In this figure we can see that the EBRD is a big player in Turkey, accounting alone for almost half of the total investments in climate finance in 2015. In the Southern and Eastern Mediterranean (SEMED) region in general the EBRD still accounts for about one third of investments.

### 2.2.3.2 Instruments

The EBRD is mainly investing in sustainable energy, municipal infrastructure and sustainable resources<sup>69</sup> through three types of instruments: investments, technical assistance and policy dialogue.<sup>70</sup>

The GET approach uses the full range of the EBRD's financial instruments, including:

- **Private sector corporate financing** and syndication in the form of private, non-sovereign and sovereign guaranteed loans, direct equity, equity funds and credit lines in individual energy efficiency and renewable energy projects. This is the major portion of environmental financing instruments used by the Bank.
- **Co-financing with the private financial sector**, public sources such as multilateral donor funds, and other international financial institutions as part of the project financing plan.
- **Selective and smart use of subsidies** to address specific barriers and market failures in line with the guidelines developed by the Bank.
- **Carbon finance or other market-based systems** that can provide additional revenues for projects. This includes technical support to EBRD clients for structuring transactions that will benefit from carbon finance or similar mechanisms.

The EBRD established the Environmental Sustainability Bond Programme (ESBP) with the goal of financing projects that achieve specific environmental benefits. Those projects are part of the Bank's Green Project Portfolio (GPP), ensuring that the proceeds of green bonds are immediately directed towards projects with positive environmental impacts in the area of renewable energy and energy efficiency as well as environmental infrastructures.<sup>71</sup>

<sup>68</sup> EBRD Climate Finance Global Partnerships (2014), Accelerating the response to climate change in 2015.

<sup>69</sup> EBRD (2013), Guide to EBRD financing.

<sup>70</sup> EBRD (2016), Climate Law and Governance, Moving Beyond by Incentivizing Green Investment...

<sup>71</sup> Environmental Sustainability Bonds, EIB website.

The EBRD approved a new \$250 million financing programme for renewable energy generation in the SEMED region. The EBRD loans under the programme are complemented by financing from the Global Environmental Fund (GEF) and the Clean Technology Fund (CTF).

### 2.2.3.3 Examples

**Regional Centre for Renewable Energy and Energy Efficiency (RCREEE):** The EBRD is teaming up with the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE), an organisation promoting sustainable energy practices in Arab countries, to reduce energy intensity in the Southern and Eastern Mediterranean (SEMED) region and increase the use of renewable energy.<sup>72</sup>

**Renewable energy generation in Morocco:** The EBRD, together with the BMCE Bank and the Clean Technology Fund (CTF), has invested €126 million in the 120MW Khalladi wind farm in the vicinity of Tangiers. It finances the construction, operation and maintenance of the wind farm, contributing to Morocco's target to develop 2,000 MW of wind capacity by 2020. In addition, the renewable energy produced is expected to reduce greenhouse gas emissions of over 200,000 tons of CO<sub>2</sub> per year. In parallel, the EBRD continues to be actively engaged in policy dialogue with the Ministry of Energy to further support the gradual liberalisation of the power sector in Morocco.<sup>73</sup>

**Green Economy Financing Facility (GEFF) for Egypt:** Together with the AFD, the EIB and the EU, the EBRD started its Green Economy Financing Facility (GEFF) for Egypt. This is a €140 million programme that will be providing loans for energy efficiency and small-scale renewable energy investments by private companies through a group of participating banks in order to achieve energy security. This initiative is part of a series of similar programmes led by the EBRD, which have so far taken place in 24 countries, bringing together 120 local financial partners and providing more than €4 billion toward EE and RE projects.<sup>74</sup>

### 2.2.3.4 General Assessment

The EBRD is the most important player in terms of share of its portfolio directed to green projects. Moreover, it wants to extend it to 40% in 2020 and this tendency should grow bigger with the next revision of the Paris Agreement. Its action in the SEMED region is new but important and its great cooperation with climate funds and other organisations are making it a big player in the region.

However, like the EIB, investments are still made in projects implying brown energy and some questioning of projects labelled as green but also still implying a rise in fossil fuel. Research has shown that between 2012 and 2014 close to 70% of the Bank's financing in the SEMED countries' energy sector was for oil and gas-based electricity.<sup>75</sup>

## 2.2.4 African Development Bank

The African Development Bank (AfDB), with headquarters in Ivory Coast, is the multilateral development bank for the African continent. In 2009, the AfDB developed a climate change strategy that calls for a rise in the support for capacity-building of African countries to tackle the consequences of climate change.

The Bank Group's Strategy for 2013-2022 aims to contribute to achieving inclusive and increasingly green growth in Africa and is defined in a number of documents that guide the operational pillars of the Department: (i) ensuring access to modern energy and (ii) embarking on a lower-carbon and climate-resilient growth path. These documents are:

- 2012 Energy Sector Policy, which aims to support African countries in developing a socially, economically and environmentally-sustainable energy sector.
- The Climate Change Action Plan (2011-2015), which sets out climate change objectives, principles, areas of focus, major activities and a climate change investment plan.

<sup>72</sup> <http://www.ebrd.com/news/2016/ebrd-and-rcreee-support-green-economy-in-the-southern-and-eastern-mediterranean-region.htm>

<sup>73</sup> Wind Energy in Morocco, EBRD Projects Database.

<sup>74</sup> Green Economy Financing Facility in Egypt, EBRD Project Database.

<sup>75</sup> Sikorova, K. (2015), The EBRD: Fueling the future, or stuck in the past?, CEE Bankwatch Network.

- The Green Growth Framework, currently being finalised, which identifies three cross-cutting areas for promoting green growth in an operational context.

#### 2.2.4.1 Climate Strategy

The AfDB created the Energy, Environment and Climate Change Department (ONEC) in 2010 in order to tackle the operational priorities and deliver tangible results for the Bank's Regional Member Countries (RMCs) and enable innovative strategic and operational thinking with the goal of leading the work of the Bank toward a more sustainable development pathway for Africa. It works on integrating a bank-wide strategy for energy sector interventions financed by the Bank's financing windows and concessional funds, such as the Climate Investment Funds, with a complementary framework on green growth and climate change mainstreaming.

The Department provides advisory services on climate change and the environment for sector operations. It also coordinates the mobilisation of innovative climate and environmental finance to pave the way for Africa's green and climate-resilient growth.

To guide the implementation of this strategy, the Bank developed a 2011-2015 Climate Change Action Plan that planned to invest around 46.4 billion over the 5-year period and was designed to scale up the investments for climate-resilient and low-carbon development in Africa. These strategies are spelt out in an action plan, which includes investments of almost \$8 billion by 2015. The plan's purpose is to reduce the continent's vulnerability to climate change and sustain the change to economies producing fewer greenhouse gas (GHG) emissions.

The Action Plan is based on three pillars: (i) low-carbon development, (ii) climate change adaptation and (iii) establishment of a climate change financing platform.



**Figure 12: African Development Bank Climate Change Program 2011-2015.** Source: AfDB

The AfDB uses a multiplicity of instruments to finance and invest in climate-resilient projects as well as adaptation and mitigation. The main instruments through which green finance is channelled are:

- Climate Investment Funds (CIF)
- Global Environment Facility (GEF)
- African Carbon Support Program
- African Water Facility (AWF)
- Congo Basin Forest Fund (CBFF)
- Clean energy bonds
- ClimDev-Africa Initiative
- Sustainable Energy Fund for Africa (SEFA)

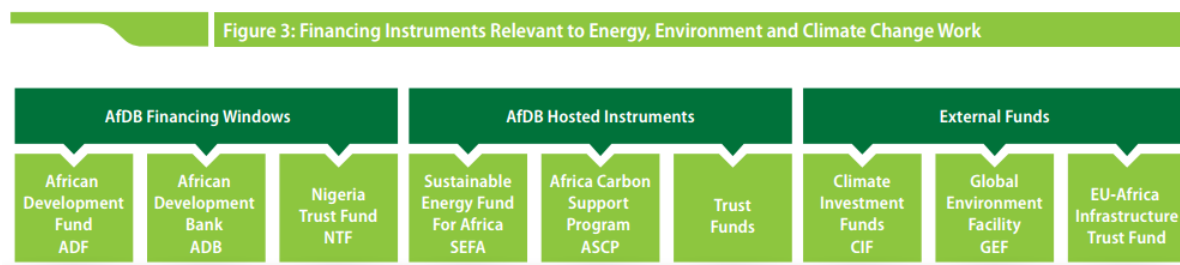


Figure 13: AfDB financing instruments<sup>76</sup>

#### 2.2.4.2 Examples

**Green Bonds:** The AfDB also has its own Green Bond Portfolio. The AfDB Green Bond programme facilitates the achievement of the Bank's corporate priority of green growth through the financing of eligible climate change projects. Investors can make a difference with their investment by financing climate change solutions through the AfDB's green bonds.

The Ouarzazate Solar Complex Project – Phase II (NOORo II and NOORo III power plants) in Morocco and the Power Transmission and Distribution Development Project both in Morocco or the Gabal El-Asfar Wastewater Treatment Plant – Stage II, Phase II Project in Egypt are the three eligible projects in the Green Bond Portfolio.

**Concentrated Solar Power in the MENA Region:** The Middle East and North Africa (MENA) region's Clean Technology Fund (CTF) Investment Plan will accelerate the global deployment of concentrated solar power (CSP) by investing in the CSP expansion programmes of five countries in the MENA region: Algeria, Egypt, Jordan, Morocco and Tunisia.

The 120-160 MW CSP plant project at Ouarzazate, Morocco, was the first project to be approved and launched in 2012. Its development marks an important step in Morocco's national plan to deploy 2,000 MW of solar power generation capacity by 2020 to support national objectives of energy security, job creation and energy exports. The first phase of the Ouarzazate project will develop a parabolic trough plant through a PPP between the Moroccan Agency for Solar Energy (MASEN) and a private partner. Ouarzazate Phase 1 involved the installation of 120-160 MW to come on line by 2014 and helped Morocco avoid 240,000 tons of CO<sub>2</sub> equivalent a year. The AfDB is channelling \$300 million from the CTF with its own contribution of \$512 million to CSP projects in Tunisia, Egypt and Morocco.<sup>77</sup>

**Tangier-Marrakesh Railroad Capacity Increase Project, Morocco:** This project is part of an on-going national development strategy in the transport sector of Morocco. It includes upgrading and modernising infrastructure and transport services to increase Morocco's economic competitiveness. The project was implemented from 2011 to 2016 and aimed at strengthening the rail infrastructure to meet the growing annual passenger and goods traffic on the Tangier-Marrakesh axis. The main objective was to improve rail transportation competitiveness on the main Tangier-Marrakesh railway line in terms of rail traffic fluidity and an increased frequency of shuttle, mainline, and freight trains contributing to greater passenger mobility. The AfDB provided €300 million to the Moroccan Government to implement the project.<sup>78</sup>

## 2.2.5 General Assessment

### 2.2.5.1 Summary of Findings

Multilateral development banks (MDB) are key players to implement green finance and leverage investments from public and private actors in order reach the transition towards a green economy. They

<sup>76</sup> African Development Bank Group (2012), Powering a Climate-Smart Africa.

<sup>77</sup> AfDB Climate Action Plan.

<sup>78</sup> Ibid.

set themselves targets and goals for 2020 through strategies that, although in general similar and directed to the same kind of projects, are different in terms of ambition and implementation.

The following table summarises the targets set for 2020 compared to the current share of the Banks' portfolio directed toward climate projects.

**Table 2: MDB Targets to support Climate Action by 2020, Joint MDB Report on climate action, 2015 and 2016**

<b>MDB</b>	<b>Part of climate financing over total portfolio in 2016 (in % and USD)</b>	<b>Future commitments to support climate action by 2020 (in % and USD)</b>
<b>WBG</b>	18% - USD 11.5 billion	28% - USD 16 billion
<b>EIB</b>	21% - USD 4.2 billion	35% - USD 7.2 billion
<b>EBRD</b>	32% - USD 3.4 billion	40% - USD 4.3 billion
<b>AfDB</b>	9% - USD 1.6 billion	40% - USD 2.2 billion

All commitments for 2020 are higher than the current levels, in general following the line of the next Paris Agreement revision process. However, there are no further commitments beyond 2020, and the fact that the majority of investments are not labelled green raises some questions about the environmental sustainability of these projects. The banks released a joint report on climate finance in 2016,<sup>79</sup> which shows the state of climate financing and the climate action they intend to take in the future. It thus provides numbers and views of the banks and what they labelled climate financing. The results are shown in the figure below:

<sup>79</sup> <https://publications.iadb.org/handle/11319/8505>



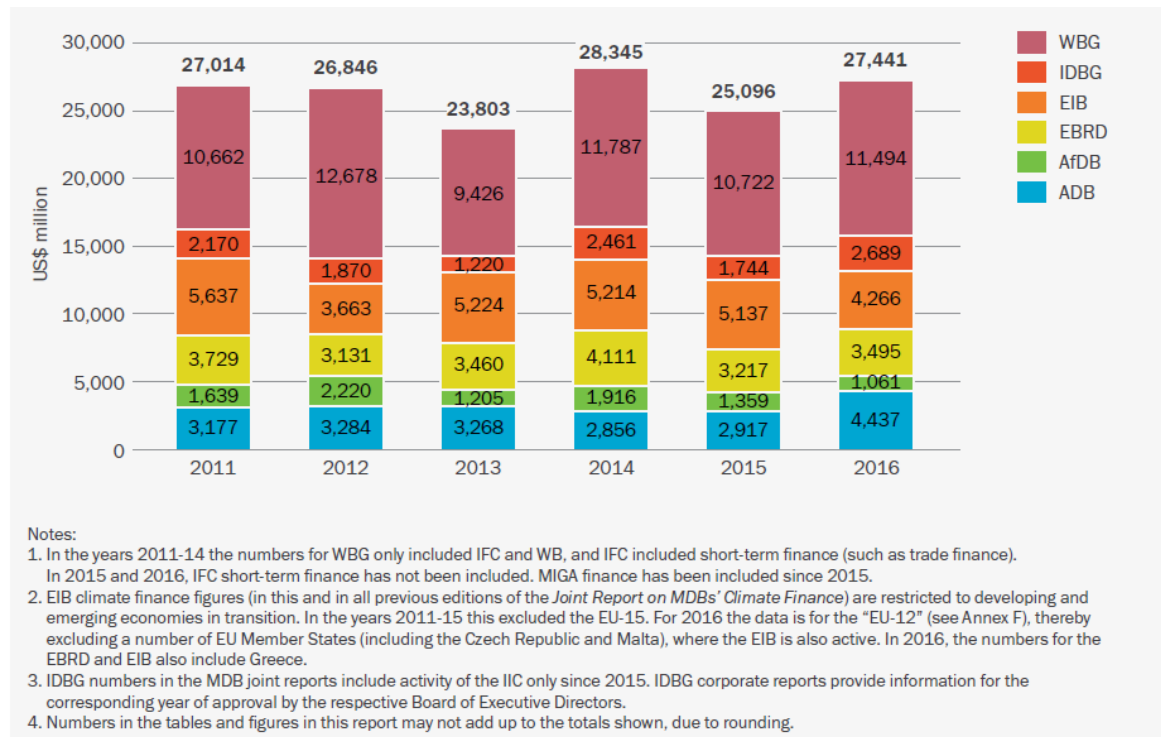


Figure 14: Reported MDB Climate Finance Commitments. Source: Joint MDB Report on Climate Action, 2016

2014 was the year when most investments were made in climate projects and this tendency is increasing with the new targets. The World Bank is the financial institution that spends most on climate finance in absolute terms but, as shown in the previous table, it has the least ambitious targets and the lowest share of its portfolio directed to green projects.

The figure below shows that for all of the MDBs, the loan is the main instrument used to finance green projects accounting for three quarter of all the investments in all banks and sectors together.

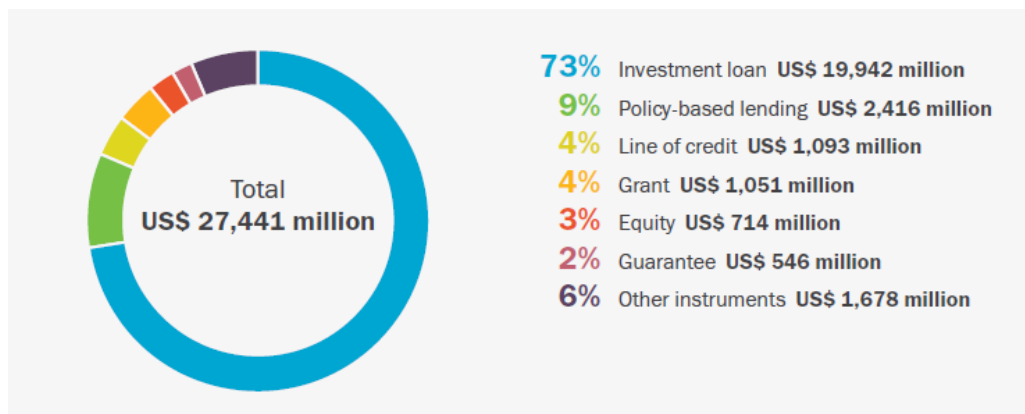


Figure 15: Total MDB Climate finance split by instrument type. Source: MDB Joint Report on Climate Action, 2016

This tendency shows that investment in green-directed projects is still similar to normal financing and that some efforts should be made in that direction in order to leverage private investments into developing countries.

## 2.3 European Union

The European Union's (EU) strategy for climate change is carried out by the Directorate General on Climate Action. In this study we focus first on the strategy formulated by the European Commission (EC), then we analyse the implementation of this strategy through the variety of instruments and tools the EU uses and, finally, we comment on some examples of this implementation in the Mediterranean region.

### 2.3.1 Strategy

#### *General Strategy*

The EU climate strategy and target to reduce greenhouse gas emissions are set out in the 2020 climate and energy package and the 2030 climate and energy framework. To respond to challenges and investment needs related to climate change, the EU has agreed that at least 20% of its budget for 2014-2020 – as much as €180 billion – should be spent on climate change-related action.<sup>80</sup>

To achieve this increase, mitigation and adaptation actions have been integrated into all major EU spending programmes, in particular cohesion policy, regional development, energy, transport, research and innovation and the Common Agricultural Policy (CAP). The EU's development policy also contributes to achieving the 20% overall commitment, with an estimated €1.7bn in 2014-2015 and €14bn over the years 2014-2020 for climate spending in developing countries.<sup>81</sup>

On the road towards this objective, the EU has developed several instruments to finance this transition. The main one is the LIFE Programme (2014-2020), the EU's funding instrument for the environment and climate action. Since its creation in 1992, this programme has co-financed more than 4,000 projects, contributing more than €3.1 billion to environmental and climate protection in Europe. The LIFE Programme 2014-2020 includes a dedicated sub-programme for climate action. This will provide €864 million of co-financing between 2014 and 2020 to develop and implement innovative ways to respond to climate challenges. This amounts to a tripling of the climate action budget compared to the LIFE+ Programme in 2007-2013.<sup>82</sup>

Another of the objectives of the EU is related to energy, making it more secure, affordable and sustainable. Wiser energy use while fighting climate change is both a spur for new jobs and growth and an investment in Europe's future.

#### *EU Strategy in the Mediterranean*

The European Union strategy on climate change for the Mediterranean region is embedded in the Horizon 2020 strategy of the European Commission.<sup>83</sup> In line with the European Neighbourhood Policy (ENP) and the Euro-Mediterranean Partnership (EMP), the key aims of the strategy are:

- Reduce pollution levels across the region;
- Promote sustainable use of the sea and its coastline;
- Encourage neighbouring countries to cooperate on environmental issues;
- Assist partner countries in developing effective institutions and policies to protect the environment;
- Involve NGOs and the public in environmental decisions affecting them.

They are to be achieved through four means: financial assistance from existing and already planned EU aid programmes; strengthened dialogue with the region's representatives; improved coordination with other organisations and partners; and sharing of EU experience in dealing with the problems of the Mediterranean and other regions.

---

<sup>80</sup> [https://ec.europa.eu/clima/policies/strategies/2020\\_en](https://ec.europa.eu/clima/policies/strategies/2020_en)

<sup>81</sup> [https://ec.europa.eu/clima/policies/budget\\_en](https://ec.europa.eu/clima/policies/budget_en)

<sup>82</sup> <http://ec.europa.eu/environment/life/funding/lifepius.htm>

<sup>83</sup> <https://ec.europa.eu/programmes/horizon2020/>

### 2.3.2 Implementation

The EU is scaling up climate finance while continuing to invest in domestic climate action to help the poorest and most vulnerable countries mitigate and adapt to climate change. This translates into 20% of the EU budget to be spent on climate action by 2020 and at least €14 billion, an average of €2 billion per year, of public grants will support activities in developing countries between 2014 and 2020.

#### *LIFE Programme*

The LIFE (the Financial Instrument for the Environment and Climate Action) Regulation sets a budget for the funding period 2014-2020 of €3.4 billion. The programme has varied sources of funding for environment and climate change programmes, which can be summarised in three types:

- LIFE yearly action call grants for projects;
- LIFE NGO operating grants;
- LIFE financial instruments managed by the EIB: (1) the Natural Capital Financing Facility (NCF) and (2) the Private Finance for Energy Efficiency instruments (PF4EE).

The Natural Capital Financing Facility (NCF) is a new financial instrument that will provide financing opportunities in the form of loans or equity investments for revenue-generating or cost-saving pilot projects promoting the preservation of natural capital, including climate change adaptation projects.

The Private Finance for Energy Efficiency instrument (PF4EE) is also a new financial instrument to provide loans for investments in energy-efficient projects prioritised by the National Energy Efficiency Action Plan.

#### *Capitalising the Green Climate Fund*

The Green Climate Fund (GCF), set up in 2010 at the Cancun Climate Conference (COP 16) based on the framework on the UNFCCC, serves as a mechanism to finance green economy projects. This fund has a central role to play in channelling financial resources to developing countries and catalysing private climate finance. Its funds come directly from the member states of the EU and not the EC. Between them and several multilateral development banks, nearly half of the fund's resources, \$4.7 billion, have been pledged.

#### *Leveraging Climate-Friendly Investments*

Countries need to attract additional public and private financing to transition to a climate-friendly economy and drive sustainable economic growth. International climate finance should be used as a lever to incentivise climate-resilient and low-carbon investments, complementing domestic resources in developing countries. The EU's approach is twofold:

- Provide grant funding directly to the poorest and most vulnerable countries, and
- Use grant funding to leverage private investment by combining grants with loans and equities from public and private sources.

For example, the EU and member states have since 2007 established a number of blending facilities that combine grant funding with loans and cover different regions:

- Providing grant finance to over 240 blended projects in 2007-2014, and
- Helping unlock investments in partner countries by combining EU grants with public and private financing: more than €1 billion in EU grants has been committed to green projects worth a total of €25 billion in low- and middle-income countries.

#### *EU Blending Facilities: Mobilising Climate Finance in Developing Countries*

Besides traditional forms of support, the EU blending facilities mobilise additional financing from private and public sources for climate change action, complementing other aid modalities. Blending is the combination of EU grants with loans or equity from public and private financiers. EU grants can take different forms: investment grant and interest rate subsidy, technical assistance, risk capital and

guarantees. EU regional blending facilities operate in all regions of EU external cooperation and help partner countries transition to low-carbon and climate-resilient economies.<sup>84</sup>

### *Scaling Up Climate Finance*

The EU blending facilities have set up specific Climate Change Windows to crowd-in more public and private financing for low-carbon, climate-resilient investments.

- 2007-2013: About €1 billion of EU grants has been committed to climate-relevant green projects estimated at €25 billion. That is 62% of all blending projects carried out since 2007.
- 2014-2020: The EU expects to double the volume of grant finance to €2 billion, aiming to mobilise projects of about €50 billion.
- The majority of EU blending projects are in the energy and transport sector; climate change adaptation is mainstreamed.

### *Neighbourhood Investment Facility (NIF)*

For the Mediterranean, the blending facility used is the Neighbourhood Investment Facility (NIF). This instrument belongs to the European Neighbourhood Instrument (ENI), the funding mechanism for implementing EU policy in the Mediterranean region, and its strategic objectives include addressing climate change as one of the major challenges of the region.<sup>85</sup> The NIF provides grants, technical assistance or guarantees in support of loans extended by the European Financial Institutions (EFIs) to beneficiaries in the neighbourhood region.

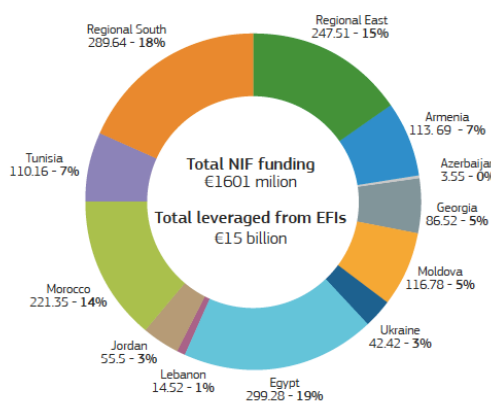
The NIF also responds to the climate challenge by building on a country's own financial capacity and leveraging significant additional resources. Beneficiary countries can access different types of funding (loans, guarantees or other risk sharing arrangements) from EFIs to finance critical infrastructure, public services and private sector development, complementing NIF grants and maximising the impact of EU funding. These projects are accompanied by technical assistance and policy dialogue with a given partner country.

---

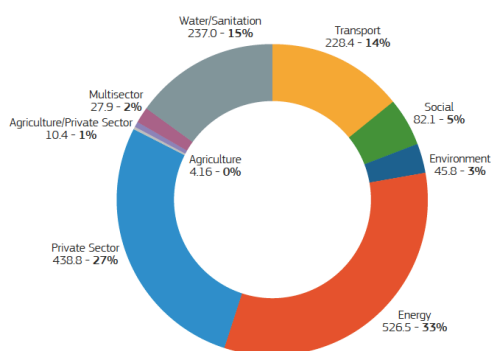
<sup>84</sup> European Commission (2015), EU blending facilities in climate action: overview.

<sup>85</sup> European Commission (2016), Neighbourhood Investment Facility 2016 Operational Annual Report, [https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/nif-oar2016\\_en\\_200617\\_web\\_version.pdf](https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/nif-oar2016_en_200617_web_version.pdf)

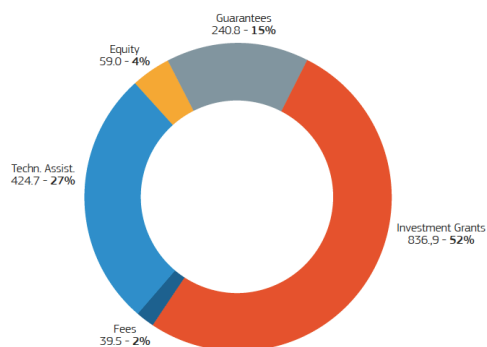
### by Country 2008-2016



### by Sector 2008-2016



### by Type of Support 2008-2016



**Figure 16: Neighbourhood Investment Facility, millions of Euros, 2008-16.** Source: European Commission (2016), Neighbourhood Investment Facility 2016 Operational Annual Report

### 2.3.3 Examples

The LIFE Programme, the EU’s financial instrument supporting environmental, nature conservation and climate action projects throughout the EU, receives funds and is managed directly from the DG Climate Action. However, many of the projects are co-financed and some of them are funded by the European Financial Institutions. For the 2014-2020 funding period, LIFE will contribute approximately €3.4 billion to the protection of the environment and climate.

## MED-ENEC: Energy Efficiency in the Construction Sector in the Mediterranean<sup>86</sup>

This was a regional project funded by the European Union in partnership with GIZ, ADEME and Ecofys that aimed to increase the use of energy efficiency measures and renewable energy systems in buildings in Southern and Eastern Mediterranean countries. Apart from policy advice and business development, special emphasis was placed on the support of large building programmes as multipliers of climate-friendly and cost-saving technologies and measures. The project was completed in 2016 and received funding from the European Neighbourhood Instrument.

## 2.4 Multilateral Climate Funds

Multilateral climate funds (MCF) manage contributions from public and private actors to climate-specific goals. For the purpose of this report, the main funds considered are those for which countries formerly report to the UNFCCC and have developed projects in the Mediterranean region.<sup>87</sup> Those funds have been integrated with the MDBs, which has enabled greater financing of climate change projects, including infrastructure projects.

### 2.4.1 Overview

The following table is an abstract of the main multilateral funds active internationally and financing projects in the Mediterranean region. It describes each fund and explains its objectives. This table shows the funds' concrete actions in order to get an impression of the role they are playing in promoting green finance and the transition towards greener investments, which is the role that has been given to those actors created by financial institutions or multilateral organisations.

**Table 3: Multilateral Funds Global Overview** ([www.climatefundsuptade.org](http://www.climatefundsuptade.org))

Fund	Administered by	Description	Area of focus	Pledge (USD million)	Deposit (USD million)	Approval (USD million)
<a href="#">Clean technology Fund (CTF)</a>	The World Bank/Climate Investment Fund	Provides middle-income countries with highly concessional resources to scale up the demonstration, deployment and transfer of low carbon technologies in renewable energy, energy efficiency and sustainable transport.	Mitigation- General Regional : MENA	5,472	5,404	4,959
<a href="#">Strategic Climate Fund</a>	The World Bank/Climate Investment Fund	Serves as an overarching framework for three targeted programmes piloting new approaches and scaled-up, transformational action on climate change: Pilot Programme for Climate Resilience, Forest Investment Programme, Scaling-up Renewable Energy Programme	Multiple Focus	2,605	2,602	1,544
<a href="#">GEF Trust Fund</a>	The Global Environment Facility (GEF)	Supports the implementation of multilateral environmental agreements and serves as a financial mechanism of the UN Framework Convention on Climate Change. It is the longest	Adaptation- Mitigation-General	1,101	1,078	456

<sup>86</sup> <http://www.med-enec.com/>

<sup>87</sup> OECD, Climate Policy Initiative (2015), Climate Finance 2013-14 and the US 100 billion goal, <http://www.oecd.org/env/cc/OECD-CPI-Climate-Finance-Report.pdf>

		standing dedicated public climate change fund.				
<a href="#">Special Climate Change Fund</a>	GEF	Addresses the specific needs of developing countries under the UNFCCC. It covers the incremental costs of interventions to address climate change relative to a development baseline.	Adaptation	367	362	302
<a href="#">Green Climate Fund</a>	GCF	Adopted as a financial mechanism of the UN Framework Convention on Climate Change (UNFCCC) at the end of 2011. It aims to make an ambitious contribution to attaining the mitigation and adaptation goals of the international community.	Multiple focus	10,255	9,896	1,174

In the MENA region there are 14 multilateral funds active with the Clean Technology Fund as the main donor, a total of \$733 million has been approved for six projects in Morocco and Egypt.<sup>88</sup>

**Table 4: Funds supporting MENA region (2003-2015)<sup>89</sup>**

Fund	Amount Approved (USD millions)	Projects approved
Clean Technology Fund (CTF)	733.47	6
Global Environment Facility (GEF4)	51.57	14
Special Climate Change Fund (SCCF)	44.39	8
Global Environment Facility (GEF5)	38.66	16
Adaptation Fund (AF)	38.62	5
Germany's International Climate Initiative	37.65	8
Least Developed Countries Fund (LDCF)	30.49	7
Adaptation for Smallholder Agriculture Programme (ASAP)	23.00	4
Pilot Program for Climate Resilience (PPCR)	20.50	2
MDG Achievement Fund	7.60	2
Strategic Priority on Adaptation (SPA) (from GEF4)	6.02	3
Partnership for Market Readiness	4.05	4
Global Climate Change Alliance (GCCA)	3.36	1
Global Environment Facility (GEF6)	0.70	2
Scaling-Up Renewable Energy Program for Low Income Countries (SREP)	0.30	1

<sup>88</sup> ODI, Climate Funds Update (2015), Climate Finance Regional Briefing: Middle East and North Africa, <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10062.pdf>

<sup>89</sup> Ibid.

## Funds in Middle East and North Africa

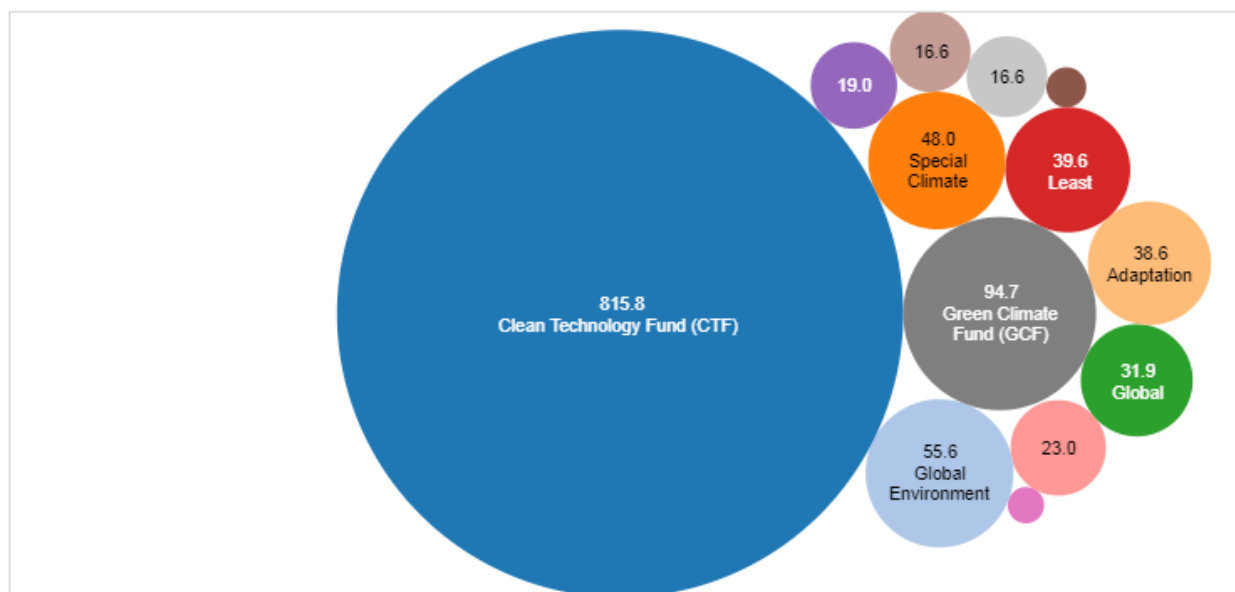


Figure 17: Funds supporting MENA region<sup>90</sup>

#### 2.4.1.1 The Climate Investment Fund and Clean Technology Fund

The Climate Investment Fund (CIF) was launched in 2008 by multilateral development banks in order to mobilise climate finance in developing countries to support high impact investments in renewable energy, energy efficiency, sustainable transport, climate resilience and sustainable forest management. With \$8.3 billion, it is supporting 72 developing and middle income countries to manage climate change challenges and reduce greenhouse gas emissions. In 2013, the CIF provided \$660 million to Algeria, Egypt, Jordan, Libya, Morocco and Tunisia to support the creation of concentrated solar power plants for the region.<sup>91</sup>

The Clean Technology Fund (CTF), part of the Climate Investment Funds, is a \$5.8 billion empowering transformation in developing and emerging economies by providing resources to scale up low carbon technologies with significant potential for long-term greenhouse gas emissions savings.

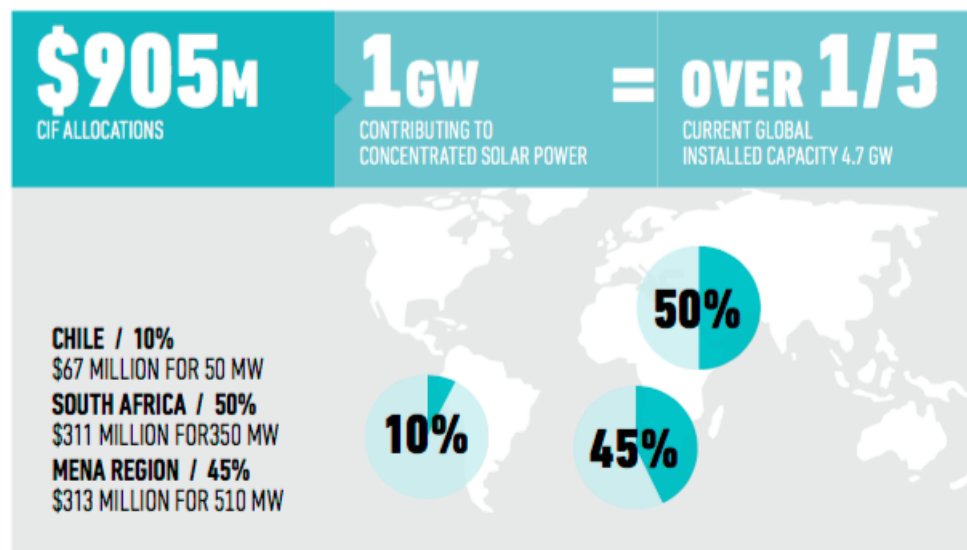
Over \$3.8 billion (66% of its resources) is approved and under implementation in clean technologies, such as renewable energy, energy efficiency and clean transport. This is expected to leverage another \$38 billion in co-financing.<sup>92</sup>

<sup>90</sup> Ibid.

<sup>91</sup> [https://www.climateinvestmentfunds.org/sites/default/files/CTF\\_TFC.11\\_6\\_Revised\\_Investment\\_Plan\\_for\\_MENA\\_CSP\\_0.pdf](https://www.climateinvestmentfunds.org/sites/default/files/CTF_TFC.11_6_Revised_Investment_Plan_for_MENA_CSP_0.pdf)

<sup>92</sup> <https://www.climateinvestmentfunds.org/fund/clean-technology-fund>



**CIF INVESTMENT IN CSP**

**Figure 18: CIF Investment in Concentrated Solar Power (CSP).** Source: Climate Investment Funds

As can be seen in the figure above, \$313 million representing 45% of the investments has been spent in the MENA region to develop concentrated solar power, based on the fund's results from 2015.

#### 2.4.1.2 The Green Climate Fund (GCF)

Since the Paris Agreement, the GCF's role has been defined in a post-2020 climate regime as the major finance channel and the 100 billion per year goal has been reaffirmed.<sup>93</sup> In 2017 its first board meeting just approved 8 new projects and programmes worth \$755 million.<sup>94</sup> The GCF is offering support for mitigation and adaptation with the obligation to balance its spending equally. A private sector facility supporting both funding windows is aiming to increase private capital by focusing on engaging local actors and small and medium-sized enterprises.<sup>95</sup>

#### 2.4.2 Instruments

The action of multilateral funds is mostly concentrated in a small number of large projects and in the form of loans or concessional loans with a total of \$1.04 billion for 83 projects directed mostly to mitigation representing more than 82% (approximately \$857 million) despite the growing adaptation needs in the region mostly for water conservation and food security.<sup>96</sup>

\$307 million of the total funding approved took the form of grants supporting the majority of projects and the remaining is provided through loans concentrated in six large-scale energy infrastructure projects. In 2014 the total financing approved increased by 41% but has only grown by 4.7% in recent years with a high concentration in only two countries of the region: Morocco, with \$649 million, and Egypt, with \$197 million, which represents 81% of this climate finance. Over 96% of this has been focusing on large-scale wind and concentrated solar power projects through the Clean Technology Fund (CTF) but 10 other projects focusing on energy efficiency sustainable transport and small-scale solar technology.<sup>97</sup>

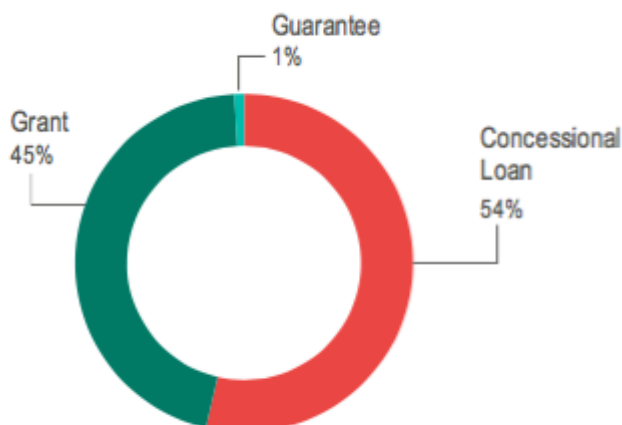
<sup>93</sup> ODI, Climate Funds Update (2015), The Green Climate Fund, <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10066.pdf>

<sup>94</sup> <https://www.greenclimate.fund/-/gcf-approves-eight-projects-at-its-first-board-meeting-in-20-1?inheritRedirect=true&redirect=%2Fhome>

<sup>95</sup> CCAP (2014), The Green Climate Fund, <http://ccap.org/assets/GCF-Fact-Sheet.pdf>

<sup>96</sup> <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10062.pdf>

<sup>97</sup> Ibid.

**Figure 19: Instruments used by multilateral funds.**

Source: *Climate Funds Update (2014)*

Adaptation projects are on average a quarter of mitigation projects but there are still several adaptation funds implementing projects in the region with a total of \$170.6 million dedicated to adaptation.

### 2.4.3 Examples

The largest project in the MENA region is the \$238 million concessional loan for the Noor II and III Concentrated Solar Power (CSP) Project in Morocco, approved in 2014 by the CTF. There are also some projects newly approved in 2017 by the GCF, such as the GEEREF Next programme, which finance energy and energy efficiency projects together with the EIB.

**Morocco:** Irrigation development and adaptation of irrigated agriculture to climate change in semi-arid Morocco. This adaptation project was approved in April 2017 and will be an investment of \$81.1 million, of which 73.7% will be from co-financing.<sup>98</sup>

**Egypt Renewable Energy Financing Framework:** The GCF-EBRD Egypt Renewable Energy Financing Framework (the Framework) will support Egypt to unlock its vast renewable energy potential by addressing key barriers hindering its development. It is a mitigation project and a \$1 billion investment relying on 84.6% co-financing.<sup>99</sup>

### 2.4.4 General Assessment

Those funds, together with financial institutions, are important actors in providing green finance in the region, especially the CTF. Seeing the number of different needs, regional scope, country interests and uneven mitigation capacities and adaptation, diverse climate funds are needed. However, with each of these funds having a particular purpose and function at the time of their establishment, there is now an issue of potential overlap, and in general too little money available through these various channels. Going forward, it will be important to maximise synergies across the climate funds, minimise duplication and reduce transaction costs.

<sup>98</sup> <http://www.greenclimate.fund/-/irrigation-development-and-adaptation-of-irrigated-agriculture-to-climate-change-in-semi-arid-morocco>

<sup>99</sup> <http://www.greenclimate.fund/-/gcf-ebd-egypt-renewable-energy-financing-framework>

As we saw, those funds are principally offering grants and concessional loans but also use and try to develop equity investments and guarantees.<sup>100</sup> Over time the funds should try to offer an even broader suite of direct financial instruments, for example green bonds.

### 3 National Development Agencies

---

In the wide spectrum of public green finance, there are a number of channels through which green finance flows. In the previous chapter multilateral climate finance has already been reviewed. However, several industrialised countries have set up their own channels of green finance through climate finance initiatives or their own bilateral development agencies. We focus here on this last channel: the work of national development assistance institutions to fund and contribute to the preservation of the environment and the fight against climate change.<sup>101</sup> These institutions act and provide funding on behalf of their respective government.<sup>102</sup> Among these institutions, national development agencies can be mentioned, particularly in the case of industrialised nations that fund climate programmes for emerging economies and public development banks. In the case of developing countries, the environment ministries and state-owned agencies have the mandate to promote the funding of sustainable development projects and environment field funding.

We focus in this section on the actions of four countries from the northern shore of the Mediterranean (France, Spain, Italy and Germany) and three from the southern shore (Egypt, Morocco and Turkey). We analyse the institutions that promote climate finance (national development agencies, public development banks, ministries and others), their strategy, instruments and implementation.

The southern shore of the Mediterranean obviously has a quite less developed environment and climate strategy. However, it remains essential to acknowledge the recent improvements made by some of these countries in order to deal with the environment and climate challenge. The steps in this direction should be recognised and encouraged.

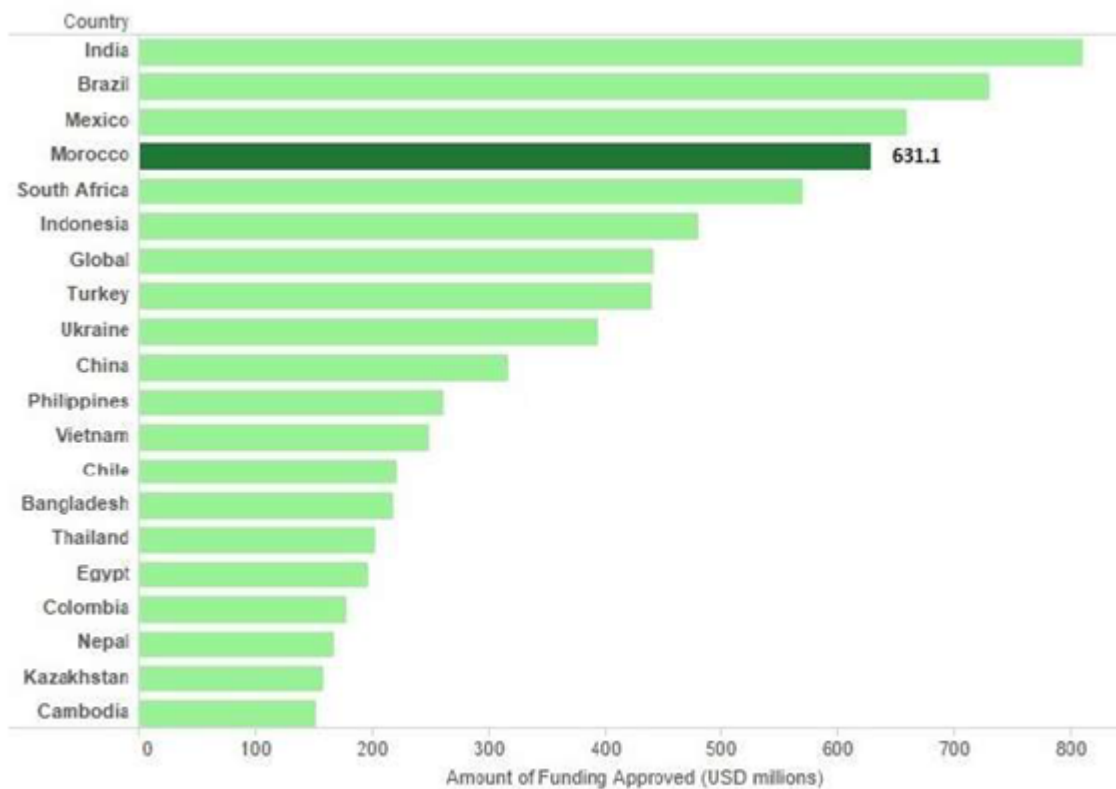
Three Southern Mediterranean countries are reviewed: Morocco, Egypt and Turkey. In this case, bilateral climate initiatives are not addressed but rather how the governments of these countries integrate the environmental issue and what mechanisms/instruments and programmes they have developed in this regard. We include the action by environment ministries, government agencies dedicated to the environment or public national banks that fund sustainable development projects.

---

<sup>100</sup> ODI, HBS (2016), 10 Things to Know about Climate Finance in 2016, <https://www.odi.org/sites/odi.org.uk/files/resource-documents/11058.pdf>

<sup>101</sup> Overseas Development Institute (2016), The Global Climate Finance Architecture, <https://www.odi.org/sites/odi.org.uk/files/resource-documents/11021.pdf>

<sup>102</sup> UNEP (2010), Bilateral Finance Institutions and Climate Change, <https://europa.eu/capacity4dev/unep/document/bilateral-finance-institutions-climate-change>



Source: *Climate Funds Update (CFU)*, September 2016, <http://www.climatefundsupdate.org/data>

**Figure 20: Recipient Countries of Multilateral Dedicated Public Climate Finance.** Source: Climate Funds Update (CFU), September 2016

According to this figure, from the main recipients of climate finance, Morocco is by far the one that receives most funding in the Mediterranean region with more that \$631 million approved in September 2016. Far behind are Turkey and Egypt, with around \$450 million and \$200 million, respectively.

## 3.1 France

### 3.1.1 French Agency for Development (AFD)

The AFD is a public development finance institution that works to fight poverty and foster economic growth in developing countries and the French Overseas Communities. It executes the policy defined by the French Government and finances and supports projects that improve people's living conditions, promote economic growth and protect the planet (such as schooling for children, maternal health, support for farmers and small businesses, water supply, tropical forest preservation and the fight against climate change). It aims at supporting the integration of climate change development.

In 2016, the AFD invested around €9.4 billion to finance activities in developing countries and the French Overseas Communities. The funds, distributed in more than 600 projects in 108 countries of operation, contributed to provide access to clean water to around 1.2 million people, install 665 megawatts of renewable energy and provide 104,000 people with electricity connections, among others.<sup>103</sup>

#### 3.1.1.1 Strategy

The AFD has a differentiated strategy for climate change and a general strategy for the Mediterranean region.

<sup>103</sup> Infographics AFD 2016 Results, <http://www.afd.fr/home>

### *Climate Strategy*

In terms of climate finance, the AFD committed over €3.5 billion in 2016 to finance 83 climate projects (renewable energies, energy efficiency, clean transport, forest protection, agro-ecology and climate change adaptation)<sup>104</sup> all over the world, thus representing around 10% of international public "climate" finance for developing countries.<sup>105</sup> This has allowed France to be positioned today as a major supporter of the fight against climate change in developing countries, alongside Japan and Germany, for example. Moreover, the AFD, as an international financial institution, is also an important player in the mobilisation of resources at national, regional and international level.

For 2016-2020, the agency has formulated an action plan that aims to provide a structure of the general strategy that the AFD will promote in the coming years in the field of climate change. This plan has three core pillars, tailored to the geographical areas of operation:

- An objective of a sustainable financial commitment to the climate representing 50% of the AFD's allocations to developing countries and 30% of the allocations of Proparco, its private sector financing arm;
- A systematic measurement of the carbon footprint of funded projects using a robust and transparent methodology;
- A policy of selecting projects according to their climate impacts, taking into account the level of development of the countries in question.<sup>106</sup>

### *Mediterranean Strategy*

Among its strategic orientations, the AFD has the Mediterranean region as a priority area for its development actions. The agency developed a specific action plan for the Mediterranean and North Africa region that includes climate change actions among its projects. In Mediterranean Basin countries, the agency's climate actions have a thematic focus on energy, urban transportation and water. In 2016, climate projects accounted for 67% of financing in the Mediterranean. Moreover, in the medium term, the objective is to reach 50% of the AFD's total annual allocations in the region to have co-benefits for the fight against climate change. However, due to the current political context, this objective seems rather ambitious. Moreover, these funds are mainly delivered through concessional and non-concessional investment loans and are gradually providing budget support for sectorial, regional or national policies.

---

<sup>104</sup> ADF Graphics, Climate Change, 2016, <http://www.afd.fr/home>

<sup>105</sup> CPI (2011), The Landscape of Climate Finance, <http://www.gwp.org/globalassets/global/toolbox/references/the-landscape-of-climate-finance-cpi-2011.pdf>

<sup>106</sup> AFD (2010), AFD and Climate Change, [http://www.afd.fr/webdav/shared/PORTAILS/PUBLICATIONS/PLAQUETTES/AFD-Changeement\\_climat\\_GB.pdf](http://www.afd.fr/webdav/shared/PORTAILS/PUBLICATIONS/PLAQUETTES/AFD-Changeement_climat_GB.pdf)

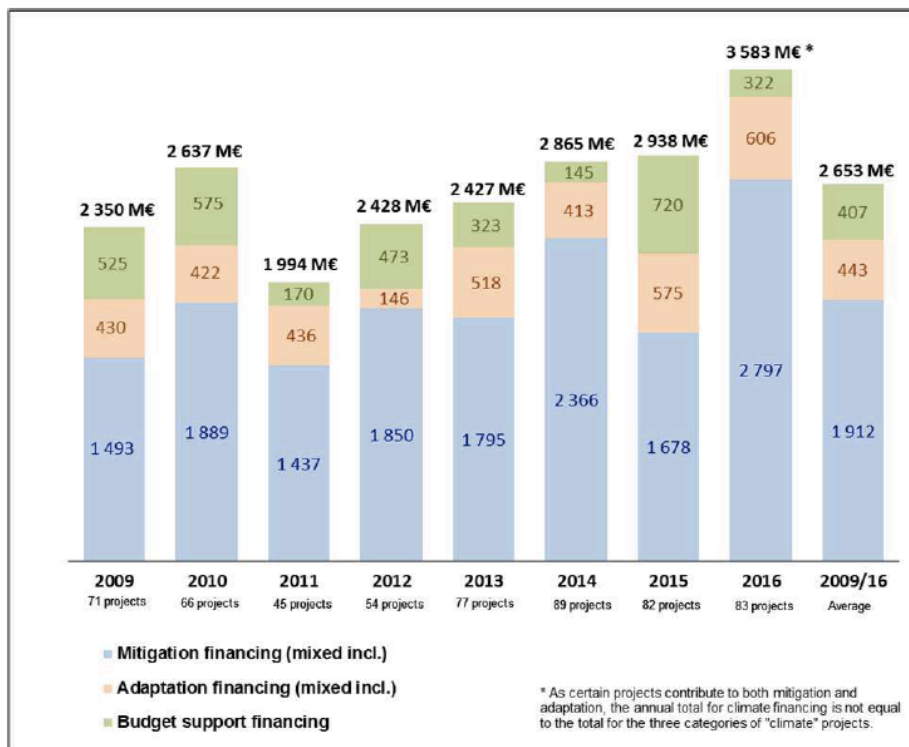


Figure 21: Climate Activity of the AFD Group in 2016, AFD<sup>107</sup>

The agency covers a range of sectors that include both mitigation and adaptation projects, among which are energy efficiency, urban transportation, local authorities' developments policies, forestry and agriculture for the mitigation area and water sector and sanitation in the adaptation branch.

### 3.1.1.2 Instruments

The AFD's financing methods include a wide range of flexible and comprehensible tools, from sectorial budget support, direct funding or concessional lending financing, market conditions tools (equity, mezzanine finance, loans, guarantees) and soft loan instruments. It also mobilises resources from European and international mandates and places strong emphasis on co-financing with other national and international donors. Its financing mechanisms include:

- Developing private sector involvement in the fight against climate change: guarantees, risk sharing, bank credit lines;
- Allowing companies and SMEs in the South to initiate energy upgrading;
- Financing "climate plans": providing assistance and budget and technical support to countries that mainstream the climate into their development strategies;
- Assisting cities in their transition policies;
- Supporting the re-channelling of financing from banks and markets;
- Assisting rural and agricultural communities in managing and preserving water resources, forest and soil resources;
- Supporting the increasingly important role of new financing actors by working in partnership with development banks in emerging and developing countries.

Moreover, the AFD has two main financial subsidiary institutions through which it channels some of its funding: Proparco and FFEM.

Proparco, Promotion and Participation for Economic Cooperation, is the financial arm of the AFD. It works as its subsidiary agency in charge of supporting the private sector via long-term financial tools on commercial terms (loans, equity investments and guarantees). Founded in 1977, it is mainly funded by

<sup>107</sup> <https://www.afd.fr/en/climate-activity-afd-group-2016>

the AFD but it also receives funding from other financial institutions, private and public, such as BNP Paribas, Crédit Agricole, multilateral development banks and private companies. Proparco makes use of a variety of instruments, such as loans, equity, investments funds, guarantees and technical assistance to finance development projects. Its main areas of intervention in the climate change sector are renewable energies, energy efficiency, access to energy, sustainable transportation, water and sanitation. Furthermore, Proparco has also started utilising innovative financial instruments, such as green bonds, together with other multilateral institutions.

FFEM, Fond Français pour l'Environnement Mondial, is a public fund dedicated to the protection and preservation of the environment in developing countries. The FFEM contributes to the financing of development projects that have a significant and lasting impact on one of the major challenges of the environment: biodiversity, climate change, international waters, land degradation (desertification and deforestation), persistent organic pollutants and the ozone layer. Its projects are distributed all over the world. However, there is a priority of action for Africa and the Mediterranean region that has received €226 billion between 1995 and 2015 of the €331 billion spent in total, which is almost 70%. Its main objectives are:<sup>108</sup>

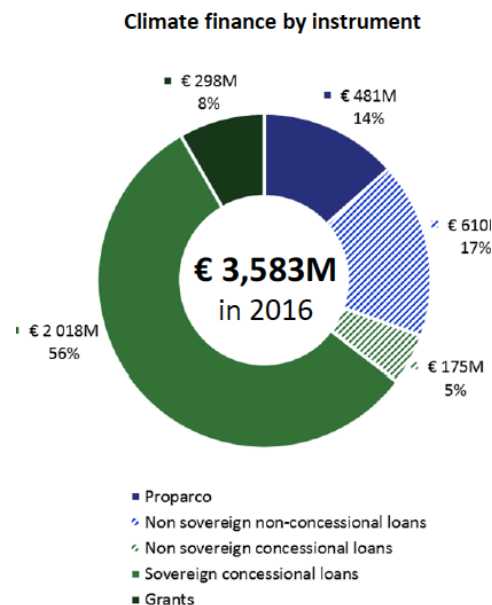
- Supporting sustainable development solutions to promote the preservation of the global environment in developing and emerging countries;
- Encouraging scientific, technical, technological, financial or institutional innovation in the projects it co-finances;
- Creating alliances and mobilising multi-stakeholder partnerships by collaborating with all national or international actors in relation to its intervention themes: public, private, NGOs, scientists, local authorities, donors, international conventions.

Furthermore, the AFD places great importance on the use of innovative instruments and strengthening the use of a diversity of financial instruments is one of its objectives in order to implement the agency's strategy. One of the AFD's first innovative operations was to develop private sector involvement in the fight against climate change, either directly or via credit lines to banks, for example in Africa, India, Indonesia and Turkey. This was a first step in order to test the involvement of the private sector, which can have a positive impact on transforming these countries' economies. Moreover, the AFD has recently developed multi-investor structured instruments (debt funds, venture capital funds...) for private sector players in the sectors of renewable energy, energy efficiency, forestry and others. The aim is to extend these instruments to also cover guarantees, insurance mechanisms and more. The AFD wants to continue scaling up investment in that direction.

---

<sup>108</sup> FFEM (2015), Rapport Annuel 2015.

### 3.1.1.3 Examples



"Climate" financing in 2009 - 2016 (in €M)

**Figure 22: AFD Climate Financing, AFD, 2016**

This figure shows the distribution of the AFD's climate change financing among its different instruments. A few examples of these projects in the Mediterranean region are described below.

**The Disi drinking water supply project in Jordan:** With a volume of water of 145 m<sup>3</sup> available per person per year, this project aims at exploiting the Disi groundwater and to carry water through a 320 km supply line to Amman, thus providing 100 million m<sup>3</sup> of drinking water. The project is being implemented through a 25-year BOT (Build-Operate-Transfer) contract for a total cost of around \$1 billion, of which the AFD and Proparco are contributing \$200 million. From 2013 onwards, this project provided Amman with a continuous drinking water supply. The water from Disi will partly replace water from aquifers, which is today overexploited around Amman, and it will thus allow it to be renewed. Finally, this project is a driver for improving service quality, reducing losses and adapting tariffs to the scarcity of water resources.

**Sovereign loan for forests and climate change in Turkey:** In Turkey, around 20,000 villages (7.5 million people) are located in or around forests and partly depend on them, which makes sustainable forest management a major challenge. To tackle this issue, Turkey launched a policy of reforestation setting the target of reaching 23 million ha (30% of the land area) of forest cover by 2023. Contributing to this effort, the AFD allocated a €150m sovereign loan in 2013 to partially finance the Forest-Climate Change Programme implemented by the Ministry of Water and Forests. The agency also committed a grant of €400,000 to the (French) National Forest Office to set up a partnership with the Turkish General Directorate of Forests.<sup>109</sup>

**Renewable Energies in Morocco:** The AFD supports the Moroccan Solar Plan (MSP) and has contributed to financing the first development phase of a 500 MW solar power complex about 10 km northwest of Ouarzazate. The MSP aims to develop a power generation capacity using at least 2,000 MW of solar power by 2020, mainly to meet local needs. In addition to reducing the Kingdom's energy dependence and the negative impact of fossil fuel imports on the state budget, this project promotes the creation of a new solar power industry in Morocco and the reduction of the country's greenhouse gas emissions.

<sup>109</sup> Project Summary, Replanting forests and building carbon storage capacity in Turkey, January 2015.



## 3.2 Spain

### 3.2.1 Spanish Agency for International Cooperation and Development (AECID)

The Spanish Agency for Development and Cooperation (AECID), founded in 1988, has been working towards the environment's preservation and battling climate change for the last years. In line with this it has developed a Sectorial Strategy for the Environment and Sustainable Development,<sup>110</sup> considering this factor as an essential element to achieve a sustainable social and economic development.

#### 3.2.1.1 Strategy

In terms of climate change, the AECID has a specific strategy on the environment and sustainable development, formulated in respect to the priorities on the environment of the Management Plan of the Spanish Cooperation. The document covers aspects such as climate change, biodiversity or desertification and also stresses the importance of including good natural resource management, strengthening environmental governance and endogenous capacities, as well as environmental education and socio-environmental research as engines of improvement.

Water is also a key part of this document: the right to water supply and sanitation through public policies based on a comprehensive management of water resources. In order to fight the effects of climate change effectively, it is essential to promote policy coherence in accordance with the international commitments assumed by the Spanish Government. This sectorial document was created with the aim of providing a coordinated action framework for all Spanish cooperation actors working in the environmental field.

#### 3.2.1.2 Instruments and Implementation

In terms of implementation, the Spanish bilateral agency is still far from partners such as the AFD. The AECID remains very traditional in its funding mechanisms. Most of the funding is done through grants and loans, and using subsidiaries or smaller mechanisms as the AFD does. The main mechanism is the Fondo para la Promoción del Desarrollo (FONPRODE), which combines the experience in terms of micro-finance of the old Fondo para la Concesión de Microcréditos (FCM), with a variety of new typologies of financeable operations. At of today's date, the FONPRODE has a large number of reimbursable financial cooperation operations in its portfolio. Moreover, through the FONPRODE loans can be granted to partner states.

Regarding its projects, unfortunately, the AECID provides considerably less information than the other the agencies about its funding and descriptions of the climate change projects it funds. However, we will mention a few examples in the Mediterranean region.

In Tunis, a project financed by the Spanish Government through its bilateral development agency to extend the Metline and Kechabta wind farms in the region of Bizerte. The project is expected to last between 2010 and 2020 as it is funded with around €9 million.

A water and sanitation project in Egypt was funded with more than €1 million for depuration plants in Abnub, Sodfa, El-Ayat and Abu-Simbel between 2011 and 2020.<sup>111</sup>

## 3.3 Germany

We have chosen to include Germany in this section because of its importance in climate finance. German climate financing includes funding for the mitigation of greenhouse gas emissions, adaptation to the consequences of climate change, and the reduction of emissions from deforestation and forest degradation.<sup>112</sup>

---

<sup>110</sup> [http://www.aecid.es/Centro-Documentacion/Documentos/Planificación%20estratégica%20por%20sectores/Resumen\\_ejecutivo\\_Estrategia\\_MA.pdf](http://www.aecid.es/Centro-Documentacion/Documentos/Planificación%20estratégica%20por%20sectores/Resumen_ejecutivo_Estrategia_MA.pdf)

<sup>111</sup> <http://cooperacionencifras.exteriores.gob.es/es-es/cooperaciones/Paginas/detalledecooperacion.aspx?idCp=95278>

<sup>112</sup> BMZ (2015), Together for a common cause – Germany's contribution to international climate financing.

German international climate finance from budgetary sources 2005-2015 (in million euros)

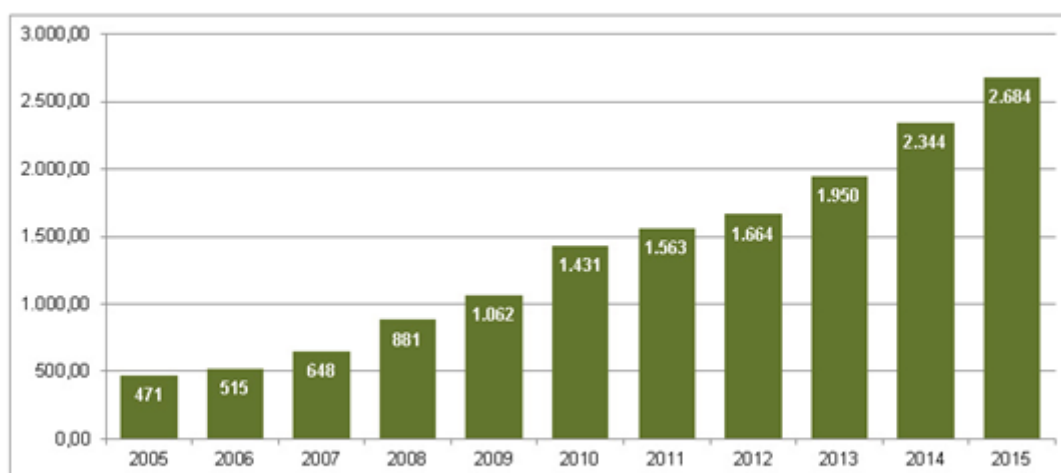


image: BMZ

German international climate finance from budgetary sources 2005-2015 (in million euros)

**Figure 23: German international Climate Finance, BMZ, 2015**

In terms of financial contribution, Germany's funding has significantly increased in recent years. From €471 million in 2005, in 2015 the German Government committed around €2.7 billion in official budget funds for climate change mitigation and adaptation and became in 2014 the largest bilateral donor of climate finance.<sup>113</sup> Approximately 90% of this sum comes from the budget of the Federal Ministry for Economic Cooperation and Development (BMZ).

Furthermore, Germany not only provides money from official budget funds but also funds that it raises on the capital market. For example, in 2015 KfW Bankengruppe and its subsidiary DEG were able to commit a further €4.7 billion in the form of development and promotional loans, shareholdings and other financing from capital market funds. Germany's public contributions to international climate finance in 2015 thus totalled €7.4 billion.

Furthermore, the German Government contributes to international climate finance by mobilising private capital (more than €900 million in 2015). This means that the German contribution from all sources in 2015 was at least €8.3 billion.

Germany's commitments to climate change are implemented through a variety of institutions, mainly two important ones: the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and KfW Entwicklungsbank.

### 3.3.1 German Development Agency (GIZ)

The German Development Agency (GIZ) provides services worldwide in the field of international cooperation for sustainable development. Mainly commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), GIZ also works with the private sector, fostering successful interaction between development policy and foreign trade. Its areas of action include trade, climate change mitigation and adaptation, sustainable urban mobility, vocational training adapted to labour market needs, fund management, development partnerships with the private sector, and stakeholder dialogues.

The core competence of the Agency is capacity development. GIZ supports people in acquiring specialist knowledge, skills and management expertise. It helps organisations, public authorities and private businesses to optimise their organisational, managerial and production processes. It also advises

<sup>113</sup> BMZ (2016), Financing climate action – Germany as a responsible partner.

governments on how to achieve objectives and implement nationwide change processes by incorporating them into legislation and strategies.

### 3.3.1.1 Strategy

In the field of climate change, GIZ assists its partners in identifying the wide range of causes of environmental risks, helps modernise environmental policy at all levels, advises on regional environmental cooperation and develops strategies to embed environmental protection in other areas of policy. All in all, the agency implements the climate policy commitments from the German Government through practical interventions or specific projects.

The institution mainly offers advisory services for a specific partner country in three fields of activity: mitigating greenhouse gas emissions, adapting to climate change and climate financing: the latter, the most relevant for our study, helps countries tailor their projects in order to gain access to international funding available from climate funds, for example. Through these services, they develop climate-specific expertise, foster international development and support political change processes in partner countries in order to prepare them to face the challenge of climate change. This advisory work of GIZ is complemented with the work of KfW, a public development bank in Germany, which provides funding to development projects, which GIZ advises.

### 3.3.1.2 Projects

A first example of a project funded by GIZ is Energy efficiency in the construction sector in the Mediterranean (MED-ENEC).<sup>114</sup> Through this project, commissioned by the European Commission in the framework of the MEDA Programme, GIZ provides advisory services to the building sector on energy efficiency measures and the use of solar energy in Mediterranean countries. Energy supplies are to become more secure and the negative impacts of the dramatic increase in energy consumption on the environment and climate should be reduced, for which GIZ fostered training, pilot projects and the promotion of company joint ventures and technology transfers. Funded with €6.5 million disbursed between 2006 and 2015, the project was carried out in nine MEDA countries: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, the Palestinian territories, Syria (currently suspended), Tunisia and Turkey until 2010 and executed by the energy ministries and energy agencies in the nine partner countries.

The Moroccan Government is advocating greater energy efficiency and the use of renewable energies in order to combat climate change. Through the Green Mosques and the Transition to Clean Energy Project,<sup>115</sup> Morocco's mosques and their Islamic clerics are helping make people recognise the benefits of saving energy. This is the second example of GIZ's climate financed projects. GIZ is supporting this Moroccan initiative with strategic advisory and training services. A key component of this project focuses on enabling the private sector to deliver solutions for energy-efficiency and renewable energies in the future. For this purpose, more than 100 mosques are to be adapted with energy-saving lighting systems, solar water-heating plants and photovoltaic systems. Almost 40 mosques have already been completed. The project has devised an interesting financing system for this purpose: the companies foot the bill for the energy modifications themselves. Their earnings then depend on the volume of energy saved as a result of the technologies they install, which means the more efficient the buildings are, the more money they earn.

## 3.3.2 KfW

KfW Entwicklungsbank is a German Government-owned development bank. The majority of the lending is done in Germany and to a lesser extent in European countries. However, its largest subsidiary, KfW IPEX Bank GmbH, predominantly lends internationally and is the one responsible for funding development projects. It provides financing to governments, public enterprises and commercial banks engaged in microfinance and SME promotion in developing countries. Additionally, it also raises climate finance from

---

<sup>114</sup> <https://www.giz.de/en/worldwide/17540.html>

<sup>115</sup> <https://www.giz.de/en/workingwithgiz/41352.html>

capital markets. In 2014, the KfW Development Bank and DEG (its private sector arm) provided climate relevant flows amounting to €2.8 billion.

### 3.3.2.1 Strategy

KfW is working towards achieving the Paris Agreement goal of limiting the increase in global warming well below 2°C by promoting mitigation and adaptation projects.

KfW develops and implements instruments in order to finance environmental and climate protection in developing countries. KfW deploys instruments of German financial cooperation for climate change financing such as grants, participations and low-interest loans. In addition, and specifically for environmental and climate protection, there is also a range of special programmes and funds available that offer greater financial leeway and support particularly innovative or broad approaches.

The work of KfW is the "financial cooperation" branch, complemented by the "technical cooperation" branch of GIZ and other public agencies. The main sectors of financial cooperation are water supply and sanitation, renewable energy and energy efficiency, as well as the development of the financial sector.

### 3.3.2.2 Instruments

The funding is done through a variety of instruments used by development cooperation. These include loans close to market terms using its own resources ("promotional loans"), soft loans that blend KfW resources with support from the federal government's aid budget ("development loans"), as well as highly subsidised loans and grants. Climate-related projects in developing and emerging countries are funded over long periods with a mix of grants, participations and low-interest loans.

In addition, and specifically for environmental and climate protection, there is also a variety of special programmes and funds available that offer greater financial leeway, and support particularly innovative or broad approaches to reach small and medium-sized businesses as well as private households. Moreover, KfW has introduced corresponding promotional products for credit institutions in the partner countries. Partner institutions are provided with long-term credit lines. The funding model depends on the size of a country's debt, its economic output and level of development, the performance capacity of the project partner as well as the type of project.

Some funding lines also come directly from the German Federal Government's budget. Such grants are mainly allocated to less developed countries. To be eligible to receive this funding, development policy criteria must be met, including the partner country's ownership and commitment. In 2014, 39% of the German Federal Government's budget funds were dedicated to Sub-Saharan Africa.<sup>116</sup> More developed countries are also eligible for grants for projects that contribute directly to reducing poverty or to protecting global public goods.

Development loans are a combination of budget funds of the German Federal Government with KfW funds raised at favourable terms on the capital market. These loans were created in collaboration with the Federal Ministry for Economic Cooperation and Development (BMZ) to increase the funding volume for the projects and programmes in the partner countries. The terms and conditions are structured to ensure that the projects are able to bear the costs and that the loans comply with the international agreements for Official Development Assistance (ODA). Even though the terms of the development loans are higher than pure budget funds, they are significantly below market level.

Promotional loans are loans to partners in developing countries and emerging economies commissioned by the government that are 100% funded by KfW on the capital market. These loans are deployed for projects that are effective when it comes to development policy and viable in economic terms for which, however, funding is not available from the commercial banking sector (e.g. due to long financing terms required).

---

<sup>116</sup> <http://icr.unwto.org/ru/content/germany-kfw-development-bank>

### 3.3.2.3 Examples

**Water issues in Jordan:** The German cooperation agency advises Jordan on how to reduce water losses and tap alternative water resources for use in agriculture. There are two options: use treated wastewater or make a more efficient use of valuable water resources.<sup>117</sup>

**Wind energy in Morocco:** Morocco has been at the centre of attention for its national energy supply strategy, focused on renewable energies. By 2020, 42% of power plant capacity is to be generated by water, solar or wind power. To this end, KfW is providing a reduced-interest loan amounting to €180 million for four sites in the north of the country and a reduced-interest loan of €50 million for this wind farm. The national energy and water supply authority, ONEE, is the specialised institution in charge of securing the majority of the funding as it won the international public tender for Taza. This company will be responsible for building, operating and maintaining the plant.<sup>118</sup>

**Sustainable water management in Egypt:** The water resources from the Nile are reducing at a fast pace, while climate change, population growth, rising demand from neighbouring countries and inefficient use are making this precious commodity increasingly scarce. In order to tackle this issue, the Egyptian government drafted the first National Water Resources Plan in 2005 requiring implementation of integrated water resource management (IWRM). To this effect KfW plays a role in managing the scarce water resources efficiently and equitably and ensuring their ecological sustainability.<sup>119</sup>

## 3.4 Italy

### 3.4.1 Cassa Depositi e Prestiti (CDP)

Cassa Depositi e Prestiti (CDP)<sup>120</sup> is an Italian investment bank that was constituted in its current form as a joint-stock company in 2003. 80% of the share capital is owned by the Italian Ministry of Economy and Finance, 18% is held by various banking foundations, while the remaining 1.5% in treasury shares. Its role is very important for the promotion of national and international development programmes. CDP is today the third largest Italian bank according to the value of the total assets owned by the group (around €400 billion in 2015), after the banks UniCredit and Intesa Sanpaolo. As of 1 January 2016, CDP has also started to play its role as a financial institution for development cooperation with the aim of rapidly becoming the operational financial arm of the Italian "cooperation system". In the next few years, systematically with the other players in the field of cooperation, CDP will therefore contribute, within the competencies and responsibilities assigned in the existing rules and regulations, to ensure that development cooperation actually and tangibly becomes a strategic investment for Italy, to cope with the great challenges of eradicating poverty, security, global growth, climate change and migration.

#### 3.4.1.1 Environmental Strategy

With products targeted at local authorities and Italian companies, CDP supports the research for new low-impact production, the adoption of alternative and renewable energy sources, the improvement of infrastructure efficiency and the adoption of new forms of transport by private and public sectors. Through its projects, CDP is committed to promoting initiatives aimed at reducing energy consumption and the emission of pollutants and supporting new models of production and green transport systems. As a national promotional institution, it acts to further the objectives of the 20/20/20 Climate and Energy Package promoted by the European Union and encourage smart, sustainable and inclusive economic growth. CDP commitment to local areas and the environment is strategic. The 2016-2020 Business Plan

<sup>117</sup> BMZ (2015), Climate Action in practice, the contribution of the German Development Policy, [https://www.bmz.de/en/publications/topics/climate/Materialie243\\_climate\\_action.pdf](https://www.bmz.de/en/publications/topics/climate/Materialie243_climate_action.pdf)

<sup>118</sup> <https://www.kfw-entwicklungsbank.de/PDF/Entwicklungsfinanzierung/Länder-und-Programme/Nordafrika-Nahost/Projekt-Marokko-Wind-2014-EN.pdf>

<sup>119</sup> <https://www.kfw-entwicklungsbank.de/PDF/Entwicklungsfinanzierung/Länder-und-Programme/Nordafrika-Nahost/Projekt-Ägypten-IWRM-2014-EN.pdf>

<sup>120</sup> <http://www.cdp.it/>

identifies actions and steering policies for the Group companies, where environmental awareness is underpinned by assessments of the economic, social and environmental impact of all actions pursued.

### **3.4.1.2 Implementation**

#### *Kyoto Fund*

The Kyoto Fund was established by the 2007 Italian Finance Act to finance measures to reduce greenhouse gas emissions, aimed at implementing the Kyoto Protocol (Kyoto Law). The resources made available total €600 million. For the first planning cycle, completed on 14 July 2012, the Kyoto Decree assigned €200 million, divided between “measures” and regional areas. Resources which had not been used by the date of the entry into force of the “Growth Decree” have been earmarked for financing projects under the Fund for the Employment of Young People in the Green Economy Sector. The Fund provides subsidised loans for projects and initiatives in the green economy and in business sectors connected with making the country safer against flooding and earthquakes. Another section of the Kyoto Fund (“Energy-efficiency of school buildings”) is intended to provide subsidised loans for improving energy efficiency in public buildings used as schools – including nursery schools – and universities, and for public buildings used for art, music and dance training.

#### *European Energy Efficiency Fund (EEEF)*

The Fund, promoted by CDP, European Investment Bank (EIB) and the collaboration of the European Commission, promotes investments aimed at energy saving and the exploitation of alternative energy sources. Through CDP, Italy promotes the innovative public-private partnership aimed at mitigating climate change through energy efficiency measures and using renewable energy in EU member states. The commitment signed by the promoters of the fund is approximately €265, broken down as follows: European Commission for €125 million, EIB for €75m, CDP for €60m and Deutsche Bank AG, selected as fund manager for €5m. The main beneficiaries of the initiative are local and regional public bodies (including the municipalities) as well as public and private companies operating at the service of local authorities such as public service companies, public transport providers, social housing associations and companies that offer energy services.

#### *MATTM Fund*

CDP collects and manages funds from the Ministry of the Environment and the Protection of the Territory and Sea (MATTM in Italian) to promote projects aimed at combating climate change and land-based pollution. The promoted initiatives, typically implemented within the developing economies, are aimed at improving energy efficiency, risk assessment and skills sharing, dissemination and promotion of low-emission development models. The MATTM Fund was created in 2016 following the Paris Agreement (COP21). To date, the ceiling amounts to €54 million, which is likely to increase in the future. CDP plays the role of administrative management of the funds received, managing its financial reporting periodically.

#### *Sustainable Growth Fund*

CDP promotes the adoption by Italian companies of innovative production techniques, encouraging sustainable economic growth and a low environmental impact Sustainable Growth Fund. The Sustainable Growth Fund, set up in 2012 under the business incentive reform process, is the result of the reorganisation of the Special Technology Innovation Fund. Under the Measure for Sustainable Growth by the Ministry of Economic Development, CDP grants subsidised loans to companies seeking to promote R&D investments that have a significant impact on the competitiveness of the country's productive system, also in line with the objectives set by the Horizon 2020 programme. In particular, the Fund is geared to the following priorities:

- To promote research, development and innovation projects of strategic importance for the revival of the competitiveness of the production system;
- To strengthen the productive structure, the re-use of production facilities and the re-launching of areas that fall into complex crisis situations of national significance;
- To promote the international presence of businesses and to attract foreign investment.

To date, CDP intervenes with its subsidies to support loans on two of the active calls, “Digital Agenda” and “Sustainable Industries”, which provide a financial allocation of €100 million and €350 million, respectively.

### 3.5 Morocco

Morocco is a country highly vulnerable to the impacts of climate change. Its water resources are limited and the region as a whole suffers from regular scarcity, particularly around its coastal and desert areas. However, Morocco has developed a strong public sector and private sector capacity and has become less dependent on official development assistance. In recent years, the country has given high priority to climate change and environmental issues and has become a regional leader in the promotion of renewable energy.

#### 3.5.1 Sustainable Development and Climate Change Strategies

In line with the international commitments made in the Rio de Janeiro (1992) and Johannesburg (2002) Earth Summits, Morocco put in place the foundations for sustainable development in the country through several political, institutional, legal and socioeconomic reforms. This process culminated with the adoption of the Charte Nationale de l’Environnement et du développement Durable,<sup>121</sup> written in 2009 to establish some baselines and principles for the battle against climate change and the policies towards the preservation of the environment. Two specific strategies followed this process:

- The National Strategy for the Protection of the Environment (SNPE);
- The National Strategy for Sustainable Development (SNDD).

In addition, the Moroccan Ministry of the Environment established the Climate Change Competence Centre (4C) to coordinate all the actions in the field of climate change and sustainable development.

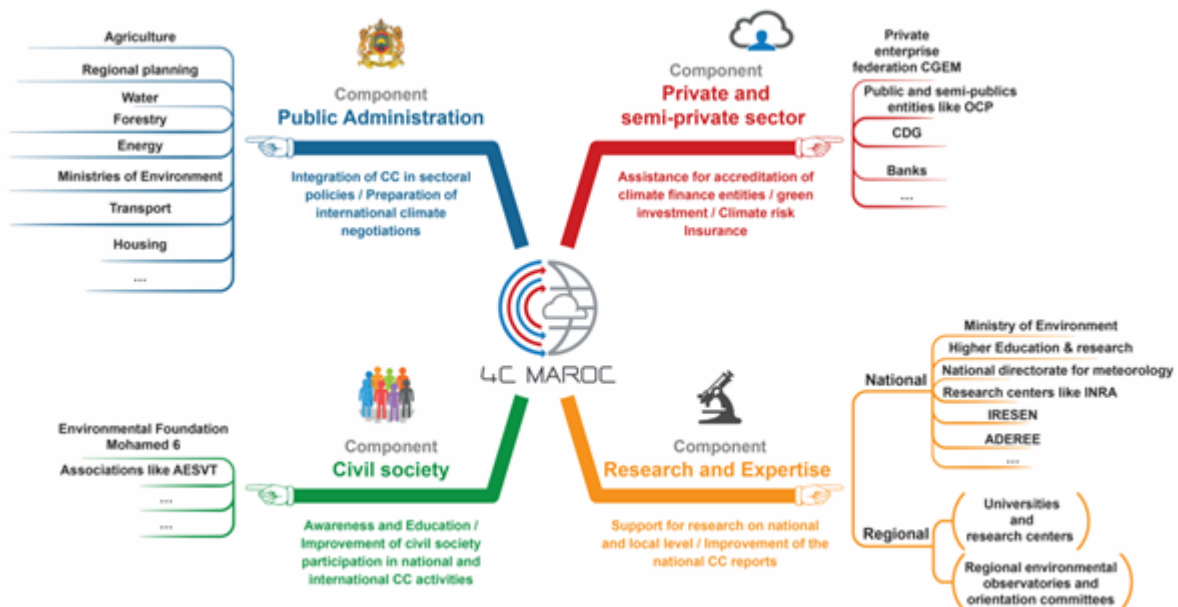


Figure 24: Centre de Compétences Changement Climatique du Maroc. Source: 4C

##### 3.5.1.1 Strategies

As mentioned before, Morocco has developed two important environmental actions. In 2008, it adopted its National Energy Strategy, the National Priority Action Plan, which established a target of 42% of

<sup>121</sup> <http://www.environnement.gov.ma/fr/plan/80-categorieaccueil/597-la-charte-nationale-de-l-environnement-et-du-developpement-durable-suite-2>

renewable energy capacity by 2020. This plan was renewed in 2016 with a new target of 52% installed renewable energy capacity for 2030. The country's renewable energy ambition is based on four strategic pillars:

- Security of supply with diversification of fuel types and origins;
- Access to energy for all segments of society at affordable prices;
- Promotion of renewable energy and energy efficiency;
- Regional energy integration among the Euro-Mediterranean markets.

Moreover, the Moroccan Government has also developed a National Strategy for Durable Development (*Projet de Stratégie Nationale de Développement Durable 2030*),<sup>122</sup> which is today the basis for all the projects implemented on the environment. This strategy is based on seven priority axis:

- Governance: consolidate the sustainable development governance;
- Green economy: reach a successful transition towards a green economy;
- Biodiversity: improve the management and valorisation of the natural resources and improve biodiversity conservation;
- Climate change: accelerate the implementation of the national policy to combat climate change;
- Sustainable territories: pay particular attention to sensitive areas.

### 3.5.1.2 Instruments and Resources

The projects implemented receive funding from a variety of sources both at domestic and international level. Domestic resources include public expenditure and budget resources, electricity tariff and energy subsidies, market formation and readiness.

However, international resources include the role of international climate funds such as the Adaptation Fund, the Green Climate Fund and the Global Environment Facility, among others. There is also a role for private sector investment in climate action in Morocco.

### 3.5.1.3 Projects

The projects developed by the Moroccan Government in the field of green finance and sustainable development cover a wide range of smaller areas such as biodiversity, air quality, environmental evaluations, depollution and waste management, among others. We will mention here some examples of implemented projects.

An important project worth mentioning again is the **Ouarzazate Complex**, Morocco's first large-scale solar power plant and the biggest project of this kind in the world. With an estimated cost of around \$9 billion, the complex foresees the construction of five CSP complexes country-wide between 2015 and 2020 for a total capacity of 2000 MW. The project is being financed by many actors, both at national and international level through grants and loans. On the other hand, the Ouarzazate Complex is designed to be managed and financed as a public-private partnership (PPP) by bringing together private investors, international finance institutions (IFIs) and the Moroccan Government.

---

<sup>122</sup> <http://www.environnement.gov.ma/fr/strategies-et-programmes/snodd?showall=1&limitstart=>



Public Financier	Commitment in mio USD
African Development Bank (AfDB)	135
EC: European Commission	122
EC: European Investment Bank (EIB)	473
France: Agence Française Développement (AFD)	68
WB: International Bank for Reconstruction and Development (IBRD)	400
Germany: Kreditanstalt für Wiederaufbau (KfW)	884
Borrower: Government of Morocco/MASEN	357
Clean Technology Fund (CTF)	238
<b>Total public finance commitment</b>	<b>2,677</b>

**Figure 25: Public Financing Plan for the Noor Ouarzazate CSP Complex, World Bank, 2016**

Another project developed by the Moroccan Government is the **Adaptation Plan for Natural and Recreational Spaces**. Demand for recreational spaces by Moroccan cities is growing significantly due to the increase in the urban population rate and the growing need for leisure and recreation.

In order to preserve and make these spaces more welcoming to the public, the programme for the development of recreational spaces has been established, allowing the design and implementation of adapted development and restoration plans, in partnership with relevant stakeholders. The objectives of this project include:

- Developing environmentally-friendly semi-urban tourism;
- Making the forest more welcoming to the public through appropriate recreational facilities by opting for equipment that blends in perfectly with the natural landscape;
- Creating a space for culture and environmental education and limiting the degradation of these areas due to poor visitor practices.

The **Mohammed VI Foundation for Environmental Protection (FM6E)**, created in 2001, is another case. Its main mission is to raise awareness and educate citizens, especially youths, in preserving their environment. Among its projects is the programme Young Reporters for the Environment. Since its launch in 2002, the programme has mobilised more than 17,000 students from the age of 12 to 18, who conducted journalistic investigations on topics related to their immediate environment (waste, water, energy, agriculture, cities, coasts and biodiversity, etc.).

Other project examples are national waste management programmes, atmospheric emissions programmes, industrial pollution and risk prevention programmes, and programmes for the management and preservation of coastal zones.

## 3.6 Egypt

### 3.6.1 Egyptian Environmental Affairs Agency

The Ministry of State for Environmental Affairs<sup>123</sup> is the ministry responsible for environmental affairs in Egypt. It was established in 1997 and works in cooperation with all development partners to promote environmental vision and outline of environmental policies in Egypt. The policies of the ministry are implemented by the Egyptian Environmental Affairs Agency. The purpose is to introduce and integrate environmental dimensions in all national policies, relevant to protection of human health and management of the environment, to preserve national natural resources within a context of sustainable development and, as a short-term objective, to reduce pollution levels and improve quality of life.

<sup>123</sup> <http://www.eeaa.gov.eg/en-us/aboutus/aboutministry/policies.aspx>

### 3.6.1.1 Strategy

The environmental policy seeks to achieve environmental protection through the establishment of proper institutional, economic, legislative and technical frameworks at the local, regional, national and international levels. The Agency's activities are planned through the **National Environmental Action Plan (NEAP)**.<sup>124</sup> It was developed in consultation with central and local public bodies and NGOs. The plan, which will need to be updated this year within the new Sustainable Development Strategy **Egypt Vision 2030**,<sup>125</sup> is an Agenda for Action over 15 years (2002-2017). The priorities to be addressed in each 5-year plan will naturally depend on the overall policy set by the government for each of these plans and the NEAP is the main environmental source document for line ministries as they develop their sectorial action plans for the next five years. The programme provides for initiatives in the following areas of intervention, water management, air quality, sound management, protecting marine environment, solid waste management and biodiversity.

### 3.6.1.2 Implementation

The plan provides the identification of both public and private funding for the implementation of environmental strategies. NEAP projects implemented by line ministries will have to be allocated funds through the State Budget. The government also finances projects through international assistance funds presented to the Egyptian Government from development agencies of donor countries. In addition to the traditional public funding channels, the NEAP plans to fund its interventions through a series of private or non-conventional channels.

### 3.6.1.3 Examples

#### *Sustainable Transport Project for Egypt (STP)*

The Sustainable Transport Project for Egypt<sup>126</sup> is a project developed between 2009-2017 by the Egyptian Environmental Affairs Agency, with a total investment of \$44 million, 7 million funded by GEF and UNDP and 37 million by the Egyptian Government and the private sector. The project goal is to reduce the growth of the energy consumption and the related greenhouse gas emissions of the transport sector in Egypt, while simultaneously mitigating the local environmental and other problems of increasing traffic such as deteriorated urban air quality and congestion. This is to be achieved by increasing or sustaining the modal share of greenhouse gas emission reducing public and non-motorised transportation options, discouraging the use of private cars and facilitating freight transportation by more energy efficient truck operations and increasing the share of cargo transported on rail and inland waterways. The STP is envisaged to achieve this by working for the development of new, integrated high quality public transport services for Greater Cairo and its satellite cities (to exert a shift from car use) and facilitating its effective replication.

#### *Industrial Energy Efficiency (IEE) Project*

The Industrial Energy Efficiency (IEE) project<sup>127</sup> started in January 2013 with a fund from GEF for \$4 million and input from the Egyptian Government that is equivalent to \$24 million, in cash and in-kind. The project is implemented by the United Nations Industrial Development Organization (UNIDO), with the Egyptian Environmental Affairs Agency as the lead executing partner and in full cooperation with the Industrial Development Authority, the Egyptian Organization for Standardisation, the Industrial Modernization Centre and the Federation of Egyptian Industries. The IEE project seeks to address some of the key barriers to industrial energy efficiency, to deliver measurable results and to make an impact on how Egyptian industries manage energy through an integrated approach that combines capacity-building and technical assistance interventions at the policy, institutional and enterprise levels. Primary target groups

---

<sup>124</sup> [http://www.egyptchm.info/?wpfb\\_dl=138](http://www.egyptchm.info/?wpfb_dl=138)

<sup>125</sup> <http://sdsegypt2030.com/?lang=en>

<sup>126</sup> <http://stp-egypt.org/en>

<sup>127</sup> <http://ieeegypt.org>

of the project are industrial managers, engineers, sellers and other professionals and policy-making institutions.

## 3.7 Turkey

Turkey is a party to most of the international environmental conventions that provide appropriate policy frameworks and promote cooperation and coherent action at global, regional and national levels to address environmental problems.<sup>128</sup> Nationally, it is the Ministry of Environment and Urbanization (MoEU) that leads and coordinates the efforts for climate and environmental-related policies and regulations. MoEU is the National Focal Point of the UN Framework Convention on Climate Change (UNFCCC). The Ministry is also responsible for coordinating high-level activities for climate change mitigation and adaptation actions at the Coordination Board of Climate Change (CBCC). In this role, it works alongside other ministries, institutions, organisations and NGOs relevant for adaptation activities.

### 3.7.1 Climate Change Strategy

#### 3.7.1.1 Strategy

The National Climate Change Strategy for Turkey was approved by the Higher Planning Council and took effect in 2010. The National Vision in this strategy is defined within the scope of becoming a country integrating climate change-related objectives into its development policies, disseminating energy efficiency, increasing the use of clean and renewable energy resources, actively participating in the efforts for tackling climate change and providing its citizens with a high quality of life and welfare in a low-carbon economy. In the Strategy Document, one of Turkey's targets within the scope of basic principles is to increase access to the financial resources required for undertaking mitigation and adaptation activities through the public and private channels of green finance.

#### 3.7.1.2 Implementation

In order to ensure implementation of the National Climate Change Strategy, in 2011 the National Climate Change Action Plan (NCCAP)<sup>129</sup> was prepared and published, including strategic principles and goals on greenhouse gas emission control and adaptation to climate change for the period of 2011-2023. The preparation of Turkey's NCCAP was based on the policy of the 9th Development Plan, which states a National Action Plan setting greenhouse gas emission decrease policies and measures with the participation of all related stakeholders under the UN Framework Convention on Climate Change. Therefore, the NCCAP was prepared on the basis of the sectors specified both in Annex A of the Kyoto Protocol and in the UNFCCC National Communication and Greenhouse Gas Inventory reporting formats and includes the goals and actions on energy, buildings, transportation, industry, waste, agriculture, land use and forestry, climate change adaptation and cross-cutting issues. The institutions involved are the Ministry of Environment and Urbanisation, the General Directorate of Environmental Management and the Climate Change Department.

#### 3.7.1.3 Examples

##### *Integrated Approach to Management of Forests in Turkey*

The Integrated Approach to Management of Forests in Turkey<sup>130</sup> is a project developed in 2013 by the Turkish Government in collaboration with UNDP, GEF and other local partners, funded with a budget of \$7.2 million. The project promotes an integrated approach to management of forests in Turkey, demonstrating multiple environmental benefits in high conservation value forests in the Mediterranean forest region. More particularly, it demonstrates approaches to generating, measuring, reporting on and verifying carbon, biodiversity and socioeconomic benefits generated through this integrated approach at

<sup>128</sup> <https://www.eea.europa.eu/soer-2015/countries/turkey>

<sup>129</sup> <https://www.iea.org/policiesandmeasures/pams/turkey/name-36358-en.php>

<sup>130</sup> [http://www.tr.undp.org/content/turkey/en/home/operations/projects/environment\\_and\\_energy/integrated-approach-management-forests.html](http://www.tr.undp.org/content/turkey/en/home/operations/projects/environment_and_energy/integrated-approach-management-forests.html)

five Mediterranean forest sites (over a total area of 450,000 ha). It then builds on these results through the development of a forest sector NAMA (Nationally Appropriate Mitigation Actions) covering Turkey's Mediterranean forests.

#### *Turkish Sustainable Energy Finance Facility (TurSEFF)*

In 2010 the EBRD launched a new financing facility, TurSEFF,<sup>131</sup> to address shortcomings in the Turkish market for sustainable energy. Through this facility, the EBRD provides credit lines to local financial institutions for on-lending to small and medium-sized enterprises (SMEs) to finance energy efficiency and renewable energy projects. The EBRD used its own funding, as well as financing from the Clean Technology Fund (CTF) and the European Union to support five major Turkish banks, Akbank, Denizbank, Garantibank, Isbank and Vakifbank, as they created lending products for sustainable energy, assessed loan requests and verified the implementation of projects. In the context of Turkey's rising energy demand and associated challenges, TurSEFF is designed to improve the security of energy supplies, support a transition to clean energy use by reducing reliance on fossil fuels, and increase private sector involvement in the development and financing of energy efficiency and renewable energy investments in the country.

---

<sup>131</sup> <http://www.turseff.org/en>

## 4 Green Finance in the Private Sector

---

### 4.1 Introduction

The actors examined previously are mainly public institutions. Although many of their instruments and initiatives are geared towards *involving* private capital, it is also interesting to look at green finance initiatives that are developed by the private sector. While the role of the public sector is crucial to the development of green finance, the next step will need to be the greater involvement of the private sector in green investments and to involve a market-based approach in a green transition.

This step represents a unique opportunity to convey remarkable sums of private capital to tackle the most urgent global challenges, complementing government resources and philanthropic grants. After the Paris Agreement, there is a shared understanding in the climate process that tackling climate change will not be possible without major mobilisation of private finance. Transforming economic activity in a sustainable way requires transformation of common business practices in the private sector, which inevitably needs private investment.

The funding of green and sustainable activities has been supported lately by the appearance of innovative financial instruments addressed to engage private investors in the protection of the environment. The process, especially in the first phase, goes through close collaboration between public and private initiatives. Of course, one should not think of the public and private sectors as two separate entities operating in separate projects but as different parts that form the green finance universe in a complementary way.

In this chapter we describe the private sector of green finance, the differences with the public sector and the challenges faced. We then provide a general qualitative overview of the sector, describing the type of actors and the main instruments used worldwide. We also analyse the market trends and the outlooks for the future, and we show examples and good practices of private green finance in the Mediterranean area. Finally, we talk about strategies put in place to overcome the main barriers in the industry.

### 4.2 Definition, Challenges and Barriers

#### 4.2.1 Need for a Financial Return

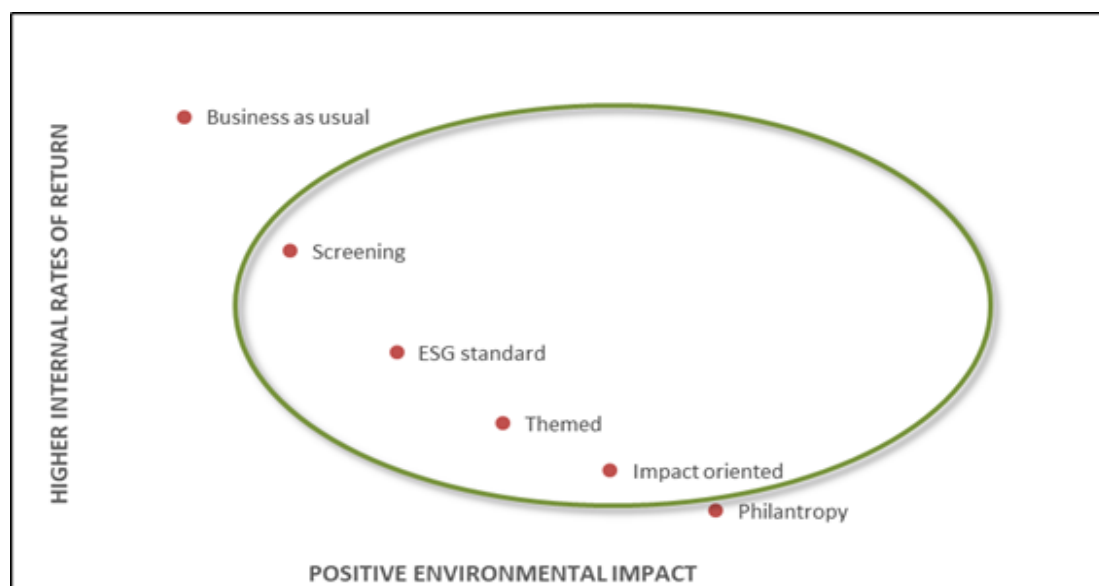
As with green finance in general, it is not easy to define the boundaries of a potentially large sector, not yet regulated by specific international legislation. First of all, we can highlight the main difference between the public sector and the private sector in green finance: if for the public institutions profit on investment can be a marginal aspect because their ultimate purpose is the collective interest, for a private investor an investment targeting an environmental improvement must be based on solid financial returns.

This is the first challenge to tackle in the green finance private sector: to make green investments not only financially viable but also competitive in the market. This is possible through a strong commitment from governments that can support the industry at its early stage, for example through regulation, incentives or tax reductions.

Capital has traditionally been allocated through two investor categories: on the one hand, the great majority is composed by those who are seeking risk-adjusted financial returns, with no focus on the environmental consequences of their investment. On the other, there are investments addressed to reach a positive environmental or social impact, with no or low expectation for financial gains. Looking at the green finance private sector, we see a merger of these two types of investors. The co-existence of these two goals – financial return and environmental benefits – plays a key role in the success of green investing.

A typology is shown in the figure below that includes different types of financial investments. It ranges from traditional mainstream investments to simple philanthropic grants. Scrolling down the internal rates of return expectation, the environmental impact targeted by the investment – usually – rises. This is due to the lower priority given by the investor to financial attractiveness, in favour of an increased focus on

environmental gains. The categorisation of the investment typologies is not a unique one. They are instead spread all along a continuum, from a higher risk profile to a higher environmental impact.



**Figure 26: Investment typology.** Source: adapted from United Nations Global Compact, UNCTAD, UNEPFI and PRI, *Private Sector Investment and Sustainable Development*, (2015)

Green investing in Table 5 is divided into five branches of investment, ranging from a higher to lower search for financial returns: screening, ESG, themed, impact-oriented and philanthropy. However, philanthropy donations that are in some way linked to expectations for financial gains should actually be taken as grants instead of investments. On the other hand, the main difference between impact and themed investments is that the latter entail competitive returns, together with environmental benefits, while impact-oriented investments are often usually compromised by below market financial yields. Definitely, from the point of view of private investors, we can consider as green finance all types of investments that range from impact-oriented to screening.

**Table 5: Characteristics, examples and categorisation of the main investment typologies.** Source: Bridges Ventures, 2012

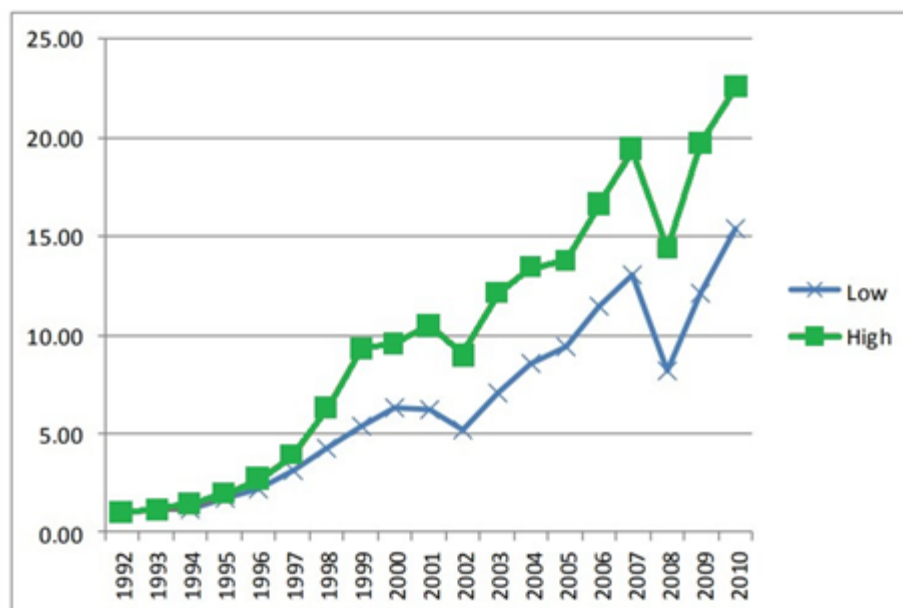
INVESTMENT TYPOLOGY	CHARACTERISTICS	INVESTMENT HORIZON	EXAMPLES
<b>Business as usual</b>	No or limited attention is given to social and environmental consequences of the investment.	From 1 to 20 years	<i>Whatever investment made only focusing on the financial return.</i>
<b>Screening</b>	Assuming some negative criteria as exclusionary, the investor must be assured that the investment will be accomplished with all predefined requirements.	From 3 to 10 years	<i>Investment fund that imposes a "green" screening on its investments.</i>  <i>Company that made its operations on the basis of filtering environmental criteria.</i>

INVESTMENT TYPOLOGY	CHARACTERISTICS	INVESTMENT HORIZON	EXAMPLES
<b>ESG Standard</b>	ESG information leads the investor, who complements financial trends with qualitative performance in environmental, social and governance terms.	From 3 to 10 years	<i>Fund that gives priority to investments towards top-class ESG companies.</i>
<b>Themed</b>	Financial operations are selected based on the environmental issue addressed by the investment.	From 7 to 10 years	<i>Investment fund targeting the rehabilitation of degraded rural areas.</i> <i>Microfinance structured fund that provides loans to local communities for the conservation of a threatened natural resource.</i>
<b>Impact oriented</b>	Also with potential below market returns, an investment is made based on the environmental outcomes that it would achieve.	From 5 years to long term	<i>Investment fund providing debt or equity capital to green businesses.</i>
<b>Philanthropy</b>	No financial return is needed for targeting an environmental issue. The impact is all that matters.	Long term	<i>Financial actor that devotes part of its earnings to environmental charitable activities.</i>

However, this theoretical classification regarding the type of investment in relation to the motivation that moves it will not suggest that the environmental sustainability of an investment necessarily implies lower – or even zero – profits. The industry's challenge is to succeed in making environmentally-sustainable investments economically profitable in a market context.

This goal is not only realistic but in many cases already possible on the financial markets. The issue is not the lower return of green investments but the perception and belief of private investors that there will be lower returns. For the stock market, companies with a higher rating of environmental and social responsibility often generate positive yields in terms of share performance, even in periods of crisis. For example, a study developed by Harvard Business School<sup>132</sup> compared the stock-value performance gained in 18 years by two clusters of 180 companies: 90 defined as "high sustainability" and 90 "low sustainability". The results showed that the most responsible companies performed + 4.8% higher than the others. In addition, the volatility of the most virtuous companies in terms of environmental and social sustainability was lower (figure below).

<sup>132</sup> HBS (2011), The impact of corporate culture of sustainability on corporate behaviour and performance, [http://www.hbs.edu/faculty/Publication%20Files/SSRN-id1964011\\_6791edac-7daa-4603-a220-4a0c6c7a3f7a.pdf](http://www.hbs.edu/faculty/Publication%20Files/SSRN-id1964011_6791edac-7daa-4603-a220-4a0c6c7a3f7a.pdf)



**Figure 27: Financial performance (in dollars) of the most responsible (High) and less responsible (Low) businesses.**  
 Source: Harvard Business School, *The impact of corporate culture of sustainability on corporate behaviour and performance*, 2011

Another critical aspect of the attractiveness of green investment is not so much the financial return itself but the timing of this return. The so-called "tragedy of the horizon"<sup>133</sup> is that imminent systemic crises (especially environmental) force operators to cautious, short-term behaviours, and this increases the risks of systemic crises in an apparently unkindly vicious circle. The systemic risks that emerged in recent years have encouraged more and more the tendency to short-term investment, while investment in sustainable projects requires a time horizon and a medium/long-term vision. Investment activities have an average turnover of 21 months. Almost 90% of institutional equity funds sell their assets after less than three years, even when longer term they favour more financial performance. Part of the problem for the green economy is that equity investments by institutional funds have an excessively short turnover.

#### 4.2.2 Need for a Clear Definition

The other big challenge for the private green finance sector is to define and identify investments that can be considered "green". Given the rapid development of the sector, without standardised, clear and efficient legislation, the risk is to fund projects that are not respectful of the environment but are classified as green. As we have already done before, we will consider green finance as a wide range of investment, of which climate finance, more clearly defined by the UNFCCC, is only a specific sub-sector.

First of all, green finance can be understood as the "green version" of a variety of credit services in the context of a green economy. The hypothesis is thus based on an analogy: if it is true that traditional finance is aimed at supporting the real economy of the capitalist type, then we can suppose that green finance supports the economy according to the green perspective. From this point of view, the general problem is the correct definition of what a green economy is. In fact, more than the classification of productions, it is the investment's general impact on the environment that could be considered. For example, a project to finance the reduction of the environmental impact of a coal power plant could be considered green, while the implementation of renewable energy plants built not respecting environmental and landscape standards cannot be green. Therefore, the financial activity of a business in the "brown" industry<sup>134</sup> could be considered green, whereas an activity in the supposedly "green sector" may not be as green as would be hoped.

<sup>133</sup> <http://www.tragedyofthehorizon.com>

<sup>134</sup> For example, the non-renewable energy industry.



In many cases, furthermore, there is an overlap in the evaluation of the investment within the environmental issues (green economy) and social issues such as workers' rights and attention to the community and stakeholders. In this case, it is more correct to talk about “responsible finance”, or “ethical finance”, as a macro-category that also includes green finance. The outlined definition should therefore be improved to succeed in developing the market.

#### 4.2.2.1 *Current Criteria and Principles*

In order to make investments in financial markets that can be defined as green, it is not only necessary to adopt criteria that determine what can be considered as such but also to implement a system of evaluation and control. This is probably the biggest problem to be faced in the development of the industry due to the lack of legislation and standardisation at international level. However, there are many initiatives that build methods and identification criteria for green investments. The problem is to orient and identify reliable certifications in a very fragmented universe of voluntary criteria developed by various market actors.

One point of reference are the six principles promoted by the UN in 2006, known as Principles for Responsible Investment (PRI),<sup>135</sup> which have been voluntarily subscribed to by 1,380 financial industry companies with a total of 59 billion trillion assets under management.

They are committed to incorporating green themes into analysis of investment processes, business policies and practices, seeking transparency in the partners, promoting environmental and social responsibility and documenting activities and progress. These principles envisage the assessment of investments according to the so-called Environmental, Social and Governance (ESG) criteria. ESG is a general criteria used by responsible investors to evaluate a company performance. The assessment of the business takes into account not only its financial profitability but also the impact and outcomes of the company. In particular, environmental parameters for the ESG look at how corporate models of production deal with waste management, polluting emissions, energy usage, water and resources exploitation, animal treatment and ecosystem conservation.

ESG scores, however, are not objective and depend on investor preferences and experience. There is no official and standardised methodology in the application of criteria and their evaluation: every country, every industrial sector, every enterprise can implement a different model of environmental or social variables integration. The mechanism is based on the credibility and reputation of the organisation and on the investor's trust. Generally, ESG criteria for a company or project are commissioned to external evaluation bodies, the ESG rating agencies, which provide independent evaluation.<sup>136</sup>

A better definition of criteria can be found for the financial instruments that have reached a more mature development level within green finance: green bonds. With regard to these instruments, the most used criteria are the Green Bond Principles (GBP), developed by the International Capital Market Association (ICMA).<sup>137</sup> The GBP, updated as of June 2017, are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond. The GBP are intended for broad use by the market: they provide issuers with guidance on the key components involved in launching a credible green bond. They help investors by ensuring availability of information necessary to evaluate the environmental impact of their green bond investments.

Another widespread standard, specific for the climate bonds market, is the Climate Bonds Standard implemented by the Climate Bonds Initiative,<sup>138</sup> a UK-based NGO.

Even in this case, however, we are not talking about a standardised global certification. Green bonds can be issued currently under a wide variety of voluntary standards, and no monitoring mechanism exists to

---

<sup>135</sup> <https://www.unpri.org>

<sup>136</sup> Novethic (2013), Overview of ESG Rating Agencies, [http://www.novethic.com/fileadmin/user\\_upload/tx\\_ausynovethicetudes/pdf\\_complets/2013\\_overview\\_ESG\\_rating\\_agencies.pdf](http://www.novethic.com/fileadmin/user_upload/tx_ausynovethicetudes/pdf_complets/2013_overview_ESG_rating_agencies.pdf)

<sup>137</sup> ICMA Paris Representative Office (2017), The Green Bond Principles 2017, <https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

<sup>138</sup> <https://www.climatebonds.net/standards>

ensure compliance even with either the two main frameworks, the Green Bonds Principles and the Climate Bonds Standards.

#### 4.2.2.2 The Problem of Greenwashing

In the absence of clear regulation of what can be defined as "green", the phenomenon called "greenwashing" may occur. Greenwashing is a typical example of what in economic theory is called "informational asymmetry".<sup>139</sup> Informational asymmetry is a condition where information is not fully shared among individuals involved in the economic process: some of the agents concerned have more information than the rest of the participants and can benefit from this configuration. Practically translated in the context of green finance, this means that those who invest in a green product are not able to know exactly the real impact of the project on the environment. If the quality of the investment products cannot be evaluated by the buyer because of the information asymmetry, the seller is encouraged to propose "not-really-green-products" by selling them as green. The buyer, on the other hand, takes into account this behaviour of the seller and states that the actual quality of the products remains unknown. This problem means that, without credible guarantees, the market equilibrium makes the best products uncompetitive in term of positive impact on the environment.

However, identifying and controlling sustainable environmental projects entails additional transaction costs that could make investments in green finance less competitive. All certifications attesting the green nature of an investment are based on flexible procedures, soft law codes and voluntary standards. In this context, green project definitions may vary depending on industry or geographical location. This means that every actor in the market can choose the parameters to label an investment as "sustainable", and it is thus difficult to make them comparable and determine their real value.

For example, in the list of financeable projects with green bonds in China, according to the China Central Bank Guidelines 2015,<sup>140</sup> there are programmes for solar and wind and efficient management infrastructure for water but also power plants with coal technology, which is supposed to reduce the impact of traditional coal-fired power plants.<sup>141</sup>

In general, a greater financial disclosure is needed for the development of this market. Labelling financial products as green without a public control mechanism leaves open the question of the credibility of these instruments and of the whole industry. We will discuss the possible strategies to deal with this problem in section 4.6.

### 4.3 Industry Overview

#### 4.3.1 Credit Sector and Purely Financial Sector

To better understand the green finance private sector, we can make a first distinction between the **credit sector** and the **purely financial sector**.

- **Credit sector:** Green credit market actors are the same as in the "traditional" market: businesses, consumers, financial intermediaries and institutions. What makes the difference is the cause of the funding application. In fact, according to the credit channel for productive investments, we can have the case of companies that have access to credit to develop green businesses, or to install low environmental impact production facilities, or to develop projects that will reduce the environmental impact. Furthermore, consumers can also access financing for investment in green products, for example the purchase of energy-efficient household appliances, renewable energy plants and the use of environmentally-friendly means of transport. To meet these forms of spending, however, there is no need for particular channels outside the current framework. In other words, for these forms of expenditure, the channel of supply of liquidity by banks or

---

<sup>139</sup> G20 Green Finance Study Group (2016), G20 Green Finance Synthesis Report, [http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis\\_Report\\_Full\\_EN.pdf](http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis_Report_Full_EN.pdf)

<sup>140</sup> [https://www.climatebonds.net/files/files/CBI-IISD-Paper1-Final-01C\\_A4.pdf](https://www.climatebonds.net/files/files/CBI-IISD-Paper1-Final-01C_A4.pdf)

<sup>141</sup> Climate Bonds Initiative (2016), Roadmap for China: green bond guidelines for the next stage of market growth, [https://www.climatebonds.net/files/files/CBI-IISD-Paper1-Final-01C\\_A4.pdf](https://www.climatebonds.net/files/files/CBI-IISD-Paper1-Final-01C_A4.pdf)

intermediaries is the traditional one, and the economic operation assumes a green connotation only because the credit obtained is intended for consumption or production of green goods.

- **Purely financial sector:** In the financial sector, there are financial instruments specifically designed in the green sense and used for speculation, diversification or hedging, and investors can be both consumers and businesses. For example, there are emission-related financial instruments (Emission Trading Systems), weather derivatives (catastrophe bonds) typically used to transfer a pure risk such as climate (floods, hailstorms, floods, hurricanes, temperature deviations from the norms), which may affect the production of particular sectors of economic activity (agriculture, energy, tourism).<sup>142</sup> There are also traditional instruments used for speculative purposes, diversification and hedging of other assets: for example, there are funds that select securities in portfolio or investment assets based on environmental sustainability criteria, or the so-called "green indices", whose value is determined by listed companies that show virtuous behaviours with regard to the environment or that operate in areas of economic activity with a "green" vocation.

### 4.3.2 Actors

Private investments in the green finance sector can come from a wide variety of actors, which largely correspond to traditional market players. The types of investors differ widely, from a geographical to a sectorial point of view. Furthermore, they also vary depending on the different roles they play in the development of the green finance sector. Here is a list of the main actors of private green investments:

**Investment banks:** As green projects improve their financial return, investment banks and other financial actors (e.g. insurance companies) increase their interest in the green finance industry. Many big banks in Europe, such as Intesa Sanpaolo, BBVN and Crédit Agricole, have long developed various green finance initiatives.

**Commercial banks:** Under this category, we can find any bank that decides to offer green savings products. A specific example, which adopts environmental sustainability as a general criterion for the entire business, is provided by the ethical banks, like Banca Etica in Italy and Fiare in Spain.

**Private companies:** An increasing number of sustainable production practices have emerged in the last decade. For instance, some multinational corporations are targeting climate change by investing in projects that sequester carbon, improving ecosystems resilience or reforestation. In recent years, furthermore, many private companies have begun to raise funds by issuing green bonds. In the Mediterranean area, some multi-utilities such as Italian Hera or French Engie are using these tools to raise green funding.

**Investment funds:** Setting up an environmental fund to finance green projects is an efficient solution to address environmental problems. In Europe, the management of green funds is highly concentrated among players that have developed and promoted green investment strategies and responsible investment for many years. For the Mediterranean countries, we can record the particularly important role of French BNP Paribas IP, which currently manages 8 green funds for an amount of €2.5 billion.

**Foundations:** An increasing number of private foundations issue grants targeting green projects that prove to involve a long-lasting programme. The most important examples of such initiatives come from the United States, where foundations such as The David and Lucile Packard Foundation have long been active in funding green projects.

**Consumers and retail investors:** A key role in increasing green investments is consumer activity that requires credit for green products, such as domestic photovoltaic plants, energy efficiency measures and electric cars. Moreover, individuals' private savings can be geared towards investing in retail green products.

---

<sup>142</sup> Boido, P. (2015), *Alternative Risk Transfer and Structured Bank Finance*, McGraw-Hill Education (Italy).

### 4.3.3 Instruments

Green finance products can be divided into four categories: retail banking products, corporate banking and investment products, asset management products, and insurance products. What is presented is therefore a general taxonomy that can be found on the market in principle. However, it is not exhaustive and, in particular, it is not certain that all intermediaries in the Mediterranean region supply chain have these products.<sup>143</sup>

There are two reasons to maintain such a general taxonomy:

- The financial market is an intangible and global market, whereby counterparty contracts can be signed in different parts of the world, and any intermediary or commercial bank can offer diversified products as long as they satisfy the criteria of safeguards set under the supervision of sovereign central banks.
- It should also be noted that the classification is provided by field scholars, as there is no standard legal definition defining a financial product such as a green product.<sup>144</sup>

Finally, some product typologies correspond to those discussed in previous chapters for public institutions. The difference is that, in this case, they are private actors to implement and offer these instruments on the market.

**Table 6: Classification of green financial products**

<b>Retail banking products</b>	
<b>Green Mortgages</b>	Loans for buying homes built according to energy efficiency criteria or powered by low impact energy sources. The incentive for subscribing to these mortgages is due to the application of a lower interest rate than the traditional ones.
<b>Green Equity Loans</b>	Loans, at affordable rates or cheaper than those of the traditional market, mainly aimed at the installation of power supplies from renewable sources.
<b>Green Commercial Building Loans</b>	Financing the renovation of buildings according to the criteria of energy saving, waste reduction and emission control; they turn to the commercial and non-residential branch.
<b>Green Car Loans</b>	Loans at lower market rates to buy cars with proven energy efficiency.
<b>Green Cards</b>	Credit/debit cards related to environmental activities, they provide a donation or environment-oriented investment by the issuer based on the value of the chartered purchase of the cardholder.
<b>Green Deposits</b>	They are technically similar to ordinary bank deposits, but the bank pledges to invest a share of earnings in green assets.
<b>Corporate, banking and investment products</b>	

<sup>143</sup> Landini, S. (2012), Introduction to green finance, IRES Piemonte.

<sup>144</sup> UNEP (2007), Green Financial Products and Services - Current Trends and Future Opportunities in North America, [http://www.unepfi.org/fileadmin/documents/greenprods\\_01.pdf](http://www.unepfi.org/fileadmin/documents/greenprods_01.pdf)

<b>Green Bond</b>	These are bonds issued to finance projects with a green print. In essence, they are used to raise funds to invest in green projects: wind power plants, initiatives related to pollution prevention and control, sustainable water use or eco-friendly construction, to name a few examples.
<b>Green Project Finance</b>	Credit Services Design, for investment by investors with complex financing needs, aimed at promoting renewable energies and energy efficiency by internalising pollution costs in financing plans.
<b>Securitisation</b>	Techniques designed to finance environmental care programmes based on bond or mortgage-backed securities.
<b>Green Venture Capital and Private Equity</b>	Funding of environmental products and service providers.
<b>Green Indices</b>	Financial risk indices whose performance is related to climatic events, but there are also indicators that report the economic and financial health status of companies and include businesses need to operate in green.
<b>Carbon Commodities</b>	Mainly developed in the European market, following the ETS, they are instruments to finance products and services related to the coal market. On behalf of their clients in the coal industry, banks and brokers manage the purchase of emission trading credits both for the purpose of hedging the risk for other assets and for speculative purposes.
<b>Green Financial Instruments</b>	All technical forms of financial instruments such as derivatives, options and swap contracts. An interesting type of derivative is the so-called Weather Derivatives, aimed at financing activities of heavily dependent businesses, with the aim of reducing the cost of risk associated with some adverse climatic event. There are also Catastrophe Options to provide the buyer with the right to get a payment if a precise index linked to disaster losses reaches the exercise price.
<b><i>Asset management products</i></b>	
<b>Green Fiscal Funds</b>	By investing in a green fund, investors can obtain a tax reduction on their profits. Investors can thus accept lower rates and banks can offer funds for environmental funding at more favourable conditions.
<b>Green Investment Funds</b>	The composition of these funds is made by choosing the best companies in different areas of activity, taking into account environmental criteria, like ESG standards; that is, the fulfilment of certain criteria relating to environmental practices or policies.
<b>Carbon Funds</b>	Funds designed to invest in emission reduction projects using investor quotas in the purchase of emission allowances.
<b>Catastrophe Bond Funds</b>	Little developed but expanding because of interest from the agricultural, tourism and construction sectors, these funds allow coverage of the physical risk associated with climate events.

<b><i>Insurance products</i></b>	
<b>Car Insurance</b>	In Europe and North America the so-called "pay as you drive" insurance formula is spreading. To encourage more responsible use of the car, both in terms of safety and pollution, safer driving and lower car use are incentivised by the insurance price.
<b>Home and Business</b>	These are more specialised forms of insurance than those commonly used to cover the risks associated with green building investment. These insurance formulas include the Green Building Coverage, designed to secure the investments made by their subscribers in important refurbishments, upgrades or new installations of eco-efficient plants for power supply, heating, insulation and public lighting. Another formula is an insurance policy for small business locations in areas of environmental risk, typically flooding, covering the environmentally vulnerable.
<b>Carbon Insurance</b>	There are two insurance formulas in this area. Covering Carbon Volatility and Kyoto Project Risk are insurances to cover the risk of volatility of the coal price but also the specific risks associated with the Kyoto Treaty in Clean Development Mechanism and Joint Implementation transactions. There are also insurance forms that cover losses for the installer and the plant owner when these fail to match the expected energy savings.

## 4.4 Trends and Outlooks

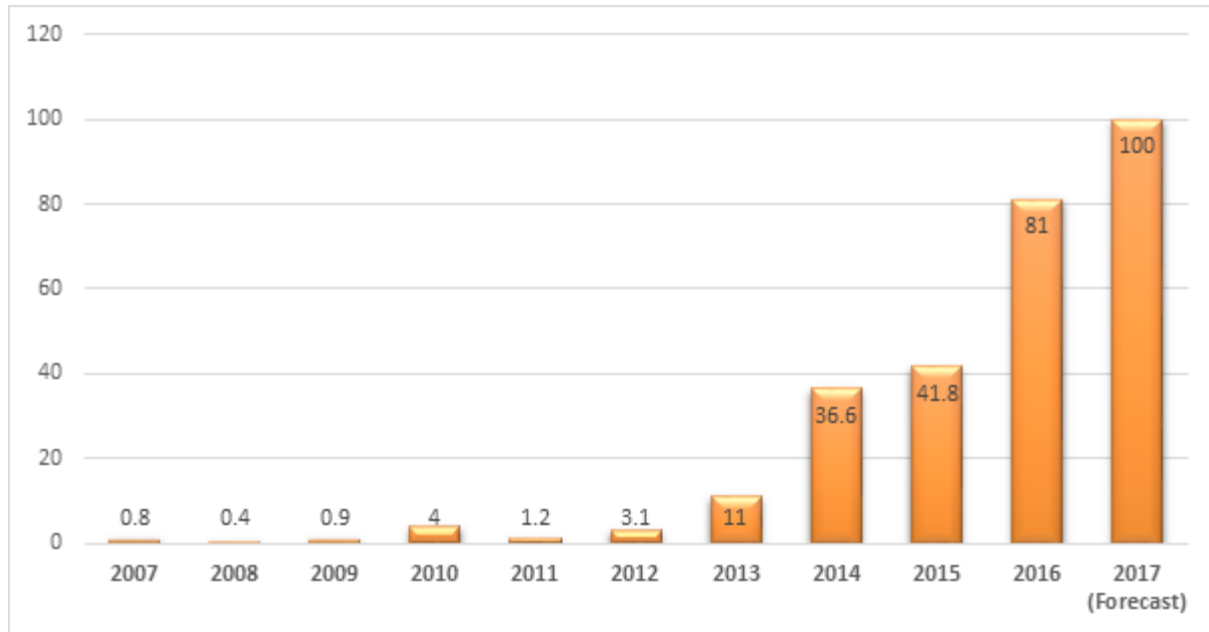
In this section we analyse the main trends of private green finance, which is experiencing a period of rapid growth worldwide, including the Mediterranean area. One way to predict the development of green finance in the medium-long term could be the greater awareness of the young generation regarding sustainability issues.

### 4.4.1 Trends in the Market

Given the structural shortage of overall data for the private sector (unlike the public sector where all initiatives are adequately publicised), and the wide variety of instruments that could be classified as green in the private market, it is not easy to analyse the situation in detail. However, some trends are very clear and can give an indication of the state of the industry.

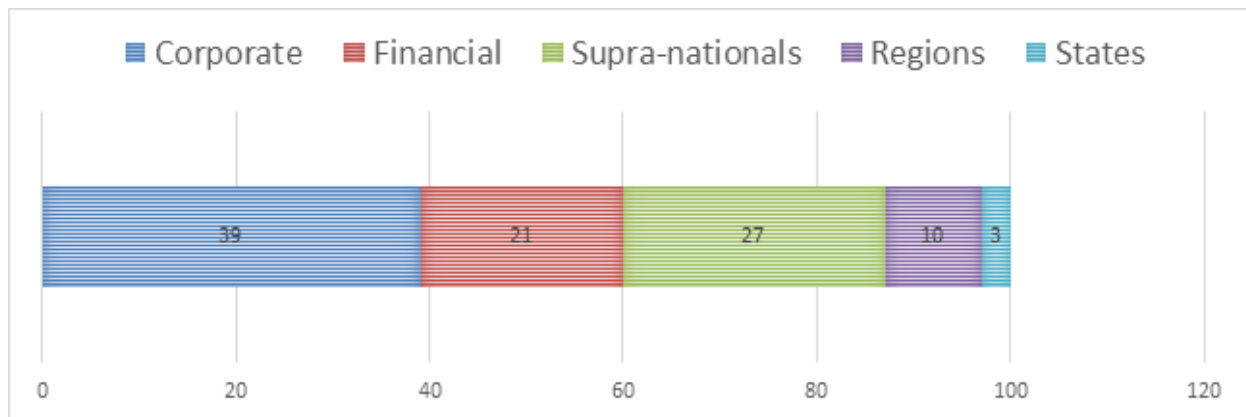
#### 4.4.1.1 Green Bonds

We can analyse the trends of private green finance by referring to the most widely used instrument: green bonds. Green bonds are the financial instrument that has achieved a high degree of maturity and broader diffusion in green finance industry. For this reason, we are also able to find and discuss some quantitative data related to this instrument. The Figure below shows the amount of green bonds issued in the world over the last ten years, from 2007 to today.



**Figure 28: The amount of emissions of green bonds worldwide. Given at 13 March 2017, in billions of dollars.**  
 Source: Bmo Global Asset Management, 2017

We can see how there has been a sudden development in the last five years, with a doubling of bonds issued in 2016 pushed by the Paris Agreement. For 2017, estimates expect to exceed \$100 billion green bonds issued. This data relates to the total amount of green bonds issued by both public and private entities. However, looking at the Figure below, which divides securities issued by type of issuer, we can see that the role of the private sector is critical.



**Figure 29: Green bonds by type of issuers.** Source: Natixis, 2016

Considering that the "financial" category contains both public and private institutions (investment banks, development banks, etc.), we can conclude that about half of the green bonds in circulation are issued by private actors.

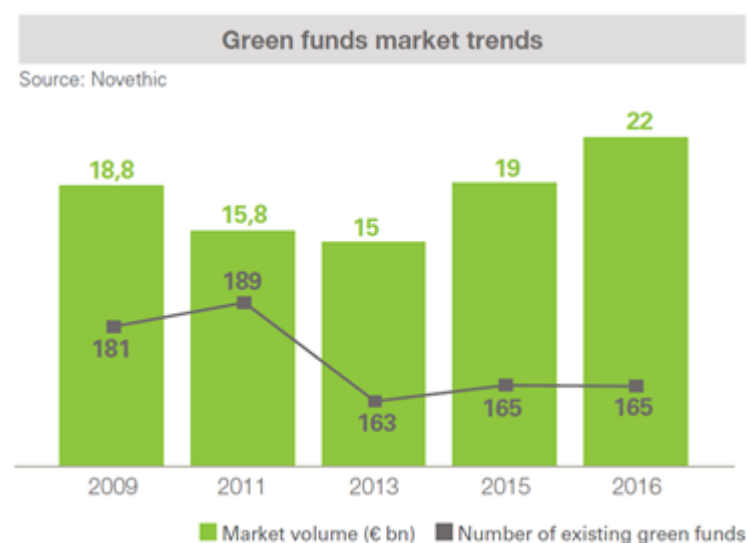
At present, green bonds have been issued in 33 countries, including France, Germany, the Netherlands, China and the United States; corporate green bonds are widespread in Germany and China, but also in Mediterranean European countries, such as Italy and France.

Most of the market is formed by institutional investors (public or private financial institutions), and the purchase of many green titles is strictly reserved for this type of investor. Enlargement of the actors involved, under the push of the Paris Agreement, could greatly increase the volume of business. Ultimately, the growth trends in the green bond market provide us with an indication of the prospects for development for the entire green finance sector on the private side.

#### 4.4.1.2 Green Funds

Another significant figure is the situation in the green funds market. As we have seen, green funds are mutual funds or other investment vehicles that will only invest in companies that are deemed socially conscious in their business dealings or directly promote environmental responsibility. A green fund's strategy can be based on avoiding negative company criteria (businesses such as guns, alcohol, gambling, pornography, animal testing, etc.) or choosing positive company criteria (environmental programmes, energy conservation, fair trade, etc.), but often there is a combination of both these strategies in the selection process. A green fund can come in the form of a focused investment vehicle for companies engaged in environmentally-supportive businesses, such as alternative energy, green transport, water and waste management, and sustainable living.

A Novethic study of March 2017<sup>145</sup> analyses trends in the green funds market in Europe. The green funds market is driven by the countries that pioneered responsible investment, like France, which experiences strong growth, and the major financial hubs like the UK and Switzerland.



**Figure 30: Green fund trends in Europe.** Source: Novethic, 2017

From 2009 to 2012, these activities were hit hard by the financial crisis, the collapse of the green bubble and the reduction in subsidies for renewable energy. Since 2012, however, we have been witnessing steady growth in the volume of investments, up to the current 22 billion in 2016. While the number of funds has remained constant, invested assets have increased significantly. In several countries, the trend is being driven by factors that are giving green funds more visibility and credibility, like the 2015 Energy and Ecological Transition Act in France.

It is difficult to know the exact breakdown of investors, but institutional investors (both public and private) currently dominate the market. Only 15% of the funds analysed by Novethic have compartments reserved for individual investors.

#### 4.4.2 Generational Price Premium for the Environment

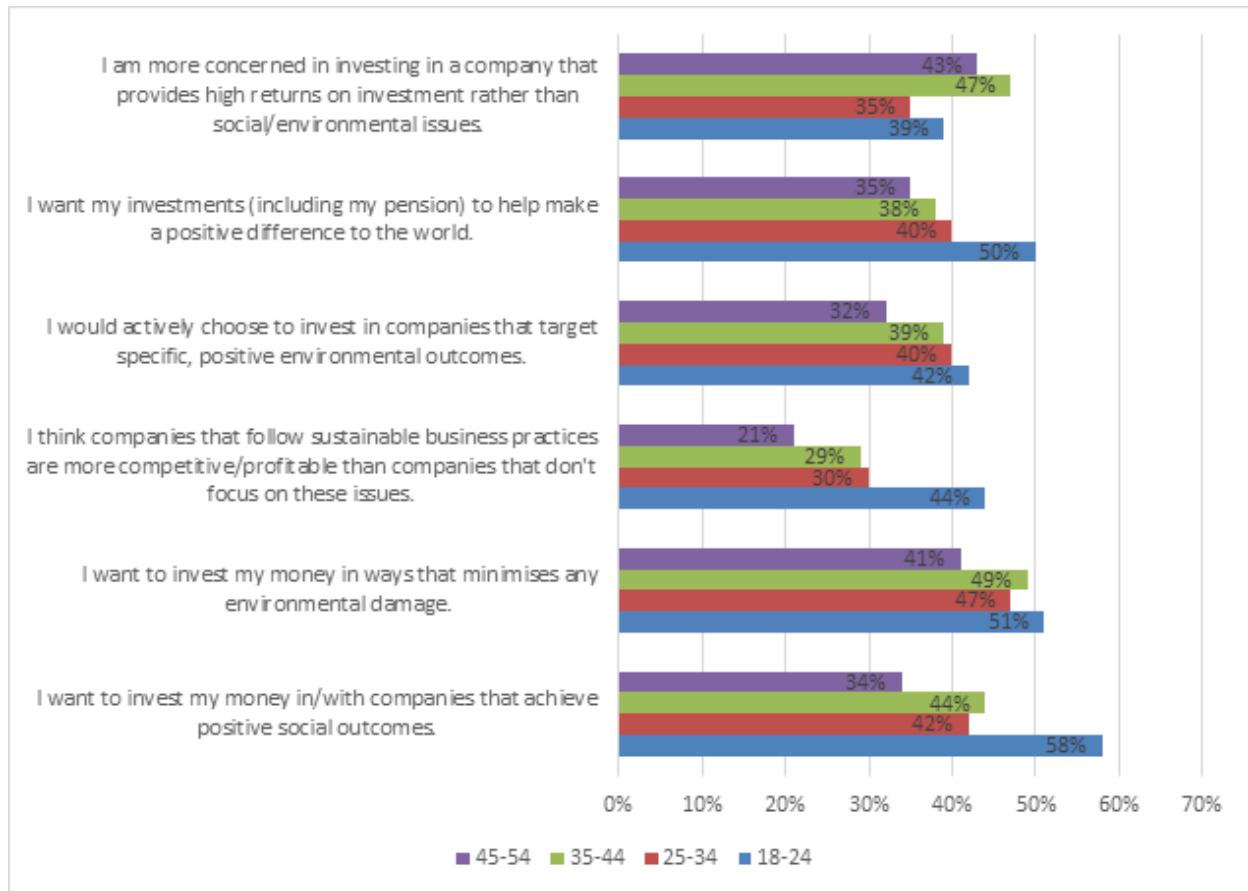
In order to estimate how the green finance market will develop in the future, one approach can be to look into the environmental awareness of consumers and investors. In economic terms, as far as market transactions are concerned, this awareness must become a willingness to pay (WTP) for environmental conservation. By addressing the issue in these terms, the development of green finance in the medium to long-term could be generational.

Some economics studies show that the further we look at the younger generation, the more people are willing to pay more for environmental goods. This trend, which can be observed in all Western consumer markets, can also be found in financial markets in terms of willingness to pay for investing in green

<sup>145</sup> [http://www.novethic.com/fileadmin/user\\_upload/tx\\_ausynovethicetudes/pdf\\_syntheses/Green-funds-study-Novethic-Ademe-2017.pdf](http://www.novethic.com/fileadmin/user_upload/tx_ausynovethicetudes/pdf_syntheses/Green-funds-study-Novethic-Ademe-2017.pdf)



products. Looking at the investment industry, shown in Figure 31, the generational differences are broadly the same found in the willingness to pay more for environmental commodities. Data suggests that today's university students – or at least their contemporaries – have an outstanding responsible knowledge of what should or could be done with their savings.



**Figure 31: The increasing environmental awareness in younger generations.** Source: Standard Life Investments YouGov poll, 2015

However, the trend observed in these studies will have to be translated into real monetary flows invested in green products. The growth of consciousness on the demand side for sustainable financial products is fortunately backed by an increasing number of financial entities committed to investing in green activities. Statistics could prove that a consistent margin of growth is still possible in the coming years. Following the recent positive trends, the investment sector is likely to seek the same path of the eco-friendly retail goods.

There is an evident lack of information about the potential of investments targeting environmental goals, especially in the older generations, definitely in contrast to incoming ones. While willingness to pay more for retail goods entails a straightforward concept of “give and take”, when it comes to financial investments the deal is not so easily understandable for the average consumer. The phenomenon could be called “financial illiteracy”. Indeed, younger generations have easier access to internet as a source of information, which provides them with the tools to keep up with changes in the behaviour of financial actors. In addition, the increasing rate of people receiving tertiary education helps enhance the ability to understand complex financial issues and mechanisms. Clearly, there must also be an effort by financial institutions and regulators to make the investment process more transparent, understandable and clear.

#### 4.5 Good Practices in Mediterranean Countries

We now focus on concrete examples of green finance implemented by private actors in the Mediterranean area. First of all, it should be pointed out that the private market for green finance is still at an early stage of development around the world. In the north of the Mediterranean, however, private

actors have in the last five years started to design instruments and initiatives to collect funds or invest in green finance. Below we list some good practices regarding private green bonds and bank activities in **France, Spain, Greece and Italy**. However, in analysing good business practices, we must keep in mind the difference between good environmental practices, which we will list below, and the “mainstream activities” of these companies, which is often involved in the “brown economy” sectors (such as fossil energy).

#### 4.5.1 Green Corporate Bonds

As previously described, a substantial part of the green bond market is made up of private issuers. Some companies in the Mediterranean area have already begun to use green bonds to raise funds for projects with a positive environmental impact. The most active industry on this front is that of energy multi-utilities, as their business is closely linked to environmental issues (energy production, water distribution, waste management).

##### 4.5.1.1 Hera (Italy)

Hera (Energy Resources Environment Holdings) is an Italian multi-utility that operates in 265 municipalities. It provides energy (gas, electricity), water (aqueduct, sewage and purification) and environmental services (waste collection and disposal) to approximately 4 million citizens. It is headquartered in Bologna and is listed on the FTSE Italia Mid Cap Stock Exchange Milan.

Hera Group was the first company in Italy, in July 2014, to launch a green bond.<sup>146</sup> The bond has been very successful with requests for a counter equivalent of about three times its amount. With an issue of a total of €500 million, redeemable in 10 years at a coupon of 2.375% and a return of 2.36%, they collected resources that will then be specifically targeted at investments related to improving environmental performance in the territory.

For each line of intervention, a number of specific investments have been identified, under the supervision of the independent certification body that monitors and reports on the process to ensure that the market is correctly and transparently targeted for the funds raised.

The funds raised went to finance four different areas of intervention:

**Fighting climate change:** This supports the production of renewable energy and the reduction of consumption through the achievement of greater energy efficiency. The first strand features photovoltaic productions and plants for the exploitation of biogas for the production of electricity, whether it comes from dumps or from anaerobic digestion systems of the damp fraction of urban waste. Regarding energy efficiency, focus is on district heating and the development of energy cogeneration (simultaneous production of thermal and electrical energy).

**Improved air quality:** The investments of this area are mainly aimed at reducing the emissions of atmospheric emissions from the Group's waste-to-energy plants, through the complete renewal of five plants in the reference territory. A renewal that allowed the Group's plant emissions to be lowered to the allowed legal limits.

**Improving the quality of water purification:** This is a current issue in Italy, where 2 out of 10 citizens do not have sewage networks and 3 out of 10 are without purifiers. In the territory managed by Hera, the situation is considerably different but there is also a strong need for investments to maintain the levels of depurative efficiency achieved and to improve and adapt performance over time.

**Waste cycle management:** Investments linked to this measure mainly concern the development of facilities and services in the area for differentiated collection (and, for example, additional ecological islands) with the aim of maximising recovery and further reducing the contribution to landfill.

Orders, amounting to €1.7 billion (more than three times the amount issued), were mainly raised by investors resident outside Italy (75%, with France, Germany and UK having the highest percentages), with

---

<sup>146</sup> [http://www.gruppohera.it/gruppo/investor\\_relations/politica\\_finanziaria/green\\_bond/](http://www.gruppohera.it/gruppo/investor_relations/politica_finanziaria/green_bond/)

a predominance of asset managers. Demand comes from 69% of investors whose investment criteria is governed by "ESG" - Environment, Social and Governance.<sup>147</sup>

#### 4.5.1.2 Engie (France)

Engie is a French energy company (formerly GDF Suez) operating in the field of electricity generation and distribution in the natural gas and renewable energy sector.

To support its ambitious development strategy in renewable energies and energy efficiency, Engie issued in March 2017 its second green bond of €1.5 billion, after having issued its first (a €2.5 billion green bond) in 2014. A bond tender offer for a total amount of €700 million was launched simultaneously on seven outstanding bonds. These two transactions will enable the group to reduce the average cost of its debt while at the same time extending its duration. The bond has two tranches: a 7-year tranche of €700 million with a 0.875% annual coupon, and an 11-year tranche of €800 million with a 1.5% annual coupon. The average coupon amounts to 1.20% for a 9.1 years average duration.

The proceeds of the bond will be used to finance renewable energy projects such as wind and solar farms, hydroelectric plants, energy efficiency projects and natural resources preservation projects. To be eligible, projects financed must meet a number of environmental and social criteria in eight areas:

- fight against climate change and the conservation of natural resources;
- environmental management;
- biodiversity;
- dialogue with stakeholders;
- business ethics,
- human rights;
- responsible procurement and health and safety.

These criteria were developed by Engie, reviewed by Vigeo Eiris (environmental rating agency) and are published on the Engie website. Bond issue proceeds will be allocated according to a specific traceability procedure that will be verified by an external audit firm.

### 4.5.2 Green Activities of Banks

Some banks in the Northern Mediterranean countries have begun to implement instruments and projects in the field of green finance. Below we will see four examples of Spanish, Greek, Italian and French banks.

#### 4.5.2.1 BBVA (Spain)

Banco Bilbao Vizcaya Argentaria (BBVA) is a multinational Spanish banking group with a strong regional connotation (Basque). BBVA has established itself as the most active Spanish financial institution in the origination and placement of green bonds in 2016. The Bank has acted as lead manager in many green bond operations, like Acciona Green Bond Private Placement, Iberdrola 3rd Green Bond, EDF 2026 Green Bond, Mexico City Airport, Nacional Financiera, ICO 2nd Social Bond and Caja Rural de Navarra Sustainable Covered Bond. Green bonds, although not having a lower cost themselves, have shown great solvency in the market and have become an important tool to promote this responsible financing in the direction that BBVA is working.

In April 2017, BBVA signed a green loan in favour of Acciona for €100 million to partially finance photovoltaic and wind projects in Chile. This operation is the second green loan of a Spanish company, both formalised by BBVA. This long-term loan has been structured as a green instrument according to the certification provided by Vigeo Eiris according to the Green Bond Principles. Acciona is one of the leading companies in infrastructures and energy sector worldwide, distinguished for promoting the development of renewable energies, infrastructures, water and services. This financing is part of the firm's strategy to

---

<sup>147</sup> [http://www.gruppohera.it/gruppo/investor\\_relations/politica\\_finanziaria/emissioni/principali\\_sottoscrittori\\_bond/pagina43.html](http://www.gruppohera.it/gruppo/investor_relations/politica_finanziaria/emissioni/principali_sottoscrittori_bond/pagina43.html)

participate in the financial mechanisms that recognise and certify the sustainability of companies and their projects.

BBVA expects green loans to grow at a level similar to that experienced by green bonds a few years ago. Therefore, it seeks to promote and facilitate sustainable investments, which will gradually gain relevance within the investment criteria of the Bank. It is expected that the green loans market will have a greater interest for issuers and financial institutions, which will increasingly have greater quantitative and qualitative objectives in terms of sustainability. The commitment of the Bank to sustainability and the environment is part of its Responsible Business Plan,<sup>148</sup> and its priorities include developing products and services that contribute to generating solutions to challenges proposed by social and environmental problems.

#### 4.5.2.2 *Crédit Agricole (France)*

Crédit Agricole is the first mutual bank in Europe and France and the third French bank for capitalisation. In 2010 they created the Sustainable Banking team within Crédit Agricole, with the purpose of assisting the Bank's clients for environmental and social transactions. The team meets the growing needs of clients for access to financial advice on projects aimed at both financial profitability and social and/or environmental positive impact (poverty reduction, job creation in disadvantaged areas, development of renewable energies, carbon footprint minimisation, etc.). The unit assists the Bank's clients in arranging these transactions, helps the business lines acting in this field and works closely with Crédit Agricole group entities. Thanks to the synergy developed, it constitutes a centre of expertise on responsible investment within the investment bank. The three main areas of intervention are:

**Green bonds:** The Bank played a driving role in the creation and development of this market and is still strongly supporting market innovations. In particular, it was behind the Green Bond Principles initiative that seeks to foster transparency and integrity in this market and, more recently, it co-drafted the Guidance for Issuers of Social Bonds extending best practices of the green bond market to the social bond market. The Bank has since 2012 been a world leader in green, sustainability and social bond structuring and placement,<sup>149</sup> having contributed to major transactions for issuers in all market segments including EDF, the EIB, Engie, the IFC, the Ile-de-France region and the World Bank.

**Green notes:** Green notes are raised financing whose proceeds are dedicated to funding environmental projects and companies. It also developed a methodology for selecting the green-certified assets supported by this programme, active since 2013.

**Impact investment:** The Bank has worked on investment projects aimed at both financial profitability and social and environmental objectives. Objectives include the reduction of poverty, job creation in disadvantaged areas, and the shrinking of carbon footprints. For example, they structured Livelihoods, a carbon offsetting fund that works with rural communities, and advised Lafarge on a micro-finance project dedicated to housing.

#### 4.5.2.3 *Intesa Sanpaolo (Italy)*

Intesa Sanpaolo is an Italian banking institution which was created by the incorporation of Sanpaolo IMI into Banca Intesa. In 2016 it was the first Italian banking group for capitalisation. The company is part of the FTSE MIB index and is listed on the Milan Stock Exchange.

Protection of the environment and attention to climate change are key aspects in the Bank's development strategy. The Environmental and Energy Policy contains Intesa Sanpaolo's long-term strategic commitments focused on mitigation and on the careful management of direct and indirect impacts.

The Bank provides a range of environmental and energy efficiency products. From 2007 to 2014 the Italian banking system financed around €27 billion worth of projects related to the production of renewable energy and geared to energy efficiency, to which the Intesa Sanpaolo Group contributed approximately

<sup>148</sup> <https://accionistaseinversores.bbva.com/TLBB/micros/bbvain2015/en/strategy/responsible-business-plan/>

<sup>149</sup> <https://www.ca-cib.com/our-solutions/sustainable-banking>

€11 billion. In 2016, 3% of Intesa Sanpaolo's total loans to business referred to environmental protection sectors, such as renewable energy, energy efficiency and environmental services, amounting to about €1.7 billion.

The Intesa Sanpaolo Group also promoted sustainable activities through projects implemented by specific business divisions:

**Mediocredito Italiano**, the Intesa Sanpaolo Group bank that brings together medium-long term financing, leasing and factoring, made an important contribution with its financial solutions for businesses and the public administration investing in renewable energy plants or in energy efficiency processes developed by energy intensive or energy service companies (ESCOs).

**Banca Prossima**, the Intesa Sanpaolo Group bank dedicated to non-profit organisations, supports third sector companies that want to invest in energy efficient projects with solutions to save on energy costs and increase the overall sustainability of social activities.

**Circular Economy project** is the project through which the Intesa Sanpaolo Group is seizing strategic opportunities to become an innovative financial leader for the circular economy, redefining traditional financial tools to support transition to a new model for economic development.

#### 4.5.2.4 Piraeus Bank (Greece)

Piraeus Bank is a Greek multinational financial services company with its headquarters in Athens. Piraeus Bank's stocks are listed on the Athens Stock Exchange (ATHEX), and its market capitalisation in May 2017 was €1.79 billion, making it the third largest by that measure.

In 2004 Piraeus Bank first set out its environmental policy, and the Bank's performance in environmental management has been marked by a continuous upward trend. It was the first Greek bank to have a certified environmental management system (EMS) and administration buildings under the EMAS and ISO environmental standards. Through implementing co-funded EU LIFE programmes, in partnership with private and public entities, the Bank has made pioneering steps in the fields of environmental management. It developed a wide variety of green products, promoted environmental education for employees, monetised the impacts of climate change on Greek business and identified climate change opportunities. The Bank has established a green banking division to promote the funding of green businesses. Since 2009, the green banking division has been very active in supporting enterprises and private individuals who like to make green investments. It is committed not only to developing green financial products but also to providing customers with a range of support services to make green investments. Some examples, by thematic areas of intervention, are:

- **Green home** (mortgages for energy-efficient houses, energy performance studies and certificates);
- **Photovoltaic at home/Producing electricity** (renewable system financing);
- **Green purchases** (financing for green appliances and green transport, financing for green upgrades).

In regard to human resources, Piraeus Bank encourages the participation of its employees and the general public in volunteer actions regarding society, environment and culture through specific programmes.

The case of Piraeus Bank is an excellent example of implementing private green finance with the support of public institutions and stakeholders, through the development of the EU LIFE Programme.<sup>150</sup>

#### 4.5.3 Ethical Finance

An alternative green finance model is provided by the ethical banks. This type of organisation, unlike the traditional financial operators, makes the integration of environmental and social responsibility in financial activity its primary mission. The ethical banks present in the world are gathered in an association

<sup>150</sup> [http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n\\_proj\\_id=3071](http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3071)

called the Global Alliance for Banking on Values (GABV).<sup>151</sup> GABV is a membership organisation founded in March 2009 by BRAC Bank in Bangladesh, GLS Bank in Germany, ShoreBank in the US and Triodos Bank in the Netherlands, currently made up of 27 of the world's leading sustainable banks, from Asia, Africa, Latin America to North America and Europe. A report published by GABV<sup>152</sup> shows that the world's 27 venture ethical banks continue to record better performance than the so-called "too big to fail" banks. Sustainable and ethically oriented banks deliver almost double the amount of credit in proportion to budget assets compared to systemic budgets: 75.2% versus 39.6%, while loans (2010-2014) are growing faster (+12.2% versus + 5.4%). In 2016, the Italian parliament approved a legal national framework to recognise the specificity of these institutes, which will have tax rebates on reinvested earnings.

#### 4.5.3.1 Banca Etica (Italy)

Banca Etica is an Italian co-operative bank founded in 1999. It proposes a bank model inspired by ethical principles, offering all the major banking products and services for individuals and families or for organisations and businesses.

Banking is developed based on the foundational principles laid down in the charter of the organisation: transparency, participation, fairness, efficiency, sobriety, attention to the non-economic consequences of economic actions and credit as a human right. To pursue its goals, Banca Etica has developed a Manifesto<sup>153</sup> and several "ethical guarantee" tools to ensure the effective use of money.

Only projects that are capable of overcoming not only an economic assessment but also a careful assessment of environmental and social impacts are funded. Some sectors of the economy, such as the production of energy from fossil fuels, nuclear power and the arms industry, are excluded from granting of funding. Other areas such as social cooperation, international cooperation, culture and environmental protection, and production from renewable energies, find a privileged credit channel. All data on the loans granted are published on the Bank's website to allow public and transparent auditing. Economic, social and environmental performance is reported to all stakeholders through corporate social responsibility tools.

#### 4.5.3.2 Fiare (Spain)

Fiare is a Spanish co-operative ethical bank founded in 2005 in the Basque Country, in collaboration with the Italian Banca Etica. Bank activity is structured on the same model as its Italian counterpart. The decisions resulting from this policy are fundamental to ensure consistency between operational activity, the statutory mission and ethical code, and are the basis of the trust pact established with savers and social base and clientele.

As for Banca Etica, the Fiare credit process is characterised by the original ability to assess credit merit in terms of both economic elements and non-economic elements (evaluation of environmental and social impact) of the projects. Funded projects must fall into a list of specific sectors eligible for funding:

- **Social welfare system** (social-health services, social housing, micro-credit assistance);
- **Energy efficiency and renewable energy** (real estate insulation, cogeneration, solar thermal, solar photovoltaic, wind, hydroelectric);
- **Environment** (waste management, recycling of raw materials, eco-compatible production);
- **Proximity farming** (production and marketing of organic products; promotion of short marketing channels, consumer groups and processes of food sovereignty);
- **International cooperation** (development cooperation recognised by the Ministry of Foreign Affairs and Cooperation, and/or by supranational institutions, microfinance, ethical finance and solidarity);
- **Socio-cultural animation** (education, culture, sport, youth centres, etc);

<sup>151</sup> <http://www.gabv.org>

<sup>152</sup> <http://www.gabv.org/news/report-shows-sustainable-banks-outperform-big-banks>

<sup>153</sup> <http://www.fiarebancaetica.coop/documento/manifiesto-politico>

- **Fair trade.**

The determination of the socio-environmental impact of the credits granted to the organisations is carried out by means of an ethno-social analysis developed by an evaluation commission, made up of volunteers of the territorial organisation, individuals and partner organisations, which makes possible the evaluation of the credit in function of non-economic indicators.

#### 4.5.3.3 *Etica Sgr (Italy)*

Etica Sgr is the investment management company (IMCo) of Banca Popolare Etica. It was created in 2000 with the collaboration of Banca Popolare di Milano, and also has the participation today of Banca Popolare dell'Emilia Romagna, Banca Popolare di Sondrio, and Credito Cooperativo del Nord Est.

It is currently the only Italian IMCo that establishes, promotes and manages only mutual funds of sustainable investment with the aim of representing the values of ethical finance in financial markets. The company also offers consulting services to institutions that want to evaluate the ethics of their investments and is the pioneer in Italy of the active shareholder. It takes part in numerous domestic and international initiatives and collaborations to share best practices in the field of sustainable and responsible investment. These include the Principles for Responsible Investment (PRI), ICRC (Interfaith Centre on Corporate Responsibility), Eurosif (European Social Investment Forum), the Sustainable Finance Forum and CDP (the Carbon Disclosure Project).

The responsible investment is concretised in selecting the listed investment offers according to precise ESG criteria, side by side with an engagement with issuers. Any business or state bonds are subject to the application of the eligibility and exclusion criteria based on certain sectors or activities and, subsequently, a careful assessment of the socio-environmental responsibility profile.

Therefore, states who apply the death penalty or who do not respect political freedoms are thus excluded from the investment, as are companies producing weapons, managing or controlling nuclear power plants, testing animals for the production of cosmetics or involved in practices that are detrimental to human dignity or harmful to the environment. Businesses and states that pass the first screening are analysed based on about 70 indicators for businesses and 60 for states: only offers with a total score higher than a certain threshold, and a qualitative profile considered in line with the indicators used, can be part of the investments. Anyone that subscribes to a fund may choose to allocate 0.1% of the subscribed capital to a fund that guarantees microcredit projects in Italy.

## 4.6 Conclusions

The private sector is implementing many initiatives to invest and raise resources from a green economy perspective. This process is coupled with an increasing awareness of consumers, savers and investors on current environmental issues, as well as with the strategies of international institutions put in place to overcome them. Private operators in European Mediterranean countries are beginning to develop new instruments and markets for green finance. The growth in the volume of business in recent years could lead to further market development over the medium to long term. However, some barriers must be overcome to allow for the development of the sector and to ensure positive results in terms of environmental sustainability.

Despite the work done by some entities, such as establishing certification procedures, the lack of precise regulatory constraints makes market transparency difficult. The sector presents credibility risks, caused by the lack of clear definitions of the term "green" and lack of information on monitoring and evaluation of green products, which would require operators to undertake an overview of funded projects.<sup>154</sup> The priority is therefore to promote the standardisation of green finance practices and enhance the transparency of information. These priorities also emerged in the G20 study group on sectorial priorities

---

<sup>154</sup> <http://www.ilsole24ore.com/art/finanza-e-mercati/2016-09-21/chi-da-bollino-green-bond-192540.shtml?uuid=AD1NbDKB>

and international policies, summarised in the report *Fostering sustainable global growth through green finance – what role for the G20?*<sup>155</sup> in April 2017.

At a concrete level, the solution could come from the regulatory models of other "green markets" recently developed, such as organic farming in the EU.<sup>156</sup> Starting from good practices developed by the market (PRI, GBP, Climate Bond Standards), it could implement a public regulatory mechanism at international level that is able to set up a "hard law" standard for certification of green financial products, as well as to accredit and control private entities that carry out evaluations and issue certifications (like ESG rating agencies). Clearly, given the complexity of the financial sector and the very wide variety of instruments used, from bank deposits to derivative contracts, the regulatory process requires a great effort from supranational and national institutions.

---

<sup>155</sup> [http://www.g20-insights.org/policy\\_briefs/fostering-sustainable-global-growth-green-finance-role-g20/](http://www.g20-insights.org/policy_briefs/fostering-sustainable-global-growth-green-finance-role-g20/)

<sup>156</sup> <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32007R0834>



## 5 Results of the Survey

This Qualitative Survey has been undertaken in order to get a practical idea of the Green and Climate Finance (GCF) perception, strategies and key actors in different type of institutions, regions and countries from international finance experts. We present the main findings, views and ideas extracted from the survey. As 18 answers were received, the results may not be representative.

### 5.1 Actors and Barriers

#### 5.1.1 Who are the Main GCF Actors?

The **financial institutions are largely identified as the main actors** to implement GCF in the region, with 44% at the national level (public and private together).

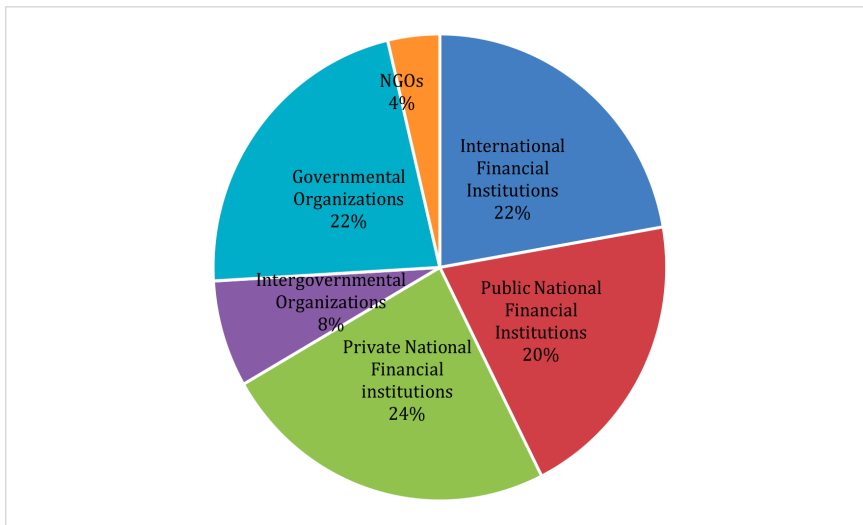


Figure 32: Main actors of green/climate finance. Source: own survey, 2017

This also highlights the importance of the financial sector to take action as key drivers of this transition but also shows that countries themselves have an important role to play with the government in order to drive this change.

#### 5.1.2 What is their Level of Commitment?

We can see that the **level of commitment on GCF is rather low**, particularly at the local level where we have seen that this is one of the main challenges to implement the green economy.

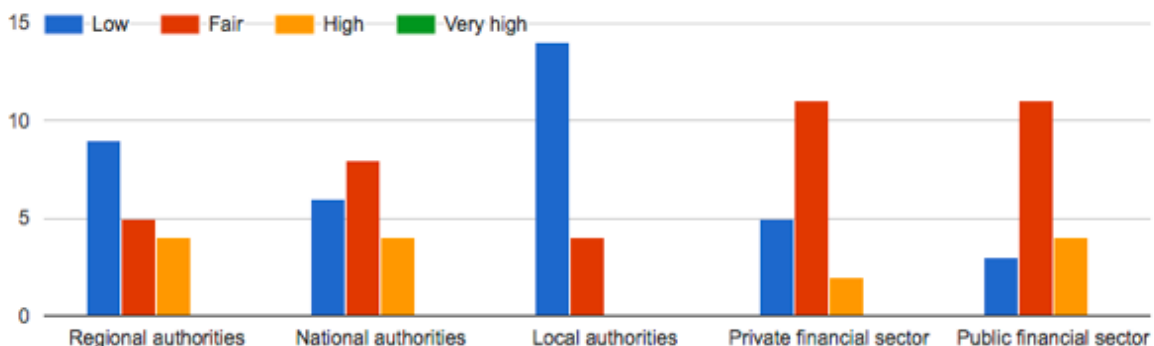


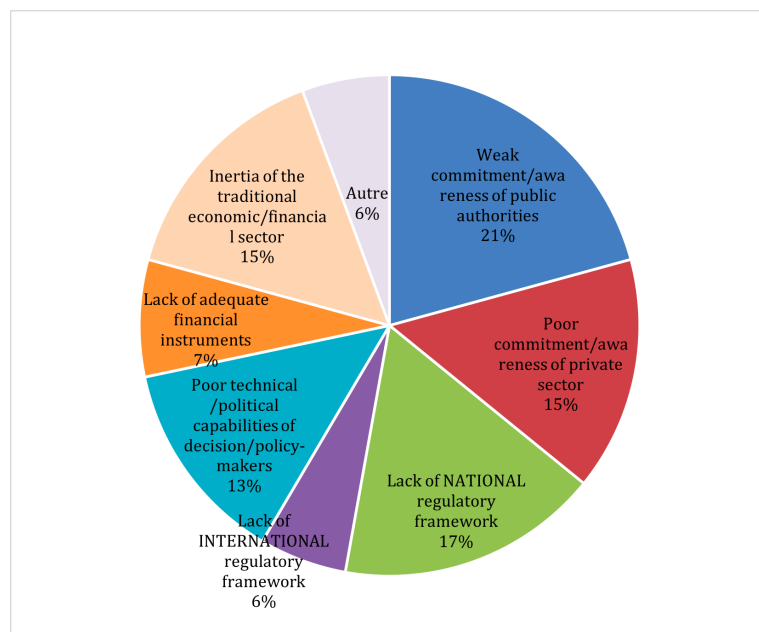
Figure 33: Level of commitment on green/climate finance. Source: own survey, 2017

It is in the financial sector (both private and public) where a fair level of commitment is highest. This, however, is still discouraging and should be appropriately tackled. The regional authorities seem to do best in their commitment to GCF.

All in all, the commitment remains quite low, and policies should be put in place in order to increase the engagement of institutions at all levels.

### 5.1.3 What are the Main Barriers?

The answers to this question underline the idea that **commitment and awareness** are seen as one of the largest issues to develop GFC in the Mediterranean region with more than a third of the answers citing the will and awareness of private or public authorities.



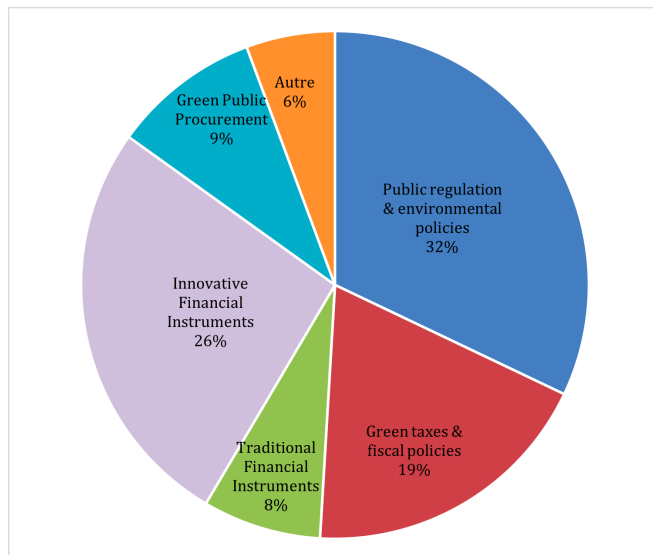
**Figure 34: Main barriers to green/climate finance.** Source: own survey, 2017

We can also see that the traditional financial sector is seen as rather passive and that the lack of a clear framework at national level, especially to regulate and promote GCF, is also a problem. The will of governments is therefore challenged and should be falling in line with the needs of the Paris Agreement.

## 5.2 Instruments

### 5.2.1 What are the Most Relevant Tools?

In relation to the most relevant tools to promote GCF, we can see that a great segment of these are related to **legislation**.



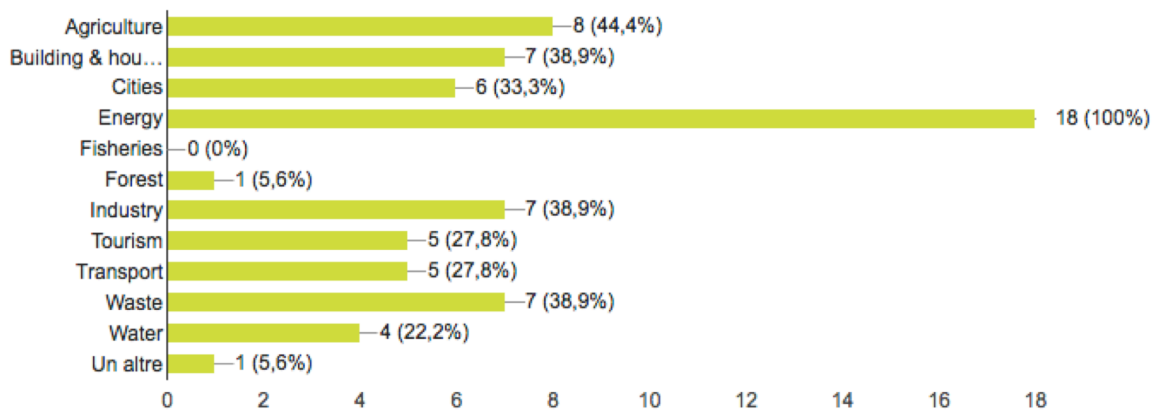
**Figure 35: Most relevant tools on green/climate finance.** Source: own survey, 2017

**Public regulation, environmental policies, green taxes and fiscal policies** are considered by most of the experts as the main relevant tools to implement GCF. Innovative financial instruments such as green bonds, guarantees or venture capital represent the third most important tool to promote GCF, which is a good sign as it demonstrates its efficiency.

## 5.3 Strategy

### 5.3.1 What are the Main Economic Sectors Related to GCF?

According to all the participants, **energy** remains the sector where most projects related to GCF are developed going along with the energy efficiency and renewable energy goals of the EU and the need to phase out fossil fuels.



**Figure 36: Main economic sectors of green/climate finance.** Source: own survey, 2017

However, we can see that some other sectors are getting attention, such as **agriculture** or **housing** and waste. There is a real need on the mainstreaming of the type of projects in which GCF is developed in order to integrate it in every sector in the future.

### 5.3.2 Are There National GCF Strategies?

In general, there is a **clear absence of national strategy** (70% of answers) on GCF in the Mediterranean countries.

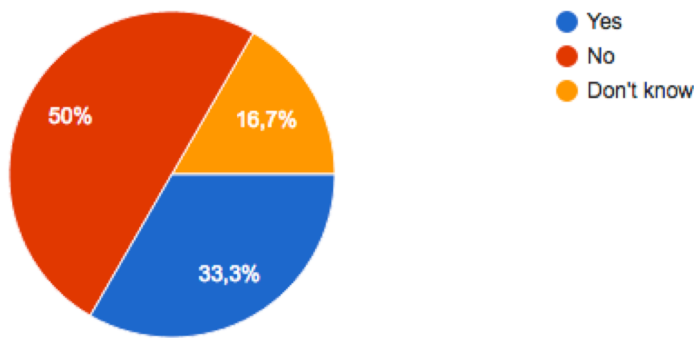


Figure 37: National strategies on green/climate finance. Source: own survey, 2017

**What about the Quality of Those Strategies?**

We can see that even when there is a strategy, it is usually not a really strong one (70% of answers) and that this could be another problem to implement those strategies.

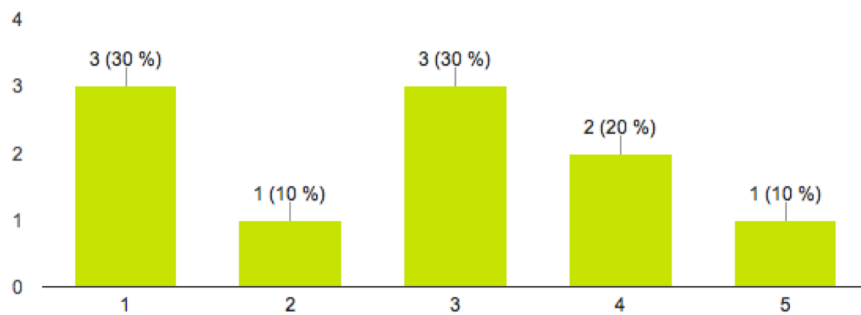


Figure 38: Quality of national strategies on green/climate finance (1: weak – 5: strong). Source: own survey, 2017

**5.4 Summary**

**5.4.1 What is the Overall State of GCF at Regional Level?**

Most experts believe the state of GCF in the region is quite weak, or very weak, while a few think it is good. However, none of the participants think it is strong, which leaves a lot of room for improvement.

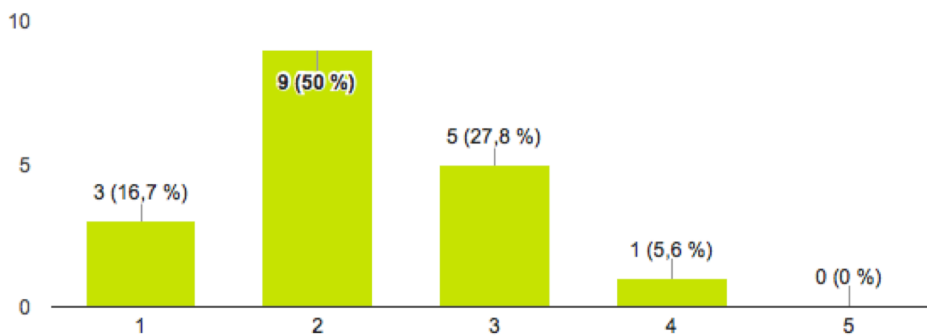


Figure 39: State of green/climate finance in the Mediterranean (1: weak – 5: strong). Source: own survey, 2017

## 6 Overall Conclusions and Recommendations

### 6.1 Findings

The global environmental situation is currently in a complex and challenging moment. After what seemed to be a very positive turnaround with the Paris Agreement coming into force in September 2016, Donald Trump recently announced the withdrawal of the United States of America from the Agreement. In this context, it remains paramount to consolidate a global consensus between the rest of the industrialised nations and developing countries in order to tackle the challenges ahead and address the growing issues arising from climate change. Private investors are also moving in this direction because the various international agreements have created important business opportunities, and green finance markets, especially green bonds and green investment funds, are growing considerably.

Through this study, we have analysed the implication of both the private and public green finance sectors in the Mediterranean area. The commitments made by the international institutions such as the multilateral development banks, the European Union, specific green funds, and national development agencies have been reviewed, as have the involvement of private sector actors. Climate finance plays a key role in this process and the need for stronger involvement of the private sector is more important than ever, particularly the need for more transparency and clarity in their green investments and instruments. After our research and consultation with a variety of experts, we can draw some conclusions and set out some of the most important issues that need to be addressed in this regard.

**Lack of clear definition of green and climate finance:** Analysing the definitions of institutional sources and the concrete practice of the sector, green finance has been considered broadly in this study as any form of financing, public or private, aimed at financial returns or at social welfare, which serves to support the green economy. However, the research in literature and documents of the financial institutions shows that there is little information available, and in general the definition is broad and the detailed criteria are not defined. This lack of conceptualisation makes the assessment problematic as terms are not used consistently and data cannot be easily compared across sources, leading to uncertainty on which projects and investments can be evaluated and labelled as “green” or “climate friendly”.

**Absence of long-term targets in the institutions’ strategies:** MDBs and other international institutions have developed green or climate strategies *generally* in line with the objectives of the Paris Agreement. This shows that – in general – financial institutions are becoming an important player in green finance. However, some are more ambitious than others: e.g. the EBRD is already investing around 30% in projects labelled as green and is planning on raising this share to at least 40% of its portfolio in 2020. Less ambitious is the World Bank with a target of only 28% of climate projects by 2020 and no targets were found for 2030. This lack of long-term vision, strategy and ambition can be problematic as many investments, especially in infrastructure, have long lifetimes and may be in contradiction with the goals of the Paris Agreement. The survey supports the point that financial institutions can engage more, ideally reaching a 100% climate or green target in the long term. Even worse is the situation regarding the long-term vision of private investors.

**Many of the investments are still not sustainable:** Despite the progress made in recent years and the targets set by international agreements, there is still a great portion of investment from public financial institutions, national and supranational, going into the brown economy (gas pipelines, non-renewable power plants, etc.). In many cases, investment in these kinds of brown industries could be justified by the need for essential infrastructure in developing areas, but in general it would be advisable to target a larger portion of investments in green economy projects. In particular, there is a real need for phasing out fossil fuel investments in order to reach the Paris Agreement objectives.<sup>157</sup>

**In the private sector, financial returns and time horizon are uncertain:** The profitability of green investments is still a critical factor for the development of the industry. The issue is not the lower return of green investments (very often financial returns are better than in traditional sectors) but the

---

<sup>157</sup> <https://bankwatch.org/news-media/blog/ebrd-fueling-future-or-stuck-past>

perception/belief of private investors that there will be lower returns. Another critical aspect of attractiveness of green investment is not so much the financial return itself but the timing of this return. The systemic crises (financial, environmental) in recent years, increasing uncertainty about the future, push operators to cautious and short-term behaviours, while investment in sustainable projects usually requires a long-term time horizon. The short-term vision of investors triggers a vicious circle that increases even more the uncertainty factors that feed it.

**There is a clear lack of transparency, consistency and homogeneity:** The lack of precise regulatory constraints makes market transparency difficult. Moreover, there are no common standards to establish which investments are labelled “green”. In this situation, there may be cases of greenwashing in the market, hindering the implementation of truly sustainable projects. The issue mainly concerns the green investment regulation and control system. If on the one hand progress has been made on voluntary certification mechanisms, in particular for the green bond market, on the other there is still a strong need for diffusion, standardisation and transparency of certification criteria and processes. The criteria with which a project to invest in is classified as “green” can be considerably different depending on the geographical area, the sector concerned or the subject that classifies it. In addition, the mechanisms for controlling voluntary certifications may not guarantee an adequate level of transparency, thereby undermining investor confidence.

**Green finance regulation and related policies are unclear** to identify which financial instruments could be used in green finance. A good degree of development has been achieved in the green bond market, while, for other forms and green investment, instruments are still not well defined. An important step could be regulatory enforcement by supranational institutions, in particular the European Union. The first signs of a transition from the soft law to a hard law system have already occurred at national level, such as the French Government's law introducing mandatory climate change-related reporting for institutional investors (Article 173 of the French law on “energy transition for green growth”<sup>158</sup>), or the Italian law recognising the specificity of ethical finance by introducing tax breaks for this type of activity.<sup>159</sup>

Overcoming these criticalities is necessary to foster the development of green finance and to govern its growth, especially in the private sector, in order to achieve the goals set for climate change and sustainable development by international institutions.

## 6.2 Recommendations

In regard to the findings described above, a number of recommendations have been deduced to tackle the issues identified and to expand the use of green finance by public institutions and private investors. These are the following:

**Establish clear definitions for green and climate finance:** To overcome the first phase of development, it is recommended to establish – ideally across all financial institutions – common, transparent and concrete criteria to define green and climate finance. Clearly defining and openly communicating the sustainability criteria would be very useful to fund projects, standardise financial tools and assessment instruments and increase governance, monitoring and transparency within an international legal framework. The definition should specify the economic sectors and types of projects that can be funded as green (e.g. can a cleaner technology for a non-renewable power plant be considered green?).

**Ensure strong leadership to involve the financial sector:** By integrating the Paris Agreement’s and SDGs’ objectives (move from a climate to sustainable development lens) in the financial actors’ strategies and projects, the links between these frameworks and financing will be strengthened. Collaboration between countries and different international institutions should be stronger to work on a specific common strategy for green finance issues. Deeper international cooperation would also serve to share experiences and know-how acquired in the various markets by all financial operators and stakeholders.

---

<sup>158</sup> <https://www.ipe.com/countries/france/france-aims-high-with-first-ever-investor-climate-reporting-law/10011722.fullarticle>

<sup>159</sup> <http://www.repubblica.it/economia/2016/12/07/news/etica-153593375/>

**Improve reporting and measurement of green finance activities:** A better definition of green finance activities should also be used in order to implement a system of measurement of green financial flows and associated impacts. An official reporting system, standardised and shared, could bring important information for guiding green investment flows and for policy-makers and regulators to achieve their policy objectives. Developing information on environmental and financial risk involves a complex and often costly set of skills, especially for small-sized financial firms. Sharing knowledge and information therefore has elements of a “public good” for the benefits of all interested stakeholders.

**Scale up green funding and promote innovative financial instruments:** it is crucial to scale up the investment of the financial sector in climate and green projects. The development and use of more innovative financing tools will also allow more investors to be attracted, e.g. through green bonds, layered risk funds and carbon pricing. Many of these instruments already exist but their use is still limited. It would be advisable to extend their practice, in particular the use of guarantees as these can help “crowd in” private sector resources and would be particularly useful in the context of low-carbon development finance due to their ability to partially underwrite risks. In line with this suggestion it would also be useful to not only focus on large projects but also to develop the bankability of small projects through more flexible tools.

**Increase MDB loans and grants to capital ratios:** climate experts propose abandoning the conservative approach that strongly limits the lending quantities by MDBs by expanding the loan portfolios to reach at least five to seven times equity. On the other hand, increasing grants goes more in line with the “polluter-pays principle” of compensating developing countries for the damage done by developed countries. The idea is to use grants as a way of leveraging larger funding volumes, notably through concessional loans, rather than viewing grants as an end in themselves.

**Improving regulation and standardisation in the private sector:** the lack of precise regulation reduces market transparency, decreases investor confidence and allows greenwashing. Stronger standardisation of green finance instruments and practices will help to mainstream their use. Starting from good practices developed by the market, a regulatory mechanism at international level could be implemented with the cooperation of the institutions and stakeholders involved. While the implementation of soft law mechanisms for certification of green financial products should be facilitated and developed, the next step for the industry should be the implementation of a hard law framework that provides clear, standardised and controllable criteria for green financial markets. More disclosure has to be demanded from financial institutions to assess their alignment with green objectives. Government regulation is also needed to counter the so-called “tragedy of the horizon”, introducing policy measures that will stimulate long-term investment and provide guarantees on future scenarios.

### 6.3 General Conclusion

Overall, it can be concluded that green finance is an increasingly important part of the common fight against climate change and environmental issues at regional and global level. Public funding alone is no longer sufficient to develop an economic model that considers sustainability as a structural element of the economy and markets. For this reason, the next step is to involve private actors and to promote their contribution to the green economy. The financial system faces many challenges, posed by the structural crisis of the last decade and ever-increasing environmental problems. What is clear, however, is that the green dimension of finance is no longer seen as a constraint but rather as a way to bring profitability into the financial industry. Certainly, greater public involvement is required to increase direct public investment in environmental projects as well to implement a sound regulatory system that encourages the involvement of private finance, including through incentives, policies and regulation.

Positive signals and concrete examples in achieving these goals are already in place in the Mediterranean region. Funding for green projects by public institutions, both national and supranational, is expected to grow in accordance with international sustainability strategies and commitments. The growth of the green bond market and climate financing in recent years by major banks and private companies has already created a good basis for the future of private green investments. Positive trends also occur for other green investment instruments, such as green funds. In addition, many retail banking initiatives have been implemented by the Mediterranean banks to develop green investment and green savings products.

The next step will be to regulate and stimulate these initiatives developed in recent years, creating a favourable and transparent context for improving investment. Legislative initiatives adopted by France and Italy in 2016 are also good steps forward towards a process of public regulation that helps to develop the whole industry. The strong cooperation between national and international institutions, the greater involvement of the private sector and the development of green projects in the southern countries will be crucial elements for green finance to become more and more a structural component of sustainable development in the Mediterranean.



## 7 Bibliography

- AFD (2016), Climate Activities of the AFD Group in 2016, <https://www.afd.fr/sites/afd/files/2017-10/climate-activity-afd-group.pdf>
- Aldana, M., & Braly-Cartillier, I. (2014), Guarantees for Green Markets Potential and Challenges, <http://fs-uneep-centre.org/sites/default/files/publications/cmfmonguaranteesforgreenmarkets.pdf>
- Barnard, S., Nakhoda, S., & Caravani, A. (2014), The Green Climate Fund.
- Baudienville, G. (2009), Beyond Grants: Climate finance in developing countries, Overseas Development Institute, <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/5524.pdf>
- BMZ (2015), Climate Action in practice, the contribution of the German Development Policy, [https://www.bmz.de/en/publications/topics/climate/Materialie243\\_climate\\_action.pdf](https://www.bmz.de/en/publications/topics/climate/Materialie243_climate_action.pdf)
- BMZ (2015), Together for a common cause – Germany’s contribution to international climate financing.
- BMZ (2016), Financing climate action – Germany as a responsible partner.
- Boissinot, J., & Huber, D. (2016), Finance and climate: The transition to a low- carbon and climate-resilient economy from a financial sector perspective, *OECD Journal: Financial Market Trends*, Vol. 2015/1.
- Cambridge Research Paper (2016), The Paris Climate Agreement: Implications for banks, institutional investors, private equity and insurers, <http://www.cisl.cam.ac.uk/publications/publication-pdfs/paris-climate-agreement-implications-for-international-banks.pdf>
- CBI Factsheet (2016), Green Finance: Green Bond Directions, COP22, [https://www.climatebonds.net/files/files/COP22\\_Directions\\_WEB.pdf](https://www.climatebonds.net/files/files/COP22_Directions_WEB.pdf)
- CBI Report (2016), Bonds and Climate Change. The State of the Market in 2016, <https://www.climatebonds.net/files/files/reports/cbi-hsbc-state-of-the-market-2016.pdf>
- Climate Bonds Initiative (2016), Roadmap for China: green bond guidelines for the next stage of market growth, [https://www.climatebonds.net/files/files/CBI-IISD-Paper1-Final-01C\\_A4.pdf](https://www.climatebonds.net/files/files/CBI-IISD-Paper1-Final-01C_A4.pdf)
- Climate Focus Briefing Note (2016), Green Climate Fund and the Paris Agreement, [http://www.climatefocus.com/sites/default/files/GCF%20and%20Paris%20Brief%202016.new\\_.pdf](http://www.climatefocus.com/sites/default/files/GCF%20and%20Paris%20Brief%202016.new_.pdf)
- Climate Funds Update, ODI (2015), Climate Finance Regional Briefing: Middle East and North Africa, [https://us.boell.org/sites/default/files/uploads/2015/11/cff9\\_2015\\_eng\\_mena.pdf](https://us.boell.org/sites/default/files/uploads/2015/11/cff9_2015_eng_mena.pdf)
- CPI (2014), What is Climate Finance?: Definitions to improve tracking and scale up climate finance, <https://climatepolicyinitiative.org/publication/climate-finance-definitions-improve-tracking-scale-climate-finance/>
- CPI (2015), Global Landscape of Climate Finance 2015, <http://climatepolicyinitiative.org/wp-content/uploads/2015/11/Global-Landscape-of-Climate-Finance-2015.pdf>
- Delfino, A. (2015), Moving Beyond by Incentivizing Green Investments in EBRD’s Countries of Operation, Climate Law and Governance Working Paper Series, Centre for International Sustainable Development Law (CISDL), [http://www.climatelawgovernance.org/Downloads/CISDL%20Legal%20Working%20Paper%20-%20Delfino,%20Angela\\_EBRD.pdf](http://www.climatelawgovernance.org/Downloads/CISDL%20Legal%20Working%20Paper%20-%20Delfino,%20Angela_EBRD.pdf)
- EBRD (2013), Guide to EBRD Financing, <http://www.ebrd.com/downloads/research/factsheets/guidetofinancing.pdf>
- EBRD (2015), Green Economy Transition Approach, <http://ec.europa.eu/environment/archives/greenweek2016/uploads/additional-assets/green-economy-transition-brochure.pdf>
- EBRD (2015), Responsible Investment Opportunity in EBRD Bonds, [www.ebrd.com/documents/.../green-projects-2015-english.pdf](http://www.ebrd.com/documents/.../green-projects-2015-english.pdf)
- EBRD (2015), Sustainability Report 2015, <http://www.ebrd.com/news/publications/sustainability-report/sustainability-report-2015.html>
- EBRD, AfDB, ADB, EIB, IADBG, & WBG (2017), Joint Report on Multilateral Development Banks’ Climate Finance 2016, [www.ebrd.com/2016-joint-report-on-mdbs-climate-finance.pdf](http://www.ebrd.com/2016-joint-report-on-mdbs-climate-finance.pdf)
- eco-union (2016), Towards a Green Economy in the Mediterranean, <http://medgreeneconomy.org/>
- EIB (2015), EIB Activity in the Mediterranean, [http://www.eib.org/attachments/country/eib\\_activity\\_in\\_the\\_mediterranean\\_en.pdf](http://www.eib.org/attachments/country/eib_activity_in_the_mediterranean_en.pdf)
- EIB (2015), EIB Climate Strategy: Mobilising finance for the transition to a low-carbon and climate-resilient economy, [http://www.eib.org/attachments/strategies/eib\\_climate\\_strategy\\_en.pdf](http://www.eib.org/attachments/strategies/eib_climate_strategy_en.pdf)
- EIB (2016), Climate Awareness Bonds Statement for the Year, <http://www.eib.org/attachments/green-bond-market-development-and-eib.pdf>
- EIB (2016), EIB Climate Awareness Bonds allocations (2007 – H1 2016), <http://www.eib.org/attachments/green-bond-market-development-and-eib.pdf>
- G20 (2015), Turkey Climate Finance Study Group, Report to the Finance Ministers, <http://g20.org.tr/wp-content/uploads/2015/11/G20-Climate-Finance-Study-Group-Annual-Report-2015.pdf>

- G20 Insights (2017), Fostering sustainable global growth through green finance – what role for the G20, [http://www.g20-insights.org/wp-content/uploads/2017/04/Climate\\_Green-Finance\\_V2.pdf](http://www.g20-insights.org/wp-content/uploads/2017/04/Climate_Green-Finance_V2.pdf)
- GBP (2016), Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds.
- HBS (2011), The impact of corporate culture of sustainability on corporate behaviour and performance, [http://www.hbs.edu/faculty/Publication%20Files/SSRN-id1964011\\_6791edac-7daa-4603-a220-4a0c6c7a3f7a.pdf](http://www.hbs.edu/faculty/Publication%20Files/SSRN-id1964011_6791edac-7daa-4603-a220-4a0c6c7a3f7a.pdf)
- I4CE (2016), Beyond transparency: unlocking the full potential of green bonds.
- International Bank for Reconstruction and Development/World Bank (2015), What are Green Bonds?, <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>
- International Finance Corporation, World Bank Group (2016), IFC Climate Implementation Plan, [https://www.ifc.org/wps/wcm/connect/5f5402804c60b510b6bbbeaccf53f33d/IFC\\_Climate\\_Implementation\\_Plan\\_03152016\\_WBG\\_v2.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/5f5402804c60b510b6bbbeaccf53f33d/IFC_Climate_Implementation_Plan_03152016_WBG_v2.pdf?MOD=AJPERES)
- KCMI (2010), Strategic Approaches to Develop Green Finance, [https://www.ifc.org/wps/wcm/connect/48d24e3b-2e37-4539-8a5e-a8b4d6e6acac/IFC\\_Green+Finance+-+A+Bottom-up+Approach+to+Track+Existing+Flows+2017.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/48d24e3b-2e37-4539-8a5e-a8b4d6e6acac/IFC_Green+Finance+-+A+Bottom-up+Approach+to+Track+Existing+Flows+2017.pdf?MOD=AJPERES)
- KPMG (2016), Green Bonds: The Process, <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/04/green-bonds-process.pdf>
- KPMG (2016), Mainstreaming the green bond market: pathway towards common standards, <https://assets.kpmg.com/content/dam/kpmg/nl/pdf/2016/advisory/Mainstreaming-the-green-bond-market.pdf>
- McKinsey Centre for Business and Environment (2016), How to mobilize private-sector financing for sustainable infrastructure, [http://www.indiaenvironmentportal.org.in/files/file/Financing\\_change\\_How\\_to\\_mobilize\\_private-sector\\_financing\\_for\\_sustainable\\_infrastructure.pdf](http://www.indiaenvironmentportal.org.in/files/file/Financing_change_How_to_mobilize_private-sector_financing_for_sustainable_infrastructure.pdf)
- New Climate Economy (2016), The sustainable infrastructure imperative – Financing from better growth and development, [http://newclimateeconomy.report/2016/wp-content/uploads/sites/4/2014/08/NCE\\_2016Report.pdf](http://newclimateeconomy.report/2016/wp-content/uploads/sites/4/2014/08/NCE_2016Report.pdf)
- Novethic (2017, March), The European Green Funds Market, [http://www.novethic.com/fileadmin/user\\_upload/tx\\_ausynovethicetudes/pdf\\_syntheses/Green-funds-study-Novethic-Ademe-2017.pdf](http://www.novethic.com/fileadmin/user_upload/tx_ausynovethicetudes/pdf_syntheses/Green-funds-study-Novethic-Ademe-2017.pdf)
- OECD (2017), Engaging the private sector for green growth and climate action: an overview of development co-operation efforts, [http://www.oecd-ilibrary.org/development/engaging-the-private-sector-for-green-growth-and-climate-action\\_85b52daf-en](http://www.oecd-ilibrary.org/development/engaging-the-private-sector-for-green-growth-and-climate-action_85b52daf-en)
- OECD (2015), Green Finance and Investment: Mapping Channels to Mobilise Institutional Investment in Sustainable Energy, [http://www.practitioners-dialogue.de/files/assets/Klimainvestitionen/Downloads/External%20Publications/OECD%20\(2015\)%20Mapping%20Channels%20to%20Mobilize%20Institutional%20Investment%20in%20Sustainable%20Energy.pdf](http://www.practitioners-dialogue.de/files/assets/Klimainvestitionen/Downloads/External%20Publications/OECD%20(2015)%20Mapping%20Channels%20to%20Mobilize%20Institutional%20Investment%20in%20Sustainable%20Energy.pdf)
- OECD (2015), Towards Green Growth? Tracking Progress, <http://www.oecd.org/env/towards-green-growth-9789264234437-en.htm>
- OECD (2015), Green Bonds: Mobilising the debt capital markets for a low-carbon transition, [https://www.oecd.org/environment/cc/Green%20bonds%20PP%20\[f3\]%20\[lr\].pdf](https://www.oecd.org/environment/cc/Green%20bonds%20PP%20[f3]%20[lr].pdf)
- OECD (2016), 2020 Projections of Climate Finance Towards the USD 100 Billion Goal Technical Note, <https://www.oecd.org/environment/cc/Projecting%20Climate%20Change%202020%20WEB.pdf>
- OECD (2017), Green Investment Banks: Innovative Public Financial Institutions Scaling Up Private, Low-carbon Investment, <https://newclimateeconomy.report/workingpapers/wp-content/uploads/sites/5/2017/01/Green-Investment-Banks-OECD.pdf>
- OECD Journal (2015), Finance and climate: The transition to a low-carbon and climate-resilient economy from a financial sector perspective, [http://www.oecd-ilibrary.org/finance-and-investment/finance-and-climate\\_fmt-2015-5jrrz76d5td5?crawler=true](http://www.oecd-ilibrary.org/finance-and-investment/finance-and-climate_fmt-2015-5jrrz76d5td5?crawler=true)
- OECD, CPI (2015), Climate Finance in 2013-14 and the USD 100 Billion Goal, <http://www.oecd.org/env/cc/Climate-Finance-in-2013-14-and-the-USD-billion-goal.pdf>
- OXFAM (2016), Climate Finance Shadow Report 2016 – Lifting the lid on progress toward the \$100 Billion commitment, [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-climate-finance-shadow-report-031116-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-climate-finance-shadow-report-031116-en.pdf)
- The New Climate Economy Report (2016), The Global Commission on the Economy and Climate, and its flagship project The New Climate Economy.
- UN Global Compact, UNCTAD, UNEPFI, & PRI (2015), Private sector investment and sustainable development, [http://www.sustainablefinance.ch/upload/cms/user/2015\\_01\\_UNGC\\_Private\\_Sector\\_Investment\\_and\\_Sustainable\\_Development1.pdf](http://www.sustainablefinance.ch/upload/cms/user/2015_01_UNGC_Private_Sector_Investment_and_Sustainable_Development1.pdf)
- UNDP (2011), Blending Climate Finance through National Climate Funds: A Guidebook for the Design and Establishment of National Funds to Achieve Climate Change Priorities, [http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Capacity%20Development/Blending\\_Climate\\_Finance\\_Through\\_National\\_Climate\\_Funds.pdf](http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Capacity%20Development/Blending_Climate_Finance_Through_National_Climate_Funds.pdf)

- UNEP (2011), Green Economy Report: Towards a Green Economy. Pathways to Sustainable Development and Poverty Eradication,  
[https://www.unep.org/greeneconomy/sites/unep.org.greeneconomy/files/field/image/green\\_economyreport\\_final\\_dec2011.pdf](https://www.unep.org/greeneconomy/sites/unep.org.greeneconomy/files/field/image/green_economyreport_final_dec2011.pdf)
- UNEP (2014), Demystifying private climate finance, <http://www.unepfi.org/publications/climate-change-publications/demystifying-private-climate-finance-2014/>
- UNEP (2016), Green finance – a growing imperative, [http://unepinquiry.org/wp-content/uploads/2016/05/Green\\_Finance\\_A\\_Growing\\_Imperative.pdf](http://unepinquiry.org/wp-content/uploads/2016/05/Green_Finance_A_Growing_Imperative.pdf)
- UNEP (2016), G20 Green Finance Synthesis Report, [http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis\\_Report\\_Full\\_EN.pdf](http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis_Report_Full_EN.pdf)
- UNFCC (2016), Biennial Assessment and Overview of Climate Finance Flows.
- World Bank (2012), Inclusive Green Growth: The Pathway to Sustainable Development,  
[http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive\\_Green\\_Growth\\_May\\_2012.pdf](http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive_Green_Growth_May_2012.pdf)
- World Bank (2015), Green Bonds: Working Towards a Harmonized Framework for Impact Reporting,  
<https://www.ifc.org/wps/wcm/connect/f932dc004ad996538a1fea4fb4720a61/Updated+logo+FINALPROPOSALIRH+CLAN.pdf?MOD=AJPERES>
- World Bank (2016), Green Bond Impact Report, <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html>
- WWF (2016), Green Bonds must keep the green promise.

## 8 Acknowledgement

---

This study has been possible with the support of several actors and experts that have reviewed its content and participated to a technical workshop held in Barcelona on 25 May 2017 to consolidate findings and recommendations. In particular, we would like to acknowledge and thank the critical contribution of the following persons and institutions:

- Hussein Abaza, Senior Consultant (former UNEP Green Economy Director)
- Mario Aymerich, European Investment Bank
- Majdi Calboussi, Project Officer, WWF North Africa
- Nicolas Debaisieux, Climate Change, Union for the Mediterranean
- Roderick Egal, Director, IesMed
- Akram El Hosseiny, Environmental Expert
- Greg Ford, Senior Strategic and Policy Advisor, Finance Watch
- Raquel García Monzón, Energy Officer, Climate & Energy Programme, WWF Spain
- Maged K. Mahmoud, Senior Expert, Regional Centre for Renewable Energy and Energy Efficiency
- Federico Mazza, Analyst, Climate Finance, Climate Policy Institute
- Maeve McLynn, Finance and Subsidies Policy Coordinator, CAN Europe
- Luisa Nenci, Founder, SustainValues
- Morgane Nicol, Institute for Climate Economics
- Igor Shishlov, Project Manager Climate, Institute for Climate Economics
- Burcu Tunçer, Team Leader SwitchMed, SCP/RAC

The technical team in charge of this report was the following:

- Javier Albarracin, Socioeconomic Development Director, IEMed
- Fabio Fiorucci, Junior Consultant, eco-union
- Jeremie Fosse, Senior Consultant, eco-union
- Margaux Moulet, Junior Consultant, eco-union
- Kristian Petrick, Senior Consultant, eco-union
- Maria Relea, Socioeconomic development fellow, IEMed