



# The Climate Finance Cascade

A NAMA financing mechanism in a nutshell

## Imprint

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# Abstract

This study has emerged from the context of the GIZ's work on NAMA development and implementation and the crucial question how to finance a NAMA. It is based on a review of literature on climate finance from the international debate of the last few years, internet research, and over 15 interviews with representatives from the various groups of actors involved in climate finance. The main findings were that the financial investment volumes required by NAMAs are available and the private sector is indeed interested, but still reluctant to make substantial investments in – new and unknown – NAMAs in the absence of a clear policy signal and under the conditions of unclear risks and barriers. The financing instruments to deal with these challenges exist but need to be applied to the new investment opportunity of NAMAs. There is not one silver bullet but rather an appropriate combination and ratio of different financing instruments for every individual NAMA.

This paper is supposed to be a background paper for the ongoing and further work on the question how to finance a NAMA and aims to identify in the context of technical assistance what has to be considered when planning and implementing a NAMA and mobilizing the financing of that individual NAMA.





# Introduction

Nationally appropriate mitigation actions (NAMAs) are an instrument within the global climate change architecture for implementing the necessary mitigation activities to keep the mean global temperature rise due to anthropogenic emissions of greenhouse gases below 2 °C. NAMAs can include changes at project and policy levels.

They can implement market activities for real emission reductions, like installing renewable energy facilities, and can also create an enabling market environment for emission reductions activities, for example by introducing a feed-in tariff. When NAMA proposals are still in the development stage, the financing needed to implement NAMAs may simply be lacking. At the 2009 and 2010 sessions of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in Copenhagen and Cancun, respectively, “developed country Parties commit, in the context of meaningful mitigation actions and transparency on implementation, to a goal of mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries” (UNFCCC 2010: COP Decision 1/CP.16, §98).

In 2011 in Durban, the COP finally decided that the Green Climate Fund should become operational in 2012. Nevertheless, there is no mechanism through which supported NAMAs can almost automatically receive international grants or other funding as it is expected by many actors. In fact, it is even unlikely that NAMAs will be financed only through grants and/or public funds. Hence, **NAMA financing mechanisms** need to be established to leverage and mobilise private investments. So far, there is nearly no NAMA financing mechanism in place – Germany and the United Kingdom have launched on December 6, 2012, in Doha the NAMA Facility to support and mobilize the financing of NAMA implementation as the first financing facility specifically aimed at NAMAs; mitigation actions are only starting to be financed as NAMAs – the NAMA Facility is going to support the Mexican housing NAMA; and there is no agreed definition on what constitutes a NAMA and whether it can be financed as a NAMA.

The reason for this gap has to do with the market itself: the **risk-averse, conservative institutional investors**, who are the only ones with the financial muscle needed for financing NAMAs, prefer plain vanilla, long-term

investments with low risks and low returns, structured fixed-income debt products and already known assets like low-carbon bonds with at least a BBB rating. Transparency, longevity, and certainty are their principal selection criteria for investments. With regard to the market environment, the **lack of a clear policy signal** from global negotiations or from individual governments funding pilot NAMAs on the ground, thereby giving investors a long-term certainty for their investments in NAMAs, inhibits the development of a NAMA financing mechanism. This gap does not result from the missing financial resources nor from the not yet developed financial instruments. Although no NAMA has been financed and implemented thus far, both the financing of large programmes which could represent a NAMA in future and the financial instruments to allocate such financing do exist.

There is not one silver bullet to raise the needed finance. Different financial instruments must be employed and packaged according to national contexts to mobilise investors, banks, financial intermediaries, project developers, technology providers, implementers, and governments. The **heterogeneity of the private sector** must be considered when employing (and combining) different financial instruments. These different instruments will not be able to make costs and risks disappear but can create different risk-return-ratios appropriate for the individual appetites of the different actors. Hence, investments in NAMAs should be bundled in **asset packages**, which are already known to investors so that they can approve of an investment in a financial asset without having to apply technical expertise to understand the details of mitigation activities. And in order to establish a NAMA financing mechanism and create certainty for investors, **standards** for what a good and ambitious NAMA constitutes and the additional requirements a NAMA has to meet compared to usual mitigation investments – basically the MRV<sup>1</sup> requirements and the specific requirements to contribute to global emission reductions and global

1 MRV stands for measurable, reportable and verifiable. This qualification for certain mitigation actions was an outcome of the 2007 COP in Bali, when developing countries acknowledged the need as well as the potential to mitigate greenhouse gas emissions, but were reluctant to commit to internationally binding caps on their emissions. Hence, the Parties in the global negotiations agreed that developing countries would get support for mitigation actions if they are measurable, reportable and verifiable.

sustainable development – must evolve. In this context it must be noted that NAMAs should not only comprise direct emission-reducing actions, but also actions to internalise externalities and reduce transaction costs of mitigation activities. In fact, the emission reduction of a NAMA is often actually the **co-benefit**, while the sustainable development impact generates the main (public) benefit. The so-called sustainable development co-benefits ensure that the low-carbon solution implemented through a NAMA will be applied and not abandoned over the long-term, and that it will be replicated and scaled-up in future.

In conclusion, to send out a strong and clear policy signal, **pilot NAMAs** need to be financed and implemented on the ground as soon as possible. These first NAMAs need to demonstrate how to effectively overcome certain **policy barriers** and make first experiences in the implementation of NAMAs, and describe how NAMAs can fit into the global mitigation architecture. At the same time, the financing of NAMAs must be developed and appropriate **financing vehicles** should be identified to enable public and private investors from the domestic as well as the international domain to allocate financial resources to the overcoming of barriers and hedging of risks. Different instruments can attract investments from different public and private, and national and international actors at different scales requiring different risk-return profiles. Therefore, various NAMAs in different regions will require different combinations of financing instruments. These instruments can mobilise additional investments contributing to the financing of other instruments, thus leveraging additional investments for other risk-return profiles. This is called a **cascade** of climate finance, where institutional investors pour in funds at the top end – where investment grade ratings are top – and where different financing instruments channel funding through to the on-the-ground investments at the bottom end. This cascade of mutually independent financing instruments actually can take the place of a formal NAMA financing mechanism.

However, NAMAs must overcome not only policy and financing barriers, but also other barriers, like a lack of knowledge and understanding and/or insufficient capacities. To this end **needs support matching platforms** can provide flexible and appropriate support.

# Comprehensive planning

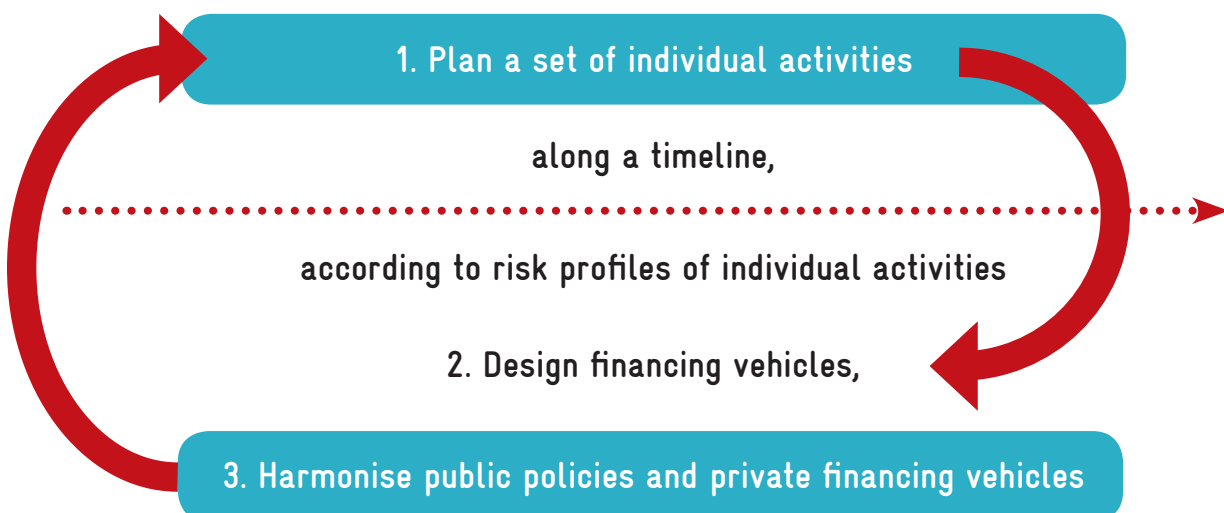
A NAMA constitutes various activities at different levels of the economy. A **set of activities** can comprise **policies and measures** for creating an **enabling environment** and a **policy framework** with incentives to support private investment flows, the establishment of a regulatory structure and effective institutions, the development of open and accessible information systems, as well as the creation of actual business models to overcome certain barriers and promote low-carbon technologies. Thereby a NAMA can connect financing, technology cooperation and capacity-building in one consistent set of activities. All these activities imply different cost structures (transition costs, incremental costs, opportunity costs) as well as revenue streams (private and public).

The financing of these NAMA activities requires the involvement of potential financiers at an early stage in the planning process. Hence, planning a set of individual activities within a NAMA along a timeline can be a good starting point. These different activities and levels of investments, however, are characterised by different **risk profiles** which require tailor-made **financing instruments** for the needed investments. A NAMA should at the same

time design a structure to harmonise **public policy** and private investments in order to maximise the effectiveness of NAMA activities and the leveraging of investments.

The amount of needed investments varies from country to country as do the shares of needed investments in (i) public goods and infrastructure; (ii) the market launch and the diffusion of goods and the establishment of companies producing goods and services, i.e. the supply side of the market economy; and (iii) the development of micro enterprises and purchasing power in order to create a demand for the produced low carbon goods and services, i.e. the demand side of the market economy.

Graphic 1: Designing the financing architecture for a NAMA



Source: Author (GIZ)

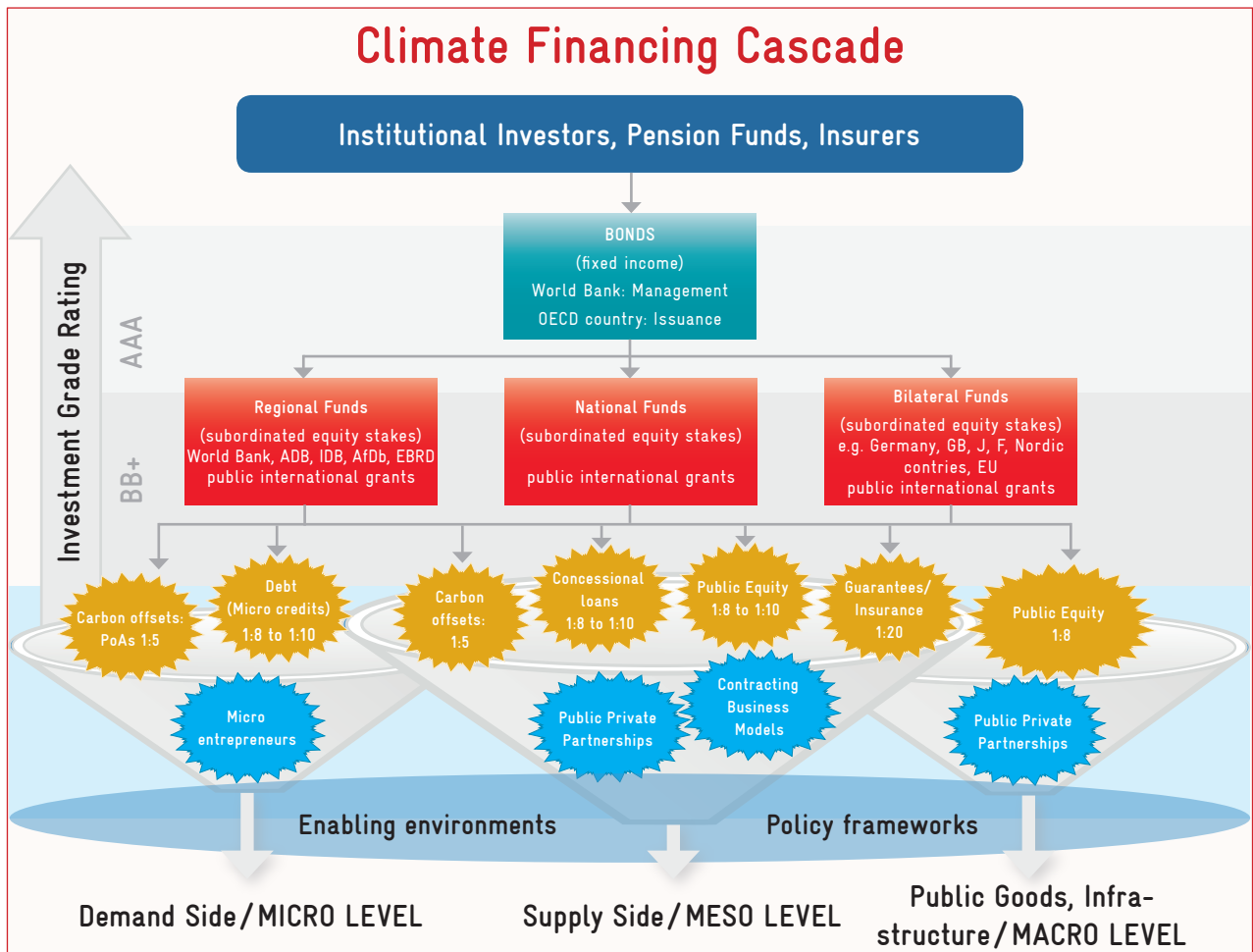
# The Climate Finance Cascade

**Instruments for financing NAMAs: how can the money be allocated?**

Starting from the bottom-up, the question is: how can investments connected to a NAMA at the three levels (public goods and infrastructure, supply side, demand side) be allocated with sufficient funding? The various activities within a NAMA require different sets of financing instruments which can vary in scope, across regions and from NAMA to NAMA. Nevertheless certain financing instruments can be identified which are appropriate for certain investments and which can be combined individually according to the investment purpose, financing needs, and opportunities to leverage additional private and public, and national and international funds.

Top-down funds from various sources are invested along the whole cascade in different instruments, which in turn leverage additional funds invested in other instruments. Thereby the funds tap into different sources and pour down like a cascade into the various mutually independent financing instruments according to the individual NAMA activities. Private investments are to be mobilised along the whole cascade of climate financing. All financing instruments can absorb private capital and thereby leverage supplementary capital. Although these instruments should match up at best, there is no need for a masterplan to develop all these instruments through one institution.

Graphic 2: The Climate Financing Cascade



Source: Author (GIZ)

## The Climate Finance Cascade from the bottom-up

**Investment purposes** at different levels of the economy **differ in cost structure, revenue flows and scope**. Infrastructure and the generation of public goods are quite costly but should not be financed through fees for use as often users can and should not be excluded from the use of this infrastructure and public goods and, thus, do not have to pay for use. As a result, there is no cash flow to those public goods, like climate-specific knowledge and education for a well-qualified labour force. Hardware infrastructure can be provided by private consortia with public concessions, as is the case for certain transport infrastructure or low-carbon industry parks, if the use of this infrastructure can be made exclusive to those users who pay for its use.

The supply side of the economy needs financial support to invest in low-carbon technologies and transform companies into low-carbon businesses. This support must come in different scopes and forms in order to be absorbed by private companies (e.g. concessional loans, public equity, publicly-backed guarantees adjusted to the financial needs of private companies and their business models) like contracting or establishing partnerships with the public sector. While the demand side needs incentives and various financing instruments, such as debt in the form of micro loans for micro enterprises to transform consumption and production patterns at the base of economies.

The next sections will briefly introduce these various financing instruments for various investment purposes at different levels of the economy. All these financing instruments can be leveraged by public funds provided as grants or other, but for none of the instruments there is a necessity to include a grant component.

### Public infrastructure level

Investments in **public goods** and **infrastructure** which fulfil the necessary requirements for private investments in mitigation measures usually do not generate cash flows. Therefore it is difficult to create private business models to provide those goods. Hence, a major part of the needed investment at **macro level** will have to come from public equity, which can leverage additional investments by signalling investment security through the **public equity**

shares in the investment if appropriate business models and cash flows can be initiated. Public-private partnerships may be one potential model for how to invest in and maintain public goods and infrastructure, as in the case for the private provision of transport infrastructure with concession by public authorities. However, it is questionable as to how far leveraging public equity on this level can go.

### Supply side level

The **meso level** represents the **supply side** of the economy, i.e. the public and private company-based structures. On this level, mitigation measures are likely to require the largest portion of the investments, as the private economy<sup>2</sup> usually emits the highest amount of emissions and requires therefore most investments in the transition to a low-carbon economy.

Depending on the risk profile and opportunities the individual activity has, different financial instruments can be applied, including public equity, guarantees and insurance policies for private investments, concessional loans and additional revenue streams from the carbon markets.

**Publicly-backed guarantees and insurance policies** for investments as well as companies are highly appreciated by private investors and according\* have the highest leverages. However, they can hardly mobilise the entire US\$ 100 billion alone, especially if public funds are indeed needed to cover the losses resulting from unsuccessful investments. Apart from that, the larger the overall financial volumes of investments, the more private investors will demand credible public signals for revenue opportunities and long-term certainty of needed mitigation investments. Hence, guarantees will instead serve as an accompanying function for investments and other financial vehicles. However, as guarantees are usually demanded only in markets where they are established already, they are not necessarily needed and thus might, in fact, do not leverage additional funds at all. Guarantees are appropriate for temporary market failures of investments in infrastructure and technology companies. Only in the short run public guarantees can be efficient for large investment

<sup>2</sup> Although in many developing countries large emitters like energy providers are often still state-owned and require therefore different financing instruments.

volumes. In the long run the market must be able to make investments without publicly-backed guarantees.

**Public equity** in companies and **concessional loans** to companies – thereby providing both debt and equity – can make investments in mitigation activities competitive with other investments and can signal serious public commitment and readiness to take risks by the public sector and implementers themselves and thereby long-term certainty to private investors and thus mobilise additional investments. In addition, these instruments have an immediate function to channel capital into needed investments and companies for mitigation purposes. Credit lines are ready for up-scaling and can be the „work horses“ in the financing of NAMAs. However, these instruments are still quite costly and lock-in public capital for quite some time.

A comparatively smaller and less significant role in the mobilisation of private funds for mitigation will be played by the **carbon market**, although it might be the only, and in the long-term most relevant, economic mechanism for mitigation – depending on ambitious targets and according caps. Certified emission reductions, which can be traded, only add up to 10–15% to revenues from a mitigation investment – which, however, should make a critical difference in deciding whether a project should be implemented and invested in or not according to the additionality requirement of the CDM. The major portion of the investment costs must come from conventional revenues, like from sold electricity, transport services, forestry products, etc. Thus, carbon market revenues can help finance a NAMA, however investment and incremental costs should not be mixed in order to avoid double counting. Therefore the MRV component of NAMAs should always be applied at the sectoral level for emission reductions. In addition, the effectiveness of carbon markets strongly depends on (politically negotiated) caps and the volatile prices of certificates. In fact, carbon offsets have the smallest leverage compared to other financial instruments.

Beyond financial vehicles to mobilise the private sector and initiate low-carbon development, there are business models for how to support private companies in providing and using low-carbon products and services.

**Public-private development partnerships** are a direct way for public interventions to create low-carbon businesses and markets. Basically, the partnership between the public and private sectors manifests itself in private companies investing in low-carbon development while receiving some sort of support from the public sector, and sometimes the private companies even fulfil public sector functions.

However, most private technology providers are reluctant and risk-averse when it comes to investments in new markets in developing countries. Hence, a more realistic model to enable investments in low-carbon technologies may be contracting business models. **Contracting** business units, ESCOs for instance, buy the low-carbon technology from the provider, install it and regularly collect the revenues from the installed technology to pay back the initial investment made in purchasing the technology. Thus the low-carbon technology is applied in developing countries without the technology provider taking the risk of a direct investment in a new market in the developing country. Such an approach is able to hedge private equity participation. In the transport sector, for instance, **private (foreign) direct investments** can probably be attracted through public-private partnerships that recover the initial investment through tolls or road concessions. The initial investments will likely come as debt from private banks. Thus, there might be a role for contractors attracting debt finance, investing in public-private partnerships, and recollecting revenues to pay back the debt.

The public sector's role would be to help set up the contracting business unit and to provide it with access to the finance market for the initial investments. This role is particularly important as not equity investments are the bottleneck of climate investments but the project development. Sufficient equity finance is available but it is only invested if market opportunities, political and legal stability, and local expertise and capacities can make investments a success.

#### Demand side level

The companies will only be able to successfully market their low-carbon products and services if the demand side has sufficient purchasing power. Therefore, public interventions at the meso level, the supply side, can be

complemented by interventions at the **micro level**. **Micro credits** can help to support individual entrepreneurs. They have only a minor relevance in terms of emission reductions, but financing for micro investments can have a role in the broad dissemination of low-carbon solutions. As micro credits are often used for consumptive purposes micro credits for low-carbon products and services can be of particular relevance in the creation of the needed purchasing power.

Especially with regard to social and economic co-benefits, a wide range of small-scale investments in low-carbon products and services can have an important impact. To

this end, **Programmes of Activities (PoA)** were introduced to bundle many small-scale activities to make them bankable for the carbon market. As this instrument is still not widely applied, and although PoA methodologies can be a basis for generating credits from NAMAs to be traded in the carbon market, the relevance of PoAs for the overall volume of global climate finance is rather limited.

The micro level and **micro entrepreneurs** will not contribute large emission reductions or invest large shares of the necessary climate finance, but they may be relevant for attaining sweeping low-carbon development and initiating dynamic and autonomous low-carbon growth.

**Table 1: Overview of financing instruments**

Financing instrument	Level of investment	Example	Financial volume	Potential leverage <sup>3</sup>
Equity	a) Public infrastructure b) Private companies	a) Bus rapid transit system b) Privately owned public transport companies	High	1:8 to 1:10
Guarantees	Private activities	Publicly-backed guarantees for revenues from sales of renewable energy	High/medium	Up to 1:20
Debt c) Loans d) Micro credits	a) Private companies b) Micro entrepreneurs	a) Credit lines for installation of waste treatment facilities b) Solar home systems	a) Medium b) Low	1:8 to 1:10
Carbon market a) Projects b) PoAs	a) Privately owned projects b) Small-scale activities	a) Installing renewable energy facilities b) Energy efficiency measures in buildings	Low	Up to 1:5

Source: Author (GIZ)

<sup>3</sup> The leverages of individual financing instruments have been identified in the Report of the Secretary General's High-Level Advisory Group on Climate Change Financing, 2011. Although this document is widely acknowledged, it has to be stated that the exact range of leverages is still continuously being debated. Indeed, studies could show that the largest leverage of funds does not necessarily correlate with the largest emission reductions and relevance of climate related projects and programs. Apart from that, leveraging ratios can vary significantly from country to country. Hence, a leveraging ratio is always highly questionable, often public funds do not leverage private investments but come as a windfall profit and crowd out private funds. Rather, certain financial instruments can be appropriate for different financial volumes of investments, not saying anything about the leverage factor of the financial instrument.

All NAMA activities at all levels – public goods and infrastructure, supply side, demand side – should be accompanied by and embedded in enhancing the **enabling environment** through human and institutional **capacity development** and the **policy framework** and incentives by providing policy advice. Clear supportive policy frameworks like feed-in-tariffs are successful means for attracting private finance interventions. Such frameworks can limit political risks and help overcome administrative barriers. Level playing fields which imply the phasing-out of subsidies for high carbon solutions should additionally enhance the investment climate. Performance-based payments, for instance for NAMA targets, can increase incentives and ensure revenues for investors. An ambitious NAMA will combine specific project activities with policy-based interventions in a broad and comprehensive NAMA programme. Immediate action is needed to initiate low-carbon development and achieve national reduction targets. However to produce a low-carbon development process and instigate autonomous low-carbon growth, the surrounding national factors related to activities – legislative regulation, economic incentives, available capacities, accessible information, effective institutions – must be designed to that end.

#### Sourcing instruments for the financing of financing instruments: where does the money come from?

The major part of necessary climate investments will not come from the international realm but from **domestic sources** like taxes, levies, public budgets, etc. This is because no country would consent to a global climate finance architecture which transfers property rights from significant parts of the economy and national infrastructure to international private investors who finance low-carbon development. At the same time public budgets are very limited and do not suffice to transfer the needed financial volumes for low-carbon investments.

Different NAMA sectors allow for various policy instruments and economic incentives to adjust prices or limit the amounts of emissions and to incentivise low-carbon investments. These instruments have a financial effect in addition to the regulatory effect which is supposed to change behaviour. The combination of those instruments

which is nationally appropriate must be determined individually.

The policy instruments should address (i) the planning and design of an enabling framework; (ii) the regulatory institutions and the definition of clear responsibilities for public interventions; (iii) the economic structures and incentives for low-carbon activities; (iv) the information needed to enhance transparency and enable low-carbon activities; and (v) the technology and the ability to implement actions pro-actively.



Table 2: Overview of domestic policy instruments and economic incentives

Domestic policy instruments and economic incentives	Energy	Transport	Buildings	Waste	Industry	Forestry	Agriculture
Carbon tax	✓	✓	✓	✓	✓	(✓)	(✓)
Energy emissions tax	✓	(✓)	(✓)	(✓)	(✓)		
Tax-free low-carbon development zones	✓	✓	✓	✓	✓		
Investment tax credits	✓	✓	✓	✓	✓	✓	✓
Production tax credits	✓				✓	(✓)	✓
Environmental levies		✓	✓	✓	✓	✓	
Phase-out of fossil fuel subsidies	✓	✓	✓		✓		
Production subsidies	✓				✓	(✓)	✓
Feed-in tariffs	✓			(✓)		(✓)	(✓)
Renewable energy access law	✓						
Project development grants	✓	✓	✓	✓	✓	✓	✓
Micro finance facility for climate-resilient practices	✓	✓	✓	✓		✓	✓
Restructuring aid for industries					✓		
Smart metres/demand-side management	✓						
Public procurement	✓	✓	✓	✓	✓	✓	✓
Green power purchasing	✓						
Publicly funded venture capital	✓	✓	✓	✓	✓	✓	✓
Venture loan guarantees	✓	✓	✓	✓	✓	✓	✓
Mezzanine/subordinated debt funds	✓	✓	✓	✓	✓	✓	✓
'First loss' public equity position in funds	✓	✓	✓	✓	✓	✓	✓
Public-private technology funds	✓	✓	✓	✓	✓		
Green bonds	✓	✓	✓	✓	✓	✓	✓
Loan softening	✓	✓	✓	✓	✓	✓	✓
Senior debt funds	✓	✓	✓	✓	✓	✓	✓
Public infrastructure funds	✓	✓	(✓)	(✓)	(✓)		
Technology insurance packages	✓	✓	✓	✓	✓		
Green accounting	✓	✓	✓	✓	✓	✓	✓
(Mandatory) labelling and standards	✓	✓	✓	✓	✓	✓	✓
Renewable fuel standards	✓	✓	✓				
Ecological footprint assessment	✓	✓	✓	✓	✓	✓	✓
Insurance programmes	✓	✓	✓	✓	✓	✓	✓
Interconnection policy	✓						
Line extension policy	✓						
Protection of innovation (patents)	✓	✓	✓	✓	✓		
Best available technology requirements	✓	✓	✓	✓	✓		
Building codes			✓				
Tolls for transport infrastructure		✓					
Parking fees		✓					
Public transport fares		✓					
Waste disposal fees				✓			
Renewable transport fuel obligations		✓					
Public benefit charges	✓	✓				✓	✓
Land zoning to protect sinks and public goods						✓	✓
Green certificates	✓	✓	✓	✓	✓	✓	✓
Emission caps and trading schemes	✓	✓	✓	✓	✓	(✓)	(✓)
Removal of trade barriers to climate technologies	✓	✓	✓	✓	✓		
Technology transfer funds	✓	✓	✓	✓	✓		
Export trade credits	✓	✓	✓	✓	✓	✓	✓

Source: Author (GIZ), adapted from UNDP: Catalysing Climate Finance, 2011.

Apart from the domestic sources of climate finance, **international climate finance** must play a complementary role that is needed to support developing countries and emerging economies in implementing the great transformation to a low-carbon economy.

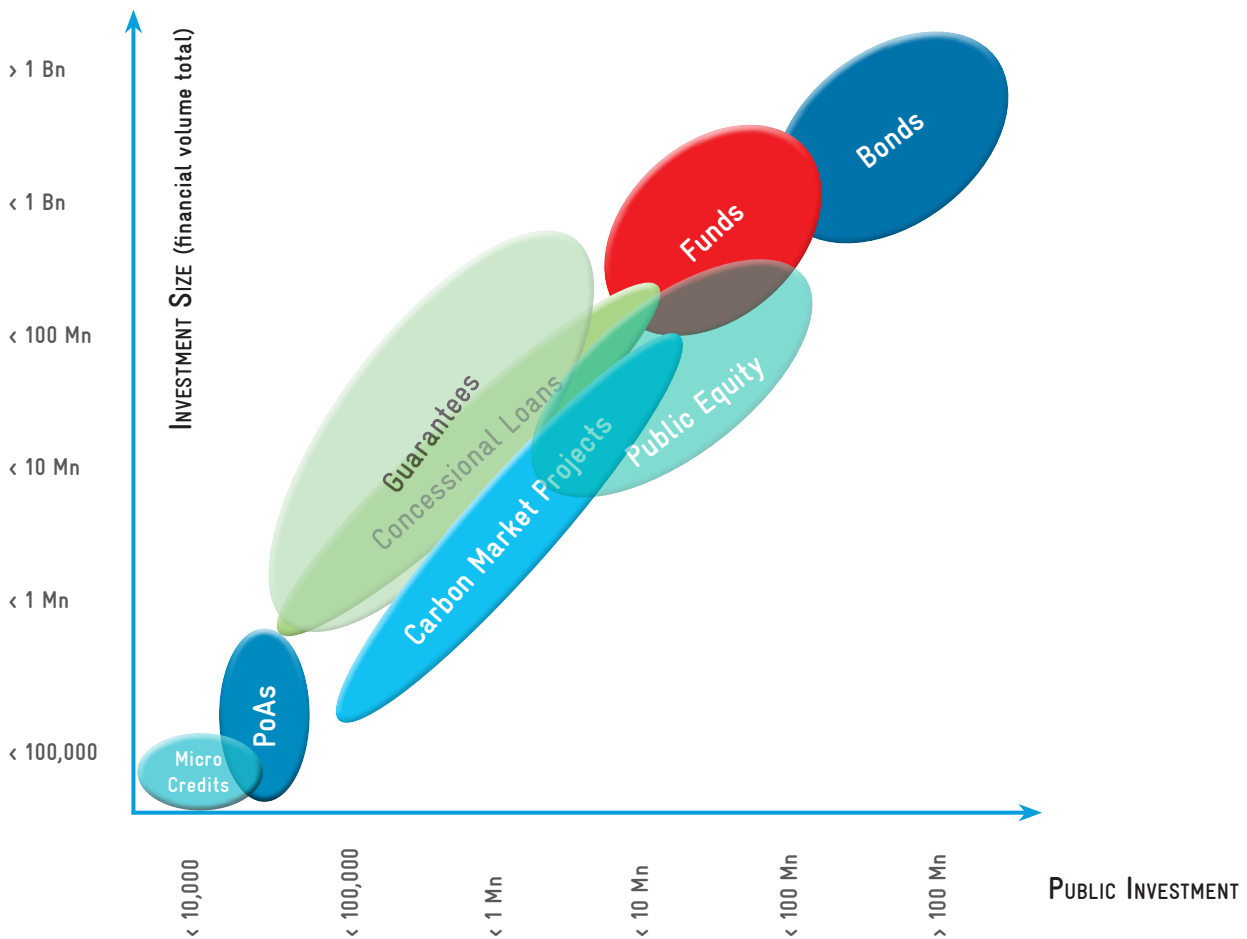
The different financing vehicles can hardly be financed by public budgets alone. Supplementary domestic as well as international private investments must be leveraged. As such investments in developing countries carry certain risks and have a low investment grade rating (BB+ and lower), interest rates on capital from the financial market are high. Therefore the global climate finance architecture will have to provide **funds** to mobilise the needed investments through the various financing vehicles for different NAMA activities. In order to attract private capital for these funds, subordinated equity stakes in regional and/or sectoral funds may be appropriate. Such mezzanine structured funding includes stakes from the public sector which take the first losses so that the senior stakes from the private sector (and mezzanine stakes from development banks) will still receive the full (publicly guaranteed) interest on their shares. While the public shares in regional and sectoral funds are not necessarily grants, the mobilisation of low-carbon investments will probably require the public shares to be **grants** in order to meet the committed annual US\$ 100 billion from 2020 on.

However, equity stakes may not be attractive to institutional investors like pension funds or insurance companies as they are simply not allowed to invest large amounts of their clients' capital in equity finance, but rather look for investment opportunities in debt finance. The global ratio of invested capital from debt to equity is between 60 to 40 and 70 to 30, with institutional investors being even more conservative. And with regard to the needed financial volumes of NAMAs these institutional investors are the only ones who have the financial muscle to invest financial amounts of the required dimension. On the other hand, these investors do not have the capacities to evaluate all investment projects in detail as to where their money flows in the end. Hence, institutional investors can only invest in AAA ratings while usually exaggerating perceived risks in new and unknown markets. Therefore, the individual investments and financing instruments intended to attract additional private

investments under a NAMA, financed through regional and sectoral funds comprising international grants, must be aggregated on a higher level and packaged. **Bonds** are usually the financial asset for mobilising amounts in the dimension needed for a NAMA. Bonds are fixed income assets and have, when managed by a global bank with an AAA rating and ideally backed by an OECD country, the highest investment grade rating and therefore meet the legal as well as strategic requirements of institutional investors. Bonds are familiar investment opportunities to institutional investors and can provide large-scale (private) financing today in exchange for future revenue streams if the bond issuer guarantees the revenues for the investor. Thus bonds can mobilise private capital without binding scarce public money upfront.

Usually, a number of projects and individual investment activities are bundled in a Special Purpose Entity which can be financed through bond issuance. However, this always works for individual countries. The **backing by an OECD country** for investments in or by other countries requires still a lot of work in convincing governments, particularly finance ministries. In the context of the commitment of developed countries to support developing countries in their mitigation efforts, however, the instrument of bonds for mobilising debt finance as well as of (regional) funds for equity finance can be necessary to leverage the committed annual US\$ 100 billion.

Graphic 3: The Continuum of Climate Financing Instruments



Source: Author (GIZ)

The various financing instruments have different **leverages**, which indicate how much additional private money will be mobilised for investment for every unit of public money invested.

Accounting for the different leverages of the various financing instruments and relating it to the approximate investment needs at the different levels of investment (public goods and infrastructure, supply side, demand side), it can be estimated that US\$ 20 to 30 billion of **public money** have to be provided annually in order to

mobilise the additional US\$ 100 billion for mitigation and adaptation annually from 2020 on.

It is still under debate as to how much private and public money can be counted towards the US\$ 100 billion commitment, and how this can be done. This has to be defined under the MRV rules on finance. Nevertheless there is already a range of international bilateral and multilateral climate finance sources. Some of those multilateral sources are indeed mechanisms established under UN rule, providing **direct access** to funds through accredited

**National Implementing Entities** in developing countries. However most international public climate finance comes from bilateral institutions.

**International climate financing instruments** along the entire cascade exist but not all are equally accessible in all regions and countries (see Annex I). NAMA bonds are only starting to be developed, only a few infrastructure funds offer support, despite having high leverages, public equity and publicly-backed guarantees are only offered by very few international institutions. However, although they have rather small leverages and financial dimensions, many carbon market-based financing instruments do exist.

**Barriers and risks: Why don't markets invest the money by themselves?**

In order to give a clear and strong policy signal for private investors, pilot NAMAs will have to develop models

on how NAMAs can meet the requirements in the global mitigation architecture, i.e. how the MRV components of NAMAs can be designed, how effective emission reductions can be achieved, and on how NAMAs can contribute to sustainable development and avoid future emissions through green growth strategies. And these NAMAs must develop **replicable business models** how to overcome certain NAMA barriers and manage risks in markets. It will probably take two to three years at least to develop the financing instruments mentioned above in order to finance a NAMA.

Therefore, the private sector and other stakeholders should get involved in the early stages of NAMA development, and outcomes from analyses and sector investment opportunities should be widely communicated. Public-private roundtables can establish a continuous communication process.

Table 3: List of barriers

	Project action	Policy-based framework
<b>Financial barriers</b>		
<ul style="list-style-type: none"> <li>High upfront costs, small project sizes</li> <li>Split incentives (e.g. for owners and users)</li> <li>Misallocation of resources for investments (e.g. subsidies for conventional technologies)</li> </ul>	<ul style="list-style-type: none"> <li>Start action on the ground</li> <li>Connect partners so they can share risks and costs</li> <li>Generate added value</li> </ul>	<ul style="list-style-type: none"> <li>Provide long-term financing</li> <li>Phase out subsidies for high carbon products</li> </ul>
<b>Institutional barriers</b>		
<ul style="list-style-type: none"> <li>Limited access to capital</li> <li>Monopolies/ limited access to markets</li> </ul>	<ul style="list-style-type: none"> <li>Integrate partners</li> </ul>	<ul style="list-style-type: none"> <li>Abolish monopolies and regulatory market access barriers</li> </ul>
<b>Economic barriers</b>		
<ul style="list-style-type: none"> <li>Externalities</li> </ul>	<ul style="list-style-type: none"> <li>Create opportunities for free communication</li> <li>Inform policymakers through bottom-up processes</li> </ul>	<ul style="list-style-type: none"> <li>Adjust market prices and internalise externalities</li> </ul>
<b>Technical barriers</b>		
<ul style="list-style-type: none"> <li>High transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>Connect partners with complementary capacities and resources</li> </ul>	<ul style="list-style-type: none"> <li>Provide technology access</li> </ul>
<b>Information barriers</b>		
<ul style="list-style-type: none"> <li>Limited awareness of options</li> <li>Lack of knowledge/access to knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Connect actors to knowledge holders</li> <li>Install gatekeepers for information flows</li> <li>Increase transparency and openness</li> </ul>	<ul style="list-style-type: none"> <li>Education and awareness raising campaigns</li> <li>Educational curricula</li> </ul>
<b>Capacity barriers</b>		
<ul style="list-style-type: none"> <li>Lack of skilled labour</li> <li>High transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>Select (international) partners with the required capacities</li> </ul>	<ul style="list-style-type: none"> <li>Establish capacity-building institutions</li> </ul>

Source: Author (GIZ), adapted from the 'Report of the Secretary General's High-Level Advisory Group on Climate Change Financing' and the 'Current Developments in Pilot Nationally Appropriate Mitigation Actions of Developing Countries (NAMAs)' by the Wuppertal Institute

While barrier refers to a political and/or economic **market failure** in allocating adequate and timely resources to activities which will generate a positive net revenue in the long term for all market actors, a **risk** is classified as a financial factor that indeed has the ability to turn the net revenue of investments into a negative figure and be a reason for whole societies as well as individuals to abstain from adequate resource allocation in the short as well as the long term.

**Table 4: List of risks**

Risk	(Public) risk management instrument
Country risk	Country risk guarantees
Policy risk: Low-carbon policy reversal	Low-carbon policy risk cover linked to NAMA process
Currency risk: Volatile returns due to exchange rate fluctuations	Currency funds offering foreign exchange hedging products
Deal flow problems: Insufficient number of commercially attractive deals	Low-carbon project development companies (publicly funded, privately run) for early stage project development, power purchase negotiations
Difficulty evaluating multiple, overlapping risks: Established mechanisms to fully evaluate risks may not be applicable due to interlinked risks	Structured funds with public first loss equity stakes

Source: 'Catalysing low-carbon growth in developing economies: public finance mechanisms to scale up private sector investments in climate solutions' by UNEP and partners, 2009.

# Conclusion

Individual NAMAs must always adjust the set of planned activities to the individual sector and country, and according\* the appropriate financing instruments must also be adjusted. However, all NAMAs should:

- (i) Consider all three levels of investments – (public) infrastructure, supply side, demand side – and assign appropriate combinations of the various financing instruments from the climate financing cascade;
- (ii) Identify the most appropriate sources of climate finance in order to raise the needed financial support: domestic sources from the list of potential policy instruments and economic incentives, and international sources from the overview of international funding sources;
- (iii) Utilize needs support matching platforms to identify opportunities to overcome certain barriers and select partners for an alliance to finance and implement the NAMA according to the identified relevant financing instruments for its implementation and the identified potential sources for its financing; and
- (iv) Consider and eventually address, throughout the process of planning the set of activities and framework policies, the barriers and risks with respect to implementing and financing NAMAs, particularly with regard to the investments from the private sector, as outlined in the list of barriers and the list of risks (tables 3 and 4).

# Annex I

## International climate finance sources<sup>4</sup>

Overview of international funding sources for mitigation action, based on [www.climatefinanceoptions.org](http://www.climatefinanceoptions.org) by the World Bank and UNDP.

<b>NAMA Facility</b>		DECC (UK), BMU (Germany)
Nature of the facility: fund		EUR 70 million
Provisions:		
<ul style="list-style-type: none"> <li>• Grants</li> <li>• Concessional loans</li> <li>• Technical assistance</li> </ul>		
Sectors:		Regions:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Buildings</li> <li>• Industry</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>		any
Access point:		Next steps:
1. Submission of outline for NAMA support project <a href="mailto:info@nama-facility.org">info@nama-facility.org</a>		2. Eligibility check
Accessible by: National governments with qualified delivery organisation		3. Ambition check
		4. Feasibility study and appraisal mission
		5. Submission of detailed project proposal
		6. Final assessment and financing approval

<sup>4</sup> The portraits of different international climate finance sources refer to information available from the website [www.climatefinanceoptions.org](http://www.climatefinanceoptions.org). They are supposed to allow practitioners a brief overview of potential financing sources for their NAMA activities. As this information can change over time, the author cannot take any responsibility for accuracy and completeness of the information in these portraits. Therefore, every practitioner is recommended to contact the respective access point included the portraits before starting to prepare any application to one of these financing sources.

<b>Global Climate Partnership Fund (GCPF)</b>		KfW Bankengruppe/ Deutsche Bank, International Climate Initiative
Nature of the facility: fund, mezzanine subordinated equity shares		US\$ 200 million
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Direct investments</li> <li>• Investments into financial institutions</li> <li>• Risk management</li> <li>• Concessional loans</li> <li>• Co-financing</li> <li>• Technical assistance</li> </ul>		
<b>Sector:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> </ul>	<b>Regions:</b> Brazil, Chile, China, India, Indonesia, Mexico, Morocco, South Africa, Philippines, Tunisia, Turkey, Ukraine, Viet Nam	
<b>Access point:</b> 1. Selection of financial institution info@gcpf.lu	<b>Next steps:</b> 2. Due diligence 3. Approval of Technical Assistance Facility Committee, if technical assistance to obtain funding is needed 4. Approval of Investment Committee 5. Loan agreement 6. Quarterly sub-loan reports	
Accessible by: Financial institutions		
<b>Alternative access point:</b> 1. Selection of projects for co-financing or direct investment info@gcpf.lu	<b>Next steps:</b> 2. Evaluation of risk-return considerations 3. Approval of Investment Committee 4. Loan agreement 5. Quarterly reviews	
Accessible by: Project developers		



<b>Global Energy Efficiency and Renewable Energy Fund (GEEREF)</b>		European Investment Bank (EIB)
Nature of the facility: fund: equity, channels financing to regional funds		EUR 108 million
Provisions:		
<ul style="list-style-type: none"> <li>• Equity for small and medium-sized enterprises (SMEs)</li> <li>• Co-financing</li> <li>• Technical assistance</li> </ul>		
Sector:	Region:	
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> </ul>	any	
Access point:	Next steps:	
Contact: <a href="mailto:geeref@eib.org">geeref@eib.org</a>		
Accessible by: Regional funds, private equity funds		

<b>Deutsche Investitions- und Entwicklungsgesellschaft (DEG)</b>		DEG
Nature of the facility: debt, loan, risk management, mezzanine finance equity		EUR 25 million
Provisions:		
<ul style="list-style-type: none"> <li>• Co-financing</li> <li>• Technical assistance</li> <li>• Private sector mobilisation</li> <li>• Long-term cooperation</li> </ul>		
Sectors:	Region:	
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Industry</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>	any	
Access point:	Next steps:	
Contact: <a href="mailto:info@deginvest.de">info@deginvest.de</a>		
Accessible by:		

World Bank Carbon Funds and Facilities		World Bank
Nature of the facility: fund, carbon market-linked (Carbon Finance Unit develops NAMA bonds)		US\$ 2.5 billion
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Upfront payments</li> <li>• Covering of transaction costs</li> <li>• Purchases of certified emission reductions</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>	<b>Region:</b> any	
<b>Access point:</b> 1. Project Idea Note (PIN) Contract: cfhelpdesk@worldbank.org	<b>Next steps:</b> 2. Financial analysis	
<b>Accessible by:</b> National Governments of member countries		

IDB's Ingrastructure Fund (InfraFund)		Inter-American Development Bank (IDB)
Nature of the facility: fund		US\$ 20 million
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Technical assistance to prepare for IDB financing</li> <li>• Partnerships with private sector and governments</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Buildings</li> <li>• Waste</li> </ul>	<b>Region:</b> Latin America and the Caribbean	
<b>Access point:</b> 1. Expression of interest Contact: infrafund@iadb.org	<b>Next steps:</b> 2. Review by IDB 3. Decision by committee	
<b>Accessible by:</b> National Governments		

Public-Private Infrastructure Advisory Facility (PPIAF)		OECD
Nature of the facility: public-private partnership		US\$ 15 million
Provisions:		
<ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Mobilisation of private sector through: capacity building, legislation, risk allocation of infrastructure investments between public and private parties</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Buildings</li> <li>• Waste</li> <li>• Agriculture</li> </ul>		any
Access point:		Next steps:
<ol style="list-style-type: none"> <li>1. Submission of concept note Contact: <a href="mailto:ajones3@worldbank.org">ajones3@worldbank.org</a></li> </ol>		<ol style="list-style-type: none"> <li>2. Review of PPIAF</li> <li>3. Submission of formal application</li> </ol>
Accessible by: Individual projects		

Hatoyama Initiative		Japan
Nature of the facility: equity, guarantees (public part and private part)		US\$ 15 billion (funds have been frozen following nuclear meltdown in Fukuyama)
Provisions:		
<ul style="list-style-type: none"> <li>• Equity investments</li> <li>• Guarantees</li> <li>• Subsidies</li> <li>• Export insurance</li> <li>• Loans</li> <li>• Grants</li> <li>• Technical assistance</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Agriculture</li> </ul>		any
Access point:		Next steps:
<ol style="list-style-type: none"> <li>1. Bilateral negotiations with Japanese Government Contact: <a href="mailto:na@na.na">na@na.na</a></li> </ol>		<ol style="list-style-type: none"> <li>2. MoU on a post-Kyoto strategy</li> <li>3. Preparation of country strategy paper</li> </ol>
Accessible by: Developing country Governments		

<b>Multilateral Investment Fund (MIF)</b>		Inter-American Development Bank (IDB)
Nature of the facility: fund: equity		US\$ 600 million
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Equity</li> <li>• Grants</li> <li>• Loans</li> <li>• Technical assistance</li> <li>• Investments in SMEs through intermediaries (venture capital funds)</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Agriculture</li> <li>• Forestry</li> </ul>		<b>Region:</b> Latin America and the Caribbean
<b>Access point:</b> 1. Application to IDB country representative Contact: zacharyl@iadb.org		<b>Next steps:</b> <ol style="list-style-type: none"> <li>2. MIF Policy and Operations Committee reviews</li> <li>3. MIF project team works with partners on Donors' Memorandum</li> <li>4. Approval for funding by MIF donors</li> </ol>
Accessible by: Financial intermediaries, NGOs		

Africa Enterprise Challenge Fund (AECF) Renewable Energy & Adaptation to Climate Technologies (REACT)		Department of International Development (DFID)
Nature of the facility: venture capital fund, private sector fund		US\$ 100 million
Provisions:		
<ul style="list-style-type: none"> <li>• Co-financing</li> <li>• Grants</li> <li>• Loans</li> <li>• Risk management</li> <li>• Supports private companies to compete for investments in low-carbon energy</li> <li>• Increases access to finance for clean energy climate resilient technologies, weather insurance</li> <li>• Access to clean energy for rural businesses and households</li> </ul>		
Sector:		Region:
<ul style="list-style-type: none"> <li>• Renewable energy</li> </ul>		East African Community
Access point:		Next steps:
<ol style="list-style-type: none"> <li>1. Application (business idea, commercial viability, development impact)</li> </ol> Contact: <a href="mailto:anjali.saini@aecafrica.org">anjali.saini@aecafrica.org</a>		<ol style="list-style-type: none"> <li>2. Assessment of Fund Manager (KPMG Development Advisory Services)</li> <li>3. Investment Committee decides</li> <li>4. Preparation and submission of detailed business plan, supported by AECF</li> <li>5. Investment Committee makes final decision</li> </ol>
Accessible by: Private companies		

<b>Climate Technology Initiative (CTI) Private Financing Advisory Network (PFAN)</b>		Public-private partnership by CTI, Expert Group on Technology Transfer (EGTT)
Nature of the facility: technical assistance facility		US\$ 140 million
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Accelerates technology transfer and diffusion by networking investors, entrepreneurs, experts, governments</li> <li>• Screens business plans</li> <li>• Helps in preparing project proposals for investors</li> <li>• Technical assistance for feasibility and technical studies</li> <li>• Matching projects with investors at Clean Energy Financing Forums and by direct introduction</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Buildings</li> </ul>	<b>Region:</b> any	
<b>Access point:</b> 1. Projects reviewed, coach is assigned Contact: <a href="mailto:kuroda@icett.or.jp">kuroda@icett.or.jp</a>	<b>Next steps:</b> 2. Development of proposal (business model, operational and marketing plan, timeline, organisational structure, technology description, industry analysis, social and environmental impact, financing structure, analysis of potential to attract investors, risk analysis)	
Accessible by: Individual projects		

International Climate Initiative		Germany
Nature of the facility: grants, concessional loans		EUR 120 million (annually)
Provision:		
<ul style="list-style-type: none"> <li>Financial assistance</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>Energy (efficiency, renewable)</li> <li>Transport</li> <li>Buildings</li> <li>Waste</li> <li>Industry</li> <li>Forestry</li> <li>Agriculture</li> </ul>		Large emitters
Access point:		Next steps:
1. Call for proposals once a year Contact: <a href="mailto:programmhuero@programmhuero-klima.de">programmhuero@programmhuero-klima.de</a>		2. Submission of project outline 3. Selection by Federal Ministry for the Environment, Nature Conservation and Nuclear Safety 4. Submission of project proposal 5. Elaboration of contract and funding conditions
Accessible by: Individual projects		

KfW Development & Climate Finance		KfW, Germany
Nature of the facility: grants, concessional loans, structured financing		EUR 20-50 million (per programme)
Provisions:		
<ul style="list-style-type: none"> <li>Financial assistance</li> <li>Provides loans (credit lines, policy-based lending)</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>Energy (efficiency, renewable)</li> <li>Transport</li> <li>Buildings</li> <li>Waste</li> <li>Forestry</li> <li>Agriculture</li> </ul>		any
Access point:		Next steps:
1. Agreement in intergovernmental negotiations Contact: <a href="mailto:info@kfw-Entwicklungsbank.de">info@kfw-Entwicklungsbank.de</a>		
Accessible by: National Governments		

EIB-KfW Carbon Programme II		EIB, KfW
Nature of the facility: carbon market-based, PoAs		EUR 100 million
Provisions:		
<ul style="list-style-type: none"> <li>• PoAs</li> <li>• Purchases of certified emission reductions from least developed countries</li> <li>• Trade credits</li> <li>• Emission Reductions Purchase Agreements (ERPAs)</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> </ul>		Least developed countries
Access point:		Next steps:
Contact: <a href="mailto:j.ranaivoson@eib.org">j.ranaivoson@eib.org</a>		
Accessible by: Project developers		

MDG Carbon Facility		UNDP
Nature of the facility: carbon market-based		
Provisions:		
<ul style="list-style-type: none"> <li>• Purchases of certified emission reductions contributing to MDGs</li> <li>• Partnerships with private sector and governments</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Agriculture</li> </ul>		Underrepresented countries in the CDM
Access point:		Next steps:
1. Project Idea Note (PIN) Contact: <a href="mailto:mdgcarbonfacility@undp.org">mdgcarbonfacility@undp.org</a>		2. UNDP conducts due diligence checks: technical and regulatory viability, carbon credit yields, financial and legal constraints, MDG contribution, country risks
Accessible by:		3. Technical assistance, pays for validation from DOE



<b>End-User Finance for Access to Clean Energy Technologies in South and South-East Asia (FACET)</b>	<b>UNDP</b>
Nature of the facility: demand side, micro finance	EUR 30-69 million
Provisions:	
<ul style="list-style-type: none"> <li>• Initiate domestic bank lending</li> <li>• Technical assistance (business planning, training, support for equipment vendors)</li> </ul>	
Sector:	Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> </ul>	Indonesia, Philippines, Viet Nam
Access point:	Next steps:
Contact: t.becker@fs.de	
Accessible by: Project developers	

<b>Climate Finance Innovation Facility (CFID)</b>	<b>UNDP</b>
Nature of the facility: funding for market research and market development	EUR 28 million
Provisions:	
<ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Development of financial products</li> <li>• Risk management</li> <li>• Banker training</li> </ul>	
Sector:	Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> </ul>	Asia
Access point:	Next steps:
1. Submission of application form Contact: eric.usher@unep.org	
Accessible by: Financial institutions	

<b>African Carbon Asset Development Facility (ACAD)</b>		UNDP
Nature of the facility: carbon market facilitation		EUR 87 million
Provisions:		
<ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Development of CDM projects</li> <li>• Collaboration with financial institutions</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Waste</li> </ul>		Sub-Saharan Africa
Access point:		Next steps:
Contact: james.vener@unep.org		
Accessible by: Project developers		

<b>Carbon Finance for Agriculture, Silviculture, Conservation and Action against Deforestation (CASCADe)</b>		UNDP
Nature of the facility: carbon market facilitation		EUR 2 million
Provisions:		
<ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Development of CDM projects supporting REDD+</li> <li>• Collaboration with financial institutions</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Agriculture</li> <li>• Forestry</li> </ul>		Sub-Saharan Africa
Access point:		Next steps:
Contact: francoise.destais@unep.org		
Accessible by: Project developers		

<b>Nordic Environment Finance Corporation (NEFCO) Carbon Finance and Funds</b>		<b>NEFCO</b>
Nature of the facility: carbon market-based		EUR 135 million
Provisions:		
<ul style="list-style-type: none"> <li>• Purchases of certified emission reductions</li> </ul>		
Sectors:	Region:	
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Industry</li> <li>• Waste</li> </ul>	any	
Access point:	Next steps:	
1. Submission of PIN Contact: kari.hamekoski@nefco.fi	2. Screening of project 3. Submission of detailed financial, technical and environmental analysis	
Accessible by: CDM project developers		

<b>Global Climate Change Alliance (GCCA)</b>		<b>EU</b>
Nature of the facility: grants, technical assistance		EUR 139.6 million
Provisions:		
<ul style="list-style-type: none"> <li>• Grants</li> <li>• Organisation of dialogues</li> <li>• Support for identifying and implementing interventions</li> </ul>		
Sectors:	Region:	
<ul style="list-style-type: none"> <li>• Forestry</li> <li>• Disaster risk reduction</li> </ul>	Low-income countries	
Access point:	Next steps:	
Contact: mamadou.diakhite@gcca.eu		
Accessible by: National Government		

<b>Asian Development Bank (ADB) Carbon Market Initiative (CMI)</b>		<b>ADB</b>
Nature of the facility: grants, technical assistance		EUR 139.6 million
Provisions:		
<ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Marketing support</li> </ul>		
Sectors:	Region:	
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Waste</li> </ul>	Asia	
Access point:	Next steps:	
Contact: <a href="mailto:adbcdm@adb.org">adbcdm@adb.org</a>	After having contacted the ADB, the application form will be filled out jointly by project sponsor and ADB staff	
Accessible by: Project developers		

<b>Clean Technology Fund</b>		<b>World Bank Climate Investment Funds</b>
Nature of the facility: fund: grants, concessional loans, risk mitigation, guarantees, equity		US\$ 4.5 billion (replenishment of fund not yet confirmed)
Provisions:		
<ul style="list-style-type: none"> <li>• Joint missions to design climate investment plans</li> <li>• Leveraging of public and private resources</li> <li>• Promotion of co-benefits for sustainable development</li> </ul>		
Sectors:	Region:	
<ul style="list-style-type: none"> <li>• Energy</li> <li>• Transport</li> <li>• Industry</li> </ul>	Middle East and North Africa, Algeria, Egypt, Jordan, Morocco, Tunisia, Turkey, Kazakhstan, Ukraine, Colombia, Mexico, Indonesia, Philippines, Thailand, Viet Nam, South Africa	
Access point:	Next steps:	
<ol style="list-style-type: none"> <li>1. Country (Government) request for mission by the World Bank; regional multilateral development bank to prepare climate investment plan</li> </ol> Contact: <a href="mailto:CIFAdminUnit@worldbank.org">CIFAdminUnit@worldbank.org</a>	<ol style="list-style-type: none"> <li>2. Investment plans are developed in collaboration with Government, private sector and stakeholders</li> <li>3. Trust Fund Committee reviews investment plan and facilitates prioritisation for scaled-up low-carbon activities</li> </ol>	
Accessible by: National Governments		

Scaling-up Renewable Energy Program (SREP)		World Bank Climate Investment Funds
Nature of the facility: fund: equity, grants, loans, co-financing		US\$ 318 million (currently fully subscribed, new funding in near future)
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Output-based aid (tied to investments)</li> <li>• Equity investments</li> <li>• Credit enhancement facilities</li> <li>• Partial risk coverage</li> <li>• Concessional loans (including micro finance)</li> <li>• Incremental budget support</li> <li>• Promotes transformation by exploring renewable energy potential</li> <li>• Programmatic, country-led interventions and policies</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy</li> <li>• Forestry</li> </ul>		<b>Region:</b> Ethiopia, Honduras, Kenya, Maldives, Mali, Nepal
<b>Access point:</b> 1. Proposals for co-financing (how to scale-up, demonstration, removal of barriers for private investments) Contact: CIFAdminUnit@worldbank.org		<b>Next steps:</b> 2. Sub-committee of the Strategic Climate Fund Trust Fund Committee decides
Accessible by: Low-income countries		

<b>Multilateral Development Bank (MDB) Pilot Programme for Climate Resilience (PPCR)</b>		<b>World Bank Climate Investment Funds</b>
Nature of the facility: fund: grants, loans, technical assistance		US\$ 1 billion
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Demonstrates integration of adaptation into development planning</li> <li>• Strengthens capacities for integration of adaptation into planning</li> <li>• Scales-up climate resilient investment</li> <li>• Enables learning processes</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>	<b>Region:</b> Selected countries: Mozambique, Zambia, Small Island Developing States, Bangladesh, Bolivia, Cambodia, Nepal, Niger, Tajikistan	
<b>Access point:</b> 1. Country-led joint mission with MDB Contact: CIFAdminUnit@worldbank.org	<b>Next steps:</b> 2. Development of a Strategic Program for Climate Resilience 3. Implementation of the Program	
Accessible by: National Governments		

<b>Global Environment Facility (GEF)</b>		<b>GEF (mechanism of the UNFCCC under the Conference of the Parties)</b>
Nature of the facility: tranches of financing (replenished): grants, co-financing		US\$ 3 billion (allocated to date)
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Establishment of funds</li> <li>• Risk management</li> <li>• Technical assistance</li> </ul> (manages Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF))		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>	<b>Region:</b> Non-Annex I countries (UNFCCC)	
<b>Access point:</b> 1. Submit Project Identification Form through GEF Agency with endorsement letter from the Operational Focal Point of the host country Contact: omizuno@thegef.org	<b>Next steps:</b> 2. Council approval. 3. GEF CEO endorsement	
Accessible by: National Governments		

<b>Special Climate Change Fund (SCCF)</b>		GEF (mechanism of the UNFCCC under the Conference of the Parties)
Nature of the facility: fund		US\$ 110 million
Provisions:		
<ul style="list-style-type: none"> <li>• Grants</li> <li>• Grants for integrating adaptation into planning</li> <li>• Implementation of adaptation measures</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Adaptation</li> <li>• Disaster risk reduction</li> </ul>		Non-Annex I countries (UNFCCC)
Access point:		Next steps:
Contact: <a href="mailto:bbiagini@thegef.org">bbiagini@thegef.org</a>		
Accessible by: National Governments		

<b>Least Developed Countries Fund (LDCF)</b>		GEF (mechanism of the UNFCCC under the Conference of the Parties)
Nature of the facility: fund		US\$ 169
Provisions:		
<ul style="list-style-type: none"> <li>• Grants</li> <li>• Technical assistance</li> <li>• Preparation and implementation of national adaptation programmes of action (NAPAs)</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Forestry</li> <li>• Agriculture</li> <li>• Adaptation</li> <li>• Disaster risk reduction</li> </ul>		48 countries with completed NAPAs
Access point:		Next steps:
1. Contact in-country focal point and submit a Project Identification Form Contact: <a href="mailto:bbiagini@thegef.org">bbiagini@thegef.org</a>		2. Council approval 3. GEF CEO endorsement
Accessible by: National Governments		

<b>Adaptation Fund</b>	<b>UNFCCC</b>
Nature of the facility: fund	US\$ 300–500 (US\$ 10 million per country)
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Grant funding for urgent responses to vulnerability</li> <li>• Promotion of (regional) co-benefits</li> </ul>	
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Industry</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>	<b>Region:</b> Developing countries
<b>Access point:</b> 1. Accredited National Implementing Entities have direct access Contact: <a href="mailto:secretariat@adaptation-fund.org">secretariat@adaptation-fund.org</a>	<b>Next steps:</b> 2. Adaptation Fund Board decides
Accessible by: National Governments	

<b>Clean Energy Financing Partnership Facility (CEFPF)</b>	<b>ADB</b>
Nature of the facility: fund	US\$ 250
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Grants for investments</li> <li>• Co-financing</li> </ul>	
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> </ul>	<b>Region:</b> Asia
<b>Access point:</b> 1. Application (bi-monthly deadlines) Contact: <a href="mailto:stumiwa@adb.org">stumiwa@adb.org</a>	<b>Next steps:</b> 2. Fund Manager reviews, working groups comment 3. Steering Committee allocates resources
Accessible by: National Governments of member countries	



ADB Climate Change Fund (CCF)		ADB
Nature of the facility: fund: grants, co-financing		US\$ 40 million
Provisions:		
<ul style="list-style-type: none"> <li>• Technical assistance</li> </ul>		
Sectors:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Buildings</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>		Asia
Access point:		Next steps:
1. Application (bi-monthly deadlines) Contact: stumiwa@adb.org		2. Fund Manager reviews, working groups comment 3. Final phase
Accessible by:		
National Governments of member countries		

IDB's Sustainable Energy and Climate Change Initiative (SECCI)		IDB
Nature of the facility: funding for technical assistance		US\$ 40 million
Provisions:		
<ul style="list-style-type: none"> <li>• Grants</li> <li>• Financial investments for project development</li> <li>• Technical assistance to prepare for IDB financing</li> </ul>		
Sector:		Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> </ul>		Latin America and the Caribbean
Access point:		Next steps:
1. Expression of interest Contact: secci@iadb.org		2. Review by IDB expert 3. Decision by IDB committee
Accessible by:		
Companies with letter of non-objection from Governments		

<b>ClimDev-Africa Special Fund (CDSF)</b>		African Development Bank (AfDB), United Nations Economic Commission for Asia (UNECA), African Union Commission
Nature of the facility: fund		US\$ 136 million
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Co-financing</li> <li>• Grant</li> <li>• Generation of high-quality climate information</li> <li>• Capacity-building for policymakers for mainstreaming climate in development programs</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>		<b>Region:</b> Africa
<b>Access point:</b> 1. Call for proposal Contact: f.tobin@afdb.org		<b>Next steps:</b> 2. Review of proposals by technical experts 3. Endorsement by Governing Council 4. Approval by CDSF Coordinating Unit 5. Approval of appropriate level in AfDB
Accessible by: Individual projects		

<b>Climate Development Knowledge Network (CDKN)</b>		DFID, Netherlands
Nature of the facility: funding for technical assistance		GBP 500,000/project
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Grants for research</li> <li>• Co-financing</li> <li>• Technical assistance</li> <li>• Funding for knowledge management</li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Industry</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>		<b>Region:</b> any
<b>Access point:</b> Contact: enquiries@cdkn.org		<b>Next steps:</b>
Accessible by: Individual projects		

<b>Nordic Climate Facility</b>	Nordic countries
Nature of the facility: funding, calls for proposal	EUR 6 million
Provisions:	
<ul style="list-style-type: none"> <li>• Grants</li> <li>• Promotion of technology transfer through the exchange of know-how and ideas</li> </ul>	
Sectors:	Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>	any
Access point:	Next steps:
<ol style="list-style-type: none"> <li>1. Concept phase: submission of proposal (annual deadline)</li> </ol> Contact: <a href="mailto:ncf@ndf.fi">ncf@ndf.fi</a>	<ol style="list-style-type: none"> <li>2. Final phase</li> </ol>
Accessible by:	
Organisations in Nordic countries with local partners in developing countries	

<b>GEF Small Grants Programme</b>	GEF, UNDP
Nature of the facility: fund	US\$ 50,000/project
Provisions:	
<ul style="list-style-type: none"> <li>• Community-level strategies</li> <li>• Community-level learning processes</li> <li>• Partnerships and networks of stakeholders</li> </ul>	
Sectors:	Region:
<ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Buildings</li> </ul>	any
Access point:	Next steps:
<ol style="list-style-type: none"> <li>1. Contact Small Grants Programme National Coordinator (in UNDP Country Office)</li> </ol> Contact: <a href="mailto:Sgp.info@undp.org">Sgp.info@undp.org</a>	<ol style="list-style-type: none"> <li>2. Submit concept paper</li> <li>3. National Coordinator reviews</li> <li>4. Prepare project proposal</li> <li>5. National Coordinator submits proposal to National Steering Committee</li> <li>6. Decision by National Steering Committee</li> <li>7. Approval of proposal &gt; upfront payment</li> </ol>
Accessible by: Community-based organisations	

<b>Indonesia Climate Change Trust Fund (ICCTF)</b>		BAPPENAS in Indonesia; managed by UNDP
Nature of the facility: fund		US\$ 8.5 million
<b>Provisions:</b> <ul style="list-style-type: none"> <li>• Funding activities by Indonesian ministries collaborating with municipalities</li> <li>• Innovation Fund: <ul style="list-style-type: none"> <li>» Grant funding</li> <li>» Economic and social benefits</li> <li>» No returns on investment expected (public goods)</li> </ul> </li> <li>• Transformation Fund: <ul style="list-style-type: none"> <li>» Leveraging private funds through PPPs, loans, international markets</li> </ul> </li> </ul>		
<b>Sectors:</b> <ul style="list-style-type: none"> <li>• Energy (efficiency, renewable)</li> <li>• Transport</li> <li>• Waste</li> <li>• Industry</li> <li>• Forestry</li> <li>• Agriculture</li> </ul>		<b>Region:</b> Indonesia
<b>Access point:</b> <ol style="list-style-type: none"> <li>1. Submission of proposal from ministries, local government bodies Contact: <a href="mailto:secreatariat@icctf.org">secreatariat@icctf.org</a></li> </ol>		<b>Next steps:</b> <ol style="list-style-type: none"> <li>2. Check for completeness, eligibility</li> <li>3. Technical Committee (sectoral ministries, Ministry of Finance, BAPPENAS): assessment of feasibility, sustainability and impact</li> <li>4. Steering Committee: approval; presentation by secretariat</li> <li>5. Implementation</li> </ol>
Accessible by: Indonesian municipal governments		

# Annex II: Bibliography

- Center for Clean Air Policy, 2008:** Interim Report. Sectoral Approaches: A Pathway to Nationally Appropriate Mitigation Actions of Developing Countries
- Center for Clean Air Policy, 2011:** Nationally Appropriate Mitigation Actions of Developing Countries by Developing Countries: Architecture and Key Issues
- Climate Policy Initiative, 2011:** The Landscape of Climate Finance
- Dalkmann, Brannigan, 2007:** Transport and Climate Change: Module 5e: Sustainable Transport: A Sourcebook for Policy-makers in Developing Cities
- Drakenberg, Olof; César, Emelie, 2009:** Old, New and Additional Funding for Environment and Climate Change – the Role of Development Cooperation
- Ecofys, 2010:** Nationally Appropriate Mitigation Actions of Developing Countries. Insights from Example Development
- Ecofys, 2011:** Annual Status Report on Nationally Appropriate Mitigation Actions (NAMAs) of Developing Countries
- European Climate Foundation, 2008:** Scaling-up Climate Finance
- European Climate Foundation, 2010:** From Climate Finance to Financing Green Growth
- European Commission, 2009:** Stepping up International Climate Finance: a European Blueprint for the Copenhagen Deal
- International Emissions Trading Association, 2010:** Green NAMA Bonds
- United Nations, 2010:** Report of the Secretary General’s High-Level Advisory Group on Climate Change Financing
- United Nations Development Programme, 2009:** Nationally Appropriate Mitigation Actions of Developing Countries: Key Issues for Consideration
- United Nations Development Programme, 2011:** Catalysing Climate Finance
- United Nations Environment Programme and partners, 2009:** Catalysing Low-carbon Growth in Developing Economies: Public Finance Mechanisms to Scale-up Private Sector Investments in Climate Solutions
- United Nations Environment Programme, 2011:** Bilateral Finance Institutions & Climate Change. A Mapping of Public Financial Flows for Mitigation and Adaptation to Developing Countries in 2010
- UNFCCC, 2010:** The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Co-operative Action under the Convention COP Decision 1/CP.16
- Ward, Murray, 2010:** Engaging Private Sector Capital at Scale in Financing Low Carbon Infrastructure in Developing Countries
- Wuppertal Institute, 2010:** Nationally Appropriate Mitigation Actions of Developing Countries: Definitions, Issues and Options
- Wuppertal Institute, 2011:** Current Developments in Pilot Nationally Appropriate Mitigation Actions of Developing Countries (NAMAs)







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