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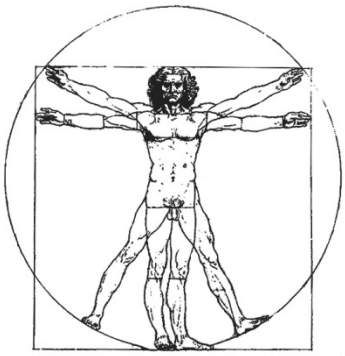

ecbi policy report

National Funding Entities

Their role in the transition to a new paradigm of global cooperation on climate change

Luis Gomez-Echeverri

October 2010

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Executive Summary

The future of the global climate change negotiations hinges on an eventual UNFCCC globally embraced decision on climate change funding support for developing countries. Leading up to and during the Conference of Parties (COP) in Copenhagen, some positive signs on funding emerged. These positive signs, however, are in danger of turning into empty promises if issues of governance on finance are not resolved. There is some hope that at the forthcoming COP in Mexico, Parties will succeed in tackling these important issues—particularly issues of governance at the centre. Attention will now need to urgently shift to issues of governance at the national level. This Policy Report is an attempt to provide useful background in the forthcoming discussions and negotiations of the UNFCCC. It is part of a series of ECBI and OIES publications on the Reformed Finance Mechanism, most specifically on the case for devolution of funding decisions to the national level.

Driven partly by some optimism on the funding side, but mostly by their strong conviction that the time for "devolution" of responsibility to the national level has now come, several developing countries are moving rapidly to organise themselves to manage the resources that will need to eventually be channelled through the UNFCCC. Many already have, or are now in the process of establishing, "national funding entities" specifically designed to manage this funding and to help mainstream programmes and projects into national development strategies and plans at the country level. Despite many differences in approach taken by the countries, one common feature that emerges is the clearly stated or implied objective to link programmes and projects approved for funding directly to some kind of overall climate change policy framework where this exists, and/or to national development strategies and plans. By so doing, countries will be able to make sure that these programmes and projects are fully aligned to their priorities and more importantly, that they can help leverage existing funds and initiatives on climate change.

The countries sparking this new wave of institutional innovation are doing it with broad political support at the national level as well as internationally. Their action will help trigger a much needed change. It will also, hopefully, help dispel the mistaken notion that most developing countries have little or no absorption capacity for significantly increased funding for climate change. As in most countries in the world—and developed countries are no exception—there are new demands that require skills that need to be built up. Good examples are those connected to performance-based funding on mitigation, including REDD+. Those with the weakest capacities will have to rely on international institutions to support the building up of capacities in some of these functions in the interim. And part of the funding that comes through the Convention will most likely need to be earmarked to build these capacities. Some of the "quick-start funding" that is being suggested by some should perhaps be earmarked for these purposes.

There are many arguments for "devolution" of responsibility. National needs and requirements, how to address them, and with what instruments, are best addressed at the national level. The complexity of financing requirements are too varied and complex to be addressed by global institutions demanding standard formulas. The differences in skills, knowledge, and instrumentalities for investments in climate change are quite different, whether they are in energy efficiency, energy conservation, renewable energy, REDD+, or adaptation. Decisions on how to address these differences, and with what instruments, can best be addressed by those who have the knowledge of the local needs and conditions. It is also at the national level that decisions on how to leverage other funds to support climate change strategies and plans, and how to mainstream these activities into these strategies and plans, can best be made.

However, the most compelling argument for "devolution" is that the impact of the funding provided will increase, and that this will create a much more desirable and effective era of global cooperation on climate change that has not existed to date. This new global cooperation will help reach the quantum leap in climate change action that is required to help avoid "dangerous" climate change for countries around the world.

Some 12 countries are already busy establishing, or putting into operation, dedicated national funding entities, and a couple of dozen more in the process of doing the same. The common feature amongst them is their desire to ramp up action on climate change, to capture and manage funding to support this action both from international and national sources, and to ensure that these activities are fully mainstreamed into their development strategies and plans. Where they differ is on the specific objectives of the funds, their sources of funds, and their governance. On the objectives, most cover overall climate change goals, but several also have focused objectives—such as Bangladesh on climate resilience, Amazon Fund of Brazil on sustainable forest management, and China on clean energy investments. On the sources of funds, all are expecting to capture international funds coming from the UNFCCC financial mechanism as well as international institutions and bilateral programmes. In addition, most are also mobilising funding of their own from other national sources—such as the case in Brazil from oil revenues, India from coal, China from CDM proceeds, and Ecuador from pledges against its decision to forego oil exploration in a vast area of Ecuador. And as for governance, most adapt to national circumstances, including adapting existing institutions and creating virtual ones to attain specific objectives, as in Brazil, and establishing broad arrangements that include strong roles for international institutions and civil society, but having the government play the central role, as in Bangladesh and Indonesia. This broad spectrum of experiences is not only proof that countries are best placed to assess their own needs and design instruments to address them, but also that the conditions and requirements across countries differ and need to adapt to what is best for them. These fresh new experiences provide a wealth of information for those interested in setting up similar entities.

This wave of new institutions joins a body of existing funds and institutions that have been created during the past 10 to 15 years for the purposes of promoting climate change–friendly investments, mostly in clean energy, energy conservation, and renewable energy. Some of these funds have played a pivotal role in helping countries—and China is a good example—to make impressive inroads into each of these three areas. In China, these funds have been working systematically, and in an integrated manner, with the policy and regulatory establishment to create a balanced system of penalties and incentives to advance the penetration of technologies in key areas. There is also an urgent need to survey and assess these funds and institutions as potential partners and supporters of climate change strategies and plans, across the developing world. Most are doing this, and doing it well already. What would be important, however, is to explore whether and how these existing funds can be more aligned and more actively engaged to support climate change action in the countries where they exist. All of them could create an attractive constellation of institutions and funds, backed by policies and regulations in support of well designed climate change strategies and plans.

1 Introduction

There is an urgent need for a major reform of the financing arrangements under the UNFCCC. This includes both the scale of the financing and its governance. The promises made at Copenhagen regarding the levels of funding address one of the concerns. Issues of governance, however, are still to be resolved, and the ongoing negotiations are addressing only part of story—the arrangements at the "centre". The purpose of this Policy Report is to provide some background for the much needed discussions for the other side of the story—what happens at the national level.

This Policy Report is part of a series of publications, reports, and briefs on issues regarding the UNFCCC Financial Mechanism where the idea of the need for devolution of responsibility to the national level, and the need for national funding entities, were introduced.[1] The Report adopts the term National Funding Entities, which was first introduced by the Indian Delegation to the UNFCCC discussions on issues of Finance.

While attention under the UNFCCC negotiations has been focused on the big picture of how finance governance is to be exercised at the centre, the key related piece of the governance challenge—how the funding will be governed locally—has received less attention. The main questions that arise at the centre—how finance is to be raised, how it is to be delivered, and how decisions are made as to what is funded and how—also come up at the local level and often, in many ways, with even greater importance and complexity. Yet, this is not where the focus of the discussions is today. This is both unfortunate and surprising, given that the success of the future of climate change finance will depend heavily on what arrangements are put in place at the national level.

[1] [1] *The Reformed Financial Mechanism of the UNFCCC: Part I: Architecture and Governance*, by Benito Müller and Luis Gomez-Echeverri, Oxford Institute for Energy Studies Background Paper EV45, April 2009.
[2] *The Reformed Financial Mechanism of the UNFCCC: Part II: The Question of Oversight Post Copenhagen,* by Benito Müller with contributions by Anju Sharma, Luis Gomez-Echeverri, Dane P. Rook, and Achala Chandani, Oxford Institute for Energy Studies Background Paper EV 52, April 2010.
[3] *The Reformed Financial Mechanism of the UNFCCC: Promoting Transparency and Accountability*, by Luis Gomez-Echeverri, Oxford Institute for Energy Studies Background Paper EV 51, March 2010.

Resources are urgently needed to help countries build their capacities to put these arrangements in place and to strengthen their capacity over time.

Some developing countries have taken the initiative of establishing innovative institutions and mechanisms, and many others are considering taking similar action. The purpose of this Report is to survey some of these new initiatives and to derive lessons that can inform the decisions of others considering setting up similar mechanisms, national funds, or national funding entities. The Report is also meant to highlight the immense support and capacity development task that is required to make these and other similar future initiatives successful.

One important note of caution and a clarification of the message of this Report is perhaps necessary at the outset. The lessons that we derive from this analysis, and from previous analysis carried out for the series of publications on the Reformed Finance Mechanism,[2] is that most developing countries are well equipped to receive and manage funds from international institutions. The experience gained from decades of Official Development Assistance, lending by International Financial Institutions such as the World Bank and Regional Development Banks, and large portfolios of Foreign Direct Investments, has resulted in many countries establishing credible and robust systems for audit and oversight, and for strengthening accountability and transparency.

What are not as well developed in many countries, and consequently in need of support, are the capacities for managing the intricacies of financing for climate change. Developing countries have many choices. Many will choose to create new institutions, and others will proceed to adapt existing ones to carry out the task. This Report presents a spectrum of these practices. But all institutions, whether newly created to be dedicated to climate change financing, or virtual ones created for this purpose, will have some

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[2] *The Reformed Financial Mechanism of the UNFCC: Part II The Question of Oversight – Post Copenhagen Synthesis Report*, Benito Müller, OIES EV 52, April 21010 and
The Reformed Financial Mechanism of the UNFCCC: Promoting Transparency and Accountability, Luis Gomez-Echeverri, OIES EV 51, March 2010.

minimum common functions that are specific to climate change financing, some of which will most likely be performance-based. These minimum climate change–related functions may include, inter alia, the following:[3]

Oversight:

- Helping to ensure the existence of climate change–related national strategies.
- Helping to ensure that the climate change activities to be financed are duly mainstreamed into these national development strategies.
- Helping to establish, and to manage, performance criteria for financing and delivery or results if and when needed.
- Coordinating funding and approval of funding requests.
- Establishing systems for review, monitoring, and where applicable, accreditation and verification of performance.

Financial Support:

- Receiving and managing funds from global funding mechanisms (including additional ones that may be established).
- Mobilising and leveraging additional resources.
- Ensuring responsible and fiduciarily sound management of funds.
- Managing the programme cycle of funds disbursed.

Standard Setting:

- Developing nationally relevant eligibility and performance criteria.
- Developing economic, social, and environmental safeguards to ensure that activities funded are in line with national priorities.
- Establishing methods for performance assessment and evaluation in general, and more specifically for funding, where the measure of performance does not have obvious ready-made standards and metrics (policies and measures).

Accountability:

- Developing ability to report on performance, either for internal performance-assessment purposes or for performance reporting if and when needed.
- Ability to maintain registers if and when needed.
- Monitoring and evaluating.
- Reaching out to civil society and stakeholders in general.

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[3] Adapted from Table 3.1 in *REDD+ Institutional Options Assessment: Developing an Efficient, Effective, and Equitable Institutional Framework for REDD+ under the UNFCCC*, Charlotte Streck, Luis Gomez-Echeverri, Pablo Gutman, Cyril Loisel, and Jacob Werksman, Meridian Institute, September 2009, page 9.

2 The Case for National Funding Entities and National Institutions

The promises made in Copenhagen by developed countries regarding "new and additional" resources for developing countries to address climate change have the potential to usher in an exciting new era of global cooperation. This quantum leap in resources, which promises to grow in size in a relatively short period of time, also has, if realised, the potential to force a transition to a new paradigm of finance transfers from developed to developing countries—from the traditional model of centrally disbursed and centrally managed resources to a new system of climate change finance, where national funding entities are given a greater role in identifying the needs, managing the resources, and making sure that the activities funded are having the expected impact and are fully mainstreamed into the development priorities of the country.

Given the need for massive investments, and for mobilisation of new financial resources for both mitigation and adaptation, this transition to a new model of resource transfers is good news for the climate change regime and for development in general. It is good news for the climate change regime in that countries will, perhaps for the first time, feel that they are legitimate partners in a global cooperation effort on climate change, as mandated by the UNFCCC, rather than "recipients" of funds managed elsewhere by distant institutions for the purpose of providing "incentives" for action.

There is a gradual recognition that the current situation of financial support for climate change action in developing countries—characterised by a large number of international funds with complex administrative processes, minimal transparency or accountability, and conflicting mandates that do not always address or respond to developing country concerns or priorities—is untenable. Consequently, we see a gradual acceptance that more needs to be done in terms of shifting the responsibility for managing and disbursing the funds to developing countries, with international institutions still playing an important but supportive role that is particularly focused on building capacities at the national level. This shift to devolve decision making to the national level—often referred to as "direct

access"[4]—is bound to increase its impact and effectiveness, as the complexities of local finance will be better and more efficiently addressed at the local level. It will probably also increase the commitment of countries as the feeling of ownership increases.

The recently created Adaptation Fund and the growing numbers of "pilot" countries for donor-funded programmes on Reduced Emissions from Deforestation and Forest Degradation (REDD) provide a glimpse of some of the complex demands that these funds and programmes will bring to countries. Several countries have decided to set up local arrangements to obtain maximum benefit and optimal results, and some of these are surveyed below. For some, the establishment of funding entities and dedicated funds has been considered to be the most appropriate response. Some have moved quickly to establish such arrangements in order to help capture, manage, and disburse resources from these funds efficiently and effectively. They are setting the pace and example for the others, and will most likely benefit earlier than they will. Most of these initiatives are too new to provide relevant lessons of experience, and need to be monitored so that their successes can be replicated elsewhere and their failures avoided by others. This Report is intended to bring these initiatives to the attention of other countries which may want to do the same.

3 The Complexity of Financing Requirements

Investments, whether directed towards mitigation or to adaptation, are too varied and complex to continue to be lumped together under the rules of global funds and

[4] A recent Discussion Paper by Caritas International and CIDSE, published in June 2010 and written by Lies Craeynest ("Business as unusual: Direct Access: Giving power back to the poor?") proposes a very useful set of minimum elements to define "direct access" and could serve as good basis for the UNFCCC negotiations: i) domestic entities have main implementing role, ii) domestic entities can be governmental or non-governmental if assigned that role by government and can be one single domestic entity or several, iii) need legal status to receive financing, iv) all project or programme cycle management responsibilities lie with domestic entities, v) financial transfers are made directly from financing mechanism to domestic entities, vi) vetting procedures of domestic entities need to be in place to ensure fiduciary and programme standards, vii) direct funding modality stands in contrast with a more traditional funding approach, as it does not require intermediary implementing agencies, and viii) some critical standards and criteria are agreed internationally but implemented domestically.

institutions that earmark resources for programmes and projects, which are often expected to fit standard formulas. Table 1 highlights some of these major differences in needs, requirements, and adequate instruments, and in particular illustrates the main difference between funding energy efficiency and renewable energy. The contrast with adaptation and REDD investments would be even greater. The material presented below and listed in the Appendix highlights the many possible instruments that need to come into play in climate change financing. Because of the magnitude of the resources needed to address the challenges of climate change in developing countries, the resources to be provided under the UNFCCC would, by definition, never be sufficient. At most, they would serve to kick-start important initiatives, but the bulk of the resources would probably need to come from efforts to leverage existing funds and programmes, both public and private. Public finance mechanisms could play a key role in this regard, but the financial engineering required to put together financial packages to make this happen is a complex task that requires a good knowledge of domestic needs and requirements, as well as of local complexities.

National funding entities and institutions are the ones best placed to sort out details of necessary investments in terms of purpose, nature and size of investment needed, risks, level of skills needed, and capacity building needs, as well as the best financing methods, instruments, and sources, from which there are many to choose. Carbon finance and market mechanisms, grants, performance-based grants where the finance provision is conditional on an agreed outcome such as a level of emission reduction, concessional debt, debt and equity guarantees, and investment in equity, are just a sample of those available.

Table 1. Main differences between investments in energy efficiency and renewable energy

	Energy Efficiency	Renewable Energy
Purpose of investment relative to project proponent's main business	Ancillary	Core
Nature of investment	Mostly retrofit, or part of capacity expansion	Mostly greenfield
Size of investment	Mostly small and medium scale	Can be large in some technologies (e.g. wind, CSP)
Nature of project proponent	Going concern	Usually a SPV
Awareness of project proponent to potential project benefits	Can be low	High
Skills and motivation of project proponent to undertake project	Can be weak and low (SMEs)	Strong, high (professional developers or utilities)
Nature of financial benefits arising from projects	Energy savings and other cost reductions stemming from productivity improvements (if any)	Power (and/or heat) sales, or avoided purchase of power and/or heat (if captive use)
Risks (other than technical)	Output of underlying industrial/commercial activity	Intermittency of RE resource (wind, hydro) Off-taker's creditworthiness Adverse changes in regulatory framework (e.g. feed-in tariffs relative to wholesale power price)
Financing method	Corporate (balance sheet) finance (unless an ESCO provides off-balance sheet financing)	Can be project finance if project is big enough
Financing source	Mostly debt (unless project involves an SPV, e.g. to create own generation sources)	Usually debt and equity

Source: J. Ligot as it appears in "Financing Global Climate Change Mitigation", ECE Energy Series No. 37, United Nations, New York and Geneva, 2010.

National funding entities and national institutions are also the bodies best placed to ensure that activities are fully integrated and mainstreamed into the development strategies of the countries. As already mentioned, it is clear that the resources to be received through the UNFCCC and related initiatives will finance only part of what is needed in countries to address the challenges and opportunities posed by climate

change—hence the importance of leveraging existing funds from other sectors and development programmes in general. This leveraging can most effectively take place if activities funded under the UNFCCC regime and related initiatives are mainstreamed, rather than funded as add-on projects at best, or at worst as pilot projects and programmes as is now mostly the case.

4 Funds and National Funding Entities

The funds surveyed below represent a mix of attempts by countries to be ready for a shift towards greater devolution of decision making to the national level by international funding sources. Although there are some commonalities amongst them, they are indeed more characterised by their diversity, each being designed to meet national needs, requirements, and institutional possibilities in the countries where they operate. Because most are in the formative stage, lessons learned are, for the most part, scarce. Although most are designed to help mainstream climate change activities into the national development priorities of the countries where they have been established, in many cases they operate off-budget to avoid the complexities and politics of operating in the context of national budgets.

Most of the funds presented here are part of a new breed of funds and national funding entities specifically created to act as national hubs to capture and manage funding received from international institutions and also to leverage other resources specifically targeted for climate change. It should be mentioned, however, that the idea of creating national hubs through which to capture and channel funds coming from international institutions is not new. Two examples help illustrate this point.

A prominent and most interesting case, going back in time, was the establishment of a dedicated fund to disburse Marshall Plan funds for the reconstruction of the German economy, while simultaneously integrating millions of refugees after World War II. The KfW (the Kreditanstalt für Wiederaufbau) was created by the West German government at the suggestion of the Allies as Credit Agency for Reconstruction to manage the Marshall Plan funds in Germany after World War II. As such, it has all the hallmarks of a

National Funding Entity.[5] The history of the origins of KfW—today one of the largest development banks in Germany and in Europe—and its role in rebuilding Germany's energy supply and housing construction—is a good example of devolution of decision making under extremely difficult circumstances, and yet a resounding success.

Another example was the attempt to introduce changes in the disbursement of official development assistance in Africa, an idea that came from proposals put forward by two civil society organisations some 15 years ago. The Swedish Dag Hammarskjöld Foundation and the African Association for Public Administration and Management proposed the idea of Autonomous African Development Funds (ADFs).[6] The model envisaged a public, but politically independent, institution catering to both government and civil society. ADFs were meant to be funding, not implementing, entities with a national scope aggregating finance from a variety of sources. Unfortunately, the idea failed because it did not generate enough support and interest. In contrast to the KfW example—where the urgency and the magnitude of the task were fully recognised—in the case of the ADFs, the idea was perhaps neither sufficiently attractive nor urgent enough for donors to change the status quo.

4.1 A sample of new funds established to date

Each of the funds presented below is described only briefly. The purpose of offering these brief descriptions, rather than lengthier and more detailed ones, is to highlight the three main characteristics that define the differences amongst these funds: i) the overall objective and/or focus of the fund, ii) the sources of funds in addition to those to be captured from international sources, and iii) the governance. These three main features define the overall difference in approach, but while the presentation here focuses on these

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[5] KfW Bankengruppe Website: *"Our History – 60 Years of KFW"*, and comment provided by Benito Müller.

[6] See: *The Reformed Financial Mechanism of the UNFCC, Part II: The Question of Oversight Post Copenhagen Synthesis Report,* by Benito Müller with contributions by: Anju Sharma, Luis Gomez-Echeverri, Dane P. Rook, and Achala Chandani*,* Oxford Institute for Energy Studies Background Paper EV 52, April 2010, page 47.

features, there are two exceptions. First, a more detailed description is offered for one of the funds—Indonesia Climate Change Trust Fund (ICCTF)—for the purposes of illustration and detailed presentation of a good possible model. Second, the translation of the Law enacted on the National Policy on Climate Change of Brazil is presented in an Appendix as a good example of a comprehensive Law on a national policy on climate change and the establishment of a Fund to support it. For a more detailed description of each of the other funds, their Web sites offer a wealth of information on the history, origin, and rationale for establishing them.

4.1.1 Amazon Fund of Brazil

***DESCRIPTION*:** The Fund was established to combat deforestation and to promote sustainable development in the Amazon. The Fund is designed to attract national and private investment into local Amazon rainforest projects that prevent and combat deforestation or restore forest areas. The Fund is an innovative hybrid formula of new institutions where the governance is shared by the Government and an Operating Agent—the National Social and Economic Development Bank, a formula that has obviated the need to create a new dedicated institution. Instead, the Fund is a virtual institution embedded within existing institutions, but with its own charter.

***SOURCE OF FUNDS AND OPERATIONS*:** The Amazon Fund's aim is to raise donations and earnings from non-reimbursable investment for the purpose of preventing and combating deforestation, as well as for preserving the sustainable use of forests in the Amazon, under the terms of a Government Decree (No. 6,257), dated 1 August 2008. The largest contributor and partner to date has been Norway, with a contribution of over US$100 million to be applied between 2009 and 2011, and a similar contribution pledged for 2010. According to the authorities, the Amazon Fund aims to raise some US$20 billion in public and private donations by 2020. During a recent visit to Brazil at the end of 2009 by Norway's prime minister, Norway announced that it would be ready to contribute up to US$1 billion to the fund for performance-based activities between 2010 and 2015.

The Fund will support activities in the following areas: management of public forests and protected areas, environmental control, monitoring and inspection, sustainable forest

management, economic activities created with sustainable use of forests, ecological and economic zoning, territorial arrangements and agricultural regulation, preservation and sustainable use of biodiversity, and recovery of deforested areas.

***GOVERNANCE*:** The Amazon Fund is managed by the National Social and Economic Development Bank which also has the responsibility for raising funds, facilitating contracts, and monitoring and supporting projects. In addition, the Fund has two Committees: a "Guidance Committee" (COFA), to issue guidelines and monitor the results obtained by the activities funded; and a "Technical Committee" (CTFA), to certify the emission reductions from deforestation in the Amazon forest. The Technical Committee is comprised of six authoritative technical and scientific experts appointed by the Ministry of the Environment for a term of three years, extendable once for an equal period. It also has an Operating Agent, responsible for the day to day management of the fund and for ensuring due diligence.

4.1.2 Bangladesh Climate Change Resilience Fund (BCCRF)

***DESCRIPTION*:** After a long period of negotiation, the Fund was finally established in early 2010. Its purpose is to provide direct support to the implementation of Bangladesh's Climate Change Strategy and Action Plan for 2009–2018 by supporting vulnerable communities in adapting to greater climate uncertainty and changing agricultural conditions.

***SOURCE OF FUNDS AND OPERATIONS*:** Under the original draft concept note dating back to 2008, it was suggested that the secretariat of the Multi-Donor Trust Fund MDTF would be managed by the World Bank. The Bank would co-chair the management committee, and administer, manage, supervise, and monitor implementation of the MDTF's projects and programmes. All implementing agencies would have to follow the Bank's guidelines and polices in project implementation and procurement. In the end, this formula was not accepted. In 2010 the Fund was renamed the Bangladesh Climate Change Resilience Fund (BCCRF). The Fund will now be managed by a Board comprising the ministers of environment, finance, agriculture, and disaster management, as well as donors and civil society. The World Bank will play a supporting technical role,

ensuring that due diligence requirements are met. The Fund itself was originally formed in 2008, but since then, there has been great controversy as to the role of the World Bank and the donor community in the management of the Fund. The new formula has been the solution accepted by all. The main donors to date are the UK, the European Union, Sweden, and Denmark with pledged contributions amounting to US$110 million.

***GOVERNANCE*:** Governance will consist of a two-tier structure, comprising a governing council and a management committee, both of which will be chaired by the government and include representatives from line ministries, development partners, and civil society.

4.1.3 Brazil National Fund on Climate Change

***DESCRIPTION*:** The National Fund on Climate Change (FNMC) was established under the Ministry of the Environment with the aim of ensuring the provision of funds to support projects and studies, and finance enterprises relating to activities on climate change mitigation and adaptation to climate change and its effects. The Fund was created to help mitigate the environmental impact of oil production in the country and to allocate a portion of the State's revenue from oil to combat the effects and impacts of climate change in Brazil.

***SOURCE OF FUNDS AND OPERATIONS*:** The law establishing the Fund was adopted on 9 December 2009 (see Appendix for a translated text of the law). It is a good example of a comprehensive law, enacted by a government with the specific purpose of creating a funding instrument to support the implementation of a climate change strategy and to mainstream funded activities under this strategy. At the end of 2009, the Government pledged US$113 million. Part of these resources will come from oil industry revenues, for which the law was modified to provide revenues for the Fund. The Fund will support programmes and projects in both mitigation as well as adaptation, in a wide range of activities that include capacity development, climate science, adaptation and mitigation projects, projects aimed at reducing carbon emissions from deforestation and forest degradation, particularly in areas in vulnerable areas, development and dissemination of technologies, R&D, development of products and services that contribute to mitigation and adaptation, payment for environmental services, establishment of agro-forestry

systems that contribute to reducing deforestation and carbon sinks, and rehabilitation of degraded areas.

***GOVERNANCE*:** The law establishing the Fund places it under the responsibility of the Ministry of the Environment. The Fund is administered by a Management Committee reporting to the Ministry of the Environment. The Committee's duties and responsibilities are established by law, as is its composition of six representative of the Executive Power and six members of the NGO community. The Fund provides grants and loans through an operating agent—one of the most important and largest development banking institutions in Latin America, the National Social and Economic Development Bank. By choosing this Bank as its Operating Agent, Brazil wanted to ensure that programmes approved under the Fund were fully aligned with national policies and supervised by a large technical and experienced staff accustomed to dealing with large projects and programmes.

4.1.4 China CDM Fund (CDMF)

DESCRIPTION: China launched the State-owned and operated Clean Development Mechanism Fund (CDMF) to help finance the country's efforts to address climate change. The Fund supports CDM projects in China and collects, manages, and utilises the national share of proceeds of CDM projects. However, the CDMF does not target only CDM projects and the limited amount of proceeds from CDM transactions. The objective of the Fund is to become an innovative financial mechanism dedicated to supporting the implementation of the country's National Climate Change Programme, to actively supporting and promoting national action on climate change and related sustainable development, to actively engaging in and promoting international cooperation, and to mobilising resources and contributing to global sustainable development. As such, the CDMF performs as a funding source, a platform for financial cooperation, cooperative action, and information and knowledge sharing.

The funds are designed to support activities in the following areas: capacity-building activities in support of climate change action, public awareness activities in climate

change, mitigation-related activities, including CDM projects, adaptation-related activities, and activities designed to leverage and mobilise other resources.

***SOURCE OF FUNDS AND OPERATIONS*:** The China CDM Fund is managed by the Ministry of Finance and among its funding sources are: revenues generated from CDM projects in China, earnings from CDM business operations, grants and other types of cooperation and support from multilateral development banks, and funds from international institutions including the World Bank and the Asian Development Bank.

***GOVERNANCE*:** The CDM Fund was jointly established by the Ministries of Finance, Foreign Affairs, Science and Technology, related agencies, and the National Development and Reform Commission. It is operated by a Management Centre, the legal entity which manages the operation on behalf of the Ministry of Finance, including the process of approvals of proposals that are submitted to the National Development and Reform Commission (NDRC), which in turn reports to a Board. The NDRC forwards the proposals that it recommends to the Board for approval. The involvement of several ministries, and the approval process by one coordinating government department and Board, guarantees the necessary checks and balance to ensure that the projects conform to the national policies and priorities of the Chinese Government.

4.1.5 China Funds for the Environment

Much is written about China's extraordinary leap into new clean energy technologies and its leadership in the production and use of renewable energy; particularly, wind and solar energy. China has been systematically investing in and promoting the development and adoption of many of these technologies, not only through policy and regulatory frameworks, but also through massive financial support. During the first 10 years of the 21st century China established a series of funds to promote and support this development—more than most countries in the world. While not fully dedicated to climate change, many of these funds target the development and introduction of cleaner technologies. Table 2 highlights some of these funds, their types, and their characteristics.

Table 2: Funds for the Environment in China

Type of fund	*Fund character*	*Source of revenue*	*Method of disbursement*	*Mngt. agency(s)*	*Investment emphasis*	*Remarks*
Pollution levy	*Govt. (Sub-national)*	*Charges, fees, fines. Revenue goes to local govt. budget*	*Grants*	*Local EPBs & financial agencies*	*Pollution treatment in enterprises & institutional capacity building*	*80% of money used for investment in pollution control & 20% used for capacity building*
Dedicated fund for pollution control	*Govt. (Sub-national)*	*Pollution charges. Revenue goes to local govt. budget*	*Loans*	*Local EPBs & financial agencies*	*Pollution control at source*	*20%-30% from the pollution levy is channeled to this fund & used to subsidise pollution control investments by major polluters*
Investment corporation	*Affiliated to govt. but operates on commercial lines*	*Pollution levies, loan repayments & other sources*	*Loans*	*Board of directors*	*Pollution control*	*Piloted in several cities, provinces*
China Foundation ***For Envt. Protection***	*Non-profit NGO*	*Private & public donations*	*Grants*	*Board of directors*	*Projects for public benefit*	

Source: "Environmental Funds in China: Past Experience and Future Prospects", Wang, Jinnan, Shuting Gao, and Chazhong Ge, Chinese Research Academy of the Environmental Sciences, Beijing 100012

4.1.6 Ecuador Yasuni ITT Trust Fund

***DESCRIPTION*:** The Yasuni Ishpingo Tambococha Tiputini (ITT) Trust Fund was established by the Government of Ecuador for receipt of contributions from a broad range of contributors that support Ecuador's historical decision to permanently forego the extraction of the Yasuni ITT oil fields. This unique initiative will help Ecuador to address climate change and sustainable development challenges, and enable it to gradually change the energy matrix of the country through investments in environmentally friendly

and socially inclusive renewable energy projects. According to the Government of Ecuador, this historic decision will avoid the emission of 407 million metric tons of carbon dioxide which would have resulted from burning the extracted fossil fuels, protect one of the most bio-diverse regions of the world, and maintain the livelihoods of the area's indigenous peoples.

The Yasuni ITT Trust Fund will have two windows—a **Capital Fund Window** and a **Revenue Fund Window**—and will finance the following strategic sustainable development programmes within the guidelines of the Ecuadorian National Development Plan:

a) Effectively prevent deforestation and conserve ecosystems, particularly the national system of natural protected areas, including its buffer zones. The total surface area currently under State's protection amounts to 20 per cent of Ecuador's territory, one of the highest percentages in the world. Conserving the Yasuni National Park would also allow the Tagaeri and Taromenane indigenous peoples to remain in voluntary isolation.

b) Reforestation, afforestation, natural regeneration, watershed management, and appropriate management of one million hectares of forest owned by small and medium-sized landholders, on land that is currently threatened by soil degradation. A substantial reduction in the current rate of deforestation considered to be one of the highest in South America.

c) Renewable energy and improvement in national energy efficiency and energy savings, including investment in environmentally friendly and socially inclusive renewable energy plants: hydro, geothermal, solar, wind, biomass, and tidal. Also considered is financial support for energy efficiency in industry and homes.

d) Promote social development in the initiative's zones of influence, with programmes that include health, education, training, technical assistance, and productive job creation

in sustainable activities, such as ecotourism, agriculture, protection of ecosystems services, and agro-forestry.

e) Support research, science, technology, and innovation with programmes that enhance: i) the generation of goods and services based on bio-knowledge; ii) integrated river basin management, and iii) change in the energy matrix, prioritised in the Ecuadorian National Development Plan.

The **Capital Fund Window**, which will be financed by contributions to the Yasuni Fund Account, will be used to finance renewable energy projects (hydro, geothermal, solar, wind, biomass, and tidal plants).

The **Revenue Fund Window** will be replenished with mandatory annual revenue payments received from National Entities for the use of the Capital Fund Window funds. The terms of repayments will be approved by the Steering Committee. It will be used to fund development projects within the framework of the strategic sustainable development programmes (conservation, reforestation, energy efficiency, social programmes, and research & innovation).

***SOURCE OF FUNDS AND OPERATIONS*:** Ecuador is requesting contributors to compensate 50 per cent of the income it is foregoing, which amounts to US$3.6 billion (over the 13-year period), with the balance being its contribution to global goods.

***GOVERNANCE*:** The Yasuni ITT Trust Fund will be administered by the Multi-donor Trust Fund Office of the United Nations Development Programme (UNDP). It will be governed and overseen by a six-person Steering Committee chaired by the Government. The Steering Committee members will include three representatives of the Government, two representatives of contributing countries, and one Ecuadorian civil society representative. Contributors to the Yasuni ITT Trust Fund include Governments, Private and Public entities including intergovernmental and non-governmental organisations, and individuals.

4.1.7 Guyana REDD Investment Fund

***DESCRIPTION*:** In September, the Government of Guyana announced the intention to establish a Fund to enable Guyana to place its forest under long-term protection, catalyse public and private investment for clean energy (with the intention of moving the entire economy away from fossil fuel energy dependence) and create new low carbon economic and employment opportunities for forest-dependent communities and other citizens of Guyana. The details of its establishment are still to be decided.

SOURCE OF FUNDS: Norway has pledged to contribute US$30 million upon establishment of the Fund, and will contribute up to US$250 million between 2010 and 2015, based on Guyana's performance.

***GOVERNANCE*:** The Fund is just in the process of being established so the governance has not yet been decided. It is, however, the intention of the Government to ask the World Bank to be the Fund Manager. In establishing the Fund, the Government has announced that the process will be evolving with the full participation of stakeholders, including indigenous peoples groups.

4.1.8 The Indonesia Climate Change Trust Fund (ICCTF)

***DESCRIPTION*:** The main objective of the ICCTF is to mainstream and align climate change within the national development agenda. As such, the ICCTF acts as the financial mechanism for the Indonesian climate change policy framework. It consists of two funds: an innovative fund that acts like a venture capital fund but with an emphasis on social benefits, and a transformation fund that mobilises investments in low-carbon economic development.

The principal guidelines of the ICCTF are: mainstreaming sustainable development, mainstreaming good governance, and mainstreaming civil society participation and local community empowerment. In the case of Indonesia, the climate change roadmap is

clearly designed to facilitate mainstreaming of climate change action throughout the economy as illustrated in Figure 1, 2 and 3 below.[7]

As also illustrated in Figure 2, the ICCTF is clearly embedded into the policy framework established by the government.

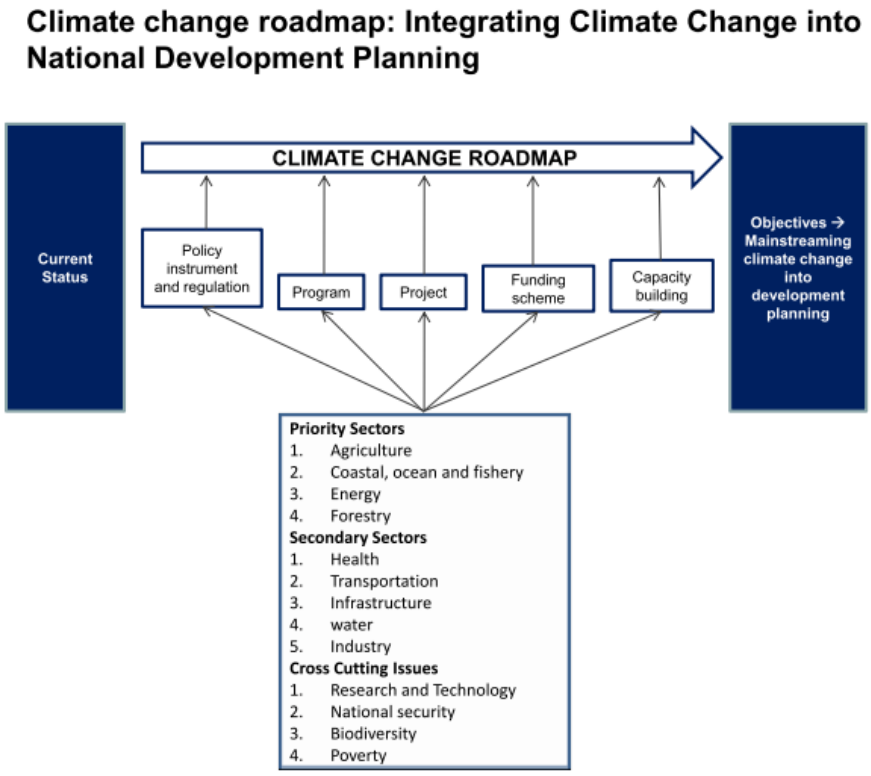

Figure 1. Climate change roadmap. Integrating climate change into national development planning

[7] Extracts from presentation made by Vrilly Rondonuwu on the Indonesian Climate Change Trust Fund Figure 1. (ICCTF) and National Road Map, Paris, 21 April 2010.

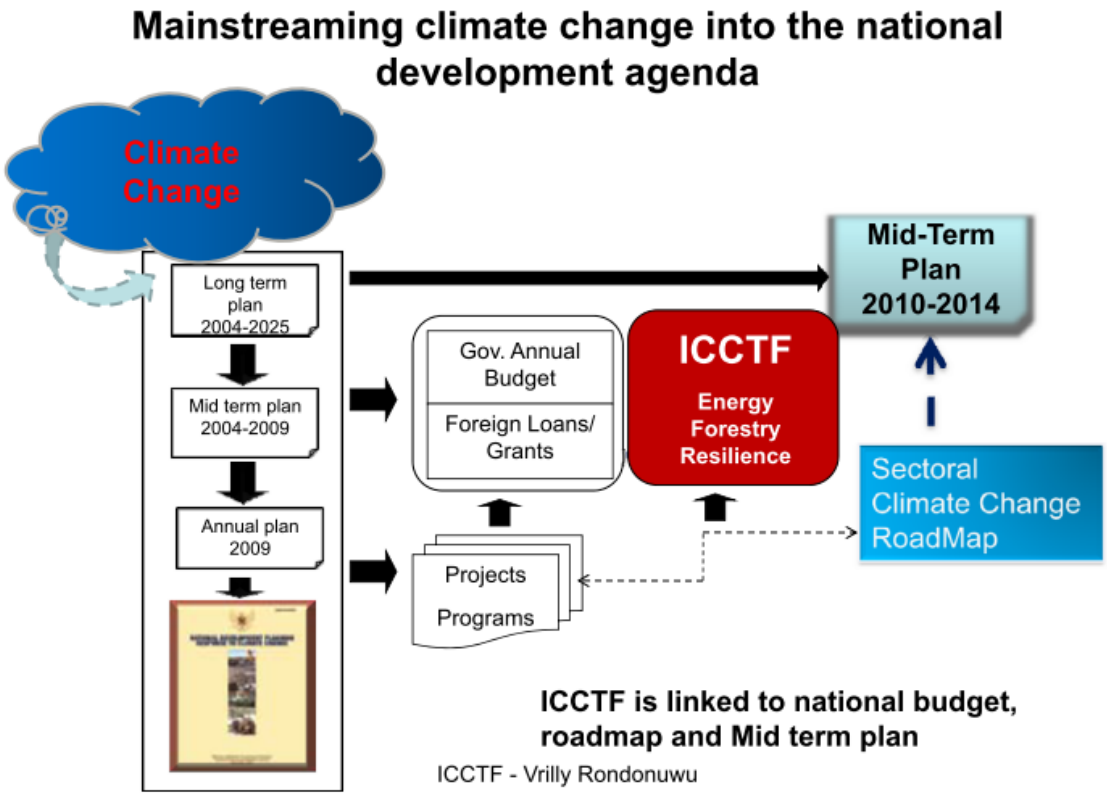

Figure 2. Mainstreaming climate change into the national development agenda

SOURCE OF FUNDS AND OPERATIONS– Initially the ICCTF will be resourced by grants from bilateral and multilateral development agencies.

GOVERNANCE– The governance consists of a Steering Committee that includes donors and government representatives with the right to vote; and an Advisory Committee consisting of donors, NGOs, and CSO representatives, responsible for overall strategic policy recommendations; a Technical Committee which advises on technical matters; and a Secretariat.

UNDP in Indonesia has been assigned the role of Interim Fund Manager. In addition, UNDP has been charged with the responsibility for developing national capacity, so that the national entity can take over this responsibility after an undefined interim period.

Figure 3. ICCTF and International Financing Schemes

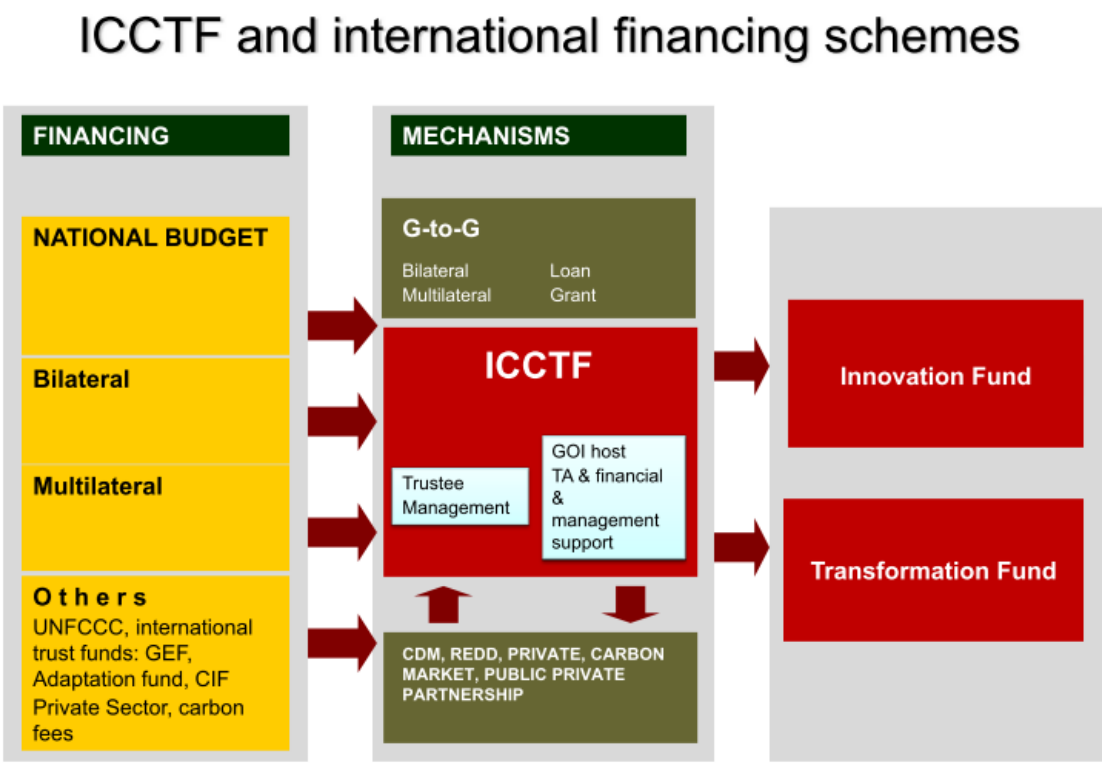

Figure 3 gives an illustration of the overall governance and inclusion of all sources of funding and mechanisms.

4.1.9 Maldives Climate Change Trust Fund

***DESCRIPTION*:** The government has created this Trust Fund to strengthen knowledge and leadership in the government, build adaptive capacity through pilot programmes, develop renewable energy through low-carbon options and public-private partnerships, improve policy and institutional capacities in both public and private sectors to deal with adaptation and mitigation of climate change, and help in its bid to become carbon-neutral by 2020.

The Trust Fund will also be used to strengthen coastal protection and to promote biodiversity conservation, tourism, fisheries industry, solid waste management, and energy solutions.

STATUS: The Trust Fund has now been created through a Memorandum of Understanding between the Government of the Maldives, the World Bank, and the European Union.

***GOVERNANCE*:** The Trust Fund will be administered by the World Bank for a period of three and a half years. The World Bank will offer security for donors and it is hoped that more countries, in addition to the EU, will add to the fund to help the Maldives break its dependency on fossil fuels. A Climate Change Advisory Council will be established. This will include members from the government and will "provide strategic direction to the climate change activities under the Trust Fund".

There will also be a Technical Committee composed of experts from the government, private sector, and civil society. This committee will be responsible for reviewing and recommending project proposals for financing and monitoring the progress of the Trust Fund programme.

4.1.10 Thailand Energy Efficiency Revolving Fund

***DESCRIPTION*:** The purpose of the Fund is to stimulate the financial sector's involvement in energy efficiency projects. It provides capital to banks, which in turn use this money to provide low cost loans for energy efficiency. This is not one of the recently created funds, but is included here as a good example of a type of fund that has been successful in mobilising investment resources for activities relevant to climate change. The Fund was created in 2003.

***SOURCE OF FUNDS AND OPERATION*:** The government allocated the initial pool of capital, and provided a small number of staff to establish the financial model.

***GOVERNANCE*:** The government carries no risk other than the initial injection of capital and small staff support, since the main work of assessing the loan applications, administering the loans, and promoting the Fund is carried out by the banks. Once the loans are repaid, money becomes available for new loans, hence the term "revolving fund".

4.2 Funds Being Developed or in the Process of Being Established

4.2.1 Nigeria National Strategic Climate Change Trust Fund

***DESCRIPTION*:** Plans are under way to establish the Nigeria Strategic Climate Change Trust Fund (NSCCTF). Sponsored by the Special Climate Change Unit (SCCU) of the Federal Ministry of Environment and UNDP, the initiative, according to its proponents, will aid in addressing key challenges as well as exploring opportunities for development, while combating the climate change threat. The overall objective of the proposed fund will be to implement long-term climate change–related actions, activities, and measures that will help to increase the resilience of national development sectors to the impact of climate change, but also enable low carbon economic development.

***STATUS AND SOURCES OF FUNDS*:** The sources of funds for the NSCCTF, its implementation arrangements, and the overall structure are, at the time of writing, under discussion with the stakeholders. It is anticipated that the arrangements for the Fund will be agreed and that the Fund will be launched by the end of 2010.

4.2.2 Indonesian Low Emission Development Financing Facility

***DESCRIPTION*:** An initiative to develop a mechanism to support low carbon development is now under way. It is intended to be a public–private partnership Trust Fund, as a form of investment fund based on existing government regulation of financial markets. The objective of the facility is to manage the source of funding from public and private support for low carbon development based on Government Regulations on Guidance for Foreign Loan and/or Grant, and also to manage private funding sources, including funding from pension funds, insurance, and other investment institutions using different instrument in the financial market.

***STATUS*:** There are two recommendations for the structure of the Facility: Alternative 1: LEDFF is single entity with a single chosen investment manager and custodian bank, Alternative 2: multi LEDFF entities would exist, managed by several chosen investment managers which would be expected to increase the potential of new funds.

4.2.3 India Clean Energy Fund

***DESCRIPTION*:** The Fund is being established to encourage the development of cleaner energies—particularly renewable energy—while imposing a negative incentive to use coal.

***STATUS*:** The institutional infrastructure and governance of the Fund is still under discussion.

***SOURCE OF FUNDS*:** The revenue will be generated from a levy or tax on coal, with a potential estimated mobilisation of billions of rupees that would go towards the creation of the Fund.

4.2.4 Philippines National Survival Fund

***DESCRIPTION*:** This is a legislative proposal to create a National Survival Fund aimed at managing international and national funding for adaptation. At the time of writing, this is only a legislative proposal, but if successful, the idea is to create a Fund to capture and channel resources for adaptation, with rules and procedures compliant with the Adaptation Board of the UNFCCC.

4.2.5 Costa Rica Green Bond

With the support of the World Bank, Costa Rica is exploring the establishment of a Green Bond, with the objective of investing in low carbon development activities.

4.3 Types of Existing Finance to Promote Clean Energy and Energy Efficiency

As mentioned before, this Report focuses on some of the newly-created funds dedicated to capturing, managing, and mobilising new and additional resources for mitigation, REDD, and adaptation. There is, however, a large array of funds that countries have created in the past 10 to 15 years for the purpose of mobilising climate-friendly investments, particularly in energy efficiency and renewable energy, and for development, diffusion, and adoption of new technologies. China, as already mentioned, has been active in promoting energy efficiency and cleaner energy through its first and second energy conservation programmes targeting the 1,000 most polluting companies,

and backing the creation of ESCOs (Energy Service Companies) to provide support to companies. However, there are many others that should be surveyed and analysed in order to determine how these can be fine-tuned to do a better job of supporting national efforts on climate change in the countries where they operate, and to be more aligned to national strategies. At present, it appears that many of these funds have sprung up to meet a growing demand and to take advantage of new business opportunities.

These fund types fall under many categories (See Appendix I) and are institutions in their own right, with strategies and policies that should be brought in line to support national development and climate change strategies. Some examples of these categories include the following:

4.3.1 Credit Guarantees and Bridge Financing

CREDIT GUARANTEES AND BRIDGE FINANCING, or so-called middle or "mezzanine" financing, to help entrepreneurs who may not have enough collateral to secure the full amount of a loan to complete a major investment in clean energy. An example is CAREC—the Central America Renewable Energy and Cleaner Production Fund—which provides resources to seven Central American countries.

4.3.2 Using Utilities or Municipalities as Relays in the Financial Intermediary Chain

PROSOL of Tunisia, and China's utility-based Energy Efficiency Programme, are good examples of this type of innovative financing. As utilities interface directly with most energy users (in grid-connected areas), energy utilities are very good intermediaries for the delivery of energy efficiency and renewable energy equipment, services, training, and financing to end-beneficiaries. In the case of Tunisia and China, these utilities become the entities that make the investments happen and ensure their successful implementation.

4.3.3 Financing Clean Off-Grid Energy in Rural Areas Through Micro-Finance

There are several new initiatives in this area, but the best and most solidly established is, of course, the Grameen Bank in Bangladesh. As the focus shifts towards meeting the demand of hundreds of millions of people without access to energy, these micro-finance

schemes will need to become major partners in helping communities secure solar home systems, biogas plants, and other programmes to make energy services possible to the large proportion of the population currently without access.

4.3.4 Loan Guarantees

These guarantees are essential when liquidity is not an issue at the national level, but where the financial intermediaries are reluctant to take risks, or rather perceived risks. China is a good example of a country which has used this system of guarantees broadly in its energy conservation programmes, but the practice is also prevalent in many other countries.

4.3.5 Special Purpose Financing Vehicles or Windows

These are very useful, particularly when banks are weak, risk-averse, or in a middle of a transition. These are usually created under the umbrella of the government and become crucial vehicles where they do not compete with local finance, thus potentially discouraging this much needed sector. IREDA, the Indian Renewable Energy Development Agency, is one good example of a special financing window which provides financing for renewable energy and energy efficiency.

4.3.6 Dedicated Credit Funded by Direct Foreign Investment or IFIs

Where local liquidity is low, or local banks are unwilling to take risks in sectors and investments relevant to climate change, a dedicated financing window with funds provided by DFI or IFIs may be a good alternative.

4.4 Local Initiatives on REDD: Potentially Important Pilots to Watch for Innovative Institutional Arrangements

4.4.1 The UN-REDD Programme

This is a joint initiative of FAO, UNEP, and UNDP. Launched in 2008, the programme aims to help countries prepare REDD strategies, to arrange for their implementation, and to build expertise. In each of these programmes, the issue of institutional set-up at the country level will be one of the priority areas to address. This will, by definition, include institutional arrangements for the handling of REDD financing in the countries. Given that these will be performance-based financed programmes, the institutional arrangements to be put in place will provide excellent lessons of experience for other types of climate change financing.

The programme currently supports activities in nine pilot countries: Bolivia, Democratic Republic of Congo (DRC), Indonesia, Panama, Papua New Guinea, Paraguay, United Republic of Tanzania, Viet Nam, and Zambia. Although current funding is available only for these nine pilot countries, several others have applied to act as observers to the Policy Board. Their observer status gives them other benefits such as networking, participation in workshops, and knowledge sharing. These countries include: Argentina, Cambodia, Costa Rica, Ecuador, Kenya, Mexico, Nepal, Nigeria, the Philippines, Republic of Congo, Solomon Islands, Sri Lanka, and Sudan. This list is expected to grow in the near future.

The network of pilot and observer countries provides a useful platform for exchanging information and knowledge on institutional aspects, including those required at the country level for performance-based climate change financing. The programme is already active in bringing together experts and technical teams from around the world to help develop analyses and guidelines on issues such as measurement, reporting, and verification (MRV) of carbon emission flows. As in the case of all climate change financing, the success of these initiatives will depend on the adequacy and effectiveness of local institutions to manage complex REDD programmes in countries.

5 Conclusions

The main messages that emerge from this survey are the following:

- Discussions on the governance of climate change financing need to pay greater attention to the national and complementary part of the central governance in the UNFCCC. Thus far, the negotiations have paid little attention to this important aspect.
- The large and rapid growth in financial resources to be made available for climate change in developing countries will be more successful as adequate institutional mechanisms are put in place to identify needs, manage resources, disburse funds, and support activities being funded. Those countries that create adequate institutions are the ones that will benefit the most from these new and additional resources.
- Several countries have taken the initiative to set up mechanisms to help raise, manage, and disburse funds in climate change–related activities. Each responds to different needs and requirements, including political requirements. There are no standards, formulas or blueprints, but all will need to address certain minimum functions that are specific to climate change financing.
- For the most part, the new type of functions and institutions required will create new demands for countries, for which most are not properly prepared. A large capacity development challenge is therefore one of the priorities that needs to be addressed and properly financed under the UNFCCC negotiations. The UN REDD programme, which is initially focusing on building capacities, will provide good lessons of experience to watch and learn from.
- But creating new dedicated institutions is not the only answer or requirement. In many countries, an array of financial mechanisms, many of them in the public sector but also some in the private sector, have been created in the first decade of the 21st century to meet the growing demand for investment in climate change–related programmes and projects. An effort should be made to coordinate and align the mission and strategies of these funds in support of the national development and climate change strategies of the countries.

- International institutions and funding mechanisms will need to play an even more active, but perhaps different, role at the country level. Some of these needs have been highlighted in the Report and include: creating a bridge where local institutions do not exist or are weak, ensuring due diligence, building capacity and providing technical assistance, funding dedicated finance windows, and in general, helping to address the risk or perception of risk that many countries experience, particularly when funding new and innovative climate change technologies.

Appendix I: Main Public Finance Mechanisms

PFMs	Description	Financial Barriers Addressed	Financial Market Characteristics	Applicable Market Segment
Credit line for Senior debt	Debt facilities provided to commercial FIs for on-lending, and usually on a full-recourse basis. Typically meets 50-80% of project cost. Can also be offered on limited or non-recourse basis depending on FIs willingness to take project risk.	(i) lack of funds among FIs; (ii) shortage of long-term funds; (iii) high interest rates.	Underdeveloped financial markets where there is lack of liquidity and borrowing costs are high.	(i) large scale and medium scale RE and EE; (ii) wholesale loans for energy access market.
Credit line for subordinated debt	Debt provided to CFIs for on-lending, in combination with senior debt to improve security for senior lender. Typically meets 10-25% of project cost. Can take other legal structures such as convertible debt or preferred shares.	(i) lack of available equity among project sponsors; (ii) restrictive debt-to-equity ratio.	Lack of liquidity in both equity and debt markets.	(i) medium and small scale.
Guarantee	A risk management tool shares in the credit risk of project loans which CFIs make with their own resources. Typically covers 50-80% of outstanding loan.	(i) high credit risks, particularly perceived risks.	Existence of guarantee institutions and experience with credit enhancements.	(i) large-scale and grid-connected RE; (ii) medium scale RE and EE; (iii) energy access market.
Project Loan Facilities	Debt facilities organized by entities other than CFIs and providing financing to clean energy project on a project finance basis. Can be combined with commercial financing or can be provided as credit lines to small CFIs for on-lending.	(i) lack of experience with clean energy project finance; (ii) inability or unwillingness to underwrite loans on a project finance basis; (ii) lack of long term lending capacity.	Strong political environment to enforce contractual obligations and enabling laws for special purpose entity.	(i) medium and small scale RE and EE.
Soft Loan Programme	Provides debt capital at concessional interest rate.	(i) financing gap during project development stage.	Lack of liquidity or interest in the target sector.	(i) medium to small scale EE and RE.

Equity Fund	Equity investment in clean energy companies and/or clean energy projects. Can be targeted at specific market segments, or full range.	(i) lack of long term capital; (ii) restrictive debt-to-equity ratio requirements.	Highly developed capital markets to allow equity investors an exit from investees.	(i) large-scale grid-connected RE; (ii) energy companies
Venture Capital	Equity investment in technology company.	Lack of risk capital for new technology development.	Developed capital markets to allow eventual exits.	Any new technology.
Carbon Finance	Monetization of future cash flows from the advanced sales of CERs which can be used to finance project investment costs or enhance project revenues. Can also be in the form of carbon delivery guarantee to minimize the risk of under-delivery of carbon credits.	(i) lack of early stage project development capital; (ii) lack of cash flow to provide additional security to project lenders; (iii) uncertainty in the delivery of carbon credits.	Developing countries or emerging markets.	(i) large-scale grid-connected RE; (ii) medium-scale RE and EE; (iii) programme of activities such as in energy access market.
Project Development Grants	Grants that are "loaned" without interest or repayment until projects demonstrate financial viability.	(i) lack of sufficient capital during project development stage; (ii) costly development process.	Developing countries or emerging markets.	(i) large-scale grid-connected RE considered high risk with lengthy project preparation cycle.
Loan Softening Programmes	Grants to help CFIs begin lending their own capital to end-users initially on concessional terms.	(i) lack of FIs interest in lending to new sector; (ii) limited knowledge of market demand.	Competitive local lending markets.	(i) medium to small scale EE and RE.
Inducement Prizes	"Ex-Ante Prizes" to stimulate R&D or technology developments. Still needs to be proven in the climate sector.	(i) high and risky technology development costs and spill-over effects.	Sufficient financing availability to deploy winning technologies.	Any technology sector.

Source: UNEP SEFI "Public Finance Mechanisms to mobilize investment in climate change mitigation", 2008 as it appears in "Financing Global Climate Change Mitigation", ECE Energy Series No. 37, United Nations, New York and Geneva, 2010.

Appendix II: New Funds Established

Name of Fund	Description	Source of Funds and Operations	Governance
Amazon Fund - Brazil	Established to combat deforestation and promote sustainable development in the Amazon	Designed to attract national and private investment in Amazon rainforest projects as well as donations and earnings from non-reimbursable investments made. Norway largest donor to date	Managed by BNDES, the National Social and Economic Development Bank of Brazil which has responsibility to raise funds, facilitate contracts and monitor and support projects
Bangladesh Climate Change Resilience Fund (BCCRF)	Established to provide to support implementation of Bangladesh's Climate Change Strategy and Action Plan 2009-2018 and particularly vulnerable communities	Designed to attract funds from UNFCCC finance mechanisms and direct donor support (UK, EU, Sweden, Denmark have pledged)	Managed by a Board comprised of Ministers of environment, finance, agriculture and disaster management, as well as donors and civil society
Brazil National Fund on Climate Change	Established to support projects and studies, and finance enterprises, relating to broad range of activities on mitigation and adaptation	To be funded partly by resources to derive from the oil industry and government pledges as well as donor support	Managed by Ministry of Environment and a Management Committee comprised of six representatives of the Executive Power and six of the NGO community
China CDM Fund (CDMF)	Established jointly by Ministries of Finance, Foreign Affairs and National Development and Reform Commission (NDRC) as an innovative finance mechanism to support the National Climate Change Programme and promote international cooperation	Funded by revenues generated from CDM projects in China, earnings from CDM operations, and grants and other cooperation grants from international institutions	Managed and operated by a Management Center on behalf of Ministry of Finance and charged to do first approval of proposals to be submitted to NDRC which makes final approval
Funds for the Environment – China	During past ten to fifteen years, China has established a series of funds to support and promote development of clean energy	Mostly consisting of investments and support grants supported by national policies and regulatory system as well as fees and fines resulting from these	Diverse management structures found in these ranging from local and national government entities to non-profit NGOs

Ecuador Yasuni ITT Trust Fund	Established to support government's decision to change the energy matrix of the country to a low carbon economy and society and prevent deforestation	Designed to attract donor funds in support of its historic decision to forego the extraction of the Yasuni ITT oil fields	To be administered by Multi-donor-Trust Fund office of the United Nations Development Programme which in turn is overseen by Steering Committee with representatives from government, donors, and civil society
Guyana REDD Investment Fund	Established to protect the national forests, and catalyze investments in support of low carbon economy and society	Designed to attract donor support. Its main contributor to date is the Government of Norway.	Governance structure being established and most likely to include key roles for international institutions such as the World Bank, stakeholders and indigenous peoples groups
Indonesia Climate Change Trust Fund (ICCTF)	Established principally to mainstream and align climate change within national development agenda	Designed to be sourced by grants from bilateral and multilateral development agencies and Banks	The United Nations Development Programme is Interim Fund Manager operating under Steering Committee that includes donors and governments and Advisory Committee with NGO and CSO representatives

Maldives Climate Change Trust Fund	Established to strengthen national capacity through pilot programs in mitigation as well as adaptation and coastal protection	Designed to attract donor support and funds from international organizations	Initially to be administered by the World Bank to operate under a Climate Change Advisory Council with government and a Technical Committee with experts from government and civil society
Thailand Energy Efficiency Revolving Fund	Established to stimulate the financial sector's involvement in investments in energy efficiency projects	Government allocated initial pool of fund but subsequently expected to be self-financed	In addition to providing initial pool of funds, government also allocated initial team of experts

Appendix III: Funds Being Developed or in the Process of Being Established

Name of Fund	Description	Source of Funds and Operations	Governance
Nigeria National Strategic Climate Change Trust Fund (NSCCTF)	To be established to implement long-term climate change-related action to help increase resilience to the impact of climate change and enable low carbon development	To be designed to attract funds from various sources	Sponsored by Special Climate Change Unit (SCCU) of the Ministry of Environment and United Nations Development Programme (UNDP) but governance to be decided
Indonesian Low Emissions Development Financing Facility	To develop a mechanism to support low carbon development	To be designed as a public private partnership Trust Fund – an investment fund based on existing government regulations of the financial markets	Governance structure under consideration and not yet decided but most likely with major involvement of expert investment managers
India Clean Energy Fund	To be established to encourage the development of clean energy – particularly from renewable energy.	Revenue to be generated form a levy or tax on coal	Governance structure under discussion
Philippines National Survival Fund	Legislative proposal to create Fund aimed at managing international and national funding for adaptation.	Designed to capture resources from Adaptation Fund and other UNFCCC and international funds for adaptation	Proposal under consideration
Costa Rica Green Bond	Exploring the establishment of a Fund to support low carbon development activities	Designed to leverage public and private funds	Proposal under consideration

Appendix IV: National Policy on Climate Change Law of Brazil

Presidency of the Republic of Brazil
Civil House (Executive Office)
Legal Affairs Sub-Office
LAW NO. 12,187, OF 29TH DECEMBER 2009.
Institutes the National Policy on Climate Change – PNMC and makes other provisions.
I, THE PRESIDENT OF THE REPUBLIC hereby inform that the National Congress decrees and I sanction the following Law:

Article 1. This Law institutes the National Policy on Climate Change – PNMC (Política Nacional sobre Mudança do Clima) and establishes its principles, objectives, directives and instruments.

Article 2. For the purposes of this Law, the following definitions apply:

I – adaptation: initiatives and measures to reduce the vulnerability of natural and human systems to current and anticipated effects of climate change;

II – adverse effects of climate change: changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems, or on the operation of socio-economic systems or on human health and welfare;

III – emissions: the release of greenhouse gases and/or their precursors into the atmosphere over a specific area and period of time;

IV – source: process or activity which releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere;

V – greenhouse gases: gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation;

VI – impact: effects of climate change on human and natural systems;

VII – mitigation: technological change and substitution that reduce resource inputs and emissions per unit of output, as well as the implementation of measures to reduce greenhouse gas emissions and enhance sinks;

VIII – climate change: a change of climate which can be attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods;

IX – sink: process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere; and

X – vulnerability: degree to which a system is susceptible to, or unable to cope with, the adverse effects of climate change, including climate variability and extremes. Variability is a function of the character, magnitude, and rate of climate change and variation to which the system is exposed, its sensitivity, and its adaptive capacity.

Article 3. The PNMC and resulting activities, performed under the responsibility of political entities and public administration bodies, shall observe the principles of caution (precautionary principle), prevention, citizen participation, sustainable development as well as the principle of common but differentiated responsibilities at international level,

and, with regard to the measures adopted for their implementation, shall consider the following:

I – all have the duty to act, for the sake of the present and future generations, to reduce the impacts of anthropogenic interference with the climate system;

II – measures shall be taken to prevent, avoid or minimize identified causes of climate change with anthropogenic origin within the national territory, on which there is reasonable consensus among scientists and technicians engaged in the study of phenomena concerned;

III – adopted measures shall take into consideration the different socio-economic contexts of their application, distribute the resulting financial burden and charges across economic sectors and populations and communities concerned in an equitable and balanced way, and weigh individual responsibilities with regard to the origin of sources and occasioned effects on climate;

IV – sustainable development is the key to address climate change while conciliating it with serving the common and particular needs of the populations and communities that live in the national territory;

V – action at national level to address current, present and future climate change shall consider and integrate activities promoted at state and city level by public and private bodies.

VI – (VETOED)

Article 4. The National Policy on Climate Change – PNMC shall aim at:

I – making social-economic development compatible with the protection of the climate system;

II – reducing anthropogenic greenhouse gas emissions with regard to their different sources;

III – (VETOED);

IV – strengthening anthropogenic removals by sinks of greenhouse gases in national territory;

V – implementing measures to promote adaptation to climate change, across the 3 (three) tiers of the Federation, with the participation and collaboration of economic and social agents concerned and of beneficiaries, particularly those especially vulnerable to the adverse effects of climate change;

VI – preservation, conservation, recovery and rehabilitation of environmental resources, with particular attention to the large natural biomes regarded as National Heritage;

VII – consolidation and expansion of legally protected areas and incentives to reforestation and re-composition of vegetation cover in degraded areas;

VIII – encouraging the development of the Brazilian Emissions Reduction Market – MBRE (Mercado Brasileiro de Redução de Emissões).

The objectives of the National Policy on Climate Change shall be consonant with sustainable development with the purpose of seeking economic growth, eradication of poverty and reduction of social inequalities.

Article 5. The directives of the National Policy on Climate Change are as follows:

I – commitments Brazil has undertaken under the United Nations Framework Convention on Climate Change, the Kyoto Protocol and other documents on climate change the country may come to sign;

II – actions to mitigate climate change, in accordance with sustainable development, which are, whenever possible, measurable for their adequate quantification and a posteriori verification;

III – adaptation measures to reduce the adverse effects of climate change and vulnerability of environmental, social and economic systems;

IV – integrated mitigation and adaptation strategies at local, regional and national level;

V – encouragement and support to participation that federal, state, district and municipal governments, as well as by the production sector, academia and organized civil society in the development and implementation of policies, plans, programs and actions related to climate change;

VI – promotion and development of science and technology research, and the diffusion of technologies, processes and practices towards:

a) mitigating climate change by reducing anthropogenic emissions by sources and enhancing anthropogenic removals by sinks of greenhouse gases;

b) reducing uncertainties in future regional and national projections on climate change;

c) identifying vulnerabilities and adopting suitable adaptation measures;

VII – using financial and economic mechanisms to promote action to mitigate and adapt to climate change, observing the provisions of Art. 6;

VIII – identifying existing instruments for governmental action that may contribute to protecting the climate system, and coordinating them with the Policy stipulated by this Law;

IX – supporting and fostering activities that effectively reduce emissions or promote removals by sinks of greenhouse gases;

X – promoting international cooperation at bilateral, regional and multilateral level for financing, capacity-building, development, transfer and diffusion of technologies and processes for the implementation of mitigation and adaptation actions, including scientific research, systematic observation and exchange of information;

XI – improving accurate and systematic observation of the climate and its manifestations within national territory and contiguous ocean areas;

XII – promoting the dissemination of information, education, capacity-building and public awareness on climate change;

XIII – providing incentives and supporting the maintenance and promotion of:

a) low-greenhouse gas emitting practices, activities and technologies;

b) sustainable consumption and production patterns.

Article 6. The instruments of the National Policy on Climate Change are as follows:

I – the National Plan on Climate Change;

II – the National Fund on Climate Change;

III – the Action Plans to Prevent and Control Deforestation in biomes;

IV – Brazil"s National Communication to the United Nations Framework Convention on Climate Change, according to the criteria established by said Convention and its Conferences of Parties;

V – resolutions by the Interministerial Commission on Global Climate Change;

VI – fiscal and tax measures destined to stimulate emissions reduction and removals of greenhouse gases, including differentiated tax rates, breaks, exemptions, compensations and incentives, to be established by specific law;

VII – specific lines of credit and financing from public and private financial agents;

VIII – development of lines of research by development agencies;
IX – specific allotments of the Union budget for actions on climate change;
X – existing financial and economic mechanisms referring to climate change mitigation and adaptation to the effects of climate change under the United Nations Framework Convention on Climate Change and the Kyoto Protocol;
XI – financial and economic mechanisms that are national in scope and referring to mitigation and adaptation to climate change;
XII – existing and upcoming measures that encourage the development of processes and technologies that contribute to adaptation and to reducing emissions and removing greenhouse gases, among which is the establishment of preferential criteria in public procurement and calls for tenders (which encompass public–private partnerships and authorizations, permits, and concessions to explore public services and natural resources) for proposals that best provide for saving energy, water and natural resources and reducing greenhouse gas emissions and waste;
XIII – records, inventories, estimates, assessments and any other surveys on greenhouse gas emissions and their sources, based on information and data supplied by public and private bodies;
XIV – dissemination, education and awareness-raising measures;
XV – national climate monitoring;
XVI – sustainability indicators;
XVII – establishment of environmental standards and of quantifiable and verifiable targets for reducing anthropogenic emissions by sources and for anthropogenic removals by sinks of greenhouse gases;
XVIII– assessment of environmental impacts on the microclimate and the macroclimate.

Article 7. The institutional instruments for action on the National Policy on Climate Change include:
I – the Interministerial Committee on Climate Change;
V – the Interministerial Commission on Global Climate Change;
III – the Brazilian Forum on Climate Change;
IV – the Brazilian Network of Research on Global Climate Change – Rede Clima;
V – the Meteorology, Climatology and Hydrology Activity Coordination Commission.

Article 8. The official financial institutions shall open up specific lines of credit and financing to develop actions and activities that meet the objectives of this Law and that aim at inducing private agents to observe and implement the PNMC within the range of their actions and social responsibilities.

Article 9. The Brazilian Emissions Reduction Market – MBRE shall be operated in commodities, futures and stock exchanges, and in over-the-counter trading companies authorized by the Securities and Exchange Commission of Brazil – CVM, where negotiations for securities representing certified avoided greenhouse gas emissions shall take place.

Article 10. (VETOED)

Article 11. Other public policy and governmental program principles, objectives, directives and instruments shall be made compatible with the principles, objectives, directives and instruments of this National Policy on Climate Change.

A Decree from the Executive Power shall, in accordance with the National Policy on Climate Change, establish the Sectoral Plans of mitigation and adaptation to climate change, aiming at the consolidation of a low-carbon consuming economy, for the sectors of energy generation and distribution; urban public transport and modal interstate cargo and passenger transportation systems; manufacturing industry and durable consumer goods industry; fine chemicals industry and basic chemicals industry; paper and cellulose industry; mining; civil construction industry; healthcare services; and agriculture and ranching, with a view to meeting gradual quantifiable and verifiable anthropogenic emissions reduction targets, considering the specificities of each sector, including via the Clean Development Mechanism – CDM and via Nationally Appropriate Mitigation Actions – NAMAs.

Article 12. To attain the PNMC objectives, the country shall adopt actions to mitigate greenhouse gas emissions with the purpose of reducing between 36.1% and 38.9% of projected emissions by 2020 as a national voluntary commitment.

The projection of emissions for 2020 as well as the detailing of actions to attain the objective stated by the present article shall be stipulated by decree, based on the second Brazilian Inventory of Emissions and Anthropogenic Removals of Greenhouse Gases not under the Protocol of Montreal, to be concluded in 2010.

Article 13. This Law enters into force on the date of its publication.

Brasília, 29th December 2009.
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