Status of Climate Finance in Indonesia

Country Assessment Report

August 2013

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August 2013

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Abbreviations

AIGCC	Asia Investor Group on Climate Change
ADB	Asian Development Bank
AF	Adaptation Fund
AFD	L'Agence*Française de Développement* (France Development Agency)
AIMS	Aid Information Management System
APBD	*AnggaranPendapatandanBelanja Daerah* (Local Budget)
APBN	*AnggaranPendapatandanBelanjaNasional* (National Budget)
ASTAE	Asian Sustainable and Alternative Energy Programme
AUSAID	Australian Government Overseas Aid Program
BAPPENAS	National Development Planning Agency or National Planning Ministry
BAU	Business as Usual
BUR	Biennial Update Report
CCPL	Climate Change Programme Loan
CDKN	Climate and Development Knowledge Network
CDM	Clean Development Mechanism
CERs	Certified Emissions Reductions
CFR	Climate Finance Readiness
CIF	Climate Investment Fund
COP	Conference of the Parties
CPEIR	Climate Public Expenditure and Institutional Review
CSR	Corporate Social Responsibility
DAK	Specific Purpose Grants
DDI	Domestic Direct Investment
DFID	Department for International Development (UK Aid)
DNPI	*DewanNasionalPerubahanIklim* (National Council on Climate Change)
EU	European Union
EUMRVCB	EU funded Capacity Building on MRV of GHG emissions and actions in developing countries
Exim	Indonesia's Bank of Export and Import
FCPF	Forest Carbon Partnership Facility
FDI	Foreign Direct Investment
FIs	Financial Institutions
FIP	Forest Investment Program
FIT	Feed in Tariffs
FSF	Fast-Start Finance
GBEP	Global Bioenergy Partnership
GCF	Green Climate Fund

GCPF	Global Climate Partnership Fund
GEF	Global Environment Facility
GFG	Good Financial Governance
GHG	Greenhouse Gas
GIZ	German Agency for International Cooperation
ICCTF	Indonesia Climate Change Trust Fund
ICI	International Climate Initiative
ICCSR	Indonesia Climate Change Sectoral Roadmap
IEA	International Energy Agency
IFC	International Finance Cooperation
IGIF	Indonesia Green Investment Fund
IIGCC	Institutional Investors Group on Climate Change
IISD	International Institute for Sustainable Development
IPPs	Independent power producers
JICA	Japan International Cooperation Agency
KCP	Kaltim Carbon Partnership
KfW	KreditanstaltfürWiederaufbau (German Development Bank)
LCDS	Low Carbon Development Strategy
LED	Low-Emission Development Strategy
LDCF	Least Developed Countries Fund
LoI	Letter of Intent
LUCF	Land Use Change and Forestry
MBS	Mitigation Budget Score
MDGs	Millennium Development Goals
METF	Medium-Term Expenditure Framework
MoF	Ministry of Finance
MoU	Memorandum of Understanding
MSMEs	Micro, Small and Medium Enterprises
MFI	Multilateral Financial Institutions
MRV	Measurement, Reporting and Verification
NAMAs	Nationally Appropriate Mitigation Actions
NAPA/NAP	National Adaptation Programmes of Action
NDB	National Development Bank
NEEDS	National Environment, Economic and Development Study
NIEs	National Implementing Entities
ODI	Overseas Development Institute
ODA	Official Development Assistance

OECD	Organization for Economic Cooperation and Development
OECD DAC	OECD Development Assistance Committee
PAKLIM	Policy Advice for Environment and Climate Change
PBB	Performance-Based Budgeting
PCF	Private Sector Facility
PFM	Public Finance Mechanisms
PSF	Private Sector Facility
PwC	Pricewaterhouse Coopers
RAD-GRK	Local Action Plan for GHG Emission Reduction
RAN API	National Action Plan for Climate Change Adaptation
RAN-GRK	National Action Plan for GHG Emissions Reduction
REDD+	Reducing Emissions from Deforestation and Degradation
RPJMN	*Rencana Pembangunan JangkaMenengahNasional* (Mid-Term National Development Plan)
RPJP	*Rencana Pembangunan JangkaPanjangNasional* (Long-Term National Development Plan)
SME	Small and Medium-sized Enterprise
UKCCU	UK Climate Change Unit
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute

Executive Summary

The challenge of climate finance readiness

Why climate finance readiness? In 2009, the Copenhagen Accord defined the overall scope of future climate finance pledges: climate policies and actions in developing countries should be supported with USD100 billion per year of new and additional public and private finance by 2020. Since then, a number of concepts have stressed the need for climate finance readiness. We suggest four pillars to improve a country's climate finance readiness: (1) supporting capacities for multi-level planning, programming and coordination; (2) institutional strengthening to meet financial access requirements; (3) providing good financial governance, including soundMRV systems; and (4) increasing efforts to engage the private sector.

Why Indonesia? Many countries, including Indonesia have started to develop national approaches to climate finance management. Indonesia has taken an ambitious stand with respect to climate change, recognizing its contribution to climate change mitigation and adaptation. It has officially declared a national target to reduce GHG emissions by 26% by 2020 compared to a business-as-usual scenario, without international support - and up to 41% with international support. Indonesia's commitment to GHG emission reduction has made it one among very few non-Annex I Countries to enact significant and comprehensive GHG emission reduction regulation. In order to fulfil these objectives, the efficient use of national and international climate finance needs to be developed.

Why this report? This report provides an assessment of the state of climate finance in Indonesia–explainingthe current funding architecture, financial flows and sources, key actors involved, andassessing the potential for accessing additional funding and structuring climate finance internally. The objective is to understand the climate finance readiness of Indonesia and identify gaps and opportunitiesto build upon in the near future. The report seeks to inform future planning and investment undertaken in this area by the government of Indonesia and development partners.

What is the situation in Indonesia?

National and international climate finance

- *Limited climate finance disbursement to date:* Estimates on the total value of international climate finance pledged to Indonesia vary but lie somewhere in the area of USD 3.1 - 4.4 billion, predicted to rise to over USD 5.3 billion in the near future. Most of this finance is pledged in the form of loans (73%). According to data from Climate Funds Update, which covers all multilateral funds and some major bilateral initiatives, only 3% (USD 82 million) of these commitments have been disbursed to date and mostly fundingREDD+ / land use related mitigation actions, which is appropriate given that around 80% of Indonesia's current GHG emissions come from those sectors. Future commitments place more focus on other mitigation actions, and since GHG scenarios point to rapidly rising emissions in energy related sectors, this area warrants greater focus*Domestic climate expenditure is increasing: A*ccording to UNDP's Climate Public Expenditure and Institutional Review (CPEIR) study, Indonesia's total budgetary expenditure in 2011 on climate change mitigation actions amounted to around IDR 5.5 trillion (around USD 579 million), an average increase of 5% since 2008.
- *Limited information on adaptation financing*: Research tracking Indonesia's expenditure on climate change adaptation activity is not yet available. This is partly due to the fact that a national action plan on climate change adaptation has not yet been published to

provide benchmarks and definitions for classifying adaptation action and tracking within public budgets and expenditure.

Legal framework

- *Mitigation framework is evolving*: Indonesia's commitment to reduce GHG emissions is codified in the *National Action Plan on GHG Emission Reduction*, regulated under Presidential Regulation No.61/2011. The *Local Action Plan on GHG Emission Reduction, launched in late 2*012, lays out provincial contributions to these targets, including provincial baselines and emission reduction targets. The national and local action plans will serve as starting points for the development of Nationally Appropriate Mitigation Actions (NAMAs) under the UNFCCC.
- *Growing momentum for forest protection*: In May 2011, the President issued a presidential regulation number 10/2011 imposing a moratorium on new licenses for land-based activities, including logging and establishing plantations in primary forest and peat land areas. Although additional measures are needed to address serious deforestation problems, the moratorium has been praised as a good first step in improving forest governance and embarking on a low emission development pathway.
- *Green banking still to start*: Indonesia's central bank is currently drafting a regulation on green banking and financing, expected to be issued by the newly established Financial Services Authority, which will require lenders to assess potential borrowers not only on financial, but also social and environmental sustainability standards, and can help encourage investments in green sectors.

Institutional framework

- *A shared responsibility for climate finance readiness*: The National Development Planning Agency (BAPPENAS) is responsible for formulating procedures and planning for climate finance, coordinating climate change loans and grants, and is the agency responsible for mainstreaming climate change into national policies. The Ministry of Finance (MoF) is responsible for ensuring that climate change is reflected in budget priorities. The Ministry of Environment is responsible for preparing the National Communication to the UNFCCC, which also includes information on climate finance needs. The National Council on Climate Change coordinates climate change control policies, which includes adaptation, mitigation, technology transfer and financing. It is also responsible for the formulation of Indonesia's position in international negotiations.
- *National climate fund established*: The Indonesia Climate Change Trust Fund (ICCTF) was established in 2009 as the financing mechanism for Indonesia's climate change policies and programs. As a national fund, it is designed to pool funding from various sources, including international donors and domestic private sector, and promote financial coherence. The UNDP is acting as the interim trustee, whilst the transition to Bank Mandiri, a state-owned bank, as national trustee is scheduled for end of 2013.
- *Access to international adaptation funding is being pursued:* The ICCTF is registering to be a National Implementing Entity (NIE) to the UNFCCC's Adaptation Fund, in order to make use of direct access modalities. The ICCTF includes expenditure funds as well as revolving investment funds, and currently prioritizes three financing windows: land-based mitigation; energy; and adaptation and resilience. Despiteattracting core funding from international donors in the first few years of operation, further fund raising success has been limited. The ICCTF has a capitilization of USD 11.3 million to date.

How "ready" is Indonesia?

Planning Capacity

- *Planning for mitigation is advanced:* The government of Indonesia has set up a national GHG emission reduction plan (RAN-GRK) and in late 2012 successfully launched provincial GHG emission action plans (RAD-GRK) in nearly all provinces. The RAN-GRK identifies mitigation actions for different sectors and includes an initial assessmemt of financing needs. The national plan lacks a cost-effectiveness assessment for all identified actions however, and the business-as-usual baseline is still under development.
- *Planning for adaptation still in process:* Climate change policy in Indonesia centers largely on emissions reduction targets - goals and strategies for climate change adaptation are not yet determined. With the presentation of a National Adaptation Plan of Action (RAN-API), Indonesia will achieve a significant milesetone but will need to go some way to catch up with mitigation progress.
- *Varying estimates of mitigation financing needs:* There are several documents that give an overview of Indonesia's climate change mitigation financing needs for e.g. the Mid-Term National Development Plan (RPJMN), the Second National Communication to the UNFCCC, and the MoF's Green Paper. Estimates for annual mitigation needs vary according to different studies, ranging from USD 925 million (MTDP 2010) to USD 19.26 billion (NEEDS/DNPI 2009), and even higher according to other assessments.
- *Need for increased donor coordination*: The establishment of the Indonesia Climate Change Trust Fund (ICCTF) is an important development in promoting coherence in climate finance planning, but there is no overarching donor coordination mechanism. The level of funding channelled through the ICCTF is currently low, increased dialogue and coordination with donors could help to boost commitments from agencies supporting the Fund.
- *Limited capacity at local level*: There is a need to strengthen the capacity of stakeholders delivering climate change plans and financing at sub-national and sectoral level. In order to improve delivery of climate finance from national to local level, enhanced stakeholder engagement is necessary through dialogue and mutual learning processes; this can facilitate the development of programmes that are pro-poor, gender sensitive, and suited to local context.

Accessing Finance

- *Direct access being arranged*: With support from GIZ, the ICCTF is in the final stages of the process to becoming Indonesia's National Implementing Entity (NIE) to the Adaptation Fund. This can potentially ease direct access to the Green Climate Fund (GCF) in future.
- *Sub--national access to funds needs improving*: Fiscal decentralization in Indonesia has delegated expenditures and revenues and administrative management to local governments, notably the right to regulate local taxes and retribution. This has implications for climate finance delivery and governance. Currently policies and legal frameworks at the sub-national level are not adequate to facilitate climate finance delivery and management. More time is required to amend the regulation of the intergovernmental fiscal transfer via specific purpose grants (DAK) to reflect climate change aspects.

Good Financial Governance

- *Integrating mitigation into budgeting systems:* The MoF initiated a Performance-Based Budgeting (PBB) in 2005 to improve the efficiency of funds. The first Mitigation Fiscal Framework suggested including emissions reduction in the PBB performane indicators and the MoF has started efforts to incorporate thematic tags including mitigation into the budget system.
- *Constraints to monitoring climate finance*: Some of the constraints observed in Indonesia that are preventing adequate MRV of finances includes: absence of formal climate finance marker system; lack of definitive guidance; and no dedicated computer system to track climate finance (Tirpak et al. 2012).
- *Systematic MRV of finance needed*: MoF and BAPPENAS need to put in place a systematic monitoring and evaluation system for tracking national and international climate finance flows, for adaptation as well as mitigation activity. The classification and indicators to characterize financial data are inconsistent. While loan-monitoring systems are quite well-developed, monitoring grants is challenging, although developing a system for the latter is important given that in UNFCCC negotiations most recipient countries hold that climate finance, particularly for adaptation, should primarily be grant-based.
- *Integrate MRV into national and local climate planning*: The link between MRV of funds and activities planned as part of the national and local emissions reduction plans need to be further elaborated. The ICCTF's MRV capacity should be strengthened as an implementing entity for these plans. There is also a need to establish an accounting and monitoring system for private climate finance, particularly where this is counted towards meeting UNFCCC targets, to ensure activities are embedded into Indonesia's internal audit institutions and that they meet national climate and development goals.

Private Sector Engagement

- *Involvement in mitigation activity*: Private sector already makes up a considerable proportion of mitigation investment in Indonesia, although accurate data on such investment is not available. Private funding mostly centres on investment in renewable/clean energy and energy efficiency, commercially viable areas where investors see they can make a return on investment.Adaptation requirements and action does not attract equity investment in the same way.
- *Carbon market and REDD+ engagement:* Indonesia has contributed less significantly to the compliance market under UNFCCC than other countries. Out of the total capital investment of USD 215.4 billion for CDM projects (as of June 2012), Indonesia's estimated share is USD 3.661 billion (or only 1.7%), far behind China's (60%) and India's (17%) (UNFCCC, 2012). In case of REDD+, there are currently more than 60 REDD+ demonstration activities spread across Indonesia, and private companies are already involved in developing and supporting these.
- *ICCTF as an institutional mechanism for public-private collaboration*: ICCTF can help to establish dialogue and collaboration with the private sector and financial institutions to ensure their involvement in the Green Climate Fund and related political proceses via the Private Sector Facility.
- *Innovative policy approaches needed*: A favourable market situation and related policies & programmes (e.g. tax incentives, low cost debt financing, R&D support) setup by the government could put in place the right triggers for more private investment in low carbon growth. Indonesia also needs to reform its domestic policy; energy pricing policy should reflect market reality and should give incentives in terms of carbon pricing.

  Financial sector's involvement sought: National banks play a key role in climate finance management and delivery and invoving these institutions could catalyze climate

investment. Bank Indonesia is currently drafting a regulation on green banking that will require not only financial but also social and environmental sustainability standards to be integrated in investment planning.This initiative is expected to send a positive signal to banks and increase their interest and participation in the climate finance industry.

What are next steps to improve climate finance readiness?

As we see from the analysis, there is good climate finance momentum underway in Indonesia, but further effort is still needed to improve national readiness for receiving and using climate finance.The following recommendationsseek tobuild upon the mechanisms and results achieved already while addressing some of the remaining gaps and challenges:

	Objective	Proposed Activity
1.	**Improve Adaptation & Mitigation Planning**	Indonesia is currently preparing the National Adaptation Plan of Action (RAN-API) to establish an overarching framework for adaptation action and investment. The development of robust cost estimates on adaptation resourcing needs is important in this process. This requires an appropriate methodology that takes into account multi-sectoral and sub-state level adaptation needs, in line with national strategies. BAPPENAS and the MoF should be supported in creating and piloting such a tool and process.
		The implementation of RAN-GRK and RAD-GRK can be facilitated by the development of sectoral NAMAs. This requires supporting ongoing efforts to prepare programmes that are aligned with the existing plans and targets of relevant ministries and government departments, and tap multiple financing sources.
2.	**Strengthen capacity for direct access to global financing sources**	In the event of the ICCTF becoming National Implementing Entity to the Adaptation Fund, ICCTF's staff can benefit from training and technical assistance in areas associated with NIE functioning and performance e.g.meeting fiduciary standards, ensuring safeguards, facilitating private sector partnerships and working with the Green Climate Fund. These activities can be linked with regional initiatives and donors discussion on the subject.
3.	**Support climate finance delivery and absorption at sub-national level**	Using the provincial GHG reduction proposals (RAD-GRK) as a benchmark, a capacity needs assessment should be undertaken to identify the skills and information requirements at local level in the successful delivery of climate change plans and funds. Based on such an assessment, a training programme could be designed for provincial and local governments and other professionals engaged in RAD-GRK implementation. This may happen in a pilot region to gain further insight into appropriate guidance for climate (finance) planning.
		Developing a pipeline of bankable projects with

		local and national stakeholders can work well to improve climate finance absorption potential, and thereby readiness prospects. In addition to technical assistance and training, this objective may be supported by more scoping and research into mitigation and adaptation investment opportunities at sub-national level, and appropriate financing instruments to avail these.
4.	**Develop the MRV system for climate finance**	The RAN-GRK/RAD-GRK process can be used to introduce standardised methodologies and indicators for monitoring and comparing mitigation actions of respective climate change programmes. To this end international partners should support the MoF in further elaborating the Mitigation Budget Score (MBS) that allows the use of emissions reduction as a performance indicator in decision making related to project expenditures. To ensure that MBS will be applied as part of a performance-based budgeting system, training in relevant functions is needed for line ministries.
		As local governments will carry the main burden of reporting on RAD-GRK implementation, BAPPENAS, and the MoF need to inform guidelines and reporting templates for data capturing and communication at the local level. In an initial pilot phase such guidelines and templates may be tested only for a subsector or in one region (e.g. energy efficiency measures in the waste sector in Central/East Jawa/East Kalimantan).
		In addition to templates and guidelines, a range of trainings are needed for stakeholders from line ministries and local government on various aspects of the MRV system such as GHG inventorying, developing BAU baselines, quanitifying mitigation activities, and performing the MRV of financial expenditures, etc.In the mid-term, 33 provinces (and 497 district/cities) need to be educated, which may require training the trainers in cooperation with donors, academics and MRV experts.
		Also needed are improved budgeting systems and classifications and codes to enable proper tracking of international assistance flowing towards climate change goals in Indonesia.
5.	**Improve stakeholder coordination on climate finance**	Setting up a donor-recipient government coordination group could be useful to the ICCTF, and possibly help in overcoming the current challenge of low funding commitment from donors. Such a group should be closely coordinated with activities of the ICCTF's Steering Committee.
6.	**Step up private sector engagement**	The Transformation Fund of the ICCTF is supposed to serve as an important catalyst for private sector investment in mitigation and adaptation actions. To take off, the Fund needs to

		be supported in the development of an appropriate investment strategy. It also requires an implementation plan, including, among others things, assessment of potential investor groups in the private sector and the potential for private investment.
		Engage the private sector in financing RAN-GRK and RAD-GRK components. A detailed research study looking at the initial experience with climate finance instruments and initiatives and recommending the best way forward can support decision makers in developing the national climate finance architecture. This can draw on experiences from other countries and utilize forums such as the Alliance for Public-Private Climate Finance Asia Pacific for learning and stakeholder consultation.
		Assist the government in piloting market instruments such as: • Revolving fund for energy efficiency. • Emissions trading activities (e.g. at the local level). • Feed in tariffs for geothermal and other renewable energies.

1. Introduction

Climate finance has always been recognised as key topic in international climate change negotiations. It was internationally agreed to increase the flow of climate finance from developed to developing countries to USD 100 billion per year from 2020 onwards (UNFCCC COP 15 and 16 agreements). Main purpose is to promote low carbon economic development in developing countries and to finance their adaptation requirements. With the international climate financing landscape becoming increasingly complex and diversified, developing countries need a new set of capacities to enable them to access and make use of available climate finance efficiently and effectively.

Indonesia too is taking measures to tackle climate change with international and domestic support. As an emerging economy, the country has committed to an ambitious target of reducing national GHG emissions. by 26% by 2020, or even up to41% with sufficient international support. To meet these targets, initial attempts to strengthening national climate finance architecture and management systems have been undertaken and are still evolving. The current fiscal mechanisms and trust funds for managing international climate finance inflows - such as the Indonesia Climate Change Trust Fund (ICCTF), the Fund for REDD+ Indonesia (FREDDI) - are at an early stage of development and require enhanced capacities for technical planning and management to become successful.

With significant international funds entering the Indonesian climate change framework (Brown and Peskett, 2011) there is a strong demand to establish mechanisms to ensure that the funds are effectively coordinated, channelled, and monitored, and that the results of financed measures are adequately verified and reported.

1.1 Objective of Report

The study serves as a preliminary gap-analysis on climate finance readiness in Indonesia. This report provides a structured overview of climate finance in Indonesia, mapping the current systems, policies, financing trends, and needs, and outlining opportunities for improving climate finance performance in the country.

The purpose of this report is to identify priority assistance for the consideration and uptake of the Indonesian governmentas part of efforts to develop climate finance architecture in the country, in collaboration with other development partners.

1.2 Scope and Approach

The report is the result of work undertaken by GIZ Indonesia and Adelphi on behalf of GIZ International Services. It is based on findings from desk research and interviews with key stakeholders in Indonesia, particularly the National Planning Ministry (BAPPENAS), the Ministry of Finance (MoF), and the National Council on Climate Change (DNPI).

Using four distinct dimensions of climate finance readiness - planning, access, financial governance (including monitoring and reporting of climate finance), and the involvement of the private sector – the study attempts to identify the current status of, and challenges to, climate finance management in Indonesia, and recommenduseful activities in developing this area. These reflections will need further scoping and elaboration with stakeholders if they are to be designed as concrete projects, and they also need to be framed within the medium to long-term perspective.

2. Climate Finance Readiness

2.1 International Climate Finance

In 2009, the Copenhagen Accord defined the overall scope of future climate finance pledges: climate policies and actions in developing countries should be supported with USD100 billion per year of new and additional public and private finance by 2020. Since then, a number of concepts have stressed the need for climate finance readiness. We suggest four pillars to improve a country's climate finance readiness: (1) supporting capacities for multi-level planning, programming and coordination; (2) institutional strengthening to meet financial access requirements; (3) providing good financial governance, including soundMRV systems; and (4) increasing efforts to engage the private sector.

In 2009, the Copenhagen Accord established a USD 100 billion annual target, to be achieved by 2020, in new and additional climate financing in support of developing countries climate change policies and needs (this pledge was subsequently formalised in the UNFCCC architecture by the 2010 Cancun Agreement). To this end the Green Climate Fund (GCF) is currently being established in Songdo City, South Korea, to play a key role in channeling "new and additional, predictable and adequate" financial resources to developing countries (UNFCCCDecision1/CP.16).

So far it is unclear how these finances will be organised, to what extent public finance will be used to catalyse private sector investment, and whether the GCF will manage large volumes of funding directly or through already existing funding structures. Growing demand for climate funding has already led to the development of a number of funds and facilitiess, both bilateral and multilateral, and diverse financing instruments. The GCF raises some hope for more effective coordination and distribution of climate finance in an otherwise fragmented landscape.

To benefit from the rapidly evolving climate finance industry, donors as well as recipient countries need to be well prepared (readiness) and understand the comprehensive range of issues, instruments, and modalities that are materializing. Many developing countries, including Indonesia, are already developing country level approaches and strategies to enable climate finance acess and utilization in meeting national climate change goals.

2.2 Concepts of Climate Finance Readiness

The availability of financial resources and capacities to absorb these vary across industrialised and developing countries, depending on the institutional architecture, policy environment, and existing financial expertise and skills within a political system. As a result donors, think tanks and research institutions have started to conceptualise approaches to evaluate and improve capacities for climate finance uptake and management.

According to the UNDP (2012), climate finance readiness can be defined as *"the capacities of countries to **plan, access, deliver, monitor and report** on climate finance, both international and domestic, in ways that are catalytic and fully integrated with national development priorities and the achievement of the MDGs*."

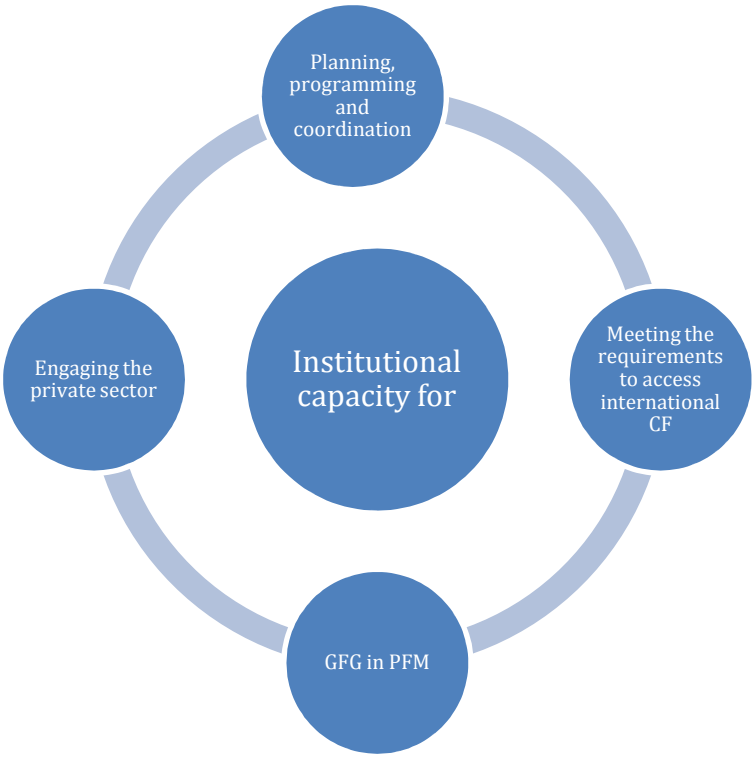
Exhibit 1: Four Pillars of Climate Finance (*Source:* UNDP 2012)

Financial Planning	Accessing Finance	Delivering Finance	Monitor, Report & Verify
Assess needs and priorities, and identify barriers to investment. Identify policy-mix and sources of financing.	Directly access finance. Blend and combine finance. Formulate project, programme, sector-wide approaches to access finance.	Implement and execute project, programme, sector-wide approaches. Build local supply of expertise and skills. Coordinate implementation.	Monitor, report, and verify flows Performance-based payments

As outlined in the table above, the four pillars of climate finance can be described with key activities that are needed to establish an integrated climate financing regime. Such a regime depends on main actors (including the private sector), the coordination mechanisms they use, and the state of funding access and utilisation at different regional levels within a country like Indonesia. Even if Indonesia has achieved a relatively advanced degree of climate finance planning, significant barriers to effective delivery and coordination of plans may still exist. For instance the absence of a sound MRV system for climate finance makes it difficult to track results and to establish performance-based payment systems.

Based on its experience in developing climate finance capacities, the GIZ has developed a "Ready for Climate Finance" approach to support *"developing countries and diverse stakeholders in **planning** for and **accessing** climate finance, **establishing and managing** national institutions and **building expertise**"*(GIZ 2012a). This approach in a revised new form (see below GIZ 2012b) consists of four dimensions that are similar to the UNDP model but with a stronger emphasis on addressing the involvement of the private sector:

Exhibit 2: The "Ready for Climate Finance" approach (GIZ 2012b).



The **first dimension** aims to provide strategic and conceptual advice as well as institutional strengthening for **multi-level planning and coordination**. In addition, the **delivery of programmes** can be included as an important part of this dimension. Evolving concepts of climate finance put a major emphasis on these aspects because they help:

- To ensure effective, efficient and equitable use of climate finance (UNDP 2012);
- To match priorities with potentially available resources and to plan theirintegratation over time (e UNDP 2012);
- To align climate finance with national development strategies and objectives (ODI 2012, UNDP 2012);
- To provide a full overview of financing options available, including modes of access and funding priorities (GIZ 2012a); and
- To ensure that project-level activities are in line with national development planning and strategies at the macro level (UNDP 2012).

Hence, planning and coordination is crucial in assessing a country's needs and priorities and in identifying the policy mix and sources of financing. Planning and coordination need to be combined with the ability to implement and execute programmes and to coordinate implementation.

Second, institutional strengthening at the national level can support countries in **accessing international climate finance** by helping:

- To structure climate finance flows provided from various sources (GIZ 2012a);
- To enable the country to increase ownership in funding decisions and allocate resources in line with national priorities and strategies (ODI 2012, GIZ 2012a);
- To promote a coherent and coordinated governmental response to climate change through tailor-made capacity development in national public finance institutions (GIZ 2012a); and
- To formulate projects, programmes and sector-wide approaches that attract and catalyse further public and private financing (UNDP 2012).

Institutional strengthening at the country level includes activities such as the development of capacities to enable direct access to international climate finance (accrediting National Implementing Entities), or blending and combining funds from diverse sources for more efficiency and strategic use.

Third, Good Financial Governance (GFG) of Public Finance Mechanisms (PFM) can be considered as a key requirement for transparent and accountable spending of climate finance, particularly:

- To monitor, report and verify financial flows and expenditures (UNDP 2012, ODI 2012);
- To monitor, report and verify results of adaptation and mitigation actions (UNDP 2012, ODI 2012); and
- To ensure that climate finance is spent in an efficient and transparent way (GIZ 2012b).

To achieve good financial governance, the establishment of effectie **monitoring and evaluation systems** is necessary, not least to track the impacts of climate policy and investment. Capacities are needed to develop integrated national reporting systems for monitoring financial expenditures and results (performance-based payments). Developing the capacity of regulating institutions and accountability mechanisms is also a requisite, as is supporting the development of expenditure management systems.

Finally, **private sector engagement** needs to be systematically addressed to leverage additional funding sources and to harness the potential of the private sector to provide climate change adaptation and mitigation solutions (UNDP 2012, GIZ 2012). A number of components are included within this challenge, for instance:

- Exploring systematically the role of the private sector in implementing key climate policy programmes (including the identification of local investment potential);
- Creating the conditions needed to engage the private sector, in part by identifying policies and measures that can help establish incentive structures appropriate for micro, small and medium enterprises (MSMEs) and the financial sector;
- Advising the private sector on how to develop profitable projects that are relevantto national climate change policies;
- Ensuring that private climate finances flow to the areas needed (e.g. adaptation as well as mitigation, pro-poor, enhancing local capacities), and are not misallocated to activities which do not yield net climate change and development benefits (ODI, 2013); and
- Implementing appropriate MRV standards for private sector engagement where this is counted towards meeting the UNFCCC climate finance goals (OECD/IEA 2011).

3. Landscape of Climate Finance in Indonesia

3.1 Indonesia's Climate Policy & Institutional Setup relevant to Climate Finance Readiness

3.1.1 Key Stakeholders in Climate Finance

The Indonesian government has taken some dynamic measures to address climate change planning and financing issues. One year after the UNFCCC's Conference of Parties 13 in Bali in 2007, Indonesia's president issued a regulation (#46/2008) for the establishment of a National Council on Climate Change. The Council is mandated to: "formulate strategies, programs and activities on climate change control; to play coordination function in the implementation of control tasks of climate change activities; to set up policies and procedures for carbon trading; to carry out monitoring and evaluation of policy implementation on climate change; and to strengthen Indonesia's position to encourage developed countries to take more responsibility in controlling climate change" (DNPI 2012). The Council carries out the mandate through working groups that act as policy think-thanks, and a Secretariat that has administrative and coordination functions. A working group under the Council (WG on Financial Mechanism) is responsible for formulating climate finance strategies and coordinating Indonesia's position on the issue in international climate negotiations.

In addition to the National Council on Climate Change, there are three government institutions in Indonesia that have a prominent role in climate finance budgeting and coordination. These are the Ministry of Finance, National Development Planning Agency (BAPPENAS), and the Ministry of Environment:

- The **Ministry of Finance** is responsible for ensuring that climate change requirements are reflected in budget priorities, pricing policies, and financial market rules. It has two divisions that have tasks related to climate finance: Division of Debt Management that has a finance tracking role, and a Fiscal Policy Office that sets the fiscal policy.
- **BAPPENAS** has the mandate to decide national climate finance systems and procedures, and to coordinate loans and grants related to climate change. It is also the main agency responsible for mainstreaming climate change into national policies.
- The **Ministry of Environment** is responsible for preparing the National Communications to the UNFCCC, which also, in principal, includes information on climate financing needs.

3.1.2 Key Policy Regulations related to Climate Change

Indonesia's policy on climate change is spurred by the President's **announcement** at the G20 meeting in Pittsburgh in 2009 to voluntarily reduce the country's GHG emission by 26% by 2020 compared to a business-as-usual scenario. In addition to this target, which should be achieved without international support, the president announced an additional reduction target of 15% with international support. One key mechanism established tofacilitate this ambition is the **Indonesia Climate Change Trust Fund (ICCTF)**, also established in 2009 to pool and coordinate funds from various sources to finance Indonesia's climate change policies and programsfor mitigation as well as adaptation. As far as climate change mitigation measures are concerned, key steps to meet this commitment are further outlined in the **National Action Plan on GHG Emission Reduction (RAN-GRK)**, regulated under

Presidential Regulation No.61/2011. The national action plan sets the foundation for developing the Nationally Approved Mitigation Actions (NAMAs) under the UNFCCC. Indonesia's commitment to GHG emission reduction has made it one among very few non-Annex I Countries to enact significant GHG emission reduction regulation. In addition, the **Regional Action Plan on GHG Emission Reduction (RAD-GRK)**, containing provincial contributions to the target, was launched in late 2012.

As far as the priorities of the national action plan are concerned, one needs to consider Indonesia's overall emission profile as reported in the Second National Communication to the UNFCCC (SNC, 2009): the emissions from land use change and forestry (LUCF) and the peat sector in 2005 accounted for around 63% (1.125 Gg CO2e) of the country's overall GHG emissions (1.791 Gg CO2e). Consequently, over 87% of the total emission reduction target (0.767 Gg CO2e) will be derived from actions in land-based sectors.

As one of the world's forest-rich countries, Indonesia perceives REDD+ as an opportunity to meet dual objectives of improving forest governance and reducing GHG emissions from deforestation and forest degradation. The huge potential to achieve both objectives attracts significant international support for Indonesia. One of the notable initiatives in REDD+ is the Norway-Indonesia Partnership that **pledges US$ 1 billion** in grants and performance-based payment grants to Indonesia.

The **national strategy on REDD+** mandated the need to establish a REDD+ agency. The **REDD+ Task Force**, founded in 2010, is the interim body responsible for preparing the agency's establishment. This body is structured under the Presidential Delivery Unit for Development Monitoring and Oversight (UKP4). In May 2011, the President issued a **presidential regulation number 10/2011 on moratorium of new licenses for land-based activities**, including logging and establishing plantations in primary forest and peat land areas. Although considered insufficient to address serious deforestation problems, the moratorium has been praised as a good step in improving forest governance and in embarking on a low emission development pathway (WRI 2011; Murdiyarso 2011). The question of addressing the problems of deforestation and forest destruction is subject to numerous reports and studies and also an aspect of climate finance governance that is mainly dealt with separately. As far as our discussion on climate finance readiness is concerned we therefore mainly focus on other challenges related to climate change mitigation and adaptation.

Indonesia is currently preparing the **National Adaptation Plan of Action,** also known as **RAN-API** (to be finalised in 2013) to identify priority adaptation actions and to initiate their implementation. The RAN-API will provide an inventory of adaptation measures that are in the pipeline of ministries and agencies such as the Ministry of Marine and Fisheries, Ministry of Health, Ministry of Agriculture or the Ministry of Public Works. Although the plan is expected to give an indication of the adaptation expenditure needed in the country, so far there is no comprehensive adaptation costing methodology based on investment and financing needs.

3.2 Indonesia's Climate Finance Landscape

3.2.1 Assessment of Climate Financing Needs

The UNFCCC, EU, and the World Bank estimate the total mitigation costs for developing countries to be between USD 150 billion per year (low estimate) and USD 180 billion per year (high estimate). Assuming a 5% - 10% share for Indonesia, the country's mitigation action could cost between USD 7.5 billion and USD 9 billion per year. Indonesia has already provided some estimates on country climate financing needs, including those presented in the Second National Communication to the UNFCCC, estimates in the Ministry of Finance's Green Paper, and those submitted as part of the mid-term development plan (RPJMN). The results of these assessments go in a similar direction:

- To integrate climate change into inter-sectoral programs, emission reduction actions have been incorporated into the mid-term development plan (RPJMN). The mid-term development plan for 2010-2014 estimates the financial requirement for meeting emissions reduction goals to be as high as IDR 37.8 trillion (or around USD 3.7 billion).
- The Second National Communication (SNC 2009) estimated the amount required to achieve 26% emission reduction target to be IDR 83 trillion (USD 8.3 billion) and to achieve 41% emission reduction the requirement is IDR 168 trillion (USD 16.8 billion).
- According to the Fiscal Policy Office (FPO) of the Ministry of Finance, the financing needs for mitigation are in fact much higher than those outlined in the SNC. This can be illustrated by the MoF's mitigation budget in 2010 that was set at IDR 10.2 trillion (USD 1.074 billion), almost 13 times of the average annual cost of USD 0.83 billion as estimated by SNC (CPEIR, UNDP 2012).
- A cost curve study jointly developed by DNPI and McKinsey (2009, quoted by the National Environment, Economic and Development Study of Climate Change) states that the abatement costs for six sectors (Power, Forestry and Peat, Agriculture, Cement and Building) sum up to EUR 12.84 billion or roughly around USD 19.26 billion until 2030. This estimate was based on an average abatement cost of EUR 6 per tCO2e.
- For the forest sector, the REDD+ Task Force has developed a study on REDD+ financing needs in Indonesia through its Funding Instrument Working Group. According to the findings, REDD+ measures will require a total USD 10 billion until 2020. The funds are expected to come from public as well as private sources that will be coordinated under the Trust Fund for REDD+ in Indonesia (FREDDI) (Sari 2012).

These assessments give a first impression of the overall scope of financing needed to achieve the climate change mitigation commitments made by the government – although uncertainties still remain. In addition, they help to understand the shortages in available climate funding. To this end, the first Mitigation Fiscal Framework Study, as part of the CPEIR, offers some helpful insights. The study estimates the mitigation costs for RAN-GRK actions to be IDR 670 trillion (USD 70.5 billion) until 2020. It was estimated using RAN-GRK target of 0.767 GtCO2e multiplied by the weighted average cost of IDR 91,000 (USD 9.5)/ tCO2e. However, existing financial resources are only IDR 15.9 trillion (USD 1.67 billion), provided by the central government budget, off-budget government financing, and local government budget in 2012. As a result, the current financing can only provide 23% of the total mitigation financing that is required (UNDP 2012).

Exhibit 3: Synthesis Table of Mitigation Financing Needs in Indonesia *(Various sources)*

No.	Sources	Mitigation Needs (in USD)	Annual Mitigation Needs (in USD)
1	Mid-Term Development Plan, 2010	3.7 bn (2010-2014)	925 million
2	Second National Communication, 2009	8.3 bn (26%); 16.8 bn (41%)	0.83 bn –1.68 bn
3	NEEDS/ DNPI – McKinsey Cost Curve, 2009	385.2 (2010-2030)	19.26 bn
4	BAPPENAS, 2011	28.07 (RAN-GRK 2010-	2.8 bn

		2020)	
5	Fiscal Policy Office (Wahyudi, 2012)	75-90 bn (2010-2020)	7.5-9 bn
6	Own illustration based on Montes, 2012 and Wahyudi, 2012	250-550 bn in 10 years	25-55bn
7	CPEIR, 2012	70.5 bn (RAN-GRK until 2020)	7.05 bn

A third challenge - apart from the lack of clarity over climate financing needs and the potential gaps in funding - is the absence of information on adaptation financing. There are no assessments carried out to define the scope ofadaptation funding needs at the country level. Some argue that the government seems to prioritize mitigation over adaptation (Prasetyantoko 2011). A reason for this could be the absence of information on priority adaptation schemes and targets for Indonesia. For selected areas some estimates are available: the financial needs for agriculture and coastal zones, for example, would be about USD 5 billion on average per year by 2020. This amount is estimated based on the cost of seawall construction and development of climate resilient crops. Meanwhile, the annual benefit of avoided damage is likely to exceed the annual cost by 2050 (ADB 2009). However a country level study is needed to give more accurate description on investment and financing needs in adaptation.

Indonesia is currently preparing the National Adaptation Plan of Action (RAN-API - to be completed by end of 2013) to identify priority adaptation measures and to initiate their implementation. The RAN-API registers adaptation measures being in the pipeline of ministries/agencies such as the Ministry of Marine and Fisheries, the Ministry of Health, the Ministry of Agriculture, the Ministry of Public Works and others. Applying a comprehensive adaptation costing methodology based on investment and financing needs is expected to provide comprehensive indications of adaptation expenditure in the country.

3.2.2 Indonesia's Public Finance and Budgeting Cycle

The domestic budget process in Indonesia is initialized by the President's vision, which is then translated into national and regional long-term, mid-term and short-term plans. These plans, that are evaluated and renewed every five years, serve as guidance for budget allocations at the national, regional and local government level. The current plan contains 11 national development priorities, three of which are related to climate change: food security; energy and environment; and disaster management (including climate change related).

The administration of foreign assistance starts with a letter of agreement between the donor agency and the government. The Ministry of Finance registers the project and sets up an account to track the flow of the financial means. The relevant ministries prepare a work plan to be approved by the Ministry of Finance and BAPPENAS to ensure compatibility with national plans. Once these procedures are completed, the project moves towards implementation followed by monitoring, reporting, and evaluation and auditing. In its current stage, the MoF accounting system cannot yet track funding for climate change projects. This is because there are no criteria to separate mitigation and adaptation activities from other projects. BAPPENAS and GIZ have developed an aid information management system (AIMS) to track development assistance. However it does not differentiate climate change from other development projects.

Since the scale of climate finance has grown significantly in recent years, there is a need to provide appropriate mechanisms and modalities to access and deliver financing. Available financing sources can be accessed from public sectors, development banks, carbon market

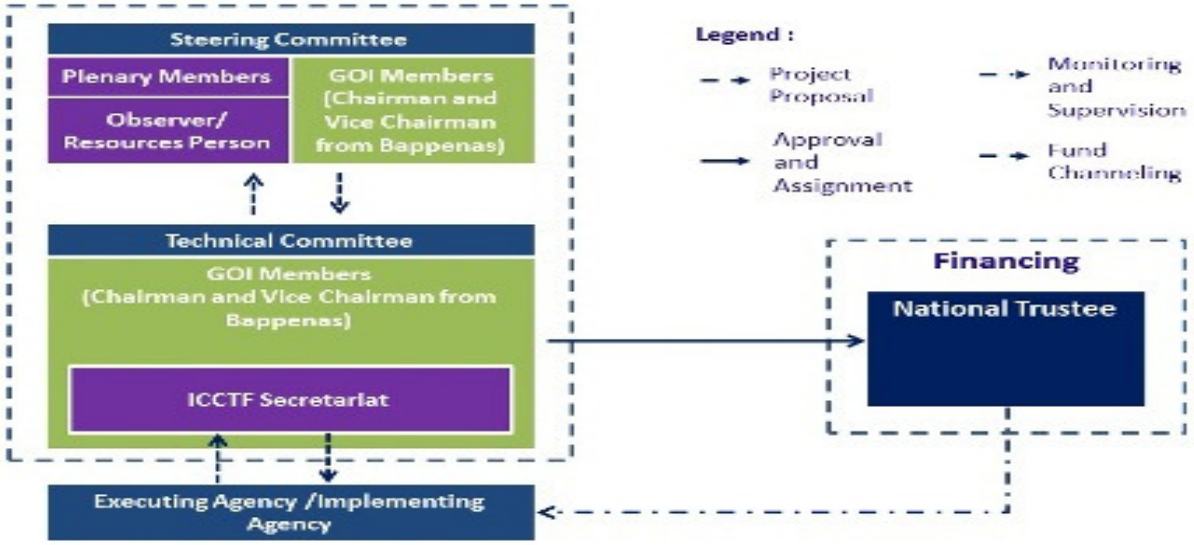
and private capital. There is a wide range of possible delivery mechanisms that can be considered in channeling public funds to recipients, including through the annual government budget, direct access (grants, loans and investments), export credits, debt swaps and many others. Mechanisms for channeling private sources include direct investment, commercial bank loans, asset financing, forward contracts, carbon credit, and payment for environmental services (DNPI 2009).

3.2.3 Climate Finance Institutions and Instruments in Indonesia

As part of the developing climate finance architecture, national climate funds have gained some prominence. These funds are a type of mechanism that support countries in accessing and blending climate finance from multiple sources to fund climate change actions at national and sub-national levels. The Indonesia Climate Change Trust Fund (ICCTF) was launched to mobilize and pool multilateral and bilateral grants for financing national climate change policies and programmes. The ICCTF was initiated by the government to coordinate climate change activities in the country, increase accountability, and avoid lengthy disbursement procedures. The ICCTF has also the role of aligning donor assistance to national development priorities, improving access to financing, and facilitating private sector involvement in climate change.

The ICCTF is governed by a Steering Committee comprising members from various government ministries, and advised by a Technical Committee of staff from different ministries as well. Day-to-day coordination and Secretariat functions fall under the remit of BAPPENAS (ICCTF 2013a). The ICCCTF includes expenditure funds as well as revolving investment funds. The fund currently prioritizes three financing windows: land-based mitigation; energy; and adaptation and resilience.

Exhibit 4: ICCTF structure and operations (Source: ICCTF 2013a)

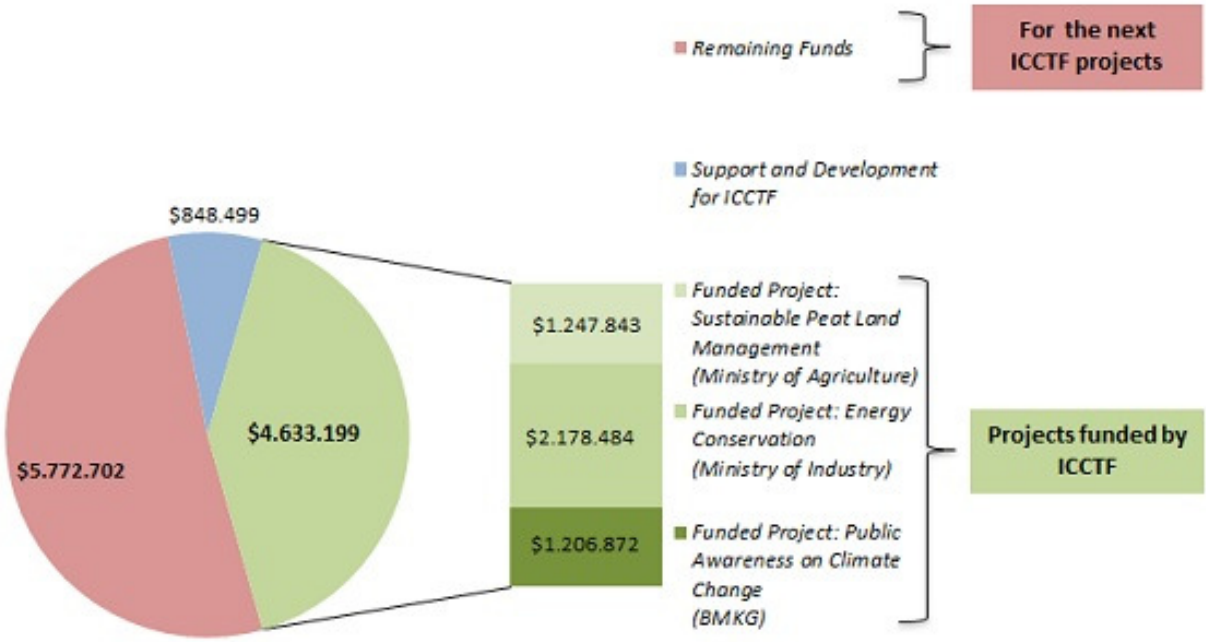


The fund has a 3-phase design: phase 1 and 2 operate as an 'Innovation Fund', providing only grants - in phase 1 only to government (ministry) led projects, and subsequently opening up to regional and local governments, public-private partnerships, NGOs and universities in phase 2. Phase 3 is designed as a 'Tranformation Fund' which can generate revenues through revolving investments, opening up to private finance and carbon markets. The phased design, with restrictions on type and recipients of funding in initial phases, has helped develop capacities and technical experience of both the ICCTF and recipient ministries. The ICCTF has not yet moved into Phase 3 as it is waiting for the government to

draft policies and regulations for cooperating with private funding sources (Frankfurt School/UNEP 2012).

The ICCTF has funded three pilot projects in 2010, one in each financing window: Sustainable Peat Land Management (USD 1.2 million, led by Ministry of Agriculture); Energy Conservation (USD 2.2 million, led by Ministry of Industry); and Public Awareness of Climate Change (USD 1.2 million, led by the Agency for Meteorology, Climatology and Geophysics) (ICCTF 2013a). In July 2012, the Steering Committee granted approval of three new projects to be implemented between 2012 and 2014: Sustainable Degraded Peatland Management (led by Ministry of Agriculture); Community Forest Management (led by Ministry of Forests); and Health Vulnerability Assessment (led by Ministry of Health). The ICCTF currently has USD 5.7 million in remaining funds for disbursement to these and other approved projects (ICCTF 2013b).

Exhibit 5: ICCTF funded pilot projects in 2010

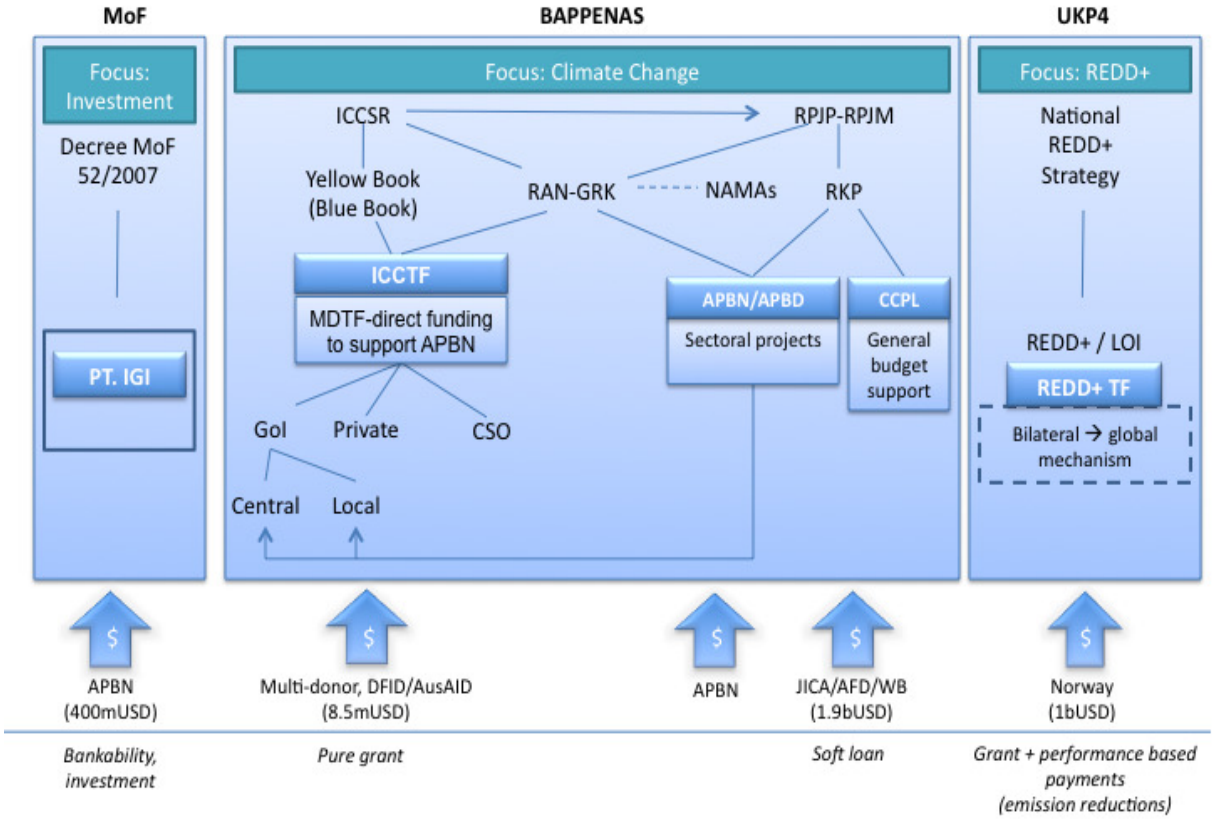


The monitoring and evaluation system used by the ICCTF focuses on six aspects: efficiency, effectiveness, impact, transparency, relevance and sustainability. The monitoring and evaluation process includes a pre-project assessment, monitoring and spot-checking, regular evaluations (mid-term and final); quarterly financing reporting submitted by projects, documenting and dissemination of lessons learned, and independent international auditing. The Steering and Technical Committees will regularly receive the results of monitoring and evaluation. However, capacity for accurately monitoring and reporting GHG emissions reductions from mitigation activity is limited, in part because Indonesia still lacks a business as usual baseline for emissions (Frankfurt School/UNEP 2012).

In addition, the Government of Indonesia initiated the **Indonesia Green Investment Fund (IGIF)** under the Government Investment Unit of MOF. IGIF is aimed at leveraging private and market-based financial resources for low-emission development projects and programmes. However the operationalization of IGIF is still pending.

Other architecture related to climate finance delivery mechanisms, besides the national funds, can be described in a rather complex picture as below:

Exhibit 6: Climate finance delivery mechanisms



The intention is to draw on existing financing instruments as much as possible, however there is still the possibility that new instruments more suitable to the affairs of various government agency may be proposed. Activities under the authority of central government (ministries/agencies) will be financed through sectoral ministries/agencies' funds, the Deconcentration Fund, and the Assistance Task Fund. The financing of activities under local government authorities can use: (1) the Specific Allocation Fund for Emissions Reduction – for financing local affairs' activities according to the priorities and criteria that are set by the central government; (2) the Performance-Based Grant, where assessment is based on the implementation of locally-proposed GHG emission reduction initiatives (RAD GRK) and accomplishment of particular targets; and (3) Local Grants for financing local affairs' activities proposed by local governments (MoF, 2011).

Regarding adaptation finance, besides the adaptation window of the ICCTF, no other systemized funding mechanism is currently in operation in Indonesia. Most of the international support is delivered via bilateral or multilateral projects. The question is how to combine public and private finances for enabling different kinds of adaptation measures typically needed in Indonesia in sectors including water, coastal management, health, and agriculture Many adaptation activities such as flood prevention infrastructure, health programmes, and national disaster plans do not attract private financing from equity investors. For equity, the project must have a fixed asset component and generate financial returns that can be captured through ownership, either a revenue stream or an increasing ownership value. Most adaptation measures yield economic benefits, but do not generate tangible financial returns. Projects in the agriculture or water sectors might be suitable targets for private investment as these sectors generate returns in crop yields or water fees.

3.2.4 Status of Climate Finance Flows

Based on data from Climate Funds Update (2013), Indonesia has received the second highest level of climate finance commitments (excluding CDM financing) after India. Until late 2011, it was estimated that international public support for climate action to Indonesia had reached USD 4.4 billion. Donors' activities on climate finance in Indonesia show a variety of modalities, institutions, and funding channels (Brown and Peskett 2011, MFF/CPEIR 2012).

In terms of volume, the vast majority of climate finance pledges have been in the form of loans (73%), and just 8% as grants, yet in terms of projects the trend is reversed: 82% of climate change projects have received grant funding while just 12% of projects were loan based. Majority of finance is coming from 7 large loan projects, 6 of which are from Japan's Fast Start Finance, while the remaining concessional loan comes from the Clean Technology Fund. Most financing has gone into funding general mitigation projects (85%) or towards REDD (5%), with just 2% going towards adaptation action, and 8% towards multiple foci activities. In terms of project count, the proportions are more even – 43% of projects are mitigation focused, 34% REDD, 16% on adaptation, and 7% addressing multiple foci. Again, this means that mitigation projects, though not disproportionate in number, receive the largest share of funding.

Indonesia receives support under the "Fast-Track Finance" for 19 mitigation, adaptation and REDD+ programs. These programs include the Forest Investment Programme (FIP), the USD 30 million of Norway-Indonesia LoI, some programs under Germany's International Climate Initiative, and programs financed by the Netherlands through the World Bank such as ASTAE, already counted in the USD 4.4 billion. Donor countries that have committed to providing the funds include the Netherlands, Denmark, Norway, Finland, Germany, the United Kingdom, and the United States of America. Most programs are channeled bilaterally (11) while the remaining 8 projects are channeled multilaterally. Most donors provide grants while the Clean Technology Fund provides loans and the Forest Investment Programme allocates both grants (53.5%) and concessional loans (46.5%) of the total investment of USD 70 million. The total known commitment under the Fast Track Finance for Indonesia is around USD 616.5 million. Most of this amount has been counted in the total international finance of USD 4.4 billion calculated by Brown and Peskett (2011).

In addition to the commitment described in the two tables in the Annex to this report, other donor agencies have also pledged climate finance support to Indonesia. These include the US Millennium Challenge Corporation, which allocated USD 332.5 million (from total USD 600 million) to green prosperity, and the French Development Bank's (AFD) pledge to Indonesia's Green Investment Fund (the amount is still unclear). In addition, UK Climate Change Unit has committed GBP 50 million (or around USD 80 million) from 2011 to 2015 for climate change related activities in the form of grants and technical assistance. If the pledges materialize, Indonesia can expect total international finance of over USD 5.3 billion in the near future.

While this amount seemingly represents a relatively high value, certain conclusion could be drawn from an analysis of this situation. First, donor investment seems to be centered on REDD+ / land use related mitigation actions, which seems appropriate considering the high share of the emissions stemming from these sectors in Indonesia. GHG emissions scenarios, however, point to exponentially rising emissions from the energy sector in future and this is something donors need to consider when planning future financial support. Furthermore, the systematic tracking, monitoring, and evaluation of international contributions to address climate change has not yet reached an adequate level, a fact which was confirmed during meetings and interviews with stakeholders. BAPPENAS and the Ministry of Finance would greatly benefit from such an improved system.

The CPEIR study estimated the use of state budget to finance climate change mitigation actions. The study tracked the Ministry of Finance's budget codes up to program and activity

level to identify expenditures on several mitigation actions from 2008 to 2011. The study came up with 14 budget lines that can be classified as mitigation actions. The share of expenditure of each mitigation action is summarized in the table below.

Exhibit 3: Domestic Expenditure on Mitigation Actions by Ministries

No.	Mitigation Action	Percentage of Expenditure on Mitigation Actions in 2011
1	Improvement of waste management	25
2	Low-emission transport	1
3	Renewable energy	3
4	Clean fuel and technology	5
5	Energy efficiency	1
6	REDD	<1
7	Ecosystem management and forest protection	9
8	Institutional development for SFM	3
9	Sustainable wood and non-wood commodities production	1
10	Increasing sink capacity through forest rehabilitation and tree planting	35
11	Improved forest security from fire and illegal logging	1
12	Water level elevation stabilization and better water circulation	10
13	Low-emission agricultural practices	5
14	Optimization of land and water resources	<1

The total expenditure on climate change mitigation amounted to around IDR 5.5 trillion (around USD 579 million). The study concluded that budget allocations had increased significantly both in nominal and real terms, and there was an overall public expenditures increase of about 5%. The study further concluded that these trends are testament to the national planning system's ability to foster a substantial increase in public spending on climate change mitigation actions (CPIER 2012).

Since the CPEIR report only focused on mitigation financing, there is no available assessment of domestic expenditure on climate change adaptation actions in Indonesia. A similar approach of tracking budget codes is much more challenging in the area of adaptation as there is no agreed definition on what constitutes an adaptation action exactly to enable its classification and tracking within the existing national budget.

3.2.5 Private Finance

Private funding for climate change in Indonesia mostly centres on investments in the energy sector, especially in renewable energy, cleaner energy, and energy efficiency. An independent study by the Pew Research Centre revealed that global private funding in clean and renewable energy in 2011 grew to USD 263 billion (Pew 2012). According to the report, domestic and foreign private companies in Indonesia recorded more than five times the growth in clean energy investment in 2011 compared to previous years by spending more than US$ 1 billion.

A first attempt was made by the Indonesian Investment Coordinating Board (2012) to track the overall investment data in the past three years (2010-2012) on low carbon technology in Indonesia (see Table 3 in Annex 5). Meanwhile for foreign direct investment, certain sectors benefited as can be seen in Table 4 in Annex 5.

Since accurate data on investment in climate change are lacking, the two tables in Annex 5 may give an illustration of a first approximation of private contribution in several investment sectors. In general, both domestic and foreign direct investments show increased values from 2010 to 2011. Based on the types of projects in which private companies are likely to invest in low-carbon technology, several sectors become apparent such as agriculture, transport and others (see Table 4 Annex 5). These sectors indicate the possibility of a favourable investment climate. For domestic direct investment, these sectors combine a total of 31.4% of investments made in 2011. Meanwhile, in 2011 foreign direct investment, similar sectors account for 28.6%.

Based on the analysis of the investment data of the Indonesian Investment Board in 2012, certain conclusions can be drawn. The private sector investments already make up considerable amounts in mitigation related activities, presumably without being aware that those include activities that can reduce GHG emissions. A favourable market situation and related policies and programs setup by the government could put in place the right triggers for these investments (for example One Door Integrated Services). A more detailed analysis of what constitutes a favourable investment climate has not been developed for Indonesia yet, but might give valuable hints for a further promotion of private sector investment in mitigation activities and low carbon growth. More gaps currently exist related to commonly agreed accounting and monitoring methods for private sector investments as well as policies to do so. This would be needed to further integrate those investments into the framework of the RAN-GRK and to provide recognition to the private sector.

3.2.6 Carbon Markets, Clean Development Mechanism (CDM), and REDD+

Despite the huge potential of emissions reduction, Indonesia does not contribute a lot to the compliance (UNFCCC) and the voluntary carbon markets. It is estimated that the compliance carbon market attracts current investment in the size of USD 8 billion to 150 billion per year, with a mid-range of USD 30 to 50 billion per year. The UNFCCC estimated the annual investment in CDM projects to be in the range of USD 40-90 billion.

Out of the overall global investment of USD 215.4 billion (as of June 2012) in CDM projects, Indonesia's share is estimated to be USD 3.661 billion (or only 1.7%), far behind China (60%) and India (17%) (UNFCCC,2012). Indonesia has developed around 240 CDM projects but only 80 of these are registered with the CDM Executive Board as of October 2012, or around 2.6% of the 3,093 CDM projects registered globally. Until October 2012, there were 23 projects that had received CERs, with a total amount of about 5.3 million ton CERs (Hindarto, 2012). Most CDM projects in Indonesia are methane avoidance from palm oil methane effluent (POME) and landfill. In addition, biomass energy and geothermal energy are also among the most common CDM projects in the country. This indicates that

CDM appears to be attractive to capital-intensive industry but is still not favorable for small and medium companies except small hydropower.

Similar to CDM, the private sector can play different roles in various REDD+ stages: as project developers or investors, as advisors, brokers or end-buyers. Currently, there are more than 60 REDD+ demonstration activities spread all over Indonesia. The current plan is to finance the readiness phase using voluntary fund and the results-based phase using global facility (unitary fund or clearinghouse). Private companies are already involved in investing and developing REDD+ demonstration activities. An example is Gazprom, a multinational company that financed the Rimbaraya Biodiversity Reserve project.

Generally one issue that arises when considering climate finance incurring through CDM and related carbon market schemes is that the resulting emission reductions under these schemes cannot be accounted for Indonesia's commitment of -26 or -41% reduction plan. This is to avoid double accounting of emission reduction achievements. But the main lessons from implementing CDM and voluntary carbon market projects can prove useful for the role of the private sector in the national mitigation framework: a price signal is needed for carbon, government's support mechanisms and policies need to be adapted, and capacities of actors interested in developing and implementing actions need to be developed. There is still a big gap between actions led by the government and those by the private sector.

3.2.7 Role of Banks

National Banks

Banks are intermediaries that provide lending services and which have great potential in financing climate change mitigation activities. Banks have a key role in climate finance as they possess the capacity to leverage international public funding and the expertise to handle sophisticated financing schemes. In addition, they also have the capacity to channel and coordinate international funds.

Indonesia's central bank, Bank Indonesia, is currently drafting a regulation on green banking. This regulation will require lenders to assess potential borrowers not only based on financial but also social and environmental sustainability standards. With this regulation, Bank Indonesia will provide incentives to private sector to invest and engage in "green sectors" and alsogive a good signal to other banks to participate and draw government's support. The Bank is still assessing various interventions including tax, soft loans and guarantee scheme (Bank Indonesia, 2012).

Most recently, some national banks have started pouring money into low-carbon projects. These include: geothermal power plants financing by BNI, (around US$ 862 million), Energy Efficiency Program (EEP) by the Indonesian Bank of Export and Import (Exim) and the ADB worth USD 200 million. Another example is Bank Mandiri that is channelling finances worth USD 100 million to CDM projects. The funds are provided by the French Development Bank (AFD) (Sitorus, 2012).
According to Bank Indonesia, as quoted in a PwC report 2012, in August 2011, there were 120 national commercial banks that hold assets worth IDR 3252.7 trillion (US$ 390.3 billion). About 15 of them lend around 70% of the country's total credit. Banks remain cautious and conservative lenders, the fact that is probably influenced by the 1997-1998 financial crises. Two rating agencies have upgraded Indonesia's sovereign debt to investment grade. In general, this development coupled with national policies will increase financing opportunities and attract new investors.The table below describes the outstanding loans channelled by commercial and rural banks broken down based on economic sector. This table gives an insight of bank's favourable sectors.

Exhibit 4: Outstanding Loans and Foreign Currency of Commercial and Rural Banks by Economic Sector (in Billion IDR)

No.	Economic Sector	Dec 2010	Dec 2011	Sep 2012
	Loans by Industrial Origin	1,232,688	1,538,397	1,804,098
1	Agriculture, Livestock, Forestry and Fisheries	92,525	116,210	139,505
2	Mining and Quarrying	60,495	85,532	91,443
3	Manufacturing Industry	274,330	343,002	418,857
4	Electricity, Gas and Water Supply	33,625	45,538	68,133
5	Construction	63,426	75,510	99,069
6	Trade, Hotel and Restaurant	346,226	414,509	507,613
7	Transport and Communication	75,448	95,486	112,932
8	Financial, Ownership and Business Services	136,582	180,418	215,626
9	Services	149,992	182,191	150,922
	Loans by Non-Industrial Origins	550,913	685,288	780,180
10	Housing	136,460	176,538	199,283
11	Flat and Apartment	3,755	5,569	8,965
12	Shop house	8,319	15,197	18,631
13	Vehicles	79,999	105,721	102,067
14	Others	322,378	382,263	451,234
	TOTAL	1,783,601	2,223,685	2,584,278
	Loans Approved	643,705	1,141,010	1,038,544
	Working Capital Loans Approved	35%	39%	38%
	Investment Loans Approved	21%	32%	33%
	Consumer Loans Approved	43%	29%	29%

Statistics above are promising as investment loans percentage shows a significant increase from 2010 to 2011 and 2012. Investment loans only accounted 21% of the total loans approved in 2010, but it increased to 33% by September 2012. This indicates a better climate for investment and financing risk for investment has been more favourable for banks.

Regional Development Banks:

Regional development banks (RDB) play a significant role in regional economic development by providing financial services that are not economically attractive for commercial banks. RDBs channel the large part of regional government budget (APBD) coming from state government transfer.

There are at least 27 regional development banks operating in different provinces in Indonesia that provide finance mostly for local infrastructure projects, small and medium enterprises, and agricultural activities. RDBs are also known for their focus on microfinance. They have a potential role in climate finance due to their easy accessibility to local people in the regions.

In terms of adaptation, RDBs have the potential to help the more vulnerable population prone to climate change impacts, including farmers and fisher folks, in managing and accumulating assets and becoming more resilient. RDBs are believed to have a social role and not merely directed towards profit making. The ideal function of RDBs is to correct market imperfections by providing services to the poor or less credit worthy borrowers, and making loans that require long maturity to be profitable such as infrastructure projects.

The capital and assets of Indonesia's RDBs tend to increase from year to year. Microfinance loans can be used to increase production, create jobs, and hence increase incomes. However, the capacity of these banks in channelling local government budget through effective mechanisms needs to be built.

The Bank Rakyat Indonesia (Indonesian People Bank, BRI) provides lessons learned for the future development of RDBs and can be also useful for their potential role in climate finance management. BRI is a state-owned bank with the highest loan disbursement portfolio in the country. Its local presence up to village level makes its microfinance division the world's largest and most profitable microfinance network. BRI provides commercial financial services to poor and lower-middle income households and manages to gain profit from the services. BRI benefited from favourable government policies, for instance a policy that gives freedom to national banks to set their own interests (Robinson, 2005).

4. Planning Capacity

Planning capacity is required at multiple levels in a country to attract and manage climate funding from varied sources. More specifically, climate finance readiness requires capacities for sound planning in three areas:

- Assessing climate change policy (mitigation and adaptation) needs (national, sectoral, sub-national) and identifying priority policy actions, along with their resourcing requirements. This includes the ability to integrate cross sectoral and multi-stakeholds views and inputs into planning.
- Designing a policy mix, based on need assessment results, that reflects the available financial management capacities at national and global scale, creates additional instruments for managing climate funding in the country, and enbables the government to play a coordinating role.
- Ensuring the supply of necessary expertise and skills at local and sectoral levels to enable the delivery of national climate change strategies and funds.

4.1 Assessing Needs and Priorities& Identifying the Policy Mix

With regards to climate change policy and financing preparation, Indonesia has demonstrated some good progress in establishing the necessary infrastructure for GHG emissions reduction planning. The national emissions reduction action plan (RAN-GRK) identifies mitigation actions for different sectors and has achieved an initial assessment of financing needs. There have also been other attempts at estimating financing needs and priorities for climate action in Indonesia. For example, the fiscal policy office supported by the World Bank prepared a Low Carbon Technology Options Study in 2009 to inform the preparation t of low-carbon growth strategies. The study analysed carbon emission reduction potential, the incremental costs and benefits of low-carbon growth strategies, and the policy support required for enabling low-carbon actions and targets.

In 2009 the DNPI launched an abatement cost curve for five sectors including forestry, peat, agriculture, power, transport, industry (cement and oil and gas) and buildings. This has its limitations though, as the least cost technology options are not always the most practical ones with a high-likelihood of being implemented. However, it has been a first available tool for the government to set priority actions.

The Government of Indonesia also submitted the second Technology Assessment (TNA) report to the UNFCCC in 2010. This contains estimates of financing requirements for recommended technological options for emissions reduction. The study was an update of the first technology needs assessment for Indonesia. Some of the assumptions of this study, e.g. capacity of geothermal power plants (27 GW) and carbon capture storage investment seem to be based on very superficial estimates that are hard to prove.

In addition to these, a Green Paper by the Ministry of Finance in 2011 identifies economic and fiscal policy strategies for the delivery of climate change mitigation in a cost-effective manner. It contains guidance on planning long term policy reforms for mitigation, covering issues of fossil fuel subsidies and carbon pricing policy.

Despite these attempts however, challenges remain in essential areas related to climate finance planning and readiness building, such as identifying climate change adaptation priorities and resourcing needs, engaging stakeholders from the private sector and sub-national government in policy design and delivery, preparing financial baselines, and so on. Proper systems for tracking and monitoring climate finances still need to be established in Indonesia. While the CPEIR tracked budget codes from 2008 and came up with insights into

expenditure on climate change mitigation activity, a similar exercise to track adaptation expenditures is more challenging to apply.

Assessing financial needs and priorities is hampered by other capacity challenges as well, even in the case of climate change mitigation. For example, the national action plan (RAN GRK) lacks a cost-effectiveness analysis to facilitate prioritization of actions. Although the CPEIR study (2012) attempted to provide a cost-benefit assessment for select mitigation technology in energy, transport and land-based sectors, there is still a gap in terms of completing the analysis for all RAN-GRK actions. The RAN GRK is also pending a business-as-usual baseline.

These aspects illustrate some of the weak areas remaining in mitigation and adaptation planning and improving readiness for receiving climate finance. Improving capacities to estimate financial requirements and tracking expenditures for climate change planning will enhance Indonesia's ability to attract increased funding from donors and negotiate more effectively the terms and conditions.

4.2 Ensuring Policy Delivery

Ensuring an appropriate level of climate finance expertise and skills across relevant sectors and sub-national government is key to successful policy delivery, especially given the leading role of provincial and local governments in developing and implementing provincial GHG reduction proposals (RAD-GRK). Under the decentralization law in Indonesia, local governments decide independently on political, fiscal and administration aspects. This has implications for the planning and delivery of climate finance sources and strategies.

Fiscal decentralization includes delegation of expenditures and revenue to sub-national governance tiers, notably the right to regulate local taxes and retributions (limited to those included in the positive list regulated by Government Regulation). However, local actors need to build institutional capacities to improve the uptake and implementation of climate finance policies. This requires that sub-national government and concerned stakeholders possess the competence to assess and articulate funding needs in preparing and delivering locally-proposed GHG emission reduction and climate change adaptation initiatives, in addition to possessing skills in climate finance management, tracking, and reporting. Capacities to use performance-based local grants are especially important in demonstrating climate finance readiness at local level of action.

The ICCTF provides some experience in climate finance policy implementation and coordination across some government ministries and tiers, and learning from these cases can inform further planning. Generally however challenges remain in essential areas of climate finance delivery such as engaging stakeholders from sub-national government and the private sector, and tracking the flow and impact of climate finance expenditures and strategies.

5. Accessing Finance

Evolving architecture and availability of global climate finance requires a varying range of expertise from national and sub-national recipients. International commitment for funding climate change activity in Indonesia has been relatively high, as indicated in previous chapters, but centered predominantly on REDD+ and land use related mitigation objectives. Despite the level of funds already pledged by donors, there is still a lot more required as various climate finance assessments conclude, and the government is challenged to tap additional sources and opportunities to meet these needs.

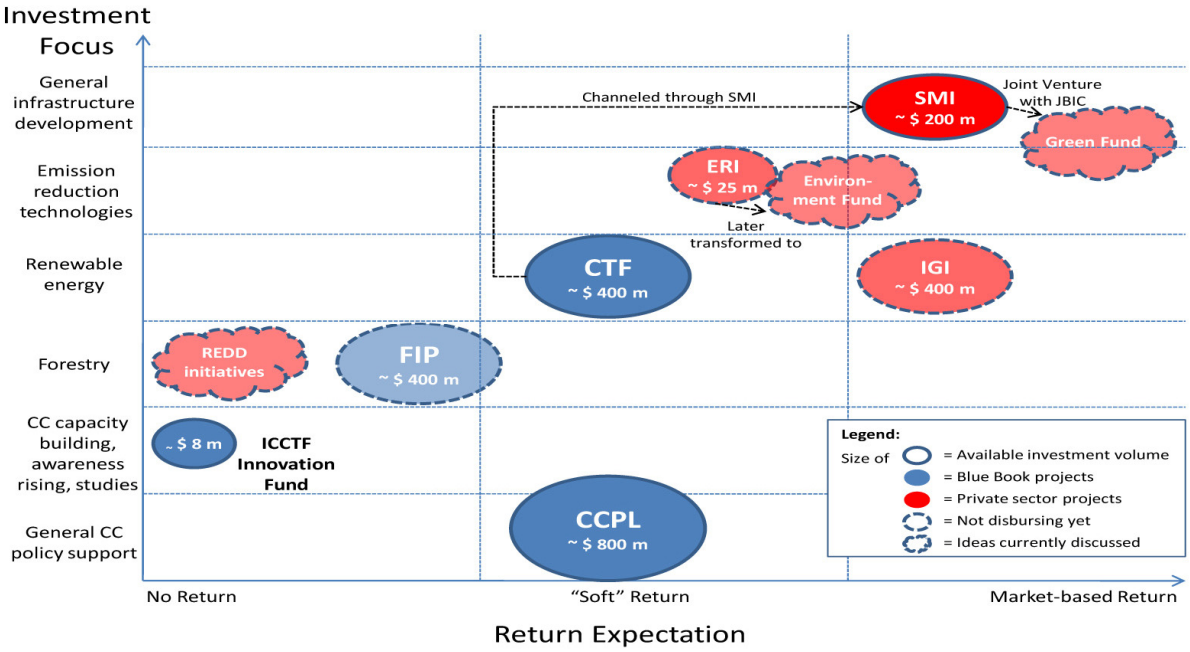
In recent years, the issue of direct access to funding, e.g. the Adaptation Fund, has been gaining prominence in global policy dialogue and drawing attention to the availability of fiduciary capacities and accreditation credentials in developing countries. Compliance with environmental and social safeguards and competencies for serving as an implementing entity are becoming increasingly important for intended recipient countries. Accessing finance also requires country government to demonstrate capacities in efficient utilization of money, including the ability to blend and combine different resources in the national policy mix and using funds to catalyze further public and private investment.

Most international public climate finance has been provided bilaterally rather than multilaterally. It can be expected that this will remain an important issue to consider in the near future. However, efforts to develop global funds has started and is an on-going process gaining more momentum and importance in the longer run (3 to 5 years from now) and will catalyse international climate finance substantially. The Green Climate Fund (GCF) will offer the possibility of a more coherent and coordinated global funding approach in the long-term future. This is expected to be fully operational just in several years. In the meantime countries need to strengthen their national climate finance institutions to be able to access emerging funds. The lack of accredited NIEs reflects that these capacities are still low.

Also important is the capacity of local actors including provincial and district governments, private SMEs, NGOs and communities to access and absorb funds from national climate funds and sources. This also depends on the efficacy of climate finance disbursement and benefit distribution mechanisms devised by national planners to enable stakeholder participation while balancing incentives with legitimacy and priority. Policies and legal frameworks at sub-national level need to be improved to facilitate funds accessibility and absorption.

Exhibit 8 gives a general overview of just how diverse the landscape of climate change funding in Indonesia is.

Exhibit 8: Mapping of Climate Finance Activities Channelled via Funds in Indonesia *(Source: own elaboration)*



5.1 Directly Accessing Financial Resources: Global to National

With support from GIZ, the ICCTF is in the final stages of the application process to becoming Indonesia's National Implementing Entity (NIE) to the Adaptation Fund. The decision by the Adaptation Fund Board, expected in 2013, can have major bearing on future development of the ICCTF – not only in the field of adaptation but also for upscale mitigation activities.

UNDP currently acts as an interim trustee of the ICCTF with plans to hand over trustee functions to Bank Mandiri in 2013 or 2014. Although the process of ICCTF's accreditation to the Adaptation Fund is on-going, the ICCTF staff can benefit from further capacity building to in delivering NIE responsibilities, managing trustee services, improving fiduciary standards, and working with the private sector to establish public-private partnership modalities.

With the establishment of the Green Climate Fund (GCF) new tasks will most likely arise for the ICCTF, for instance ensuring direct access for Indonesia. Although it will take some time for the GCF to become fully operational, the preparatory capacity development should already start.

In addition to the national Trust Fund, further initiatives are needed to establish systems and capabilities for blending climate finances from various sources and streaming towards targeted activities. This again requires cooperation and coordination with multi-sectoral stakeholder groups.

5.2 Accessing National Sources of Financing

Indonesia needs to ensure sufficient in-country capacity for formulating bankable climate change projects and programmes to attract funding. Because climate change goals and targets are spread across various ministries and departments, the expertise required for preparing and delivering projects needs to be widely established as well.

Developing a pipeline of bankabale projects with local and national stakeholders can work well to improve climate finance absorption, and therefore readiness prospects. In addition to technical assistance and training, this objective may be supported by more scoping and research into mitigation and adaptation investment opportunities at sub-national levels and appropriate financing instruments to facilitate these.

A challenge to funds access at downstream levels is the absence of efficient channelling mechanisms between national and local institutions. One of the fastest options that can be supported is the promotion of a financial transfer mechanism via local grants (e.g. to implement RAD-GRK). The support of such pilot activities can be a first step towards strengthening the capacities of local governments in close cooperation with the MoF.

More time is required to amend the regulation of the intergovernmental fiscal transfer via specific purpose grants (DAK) to reflect climate change aspects. It is, however, worth mentioning that among the fourteen current sectors eligible for DAK funds there are four infrastructure sectors—irrigation, roads, sanitation, and water supply that may serve as a helpful starting point for considering adaptation needs.

6. Good Financial Governance

Good Financial Governance (GFG) necessitates the availability of satisfactory monitoring and evaluation systems to assess the performance of investments and to assure the best use of funds. Sound information on climate finance received and disbursed is a key criterion for decision-makers in developing countries. As per global agreements, developing countries are expected to start submitting biennial update reports (BUR) in 2014 on the results of climate change actions and funding availed. These reports will include description of domestive MRV processes and information on support needed and received, along with updates on GHG inventory and mitigation actions and results.

The objective of such efforts is to have better financial and impact monitoring data available to inform decision making on financial spending and management and climate change planning. Transparent monitoring also helps to build trust among recipient and donor countries. This can ultimately lead to increased financial support in the future (Tirpak et al. 2012).

In the case of Indonesia, the CPEIR stressed the need for improved MRV within the current climate finance system to avoid duplicated efforts. The systematic monitoring and evaluation of international contributions to climate change targets is not yet at the level where it should be which is why capacity development of public and private institutions to implement MRV functions is necessary.

Indonesia has embarked on various initiatives to overcome some of these shortcomings and to develop a more sophisticated MRV mechanism. The MoF has initiated the introduction of Performance-Based Budgeting and a Mitigation Budget Score to estimate the benefits from mitigation actions and to track climate resources. These efforts need further boosting and should also extend to adaptation related spending.

6.1. What is the Primary Challenge in Monitoring Climate Finance?

To being with, one of the challenges to tracking funds is the fact that there is no agreement on the kind of budgets to mark as climate finance, which makes it difficult to distinguish it from other sources of finance, including general development expenditure. And it is important to mark and track climate specific funds as this enables performance-based budgeting.

Although aid and climate finance are different, they share two similar characteristics that make new and additional climate finance difficult to monitor. First, the sources of public climate finance are the same sources as aid finance. Second, financing for climate change adaptation is hard to distinguish from aid, as has been the case when tracking domestic public expenditures on adaptation activity.

Generally, a climate finance marker should indicate whether a policy programme or project budget contributes to GHG emissions reduction or not. Secondly, a performance based system should also consider the marginal budget shares for quantified emission reductions in order to generate information on cost effectiveness.

Some attempts have been made on this front. The Organization for Economic Cooperation and Development (OECD) sets out some initial definitions (OECD, 2011), separating mitigation and adaptation with examples for each of them. The RIO-Marker has also introduced a continuum for climate change mitigation finance: `principal objective → significant objective → not targeting the objective'. Furthermore, the CPEIR study provides a first indicative overview of what can be classified as climate finance: It disaggregates climate expenditure in the energy, transport and forestry sector.

6.2 Capacities to Monitor Climate Finance at the National Level

Tirpak *et al*. (2012) assessed the monitoring performance and capacities of developing countries receiving climate finance. For Indonesia, it was noted that no formal climate finance markers or definitive guidance existed, and dedicated systems to track climate finance were missing. The classification and indicators to characterise financial data (e.g., sector and activity codes) were also inconsistent. The assessor did note, however, that efforts to integrate climate mitigation tags into the MoF's thematic tags was underway. The MoF is still in the process of accounting the total climate finance received by the governmentof Indonesia and analysing the channelling mechanisms used (Gyat*et al*. 2012).

Moreover, substantive information on private financing is also required. Tracking this stream of spending and investment is necessary for informing the development of public policies seeking to leverage private investment forlow carbon and climate resilient development.

Generally, monitoring climate change related grants in Indonesia is challenging, while loan-monitoring systems are better developed. This is due to the requirement for loans and repayment plans to be approved and administered through central agencies such as the MoF. The difficulty with monitoring grants arises from the way donors deliver these and the limitations of domestic policies governing grants receipt. Currently, there is no mechanism that directs donors and line ministries to report on grants and their results.

A consolidated national database system set up to monitor and report on climate change related loans and grants, even private investment, would be a useful step in overcoming this gap, this is something for the MoF and BAPPENAS to consider undertaking.

6.3 Developing MRV system for Climate Finance

Some of the immediate work that is needed in achieving a comprehensive MRV system for climate finance management in Indonesia involves:

- ✓ Categorizing climate change projects - determining official definitions that distinguish them from other development projects and setting up budget codes for climate finance.
- ✓ Strengthening a performance based budgeting system for mitigation as well as climate change adaptation focused expenditures by the government.
- ✓ Ensuring stronger coordination at the national and provincial levels to enable integrated approaches to MRV; strengthening the role of the ICCTF as an institutional arrangement in this domain.
- ✓ Establishing an accounting and monitoring system to track private investment in climate change mitigation and adaptation.areasand to ensure that these activities are embedded in Indonesia's functional internal audit institutions.
- ✓ Further elaborating the link between MRV of funds, the activities planned, and those to be implemented as part of RAN-GRK and RAD-GRK.
- ✓ Building capacities for the government to ensure an internal control system for climate change relevant activities as part of government regulation.

7. Private Sector Engagement

The private sector is thought to to be the most significant source of capital for climate related financing. The government's role is to create a favourable environment for attracting private investment towards national climate change programmes and targets. Understanding the factors constituting a favourable environment for climate change investments in Indonesia needs deeper study though. Corporate Social Responsibility (CSR) activities, for instance, could be used to demonstrate the role and advantages of corporate involvement in climate change related initiatives, and to explore further potential for climate financing. Other means, like tax incentives, low-cost debt financing, equity investments, and sharing of research and development costs can be used by the government to attract private investors and partners in this field.

In the case of Indonesia, the current structure of climate financing (via the ICCTF and beyond) is designed to include major support from the private sector. However, the planned private sector focused Transformation Fund of the ICCTF is not yet developed. As part of its cooperation with BAPPENAS, the GIZ plans to support the design phase of the Transformation Fund.

In other measures by the government to bring the private sector on board, a promising signal has come from the of the Bank Indonesia (the central bank) as it prepares a regulation on green banking that will require lenders to assess potential borrowers not only on the basis of financial standards, but also on social and environmental sustainability ones.

Generally, however, a comprehensive reflection on the role, relevance, and interest of private sector entities in in various areas of climate change mitigation and adaptation financing is still not available.

7.1. Current Issues in Private Sector Engagement

Private sector already makes up a considerable proportion of mitigation investment in Indonesia, although accurate and comprehensive data on such investment is not available. Private funding mostly centres on investment in renewable/clean energy and energy efficiency, commercially viable areas where investors see a return on investment. Adaptation requirements and actions do not attract equity investment in the same way as they don't offer similar returns.

Private sector activity is generally expanding in Indonesia, however barriers to investment still exist, some of which are specific to the climate change sector. In the energy sector, for instance, it is often not easy for low-carbon technologies to enter the market due to limited grid access and high entry costs coupled with a low rate of return. Current regulations hinder Independent Power Producers (IPPs) from making significant investment in renewable energy deployment. The Power Purchase Agreement involves a long negotiation process, which notably causes a rise in prices and even non-profitability.

The cost of generating energy from renewable sources is typically more expensive, given that Indonesia has spent massively on fossil fuel and electricity consumption subsidies, amounting to IDR 164.7 trillion (arond USD £18.3 billion), or 30% of the total state buget in 2011 (IISD 2012). Such subsidies have triggered an inefficient use of energy and leave little incentive for energy conservation. The government started reviewing energy-/electricity pricing and subsidy policies to reduce these economic distortions, and through the MoFsome initial steps to reform the pricing policy have been taken. This is, however, a highly politicized and challenging issue for the government and action is expected to be slow.

Foreign exchange risk is an additional deterrent to private sector's investment in climate change mitigation initiatives as since most projects entail long-term investment of up to 30 years. Because payments in most energy project contracts are denominated in US dollars and exchange rates are volatile, this increases the risk to investor.

The experience with CDM implementation also brought to light challenges and barriers specific to the mitigation market. Carbon is still viewed by many as a public good; hence it is difficult to integrate into the conventional investment analysis. In Indonesia, the banking sector is not very familiar with energy efficiency and renewable energy investments. Most national banks are not engaged in financing CDM projects. The key issue is the perception of risks: Certified Emissions Reductions (CERs) are still not viewed as 'real' outputs or benefits by credit analysts, thus making CERs also difficult to act as collateral and guarantees. The failure to recognize carbon as revenue stream makes the return on investment remain at unattractive levels (MOF 2008).

Other political and regulatory risks are typically prevalent in developing countries and provide additional deterrents to private sector's appetite for risk taking and investment in new markets. Such risks are associated with enforcement of contracts, protection of intellectual property rights, and legal uncertainties, and certain other conditions. While such barriers exist in Indonesia, the country does seem to be making progress in overcoming some of these obstacles. By introducing significant structural reforms, the government has created more enabling conditions for foreign investors and has created relatively greater transparency in financial management. Also, Indonesia has managed to overcome the impacts of the financial crisis in 1997 and has regained its former investment grade, as recognized by two credit rating agencies in late 2011.

Effective inter-ministerial coordination and cooperation is also an enabling factor in market development and private sector development. The government has taken positive steps to encourage renewable energy investments by issuing the new regulation of the Ministery of Energy and Mineral Resources (MEMR) No. 22/2012. The regulation has introduced Feed-inTariffs (FIT) for geothermal, waste and biomass power with rates between 10 and 18.5 cent US$/kWh depending on the region. As a next step, MEMR and MoF are preparing FIT for solar power. This has already gained increased interests from investors.

It is also important to understand the role of sub-national government in business development. The decentralized governance system introduced over the last 10 years maycreate inconsistencies in regulations enacted by the central government and those led by local governments. Under the decentralized system, local governments have the authority to create local taxes (limited to those included in the positive list measured by the Government Regulation) to finance their autonomous functions. Local regulation may not however always follow the available guidelines and this can cause confusion among potential investors, discouraging their interest as a result.

7.2 How to increase Private Sector Engagement?

To overcome some of thebarriers to private sectors involvement in climate change activity, Indonesia needs to consider reforms to domestic policy. Government needs to apply an energy pricing policy that encourages realistic carbon pricing instead of fossil fuel subsidizing, and even increase the general carbon tax on fossil-based industries should be among reforms introduced in Indonesia.As previously indicated and as recommended in the Green Paper of Ministry of Finance, 2009, taxes should be shifted to natural resources and energy use instead of goods. The balanced-budget rule could be applied, introducing of feed-in tariff (FIT) for low-carbon technologies. Some stakeholders appear to oppose the idea of applying a general carbon tax. Either higher awareness and better understanding of the issues should be brought about or alternatives to this proposed idea are needed. To leave it as it is should not be the option.

The country also needs to reform the legal aspect of investments by providing clear, robust and transparent regulation that will encourage private sector participation in financing climate change actions. Legal certainty is a basic requirement to boost investment.

To manage country specific and political risks for investment, the government could apply investment risk mitigation instruments such as policy guarantees and risk insurances. The government therefore should be able to control infrastructure projects and provide guarantees for the private sector.

In addition to a regulatory approach, the government should put in place credible and stable incentive mechanisms that favour climate actions. The Green Paper by MoF suggested creating financial incentives for regional governments to support actions that contribute to emission reductions. The central government will then pay actions using existing and new fund transfer mechanisms. To create the same conditions between fossil-based and low-carbon technologies, the government should consider applying powerful incentives such as: national targets, feed-in tariffs, tax incentives for low carbon technologies and renewable energy quotas. In addition, the government and policy-makers need to achieve another critical step, which is providing easier market access for low carbon technologies and grid access by the private sector on a competitive basis. Opening up access is considered very important to increase capacity, technology development and stimulate finance (UNEP 2012).

In terms of process, it appears that instruments promoting dialogue between the public and private sector are very useful in order for both sides to learn about policy frameworks and priorities by the government, as well as for the public sector to learn about the private sector's motivation to invest in green and low carbon technologies and mitigation activities, as well as the associated risks and barriers. Through such dialogue, appropriate policy and supportive instruments could be developed and put into place in order to enhance the private sector's participation in both adaptation and mitigation frameworks and investments. The role of the private sector in this context is very crucial and critical, e.g., operations by private sector companies around land management can either contribute significantly to GHG emissions or could in contrast help to mitigate climate change emissions and ultimately provide options foradvancing green growth in the country.

7.3 Good Practices: Public-Private Dialogues as Instrument

Two examples of public-private dialogues as an instrument demonstrate how exchange and trust building are useful for climate finance in order to implement activities, validate and develop approaches for mitigation and adaption and gain information for further improvement. Both examples were taken from Indonesia.

First example is the public-private dialogue forum at the local level taken up by the KALTIM Carbon Alliance (KCA). The Indonesian province of East Kalimantan faces the task of integrating climate change mitigation into the system of local development planning and combining national climate change targets and green growth strategies. If successful, green growth in the province will decouple economic development from increase in GHG emissions.KCA is a discussion and work forum focussing on three sectors: palm oil plantations, natural forest management and open-pit mining. Its objective is to unlock the private sector's potential to contribute to green growth in the province of East Kalimantan. Under the KCA the provincial government of East Kalimantan and the 'environmental champions' from the private sector would work together as part of a working group for green growth under the provincialgovernment's climate change council, the DDPI.

KCA activities are divided into three phases. A first phase focuses on discussions between the private sector companies and documents the contributions of 'environmental champions' to green growth recognized as such by the government. In a second phase companies would commit to improving their management practices and receive training sponsored and potentially incentives to support advances. In a third phase experiences will be transformed

into government policies and potentially scaled-up to the national level. Elements of the KCA include:

- The government takes a proactive stance to recognizing the private sector's contribution to climate change mitigation and passes regulations to create incentives.
- With capacity building support and using government incentives the private sector works towards improving the business practices to enhance productivity and reduce carbon emissions at the same time.
- International donors and agencies, including GIZ, support the KCA, providing this capacity building support. Some international donors may even consider co-funding a government support/incentive programme for the KCA and the participating private sector firms.
- For all of these activities, the companies and the government join together under the KCA where they can engage in a constructive dialogue that provides a semi-independent forum to track progress and contributions to green growth and emission reductions.

The second example in bridging investor groups and the public sector on a regional level is the Alliance for Public Private Climate Finance Asia-Pacific that was launched in November 2012 by GIZ and the Asia Investor Group on Climate Change (AIGCC) in Jakarta to facilitate private investment in climate action. The initiative aims to combine the considerable climate finance work carried out globally with a detailed understanding of the policy and investment environment in the Asia-Pacific region. This is expected to help support the development of effective public private financing mechanisms that can most efficiently facilitate investments in these regional markets. A regional platform to host stakeholder dialogues at many levels and regular consultations is planned, along with supporting capacity building of financial institutions and policy makers in developing countries and emerging markets and to strengthen communication between public and private sectors. The intention is to have public and private sector actors actively exchange ideas on climate finance development and come up with concrete concepts on the design of the climate finance architecture in the region and within the different countries.

8. Recommendations: Next steps to improve climate finance readiness?

As we see from the analyses in this report, there is good climate finance momentum underway in Indonesia, but further effort is still needed to improve national readiness for receiving and using climate finance. The following recommendations seek to build upon the mechanism and results achieved already while addressing some of the remaining gaps and challenges:

	Objective	Proposed Activity
1.	**Improve Adaptation & Mitigation Planning**	Indonesia is currently preparing the National Adaptation Plan of Action (RAN-API) to establish an overarching framework for adaptation action and investment at the country level. The development of robust cost estimates on adaptation resourcing needs is important in this process. This requires an appropriate methodology that takes into account multi- sectoral and sub-state level adaptation needs, in line with national strategies. BAPPENAS and the MoF should be supported in planning and undertaking such processes to estimate financial requirements.
		The implementation of RAN-GRK and RAD-GRK can be facilitated by the development of sectoral NAMAs. This requires supporting ongoing efforts to prepare programmes that are aligned with the exisgting plans and targets of relevant ministries and government departments, and that tap multiple financing sources
2.	**Strengthen capacity for direct access to global financing sources**	In the process of ICCTF becoming a National Implementing Entity (NIE) to the Adaptation Fund, ICCTF's staff can benefit from training and technical assistance in areas associated with NIE functioning and performance e.g. meeting fiduciary standards, ensuring safeguards, facilitating private sector partnerships and working with the Green Climate Fund. These activities can be linked with regional initiatives and donor discussions on the subject.
3.	**Support climate finance delivery and absorption at sub-national level**	Using the provincial GHG reduction proposals (RAD-GRK) as a benchmark, a capacity needs assessment should be undertaken to identify the level of expertise and information required in the delivery of climate change plans and funds at the sub-nationalpolicy level. Based on such an assessment, a training programme could be designed for provincial and local governments and other professionals engaged in RAD-GRK implementation. This may happen in a pilot region to gain further insight into providing appropriate guidance for climate (finance) planning.

		Developing a pipeline of bankabale projects with local and national stakeholders can work well to improve climate finance absorption potential. In addition to technical assistance and training, this objective may be supported by more scoping and research into mitigation and adaptation investment opportunities at sub-national level and sectoral level, and identification of appropriate financing instruments to facilitate these.
4.	**Develop the MRV system for national climate finance management**	The RAN-GRK/RAD-GRK process can be used to introduce standardised methodologies and indicators for monitoring and comparing mitigation actions of respective programmes. To this end international partners should support the MoF in further elaborating the Mitigation Budget Score (MBS) that allows the use of emissions reduction as a performance indicator in project expenditure related decision making. To ensure that the MBS is applied as part of a performance-based budgeting system, training in relevant functions is needed for line ministries
		As local governments will carry the main burden of reporting on RAD-GRK implementation, BAPPENAS and the MoF need to inform guidelines and reporting templates for data capturing and communication at the local level. In an initial pilot phase such guidelines and templates may be tested only for a subsector or in one region (e.g. energy efficiency measures in the waste sector in Central/East Jawa / East Kalimantan).
		In addition to templates and guidelines, a range of trainings are needed for stakeholders from line ministries and local government on various aspects of the MRV system such as GHG inventorying, developing BAU baselines, quanitifying mitigation activities, and performing the MRV of financial expenditures, etc.In the mid-term, 33 provinces (and 497 district/cities) need to be educated, which may require a training the trainers in cooperation with donors, academics and MRV experts.
		Also needed are improved budget systems and classifications/codes to accommodate tracking of international assistance to climate change goals in Indonesia.
5.	**Improve stakeholder coordination on climate finance**	Setting up a donor-recipient government coordination group could be useful to the ICCTF, and possibly help in overcoming the current challenge of low funding commitment from donors. Such a group should be closely coordinated with activities of the ICCTF's Steering Committee.
6.	**Step up private sector engagement**	The Transformation Fund of the ICCTF is supposed to serve as an important catalyst for enhanced private sector investment in mitigation

		and adaptation actions. To take off, the ICCTF needs to be supported in the development of an investment strategy. It also requires an implementation plan, including, among others things, assessment of private sector target groups and potential for mitigation financing.
		There is a need to engage the private sector in financing RAN-GRK and RAD-GRK components. A detailed research study looking at the initial experience with climate financing instruments and initiatives and shortlisting possible solutions for way forward can support decision makers in establishing the appropriate public-private investment structures. This can draw on experiences from other countries in the region and utilize forums such as the Alliance for Public-Private Climate Finance Asia Pacific for learning and stakeholder consultation
		Assist the government in piloting market instruments such as: • Revolving fund for energy efficiency • Emissions trading activities (e.g. at the local level) • Feed in tariffs for geothermal and other renewable energies

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ANNEX 1: Most Important Sources for Adaptation

Fund name	Managing Organisation	Type	Total fund size including pledges (as of date)	Amount currently allocated (as of date)	Eligible sectors and activities
UNFCC Funds					
Adaptation Fund	Adaptation Fund Board/GEF	Grant	US$ 274 million (Jan 2012)	US$124 million (Jan 2012)	All vulnerable development sectors where "sufficient information is available to warrant adaptation activities".
Least Developed Countries Fund (LCDF)	GEF	Grant	US$415 million (Jan 2012)	US$189 million (Jan 2012)	All vulnerable development sectors identified in the National Adaptation Plan of Action (NAPA). Activities funded must be in line with the specific "urgent and immediate adaptation priorities" identified in the NAPA.
Special Climate Fund (SCCF)	GEF	Grant	US$216 million (Jan 2012)	US$143 million (Jan 2012)	Two funding windows exist: (a) Adaptation and (b) Technology transfer. (a) Covers long and short term adaptation activities in all vulnerable sectors where "sufficient information is available to warrant such activities". (b) Covers technology transfer activities related to both mitigation and adaptation, including, as a primary priority: "the implementation of the results of technology needs assessments".
Other bilateral and multilateral funds					
African Develop-ment Fund (ADF)	AfDB	Loan	Approx. US$ 9.3 billion (Budget 2011-2013)	Unknown	No sectoral limitations. The ADF contributes to the promotion of economic and social development in 40 least developed African countries by providingconcessional funding for projects and programs, as well as technical assistance for studies and capacity-building activities. For the replenishment period

					2011-2013 adaptation will be a key priority of the fund e.g. in infrastructure and agricultureinvestments.
Africa Enterprise Challenge Fund: Renewable and Adaptation to ClimateTechno-logies (REACT)	KPMG onbehalf ofdonors	Grant Loan Riskmgmt.	US$50-100million(total size offund)	Unknown	No sectoral limitations. The fund is exclusively focused on supporting innovative business ideas from private entities within the areas of renewable energy and adaptation e.g. products and services that help smallholder farmers adapt such as weather insurance, drought resistant seeds and early warning systems.
ClimateDev Africa Special Fund	AfDB	Grant	€144 million (budget 2012-2014)	Unknown	No clear sectoral limitations. The fund willsupport 'implementation of demonstrationadaptation practices' as well as variouscapacity building activities.
Climate and Develop-ment Knowledge Network (CDKN)	UK/Netherlands	TAGrant	£45 million(2010-2015) Additionalfundingexpected from The Netherlands.	Unknown	Very broad mandate on climate change (both mitigation and adaptation) research, technical assistance, knowledge sharing and co-funding of projects.
Global Climate Change Alliance	EU	Grant	€164 million (budget for 2008-2010)	€140 million (Jan 2012)	Broad mandate on climate change (both mitigation and adaptation activities). Adaptation is a top priority. Specifically for adaptation the fundsupports: (a) Development of adaptation plans in vulnerable countries other than LDCs, (b) Support for NAPA implementation, (c) Adaptation activities in the water and agriculture sectors, (d) Sustainable natural resource management, (e) Promoting disaster risk reduction.
Global Facilityfor DisasterRe	World Bank	Grant	US$324 million (Feb 2012)	Unknown	Mainstreaming of disaster risk reduction in development e.g. activities

ductionand Recovery (GFDRR)					to reduce risks from climate related disasters (flooding, cyclones, droughts etc.), climate resilient reconstruction of infrastructure after disasters, and other DRR relatedadaptation activities.
Japan's FastStart Financing	Japan	Grant, Loan TA	US$738 millionfor adaptation(budget 2008-2012)	Unknown	Not clear. This is not a fund as such, but an initiative covering all of Japan's international activities in relation to climate change. Sectoral focus and eligibility is dependent on bilateral discussions with
Inter-nationalClimateInitiative (ICI)	Germany	Grant, Loan	€120 million/year(of which50% - €60million - is foradaptation/biodiversity)(2012 estimatebased on salesof CERs	€64million foradaptationto date	No clear sectoral limitations. Mentioned sectors include: food security and agriculture, sustainable land management, water resource management, sustainable biomass production, human health, disaster risk reduction and migration management. Ecosystems Based Adaptation seems to be a particular priority.
Multilateral Investment Fund (MIF)	ADB	Grant, Loan, Equity	Approx. US$120 million/year	Unknown	No clear sectoral limitations. The MIF works primarily with the private sector (small businesses, microfinance etc.). Adaptation is one of the priority themes.
StrategicClimateFund – PilotProgramfor ClimateResilience(PPCR)	WorldBank	Grant LoanTA	US$982 million(Nov 2011)	$800 millionin nationalinvestmentplans (SPCRs) $148 million in approvedprojects(Jan 2012)	All development sectors and priorities identified in NAPAs or other relevant country studies and strategies. A specific Strategic Program for Climate Resilience (SPCR) will be developed in each PPCR country and will guide further implementation and funding.
Adaptation funding sources currently under discussion					
Green Climate	TBD	TBD	TBD	Not yetoperatio	Eligibility criteria TBD. Resource allocation will be

Fund				nal(officially designatedat COP17in Durban,but practicaloperation,including callfor fundingproposals,unlikely tostart until2013-2014)	'balanced' between mitigation and adaptation.

ANNEX 2: Summary of REDD+ flows

Fund	Estimated annual commitments (USD million)
UN-REDD Program	50.7
World Bank Forest Carbon Partnership Facility	11.5
Congo Basin Fund	17.4
Amazon Fund	105.
BNDES Mata Atlantica Initiative	3.9
Forest Investment Program	0.7
Norway-Indonesia REDD+ Partnership*	00
Norway-Guyana REDD+ Investment Fund**	0.0
Global Environmental Facility	55.0
International Tropical Organization	4.0
Bilateral climate market commitments in forestry sector	365.0
Forest Carbon Market	125.0
Total	**738.2**

ANNEX 3: Selected Private Financing Sources

Financing Source	Total Fund Size	Major Objectives and Activities
Africa Enterprise Challenge Fund:Renewable Energy & Adaptationto Climate Technologies	N/A	Co-funding of private investments for low cost, clean energy for rural businesses and households
ATP Pension Fund	€68 billion	Investments in renewable energy infrastructure and technology
Capital Market Climate Initiative (CMCI)	N/A	Help unlock the private sector's ability to help meet the $100 billion of new green investment required annually by 2020 to tackle climate change
FE Clean Energy Group Inc.	N/A	Investments in the middle market energy efficiency services sector and in sustainable development.
Institutional Investors Group onClimate Change (IIGCC)	€6 trillion	Catalyze greater investment in a low carbon economy
Investor Network on Climate Risk(managed by Ceres)	US$10 trillion	Identify opportunities and risks in climate change and tackle related policy and governance issues
Investor Group on Climate Change Australia/New Zealand (IGCC)	AU$700 billion	Encourage government policies and investment practices that address the risks and opportunities of climate change
Long-term Investors Club	US$3 trillion	Bring together major worldwide private financial institutions to fund climate mitigation projects
MMA Renewable Ventures (MMARV)	US500 million	Deliver exceptional investment opportunitieswhile providing competitively priced renewableenergy and energy efficiency products
P8 Group	US$3 trillion	Create viable investment vehicles to combat climate change and promote sustainable development
X prize – Energy and Environment Prize Group	N/A	Generate breakthroughs in clean energy, climate change, energy distribution/storage, energy efficiency/use, and water resource management

ANNEX 4: List of Meetings

No	Day/Date	Agenda
1	13 August 2012	Presentation of the project to Deputy for Development Funding Ministry of Development Planning (BAPPENAS)
2	15 August 2012	Discussion with Director for Environment Ministry of Development Planning (BAPPENAS)
3	15 August 2012	Discussion with Head of Centre for Climate Finance Funding Policy and Multilateral Fiscal Policy Unit Ministry of Finance
4	10 September 2012	Discussion with Secretary of Climate Finance Working Group National Council on Climate Change (DNPI)
5	1 October 2012	Discussion with Assistant Deputy for Environmental Economy Ministry of Environment (KLH)
6	10 October 2012	Kick off Project of “Strengthening Public and Private Climate Finance” CDKN-GIZ with all related stakeholders (Bappenas, DNPI, MOF, KLH)
7	23 October 2012	Discussion with Alex Heikens from UNDP on synergy between CPEIR report and the project
7	13 November 2012	Discussion with Secretary of Climate Finance Working Group National Council on Climate Change (DNPI) on scoping study report
8	23 November 2012	Discussion with Researcher on Fiscal Policy Ministry of Finance on scoping study report

ANNEX 5: Tables

Table 1 : International Public Finance in Indonesia

Climate Finance Vehicle	Donors	Financial Administrator	Executing Agency	Type of Support	Amount (USD)	Disbursement System
Climate Change Programme Loan (CCPL)	JICA, AFD, World Bank	Ministry of Finance	Ministry of Finance	Concess-ional Loan	2.2 bn	Disburse directly to Ministry of Finance from which it goes, via normal government procedures, to the ministries, departments, or agencies responsible for budget execution.
Indonesia Climate Change Trust Fund	Indo-nesian Governm ent, DfID, AusAid	Interim Trustee is UNDP; decision making by Steering Committee	BAPPENA S	Grant	11,2 million	Disbursed directly to a particular ministry, agency, or department, and managed through special accounts outside of the regular government system.
Indonesia Green Investment Fund (IGIF)	Governm ent, DfID, AFD	PIP (Government investment unit/ sovereign wealth fund) managed by Ministry of Finance		Equity, grants, concession al loans, guarantees	To be decided	Disbursed directly to a particular ministry, agency, or department, and managed through special accounts outside of the regular government system
Norway – Indonesia REDD+ Partnership	Norway	UNDP (Phase 1)	REDD+ Task Force	Grants, and perfor-mance based grants	1 billion (200 mn grant; 800 mn performance-based)	To be decided
Direct project/progr amme support (REDD+ readiness/ pilot project, technical assistance, capacity building, support for MRV).	Various donors	Various, depending on project/progra mme	Various, depending on project/pro gramme	Primarily grants	USAID (136 m, G); KfW (402 m, G&L), JICA (16.5 m, G&L), AusAid (76m, G), World Bank (400 m, L), EU (24 mn, G), Germany ICI (15m, G), GiZ (10m, G).	Can be either disbursed directly to a particular ministry, department or agency and managed through special accounts, or undertaken by donor agency or by a non-government agent on its behalf.
Forest Investment Program	UK (Total funding for 8 countries : GBP 88 million)	The World Bank (Trustee and administrating unit). Implementing agencies: IFC, ADB	Ministry of Forestry, Ministry of Home Affairs, Local govern-ments	Grant, loan and technical assistance by other donors	Grant 37.5 m, Loan 32.5 m, additional grant pool 6.5 m	ADB will execute the grant with Ministry of Forestry

Table 2 : Programs in Indonesia under Fast-Track Finance

Program	Donor Country	Theme	Channel	Financing Type	Amount
Energizing development – Hydropower	Netherlands	Mitigation	Bilateral	Grant	EUR 8 million
Pilot program on afforestation and sustainable forestry	Denmark	REDD+	Bilateral	Grant	DKK 3 million
Indonesia-Norway REDD+ Partnership	Norway	REDD+	Bilateral	Grant	USD 30 million
National Program on Renewable Energy	Netherlands	Mitigation	Bilateral	Grant	EUR 24 million
Indonesia Energy and Environment Partnership	Finland	Mitigation	Bilateral	Grant	EUR 4 million
Balancing Land Use Management, Sustainable Biomass Production and Conservation	Germany	REDD+	Multilateral	Grant	
Clean Technology Fund	United Kingdom	Mitigation	Multilateral	Loan	USD 400 million from multi-donors
Forest Investment Program	United Kingdom	REDD+	Multilateral	Grant and Loan	USD 70 million
Dutch Global Sustainable Biomass Fund	Netherlands	Mitigation	Bilateral	Grant	USD 4.55 million
Energy Efficiency for sustainable tourism in Pangandaran	Germany	Mitigation	Multilateral	Grant	EUR 1.2 million
Database for management of climate adaptation information and data	Germany	Adaptation	Bilateral	Grant	EUR 2.1 million
Vulnerability assessment and adaptation to climate change for water resource management in coastal cities of Southeast Asia	Germany	Adaptation	Multilateral	Grant	EUR 0.1 million for three countries: Indonesia, Thailand and Viet Nam.
Global Climate Partnership Fund (GCPF)	Germany	Mitigation	Bilateral	Grant	
Pilot testing of Global Bioenergy Partnership (GBEP) criteria and indicators for sustainable bio energy	Germany	Mitigation	Multilateral	Grant	
Inventory of methods for climate adaptation	Germany	Adaptation	Bilateral	Grant	
Asian Sustainable and Alternative Energy Programme (ASTAE)	Netherlands	Mitigation	Bilateral	Grant	
REDD+ under programming	Netherlands	REDD+	Multilateral	Grant	EUR 13.3 million for 4 countries
Partners for resilience program	Netherlands	Adaptation	Multilateral	Grant	EUR 20.76 million for 9 countries
Reduce deforestation and greenhouse gas emission	United States	Mitigation/REDD+	Bilateral	Grant	US$ 17 million

Table 3 : Domestic Direct Investment –Tracking Private (including State Owned Enterprise) Investment on Climate Change Mitigation

No.	Sector	2010		2011		2012*	
		P	I	P	I	P	I
	Primary Sector	253	12,131.4	363	16526.3	305	15,063.2
1	**Food crops and plantation**	**166**	**8,727.3**	**255**	**9,367.3**	**211**	**6,251.0**
2	**Livestock**	**59**	**156.5**	**62**	**247.2**	**22**	**61.0**
3	**Forestry**	**8**	**1.0171.6**	**11**	**12.5**	**9**	**132.5**
4	Fisheries	2	1.0	5	0.1	7	14.3
5	Mining	18	3,075	30	6,899.2	56	8,604.4
	Secondary Sector	419	25,612.6	706	38,533.8	577	38,110
6	Food Industry	166	16,405.4	258	7,940.9	176	7,719.4
7	Textile	26	431.7	52	999.2	51	3,247.2
8	Leather goods and footwear	4	12.5	3	13.5	6	62.9
9	Wood	6	451.3	14	514.9	5	52.1
10	Paper and printing	25	1,102.8	53	9,296.3	56	4,997.2
11	**Chemical and pharmaceutical**	**64**	**3,266.0**	**106**	**2,711.9**	**81**	**4,213.0**
12	Rubber and plastic	48	522.8	81	2,295.7	78	2,310.7
13	Non-metallic mineral	13	2,264.6	39	7,440.5	36	9,008.4
14	**Metal, machinery and electronic**	**50**	**789.6**	**76**	**6,787.0**	**68**	**5,838.6**
15	Medical and optical instrument-watches and clock	-	-	1	-	-	-
16	**Motor vehicles and other transport equipment**	**15**	**362.2**	**16**	**529.1**	**15**	**569.0**
17	Other industry	2	3.7	7	4.8	5	11.5
	Tertiary sector	203	22,882.2	244	20,940.6	200	12,509.4
18	**Electricity, gas and water supply**	**31**	**4,929.8**	**49**	**9,134.7**	**57**	**2,825.6**
19	**Construction**	**7**	**67.6**	**8**	**598.2**	**7**	**2,168.5**
20	Trade and repair	32	116.4	31	328.6	22	1,001.5
21	Hotel and restaurant	27	390.3	26	394.4	18	861.3
22	Transport, storage and communication	34	13,787.7	27	8,130.1	35	3,703.9
23	Real estate, industrial estate and business activities	3	261.7	8	732.7	4	58.0
24	Other Services	69	3,328.6	95	1,621.9	57	1,891.6
	Total Domestic Direct Investment in bn IDR	875	**69,626.3**	1,313	**76,000.7**	1,082	**65,682.7**
	Total DDI in bn USD		**6.74**		**8.44**		**7.3**

Table 4 : Foreign Direct Investment -Tracking Private (including State Owned Enterprise) Investment on Low-Carbon Technology

No.	Sector	2010		2011		2012*	
		P	I	P	I	P	I
	Primary Sector	428	3,033.9	713	4,883.2	814	4,480.7
1	**Food crops and plantation**	**159**	**751.0**	**264**	**1,222.5**	**316**	**1,271.9**
2	**Livestock**	**11**	**25.0**	**14**	**21.1**	**7**	**15**
3	**Forestry**	**12**	**39.4**	**15**	**10.3**	**13**	**12.5**
4	Fisheries	19	18.0	29	10.0	16	24.4
5	Mining	227	2,200.5	391	3,619.2	462	3156.8
	Secondary Sector	1,091	3,337.3	1,643	6,789.6	1,571	8,594.1
6	Food Industry	194	1,025.7	308	1,104.6	334	1,148.8
7	Textile	110	154.8	166	497.3	133	378.1
8	Leather goods and footwear	30	130.4	59	255.0	71	130.1
9	Wood	31	43.1	29	51.1	21	16.4
10	Paper and printing	32	46.4	42	257.5	55	1.069.7
11	**Chemical and pharmaceutical**	**159**	**793.4**	**223**	**1,467.4**	**214**	**2,476.9**
12	Rubber and plastic	100	104.3	148	370.0	133	585.8
13	Non-metallic mineral	8	28.4	46	137.1	52	123.4
14	**Metal, machinery and electronic**	**269**	**589.5**	**383**	**1,772.8**	**332**	**1,284.4**
15	Medical and optical instrument-watches and clock	2	-	5	41.9	2	1.6
16	**Motor vehicles and other transport equipment**	**97**	**393.8**	**147**	**770.1**	**156.0**	**1,308.0**
17	Other industry	59	27.6	87	64.7	68	70.8
	Tertiary sector	1,557	9,843.6	1,986	7,801.7	1,801	5,177.2
18	**Electricity, gas and water supply**	**42**	**1,428.6**	**64**	**1,864.9**	**76**	**1,072.3**
19	**Construction**	**65**	**618.4**	**63**	**353.7**	**55**	**195.9**
20	Trade and repair	735	773.6	899	826.0	784	396.6
21	Hotel and restaurant	181	346.6	205	242.2	226	729.6
22	**Transport, storage and communication**	**87**	**5,072.1**	**86**	**3,798.9**	**78**	**1,872.8**
23	Real estate, industrial estate and business activities	71	1,050.4	109	198.7	135	328.5
24	Other Services	376	553.9	560	517.3	447	581.6
	Total Foreign Direct Investment bn IDR	3,076	**16,214.8**	4,342	**19,474.5**	4,186	**18,252**

	Total FDI in bn USD		**1.80**		**2.16**		**2.03**

Source: Investment Coordinating Board, 2012. Note: Excluding of Oil & Gas, Banking, Non-Bank Financial Institution, Insurance, Leasing, Investment which licenses issued by technical/sectoral agency, Portfolio (stock market) as well as Household Investment. P: Total of Project; I: Investment Value in Billion IDR. * Until September 2012.

This document is an output from a project funded by the UK Department for International Development (DFID) and the Netherlands Directorate-General for International Cooperation (DGIS) for the benefit of developing countries. However, the views expressed and information contained in it are not necessarily those of or endorsed by DFID, DGIS or the entities managing the delivery of the Climate and Development Knowledge Network*, which can accept no responsibility or liability for such views, completeness or accuracy of the information or for any reliance placed on them.