The Little REDD Book

A guide to governmental and non-governmental proposals for reducing emissions from deforestation and degradation

GCP
Global Canopy Programme

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The Global Canopy Programme is an alliance of 37 scientific institutions in 19 countries, which lead the world in forest canopy research, education and conservation. Today, our 3 main programmes - in science, policy and finance - aim to define and explore the range and economic value of forest ecosystem services and to share our findings with decision-makers in government and finance.

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ACRONYMS

AAU	Assigned Amount Unit
AFOLU	Agriculture, Forestry and Land Use change
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
COP	Conference of the Parties
DAF	Development Adjustment Factor
ER	Emission Reduction
ES	Ecosystem Service
FAO	Food and Agriculture Organisation
FCPF	Forest Carbon Partnership Facility
FLEGT	Forest Law Enforcement Governance and Trade
GHG	Greenhouse gas
GOFC-GOLD	Global Observation of Forest and Land Cover Dynamics
HFLD	High Forest Low Deforestation
IIED	International Institute for Environment and Development
IPCC	Inter Governmental Panel on Climate Change
IPES	International Payments for Ecosystem Services
LULUCF	Land Use, Land Use Change and Forestry
MRV	Measurable, Reportable, Verifiable
NGO	Non-governmental Organisation
ODA	Official Development Assistance
PES	Payments for Ecosystem Services
POA	Programme of activity
RED	Reducing Emissions from Deforestation
REDD	Reducing Emissions from Deforestation and (Forest) Degradation
RER	Reference Emission Rate
RS	Reference Scenario
SBSTA	Subsidiary Body on Scientific and Technical Advice
SFM	Sustainable Forest Management
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute
WWF	World Wildlife Foundation

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We are continually aiming to improve the Little REDD Book and your feedback is welcome. Please send comments to:

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or visit www.littleREDDbook.org

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FOREWORD

If a post-Kyoto climate agreement fails to act on avoiding tropical deforestation, the achievement of overall climate change goals will become virtually impossible. The lives and livelihoods of millions of people will be put at risk, and the eventual economic cost of combating climate change will be far higher than it needs to be.

For these reasons, the next agreement must create meaningful incentives to remunerate forest nations for the valuable climate services they provide to the world.

Important progress has been made over the past year by those working on REDD. But to make REDD a success three over-arching challenges remain.

First, the REDD framework must provide incentives for all rainforest countries – if any significant group of countries is left out, then deforestation will move to those jurisdictions, and we will have failed to avoid greenhouse gas emissions from deforestation and forest degradation.

Second, these incentives must be at the scale required to solve the problem – if they are insufficient in value, they will not out-compete the other legitimate economic activities which drive deforestation.

Third, the citizens of forest countries – especially those who depend on the forest for livelihoods – must be active participants in framing a solution. In the same way as there is no solution to climate change without forestry, there is no solution to deforestation without the support of forest populations. Thanks to the work of many within the REDD community and elsewhere, there is a path to resolving the remaining scientific, economic and methodological issues. What is urgently required now is political will and effective action to design and implement national-scale solutions to meet the challenges.

I welcome the publication of The Little REDD Book, and hope that it will help to move the forestry debate forward - from talking about the role of forests in combating climate change to acting with the urgency and clarity that the people of our planet require.

HIS EXCELLENCY BHARRAT JAGDEO

President of Guyana

November, 2008

WHY THIS GUIDE IS NEEDED

The IPCC estimate of emissions from tropical deforestation in the 1990s was 1.6 billion tonnes of carbon per year equating to 20% of global carbon emissions. To create a mechanism that addresses this problem, many differing proposals to reduce emissions from deforestation and degradation (REDD) have been put forward to the UNFCCC, which has resulted in some confusion. This non-partisan guide to the proposals is intended to accelerate understanding.

The Little REDD Book has been compiled by the GCP with the support of a wide range of contributors from around the world including many proposal authors. The Prince's Rainforests Project has kindly provided its analysis of the proposals, which is at the heart of this guide. It shows how they have developed over time, either directly or indirectly building on what has come before. Most importantly, it demonstrates how much common ground there is between proposals - that for every point of difference there are many points of agreement, and that a menu of commonly held principles and approaches is emerging.

Agreement on REDD is within reach. The spread of new technologies such as satellite monitoring is overcoming some long-standing technical barriers. Collaboration by scientists, economists and policy makers at the UNFCCC, IPCC and other forums, is helping to clarify outstanding methodological issues. Money for capacity building and pilot projects has started to flow. The imperative now is for the international community to continue working collaboratively and with renewed urgency towards achieving political consensus at Copenhagen. It is our hope that this publication – and its online counterpart www.littleREDDbook.org – can help build understanding as the countdown to COP 15 begins in earnest.

Andrew W. Mitchell

Founder & Director

Global Canopy Programme

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UNDERSTANDING REDD

FORESTS: WHY ARE THEY IMPORTANT?

COMBATING CLIMATE CHANGE

Tropical forests cover about 15% of the world's land surface[1] and contain about 25% of the carbon in the terrestrial biosphere[2]. But they are being rapidly degraded and deforested resulting in the emission of heat-trapping carbon dioxide to the atmosphere. Roughly 13 million hectares – an area the size of Nicaragua – are converted to other land uses each year[1]. This loss accounts for a fifth of global carbon emissions, making land cover change the second largest contributor to global warming[3] (see Figure 1). Forests therefore play a vital role in any initiative to combat climate change.

A HOME TO LOCAL COMMUNITIES

Forest resources directly support the livelihoods of 90% of the 1.2 billion people living in extreme poverty and are home to nearly 90% of the world's terrestrial biodiversity[4]. Local communities depend on forests as a source of fuel, food, medicines and shelter. The loss of forests jeopardises poverty alleviation. Indigenous and forest-dependent peoples are stewards of their forests, providing the rest of humanity with vital ecosystem services (ES). Climate change will hit the poorest hardest and so reducing deforestation will help build their resilience to climate impacts.

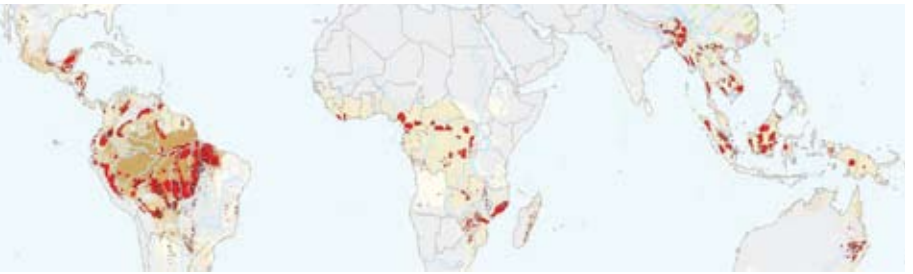
MORE THAN JUST CARBON

At local to global scales, forests provide essential ecosystem services beyond carbon storage – such as watershed protection, water flow regulation, nutrient recycling, rainfall generation and disease regulation. Old growth forests also soak up carbon dioxide from the atmosphere – offsetting anthropogenic emissions. Protecting tropical forests has a double-cooling effect, by reducing carbon emissions and maintaining high levels of evaporation from the canopy[2].

THE CAUSES OF DEFORESTATION

The causes of deforestation are multiple and complex and vary from country to country. Local pressures arise from communities using forests to provide sources of food, fuel and farmland. Poverty and population pressure can lead inexorably to the loss of forest cover, trapping people in perpetual poverty. Whilst millions of people still cut down trees to make a living for their families, a major cause of deforestation is now large-scale agriculture driven by consumer demand. In recent decades deforestation has shifted from a largely state-initiated to an enterprise-driven process. The drivers of the demand for agricultural land vary globally. In Africa, it is primarily small-scale subsistence farming. In South America, it is large-scale farming enterprises, producing beef and soya for export markets. In South East Asia, the driver is somewhere between the two, with palm oil, coffee and timber the main products. Demand for timber also drives deforestation and therefore contributes to land-use change emissions[5].

Figure 1. Regions of deforestation in recent decades



Source: Millennium Ecosystem Assessment

REDD: A SOLUTION TO THE PROBLEM

WHAT IS REDD?

The basic idea behind Reducing Emissions from Deforestation and Degradation (REDD) is simple: Countries that are willing and able to reduce emissions from deforestation should be financially compensated for doing so[6]. Previous approaches to curb global deforestation have so far been unsuccessful, however, and REDD provides a new framework to allow deforesting countries to break this historic trend.

WHAT ARE THE OBJECTIVES OF REDD?

REDD is primarily about *emissions reductions*. The Bali Action Plan decided at the Conference of the Parties (COP) at its thirteenth session[7] states that a comprehensive approach to mitigate climate change should include:

"Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries"

But, a future REDD mechanism has the potential to deliver much more. REDD could simultaneously address climate change and rural poverty, while conserving biodiversity and sustaining vital ecosystem services[8].

Although these benefits are real and important considerations, the crucial question is to what extent the inclusion of development and conservation objectives will either promote the overall success of a future REDD framework or complicate and therefore possibly hamper the ongoing process of REDD negotiations.

THE STORY SO FAR...

A fundamental milestone was achieved at COP 11 in Montreal in 2005 when Papua New Guinea and Costa Rica supported by eight other Parties proposed a mechanism for Reducing Emissions from Deforestation in Developing Countries. The proposal received wide support from Parties and the COP established a contact group and thereafter began a two year process to explore options for REDD. This decision resulted in a wide range of Parties and observers over this period submitting proposals and recommendations to the Subsidiary Body on Scientific and Technical Advice (SBSTA) to reduce greenhouse gas (GHG) emissions from deforestation and degradation. We are now at the stage where we have a number of proposals on the table. Under the Bali Action Plan, if REDD is to be included in a post-2012 framework, a decision about what a REDD mechanism will look like and what it will include needs to be agreed by COP15 in Copenhagen in December, 2009. Reaching a consensus on this issue is of paramount importance for a global deal on climate change[9].

HOW DOES THE LITTLE REDD BOOK HELP?

The task at hand is to have meaningful and informed debates about the nature and implications of the proposals on the table.

The Little REDD Book draws upon recent work undertaken by The Prince's Rainforests Project to analyse thirty-three governmental and non-governmental proposals submitted to the UNFCCC. Twenty of these submissions are by Parties to the Convention and thirteen by non-governmental organisations (NGOs) (see the inside front cover of this book for reference).

The aim of the Little REDD Book is to help forest stakeholders to understand and compare current and future proposals in a consistent way in order to promote a consensus on how to reduce emissions from deforestation and degradation. To do this the Little REDD Book introduces a framework which resolves REDD mechanisms into four distinct modules.

These modules can be thought of as independent building blocks that can be arranged in a 'mix and match' approach: taking the most desirable option from each module to create an effective, efficient, and equitable REDD proposal which maximises the potential benefits and minimises the perverse outcomes.

The Little REDD Book uses this framework to assess each of the proposals individually to allow clear comparisons to be drawn between the different REDD mechanisms. The individual proposals are then analysed jointly to show convergence and divergence in an effort to add clarity to the overall picture.

To help stakeholders understand the various proposals quickly and simply, key elements of the proposals have been presented graphically throughout this document. This visual language is introduced on page 27 and is also available on the inside back cover for quick reference.

THE FRAMEWORK

A FRAMEWORK FOR UNDERSTANDING THE PROPOSALS

THE BUILDING BLOCKS

The diagram opposite presents a new framework for understanding REDD proposals. The framework comprises four basic building blocks as follows:

- Scope: What is being delivered?
- Reference Level: How is it being measured?
- Distribution: Where/to whom does the money go?
- Financing: Where does the money come from?

The overall effectiveness, efficiency and equity of a proposal is determined by its scope, reference level, and financing and distribution mechanisms, as shown in Figure 2.

It is helpful to view REDD proposals in this way because it allows us to understand the elements of individual proposals. It also shows us the distribution and evolution of ideas of the combined proposals and enables us to see areas where there are high levels of convergence or divergence.

MIX AND MATCH OPTIONS

Each of the four modules has a series of options that have emerged from the different proposals. More detail on the options encompassed within each module is given in the following pages.

Some options potentially impose constraints on others. When viewing the proposals as a group, however, there are a number of different 'mix and match' options; for example, the decision to include deforestation and degradation (REDD) or just deforestation (RED) can, broadly speaking, be addressed separately from the question of whether to use a fund or a market.

The framework introduced here, and the analysis behind 'How do they compare' have been developed by The Prince's Rainforests Project. For further information email Anna Creed: anna.creed@royal.gsx.gov.uk or visit: www.princesrainforestsproject.org/redd

Figure 2. Building blocks of a REDD proposal.

To provide a quick reference to the different modules of the framework, the colours for the four modules shown above are used throughout this guide, green will always signify scope, blue: reference levels, purple: distribution and orange: financing mechanisms. A small icon will also be displayed in the corner of the page if a specific module in the framework is being discussed.

SCOPE

The first step in understanding REDD proposals is to quantify what is included. The scope refers to the activities, carbon pools and countries that are considered eligible for generating emissions reductions under REDD.

OPTIONS

Activities: Reducing emissions from deforestation (RED), Reducing emissions from deforestation and degradation (REDD) or enhancement of carbon stocks (REDD+).

The choice of scope will have an impact on the scale, relative cost and mitigation potential of a REDD mechanism. It will also play an important role in the political feasibility of an agreement and the ability of developing countries to measure, report and verify the options considered within scope in a proposal. In addition the countries that might benefit under REDD is also influenced by the agreed scope (see Box 1).

REFERENCE LEVEL

A REDD mechanism must specify how emissions reductions (ERs) are being measured. The *reference level* defines the reference period and scale against which the activities within scope are measured.

OPTIONS

Scale: Sub-national, National, Global

Reference period: Historic baseline, Current (structural), Projected baseline

Reference levels define the business as usual scenario over a predefined scale and can therefore be used to determine the additionality of a given activity. Although the choice of reference level greatly impacts the types of country that generate ERs it need not necessarily influence which countries benefit from those ERs. The distribution or allocation of benefits to actors other than those generating the reductions is discussed in the distribution module. Reference levels, however, are often conflated with an adjustment factor or a negotiable element to account for differing country circumstances.

It is worth noting that the science of forestry carbon accounting, and moreover the assessment of business as usual practices within forests is still imprecise[10] and as such both historic and projected baselines have a large element of uncertainty. Much work has been done and continues to be done, however, to improve technical and methodological know-how in this area. Global Observation of Forest and Land Cover Dynamics (GOFC-GOLD) and the IPCC are recognised within the intergovernmental and scientific communities as sources of high quality scientific knowledge that is increasing certainty in the establishment of reference levels and monitoring methods.

DISTRIBUTION

The scope and reference level determine how many emissions reductions will be generated. Of equal importance is how the benefits of those reductions will be allocated. The majority of proposals advocate incentives or compensation directly in line with a Party's own actions. Other proposals suggest that some of these benefits should be redistributed to Parties other than those generating the emissions reductions through a *distribution mechanism*.

OPTIONS

Asset: Emissions, Carbon Stock, Opportunity Costs

Scale: Sub-national, National, Global

The choice of how to distribute benefits has the potential to greatly influence the impact across countries (see Box 1). Some proposals, for equity reasons or to address socioeconomic factors, have chosen a distribution mechanism which allocates funds to historically low emitters who may emit at some point into the future. Other proposals, to avoid international leakage, have suggested that a proportion of funds generated through REDD should be distributed to countries with currently low rates of deforestation but high forest cover. The argument goes that if these countries are not rewarded to protect their current stocks there will be a perverse incentive to chop down their forests for more profitable ventures.

The choice of methodology for distributing benefits can be scientific or negotiated. Furthermore, proposals which allocate benefits in line with generated reductions will be regarded in this book as having no distribution mechanism. As discussed, proposals sometimes conflate reference levels with distribution mechanisms. Where this is the case this book will separate these two elements to allow for a simpler comparison.

FINANCING

The final step in defining the framework of a REDD proposal is where the money comes from.

OPTIONS

Source: Direct-Market, Hybrid / Market-linked, Voluntary Fund

Activities for REDD can be financed though a voluntary fund, a direct-market or a hybrid / market-linked mechanism. A voluntary fund could operate at the national (i.e. uni- or multilateral) or international scale. Official Development Assistance (ODA) is an example of a funding mechanism. In general, however, non-Annex I Parties call for new and additional contributions from developed countries. It is important to note that emissions reductions generated through a fund cannot be used for compliance in carbon markets. In a market-based mechanism REDD credits would be traded alongside existing certified emissions reductions (CERs), and could be used by companies to meet emissions targets in their national cap-and-trade systems. A hybrid / market-linked mechanism generates finances through either an auction process, or by establishing a dual-market in which REDD credits are linked to but are not fungible with existing CERs. Norway's proposal to auction Assigned Amount Units (AAUs), the Center for Clean Air Policy's "Dual Markets" approach and Greenpeace's TDERM are all examples of market-linked mechanisms[11].

Each of these approaches has its strengths and weaknesses, however a growing consensus is emerging that a combination of these approaches will be needed to match the different stages of development and differing needs of tropical rainforest nations[11].

BOX 1: WHO CAN BENEFIT?

Fonseca and colleagues[12] have devised a matrix to show that developing countries fall into four basic categories or quadrants based on their forest cover and recent deforestation rate (see Table 1).

These quadrants are important within the context of the REDD debate as not all countries will benefit equally under any proposed REDD mechanism depending on the choice of options within the basic building blocks of the framework.

Table 1: A matrix to split countries by their forest cover and historical rate of deforestation[12].

	LOW FOREST COVER (< 50%)	HIGH FOREST COVER (> 50%)
HIGH DEFORESTATION RATE (> 0.22%/yr)	**Quadrant I** e.g. Guatemala, Thailand, Madagascar No. of Countries: 44 Forest area: 28% Forest carbon total: 22% Deforestation annual 48%	**Quadrant III** e.g. Papua New Guinea, Brazil, Congo (DR) No. of Countries: 10 Forest area: 39% Forest carbon total: 48% Deforestation annual 47%
LOW DEFORESTATION RATE (< 0.22%/yr)	**Quadrant II** Dominican Republic, Angola, Vietnam No. of Countries:15 Forest area: 20% Forest carbon total: 12% Deforestation annual 1%	**Quadrant IV** e.g. Suriname, Belize, Gabon, No. of Countries: 11 Forest area: 13% Forest carbon total: 18% Deforestation annual 3%

Depending on the choice of scope, reference level, distribution, and to an extent funding mechanism of a given proposal, some countries stand to benefit more than others under REDD. For example, countries in Quadrants I and III with historically high deforestation rates will, broadly speaking, stand to gain more from proposals that use a historical baseline, than say a projected baseline. Countries in Quadrants III and IV with high forest cover will also benefit more from proposals that have an explicit distribution mechanism based on carbon stocks. Finally, countries in Quadrant II with low forest cover and low rates of deforestation will find it difficult to benefit under REDD unless enhancement activities are included in the scope of the mechanism.

PROPOSALS

GUIDE TO THE PROPOSALS

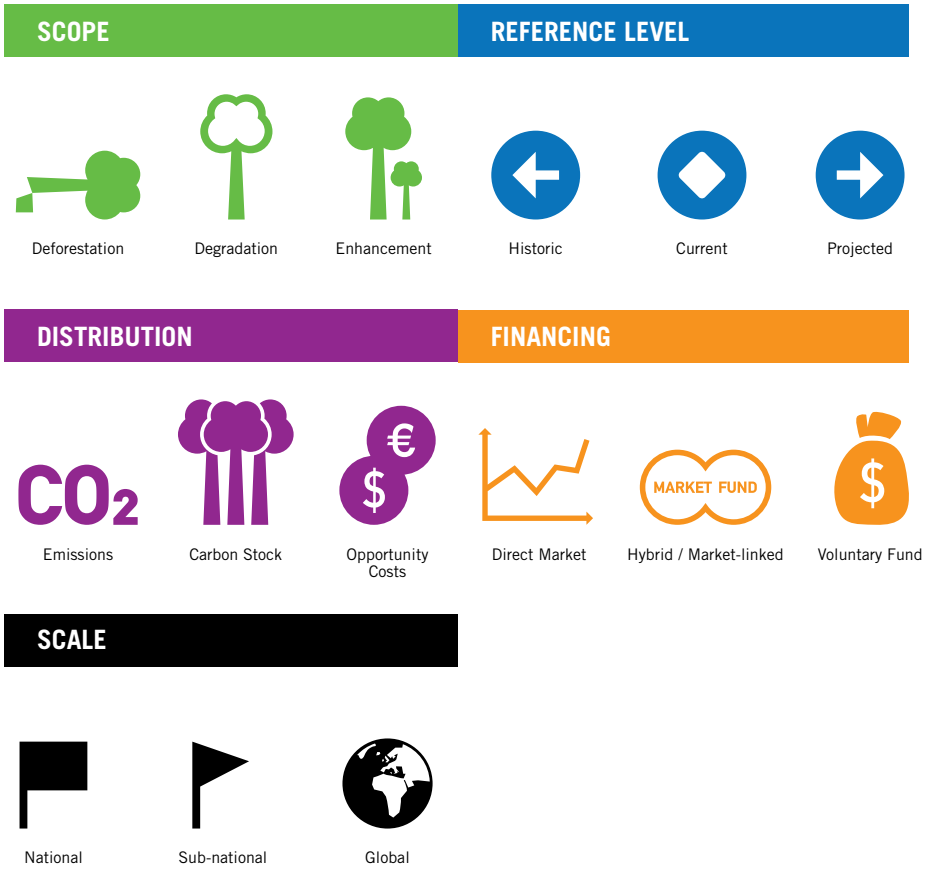
The following pages present a guide to the thirty-three proposals currently being considered using the analytical framework introduced above. Each proposal has been represented graphically using the icons shown overleaf. These icons represent the main options from the analytical framework, and have been grouped into their respective modules.

The icons will be presented at the top of each proposal in an 'icon bar' (see Figure 4 above). Not all proposals aim to define all of the modules of the framework. Therefore to simplify matters, all icons in the icon bar will be grey by default and only the options that are explicitly proposed in the submissions will be highlighted in colour. The colour will correspond to the module of the framework in which the icon is grouped.

Figure 4. Icon bar

The example in Figure 4 above indicates that the scope of this hypothetical proposal includes deforestation and degradation, the reference level is historic, the proposal hasn't specified an explicit distribution mechanism and the financing is through a hybrid / market-linked fund.

Figure 5. Key to Icons



GOVERNMENTAL PROPOSALS

AUSTRALIA

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14/Add.1, FCCC/SBSTA/2008/MISC.4/Add.2

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
June 2008

SUMMARY

Australia states that the overarching principles, rather than the individual mechanisms, will determine the successful outcome of a future REDD framework and propose five key principles to be considered. Among these are the need for a clearly defined scope with robust monitoring and reporting methodologies, a national sectoral baseline to address national-level leakage, and a consistent treatment of emissions across the AFOLU sector.

REDD will be most effectively addressed through a market-based mechanism, and Parties should try also to maximise co-benefits including biodiversity conservation, air, soil and water pollution reduction and the improvement of rights of indigenous and forest dependent peoples.

Australia believes that Parties and relevant organisations should progress demonstration activities as a priority and is working in partnership with Indonesia and Papua New Guinea on practical activities to reduce emissions from deforestation and forest degradation in the context of SFM.

BRAZIL

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
February 2007

SUMMARY

Brazil proposes the establishment of a voluntary fund into which developed countries provide new financial resources additional to existing funding activities. Developing countries are entitled to ex-post financial incentives from the arrangement after they demonstrate, in a transparent and credible manner, that they have reduced their emissions from deforestation.

Incentives should be based on a comparison between the rate of emissions from deforestation over a past time period and a reference emissions rate (RER). Decreases in emissions will be credited and increases in emissions will be converted into a debit from future financial incentives. The price per tonne of carbon for incentives will be negotiable and reviewed periodically.

Accounting will be at the national level and incentives will be distributed in the same ratio as the emissions reductions each country has achieved. The RER is the average rate of deforestation over the previous 10 year period starting from the time of implementation within the UNFCCC, and will be recalculated every 3 years as the average of the last three years emissions from deforestation (if rates have fallen below the RER).

CANADA

SCOPE | REFERENCE LEVEL | DISTRIBUTION | FINANCING

*UNFCCC Document Code**
FCCC/SBSTA/2008/MISC.4

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
April 2008

SUMMARY

Canada recognises the importance of the IPCC and GOFC-GOLD and recommends the IPCC to produce a report on methodological guidance for a REDD mechanism.

The indicative guidance provided in the Annex to Decision 2/CP.13 states that reductions in emissions or increases resulting from a demonstration activity should be based on historical emissions, taking into account national circumstances. Further guidance will be necessary from SBSTA to identify factors that must be considered in the determination of reference emissions levels, e.g. national circumstances.

Canada believes that the inability to meet methodological requirements related to forest degradation should not result in the complete exclusion of a Party from an incentive to reduce emissions from deforestation, provided that the said Party meets the methodological requirements related to deforestation.

CHILE

SCOPE | REFERENCE LEVEL | DISTRIBUTION | FINANCING

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
August 2007

SUMMARY

This proposal uses the "Nested Approach" proposed by CATIE, summarised under non-governmental proposals on page 53.

COALITION FOR RAINFOREST NATIONS (CfRN)

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4/Add.1, Unpublished material

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
August 2008

SUMMARY

CfRN recognises three distinct categories of national development which require differing approaches and sources of funding. Category I, the readiness phase, would use voluntary funding to build capacity in developing countries. It could build on existing platforms such as the FCPF or the UN-REDD Initiative. Category II, scaling-up, would still be voluntarily funded, and could incorporate a trial market phase. It aims to encourage and expand a range of national, sub-national, local and project-level activities. Category III, future markets, calls for a series of policy measures that must be considered to establish an effective mechanism for REDD. These include, crediting for early action to ensure that current emissions reductions from deforestation are creditable post 2012, an adjustment mechanism taking into consideration national circumstances as well as environmental, social and economic factors, and a market mechanism which is fully fungible with AAUs but complementary and additional to the CDM.

A reference emissions rate (RER) should be determined by assessing rates of deforestation over a historical Reference Period no shorter than five years. Incentives would be allocated by calculating the estimated reduced emissions, using IPCC guidelines, over an agreed upon past time period, evaluated against the RER plus a development adjustment (DA) factor.

COLOMBIA

*UNFCCC Document Code**
FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
April 2008

SUMMARY

Colombia, as other Latin-American countries, proposes some basic elements of a future REDD mechanism. These include Incentives for early action under the UNFCCC framework, a market mechanism involving the private sector to mobilize the necessary investment flows into developing countries, wider participation and deeper GHG emission reduction commitments by Annex I countries. Incentives should be complemented by instruments to allow countries to build capacities and enhance the availability and quality of data.

The proposed mechanism should be consistent with the principles of the carbon market and rely on the technical and institutional infrastructure already in place. Colombia believes that each Party should be able to choose from either a sub-national to national reference level and suggests that leakage issues could be managed at the project-level through an approved methodology whereby the displaced emissions are deducted from the project credits.

Reference levels could use either an extrapolation of past trends into the future, prevailing technology or practice, or logical arguments made by activity participants based on observed trends. Tradable and fully fungible emission reduction credits would be issued against the aforementioned reference levels.

CENTRAL AFRICAN FOREST COMMISSION (COMIFAC)

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
March 2007

SUMMARY

To achieve real and measurable benefits for the climate, COMIFAC states that policy approaches and positive incentives should be based on a basket approach designed to address the differing dynamics of the forest sector within developing countries, linked with substantial emissions reduction commitments in developed countries. Within this context, three voluntary funding options, similar to the proposal by CfRN, are available for three distinct deforestation phases. Firstly, an enabling fund would be needed to build capacity with reference scenarios and policy measures to reduce deforestation. Secondly, a stabilization fund would be used in countries with currently low rates of deforestation to protect and maintain carbon stocks; funding could come from a share of proceeds from REDD credits combined with additional funds provided by Annex I countries through ODA or taxation. Thirdly, a REDD mechanism, whereby positive incentives are awarded for emissions reductions below a reference scenario (RS) could provide positive incentives for REDD. The RS would be a combination of a historical reference emissions rate (RER) and a development adjustment factor (DAF).

Given the diversity of national circumstances, it is essential to be flexible in selecting approaches and relevant action levels for consideration; both national and sub-national approaches are compatible and relevant in Congo Basin countries.

COSTA RICA

*UNFCCC Document Code**
FCCC/CP/2005/MISC.1, FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2008/MISC.4

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
April 2008

SUMMARY

Costa Rica proposes a market based mechanism based on solid technical and methodological procedures that allows Non-Annex I Parties, who voluntarily elect to reduce their emissions from deforestation, to be financially compensated by Annex I Parties on the basis of their performance.

To avoid the creation of any perverse incentives that may deteriorate ongoing programmes or planned efforts, Parties should support early action of developing countries by ensuring that any emissions reductions obtained during the period from 1990 to the start of any future agreement on REDD can be used to assist in achieving future compliance.

Reference emission levels should be estimated using historical data for changes in forest cover area, and IPCC procedures to estimate associated carbon stocks and carbon stock changes. Developing countries with early policy approaches that have led to reduced deforestation rates should be permitted to adjust their reference emission levels to a date appropriate to national circumstances.

On an annual basis, a proportion of the projected emission reductions should be kept in reserve, and could be drawn from during periods of unpredictably, thereby providing continuity of funding to support ongoing activities.

EUROPEAN UNION (EU)

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4, Unpublished Material

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
July 2008

SUMMARY

The EU proposes that policies should focus on positive incentives to reduce emissions from deforestation and forest degradation and that additional actions on conservation, SFM and enhancement of forest carbon stocks could complement measures for REDD.

The EU favours an approach that bases incentives on agreed national reference emissions levels, which should be ambitious, yet realistically achievable, taking into account national circumstances including existing policies and initiatives, historical data, current trends and developments in land use. The agreed level would be negotiated and revised periodically. The EU recognises that sub-national approaches may be appropriate under some national circumstances, as a step towards the development of national approaches, reference levels and estimates, however, national approaches are essential to avoiding the risk of leakage within the national boundary.

The EU recognises that public financing is currently not sufficient and not sustainably available, and therefore recognises the need to further assess all financing options, in particular with respect to scale and sustainability they might provide, and notes that a well designed market-linked approach can contribute to long-term action.

INDIA

*UNFCCC Document Code**
FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14/Add.2, FCCC/SBSTA/2008/MISC.4

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
March 2008

SUMMARY

India highlights that Brazil's submission for compensated reduction unfairly favours countries with high deforestation rates, and therefore proposes a mechanism of "Compensated Conservation" that also rewards countries for maintaining and increasing their forests as a result of conservation. As such, India would support a common methodology that i) assessed changes in carbon stocks and GHG emissions due to conservation and sustainable management of forest, and ii) reductions in emissions from deforestation and degradation.

The UNFCCC could create three different financial instruments for the range of different actions to be implemented by the countries according to their national circumstances. These might include a Reducing Deforestation Fund, a Stabilization Fund, and a Forest Carbon Conservation Fund. India, like other Parties, also considers an Enabling Fund to support capacity building and pilot activities related to REDD activities for developing/least developed countries.

To enable robust reporting of changes in forest cover, a national baseline is recommended, to prevent double accounting and leakage. CDM A/R project activity, will also be entered as a debit in the national inventory for REDD accounting.

INDONESIA

SCOPE REFERENCE LEVEL DISTRIBUTION FINANCING

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2/Add.1, FCCC/SBSTA/2007/MISC.14/Add.1, FCCC/SBSTA/2008/MISC.4

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
March 2008

SUMMARY

Indonesia states that the adoption of a single definition for deforestation is essential to ensure the fairness of providing incentive for developing nations. Voluntary actions eligible for compensation should include enrichment planting in secondary forests, emissions reductions through avoided conversion of forest, emissions reductions through combating illegal logging and fires, and conserving carbon through forest conservation.

Reference levels for generating credits would be two-fold. The reference level for unplanned activities is derived from a national historic baseline over a predetermined period. Unimplemented planned activities would use a baseline set according to the carbon stock existing at the start of the REDD commitment.

Indonesia, like CfRN, defines three distinct phases of activity which would require three separate financial resources. Readiness activities would leverage ODA through bilateral and/or multilateral channels. A transition phase would use both ODA and voluntary based funding mechanisms and transition to a pre-2012 market. A post 2012 agreement would use a basket approach including domestic, regional or international emissions markets, accompanied by deeper targets for Annex I Parties.

JAPAN

SCOPE REFERENCE LEVEL DISTRIBUTION FINANCING

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4, Unpublished Material

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
August 2008

SUMMARY

Japan recognizes it is important to reduce and furthermore reverse the loss of worldwide forest coverage through SFM, including protection, restoration, afforestation and reforestation, and increased efforts to prevent forest degradation. Due to the varied and essential functions of forests, policies and measures to address deforestation and degradation should focus on not only carbon flux but also promotion of SFM and conservation of biodiversity.

The reference level would be set based on historical change of forest resources. More specifically it would be established by monitoring present forest resources making use of both satellite images and ground researches in forests against an assessment of forest resources in the past with previous satellite images and/or forest inventory. In countries where the rate of deforestation and degradation is low but is foreseen to rise, future socioeconomic trends could also be reflected when setting the reference level.

MALAYSIA

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2

Date
February 2007

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

SUMMARY

Malaysia believes that policy approaches for REDD should be based on both measures taken as well as opportunity costs foregone. Developing countries that have retained large tracts of natural forests will be under greater pressure to convert forest to other land uses and incentives for these countries should be maximized to ensure that the remaining forest is not deforested. Both total protection and SFM practices should be considered as positive practices to avoid deforestation.

Malaysia believes that new and additional funds will have to be set aside for developing countries to assist in building technical and institutional capacity to implement effective measures for REDD. Positive incentives should be voluntary, flexible, and offer a range of incentives that would be applicable to the wide variety of forestry environments, management regimes and socio-economic and development conditions of developing countries.

Malaysia is concerned that countries anticipating a mechanism which rewards reductions in emissions over a historical baseline will give rise to a perverse incentive to increase timber harvests in the years prior to the onset of the first commitment period. Malaysia can see the advantages of a national based approach for the REDD mechanism as it would simplify reporting and validation. Project-based approaches, however, should also be considered.

MEXICO

*UNFCCC Document Code**
FCCC/SBSTA/2007/MISC.2, FCCC/SBSTA/2008/MISC.4/Add.3, Unpublished Material

Date
August 2008

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

SUMMARY

In order to increase the cost-effectiveness of REDD activities, it will be fundamental to account for their participation in the carbon market. Mexico considers that discussions on how to appropriately integrate REDD activities within this market should be conducted in the context of the Second Review of the Kyoto Protocol. Funds will play a critical role for activities such as capacity building, conservation and SFM, which need non-return funds in order to be deployed.

Reference emissions levels, at all scales of implementation, should be based on historical data on GHG emissions and should take into account national circumstances. Mexico strongly encourages a national accounting system to facilitate reporting and to avoid double-counting of emission reductions or removals. The implementation of activities at the national or sub-national level will be determined by each country on a voluntary basis, as their sovereign right, taking into account their specific national circumstances and requirements. Sub-national approaches for some countries, however, might constitute a step towards the development of national approaches.

NEW ZEALAND

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.2, Unpublished Material

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
August 2008

SUMMARY

Any REDD mechanism must provide developing countries with adequate financial resources to compensate them for the economic benefits they forgo by reducing deforestation and degradation.

To provide the primary financial resources to address REDD, a market-based approach is likely to be more durable and economically efficient than a fund-based approach. Both approaches, however, have their benefits and drawbacks and New Zealand is open to exploring both options.

A national-based mechanism (be it market-or fund-based) is likely to be significantly superior to a project-based mechanism, primarily because it is better at addressing intra-country leakage. Some form of fund-based approach may be appropriate as an initial step to aid countries' development of a national-level approach, even if a market-based approach at the national level is ultimately agreed as the primary funding mechanism.

Any mechanism should have maximum potential for global coverage, as this is the best way to address issues of international leakage. The mechanism should not apply arbitrary adjustments to financial incentives to 'correct' for possible international leakage.

NORWAY

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, Unpublished Material

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

Date
September 2007

SUMMARY

Norway believes that REDD should be additional to, and not a substitute for, deep cuts in developed countries' emissions. As well as promoting reductions in emissions a REDD mechanism should promote SFM, contribute to the protection of biodiversity and secure the rights and involvement of local communities and indigenous peoples.

Norway believes in principle that reference levels should be based on historical emission data, but recognises that for many countries with low rates of deforestation and degradation such historical rates would not give a sufficiently strong incentive. A future REDD regime should operate at the national level in order to reduce tahe risk of within country leakage. Transitional solutions may be needed to help countries in developing national approaches. Such transitional solutions must address the risk of intra-national leakage, by for example limiting credits from sub-national REDD activities to fund-based approaches, without an offset mechanism.

Norway believes a combination of market- and fund-based mechanisms is needed. Markets could be useful in mobilizing resources from the private sector, but could be less effective for countries with low rates of deforestation. Further, a market based mechanism would not be relevant for capacity-building. On the other hand, a fund that solely relies on aid donations would not necessarily be sustainable in the long run.

Norway has proposed more recently that an auctioning of emissions allowances at the international level could be used as a source of finance for REDD. A 2% levy on AAUs could generate an income between $15 and 25 billion per year.

PARAGUAY*

*UNFCCC Document Code**
FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4

Date
April 2007

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

SUMMARY

This proposal uses the "Nested Approach" proposed by CATIE, summarised under non-governmental proposals on page 53.

* on Behalf of Argentina, Honduras, Mexico, Panama and Peru

TUVALU

*UNFCCC Document Code**
FCCC/SBSTA/2007/MISC.2/Add.1, FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2007/MISC.14/Add.3

Date
November 2007

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

SUMMARY

Tuvalu suggests, firstly, that for the purpose of REDD discussions appropriate definitions of deforestation and degradation need to be developed that minimise potential perverse outcomes. Conservation of existing carbon stocks should be explored outside the REDD mechanism as there are no emissions being traded.

Tuvalu highlights three market approaches for REDD, but demonstrates that there are inherent complications with these approaches which need to be properly addressed before decisions can be made to adopt these mechanisms. These include the risk of leakage with project-level baselines, flooding of carbon markets, and measurement difficulties. Tuvalu suggest as possible solutions to these issues: the use of a national baseline for leakage, dual markets, increased Annex I targets, or discounted REDD credits to avoid market devaluation, and wide availability of remote sensing and ground sensing methodologies in developing countries to allow consistent measuring. Tuvalu also proposes that non-market sources of funding should also be explored and could be used to support capacity building and early action on REDD.

USA

*UNFCCC Document Code**
FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.14, FCCC/SBSTA/2008/MISC.4

Date
March 2008

* UNFCCC document codes can be searched on the UNFCCC website at: http://unfccc.int/documentation/documents/advanced_search/items/3594.php using the "Document Symbol or Call Number" text field

SUMMARY

The United States is of the view that efforts to mitigate deforestation should occur in the broader context of sustainable forest management and sustainable development. While deforestation is a major source of emissions, emissions also occur from land degradation and opportunities to increase carbon storage on managed lands are consistent with broader sustainable forest management objectives. The United States has supported increasing the priority of conserving forests and reducing emissions from deforestation in relevant existing bodies.

Both national and project-level activities have strengths and weaknesses and need further exploration. Project-based approaches are useful for targeting specific concerns and ensuring that there is a causal link between an action and a response. Displacement of emissions, or leakage, is a key methodological issue associated with REDD at the project/sub-national scale, but can also occur with national level accounting. National approaches are broader in scope and can capture shifts of emissions within a country's borders. It is more difficult, however, with national approaches to measure the impacts of policy changes in national emission trends. Both national and project-based approaches for this work program should be consistent with the IPCC Good Practice Guidance for LULUCF.

Definitional issues should be examined as part of the technical work program; a clear definition or set of definitions for forest degradation within the REDD context are particularly necessary.

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NON-GOVERNMENTAL PROPOSALS

CLIMATE ACTION NETWORK (CAN)

Website
www.climatenetwork.org

Date
February 2008

SUMMARY
The proposal developed by CAN suggests auctioning all or part of the Annex I Assigned Amount Units (AAUs), which are currently allocated for free, to generate funds for REDD activities. There are a range of options that should be explored in this field including:

- On the international level, AAUs would not be allocated for free to countries, but rather would be determined by a central auction under an agreed, and tight, overall cap. Part of the revenues generated would be put in a separate global fund in support of adaptation, technology and REDD

- On the international level, *part* of the Assigned Amount would not be allocated for free to countries but rather taken out and put in a separate global fund to be monetized and allocated to adaptation, technology and REDD

- On the *national* level, permits would be auctioned and part of that revenue would be placed in a national fund coordinated with other national funds or an international fund for adaptation, technology and REDD

Auctioning could be a significant funding source. For example, assuming a price of $30 to $40/tonne, each one percent of Annex I AAUs set aside would generate $3.75bn/year.

TROPICAL AGRICULTURAL RESEARCH AND HIGHER EDUCATION CENTER (CATIE)

"NESTED APPROACH"

Authors
Lucio Pedroni, Michael Dutschke, Manuel Estrada Porrua, Axel Michaelowa, Andrea García Guerrero, and Walter Oyhantçabal

Website
www.catie.ac.cr

Date
October 2008

SUMMARY
The "Nested Approach" proposed by CATIE and the German Emissions Trading Association BVEK aims to address project-level investment risk within national-level accounting mechanisms. Under a national-level crediting system, individual projects, which generate real emissions reductions below an approved baseline methodology, would not be credited unless the overall country emissions reductions were below the national baseline.

To address this outcome, the Nested Approach uses an accounting mechanism at both the national- and project-level. Countries with emissions below a negotiated target would receive credits that can then be redistributed to local actors. Sub-national entities are also direct recipients of credits, regardless of national performance, thus creating a direct opportunity for private sector investment.

After its initial release the Nested Approach has since been supported by a number of organizations and Latin American countries (see Chile, and Paraguay on behalf of Argentina, Honduras, Mexico, Panama and Peru).

CENTER FOR CLEAN AIR POLICY (CCAP)

"DUAL MARKETS APPROACH"

Authors
Matthew Ogonowski, Ned Helme, Diana Movius, Jake Schmidt

Website
www.ccap.org

Date
August 2007

SUMMARY
The so-called "dual markets approach" developed by the Center for Clean Air Policy (CCAP) proposes the creation of a new carbon market that would be separate from the post-2012 carbon market and would trade solely in REDD credits. Emissions reductions within this market could be used by Annex I Parties to achieve national targets but credits would not be fungible between the two markets.

The rationale behind creating an independent market is to separate the impacts and risks of integrating a REDD market with the post-2012 regime. Concerns exist that development of a single market would risk flooding with an excess supply of REDD units and raise concerns related to volatility and permanence, leading to disruptions in the post-2012 carbon market. The dual markets approach allows time for a REDD program to develop before any market linking.

The COP would decide the maximum amount of credits derived from REDD activities that could be used to meet national targets. Annex I Parties would specify at the outset how many, and from which developing countries, offsets will be purchased, thereby providing a minimum level of demand for REDD.

CENTRE FOR INTERNATIONAL SUSTAINABLE DEVELOPMENT LAW (CISDL)

"CARBON STOCK APPROACH"

Authors
Steve Prior, Charlotte Streck, Robert O'Sullivan

Website
www.cisdl.org

Date
February 2007

SUMMARY
The "carbon stock approach" aims to overcome a number of difficulties associated with proposals that rely on a national baseline that requires central oversight and coordination to establish emissions reductions.

CISDL and GPPI highlight three issues with baseline methodologies and traditional government to government cooperation: Weak and poorly enforced forest administration, failure to capture private sector investment; and failure to generate ex-ante financial incentives. To address these concerns Prior et al. propose a Carbon Stock Mechanism that awards ex-ante allowances based on the carbon stock of a country. A reserve of protected stock is established over part of the national forest area and projects that commit to permanently protecting threatened stock outside of the reserve receive further tradable credits. Credits are issued over time to create incentives for long-term protection. The area of reserved forest is calculated using a future projected baseline that estimates the expected forest cover at a negotiable future date in the future.

CENTRE FOR SOCIAL AND ECONOMIC RESEARCH ON THE GLOBAL ENVIRONMENT (CSERGE)

"COMBINED INCENTIVES 1"

Authors
Bernardo Strassburg, Kerry Turner, Brendan Fisher, Roberto Schaeffer, Andrew Lovett

Website
www.uea.ac.uk/env/cserge/

Date
January 2008

SUMMARY
The proposal by CSERGE offers a compensation mechanism with "combined incentives" to reduce emissions in developing countries. Strassburg et al. highlight two issues with existing mechanisms. Firstly, project- or national-level mechanisms have been unsuccessful in the past due to national or international leakage respectively. Secondly, additional incentives should be provided to countries that have been conserving their forests in the recent past (quadrant IV countries from Table 1).

To address these issues, CSERGE propose that credits should be generated relative to a global baseline, thus eliminating international leakage. Secondly, credits should be distributed based on individual country performance against both past emissions and a global average emissions rate. These "combined incentives" allow funds to be allocated to both previously high emitters and countries with currently low deforestation rates. The proportion of funds going to each of these activities is adjustable and could be decided by the COP.

ENVIRONMENTAL DEFENSE FUND (EDF)

"COMPENSATED REDUCTIONS"

Authors
Marcio Santilli, Paulo Moutinho, Stephan Schwartzman, Daniel Nepstad, Lisa Curran, Carlos Nobre

Website
www.edf.org

Date
December 2006

SUMMARY
The "compensated reductions" approach by EDF and the Amazon Institute for Environmental Research (IPAM) is one of the earlier proposals to address reducing emissions from deforestation and is intended as a broad vision for the purpose of stimulating debate. In that sense, it should be viewed as more of an umbrella category rather than as a detailed proposal for negotiations. Santilli et al. use a simple concept: any (non-Annex I) country that reduces national deforestation levels below a predetermined baseline would be eligible for compensation through a global carbon market.

Emissions reductions would be relative to a historical average level of deforestation, although reference levels could be tailored to different national circumstances; for example, HFLD countries could receive credits if reference levels were set above their recent level of deforestation. Santilli et al. also suggest revising reference levels downward over time to achieve zero deforestation.

Compensation would be allocated ex-post, and would be measured using a combination of remote sensing, ground surveys and/or forest inventories. The mechanism would also operate at the national level to avoid within country leakage, and to assure additionality, and permanence.

GREENPEACE

"TDERM"

Authors
Bill Hare, Kirsten Macey

Website
www.greenpeace.org

Date
December 2007

SUMMARY
The Tropical Deforestation Emissions Reduction Mechanism (TDERM) is a hybrid market-linked fund that aims to overcome several fundamental issues inherent in REDD mechanisms. Hare and Macey highlight technical issues including scale effects, leakage, and other methodological uncertainties, as well as market instability and social and biodiversity concerns.

The proposed fund would trade Tropical Deforestation Emission Reduction Units (TDERUs) that would not be fungible with the current CDM market. The price of TDERUs could be set either by auctioning or by setting a price linked to the price of Kyoto units. Annex I Parties would be required to meet a fixed part of their national targets using TDERUs. To minimise scale effects this volume would fall between an upper and lower percentage of total emissions.

The fund would be part of a post 2012 agreement and would be responsible for meeting both climate and biodiversity objectives. Greenpeace advocate modalities and procedures for allocating funds that would ensure equity, effectiveness and a broad range of participation.

HUMANE SOCIETY INTERNATIONAL (HSI)

"CARBON STORES APPROACH"

Authors
Alistair Graham, Rod Holesgrove, Nicola Beynon

Website
www.hsi.org.au

Date
August 2008

SUMMARY
HSI propose a single framework for terrestrial carbon stores and AFOLU that merges LULUCF with the proposed REDD framework. To that end, Graham et al. recommend a flexible "carbon stores approach" that rewards developing countries with both high and low historical deforestation rates for maintaining and maximising their carbon stocks based on the extent to which land is maintained at, degraded below or restored to its natural carbon carrying capacity.

To avoid perverse outcomes, such as the clearing of primary natural forests to create short rotation fuel and fibre crops, Graham et al. state that any post-2012 agreement must adopt appropriate definitions and associated accounting and reporting protocols for forests, deforestation and forest degradation.

Funds for the new mechanism would be generated through two streams. HSI supports the inclusion of a REDD market mechanism in the UNFCCC post 2012 agreement, but also strongly encourage governments and other agencies to maintain and substantially increase funding independent to markets for the protection of carbon stores and biodiversity.

INSTITUTE FOR SUSTAINABLE DEVELOPMENT AND INTERNATIONAL RELATIONS (IDDRI)

"COMPENSATED SUCCESSFUL EFFORTS"

Authors
P. Combes Motel, R. Pirad, J.-L. Combes

Website
www.cerdi.org

Date
June 2008

SUMMARY
The "compensated successful efforts" methodology put forward by IDDRI and the Centre d'Études et de Recherches sur le Développement International (CERDI) aims to bypass methodological issues of baseline estimation used by other proposals.

The authors highlight thematic issues in calculating emissions reductions that rely on an ex-ante estimation or negotiation of a counterfactual value. They suggest that any such methodology could result in the generation of "fake" credits and misallocation of financial resources that would ultimately undermine the efficiency of any future REDD mechanism.

The proposal instead suggests that REDD funds support a country's domestic policies and measures to avoid deforestation (called "successful efforts"). To identify the effectiveness of these efforts the authors use an econometric model that explicitly takes into account ex-post structural drivers of deforestation, thereby using their real values during the crediting period. Any effects which are not a result of structural drivers are assumed to be a result of domestic action and if positive can be used as criteria to help with further financing decisions.

INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS (IIASA)

"AVOIDING REDD HOT AIR"

Authors
Michael Obersteiner, et al.

Website
www.iiasa.ac.at

Date
October 2008

SUMMARY
The proposal by IIASA aims to address two key requirements of any potential REDD mechanism; firstly the generation of measurable, reportable and verifiable (MRV) REDD credits, and secondly the provision of sustainable emissions reductions.

To ensure MRV credits, IIASA advocate the establishment of an International Emission Reference Scenario Coordination Centre (IERSCC). The IERSCC would act as a global clearing house for harmonized data used in reference scenario modelling. It would be tasked with the collection, reporting and subsequent processing of earth observation, and deforestation and degradation driver information in a globally consistent manner. The IERSCC would also coordinate reference emission scenarios of individual countries against which "real" REDD efforts can be measured.

To maximise ecosystem services co-benefits, Obersteiner et al. use a Dutch tender auction of REDD credits. The auction can be implemented in one of two ways: either maximizing the ecosystem value per REDD unit or the GHG mitigation per fungible Annex I emission reduction unit.

JOINT RESEARCH CENTRE (JRC)

"INCENTIVE ACCOUNTING"

Authors
Danilo Mollicone et al.

Website
www.jrc.it

Date
March 2006

SUMMARY
The JRC propose a new accounting mechanism for REDD that awards both reducing deforestation in countries with high forest conversion rates, and maintaining low forest conversion rates in the other countries. Mollicone et al. point out that if a hypothetical remuneration mechanism is based solely on national baselines, those countries with low forest conversion rates will see little or no benefit in making further reductions.

Baselines under the mechanism are established using an average over an historical reference period between two negotiable dates. To avoid intra-national leakage Mollicone et al. state that any baseline should be at the country level.

The generation of credits is determined through a country's historical conversion rate relative to the global average. Mollicone et al. propose that countries with emissions less than half of a global average baseline are rewarded for maintaining their carbon stock and countries with emissions higher than average are rewarded for reducing emissions from forest conversion.

TERRESTRIAL CARBON GROUP (TCG)

Authors
Ralph Ashton et al.

Website
www.terrestrialcarbon.org

Date
July 2008

SUMMARY
The TCG demonstrate that all types of terrestrial carbon are essential in combating climate change and should therefore be included in any future climate change response. Initially this would include peatlands, forest and lands that can become secondary forest; other areas could be phased in as the science develops.

Under the proposal, developing countries would be allocated a "national terrestrial carbon budget" which they can emit over a fixed period (say 50 years) into the future. The national budget would be defined as any terrestrial carbon that was not protected terrestrial carbon on a predetermined date; "protected" refers to carbon currently protected by law, or not likely to be emitted over the fixed period because of economic or biophysical constraints. The system therefore applies to developing nations with different historical and current terrestrial carbon circumstances

Credits would be allocated under the proposed system for emitting less than the national budget, and/or the creation of any new protected terrestrial carbon, thereby safeguarding against permanence. Revenue could be generated from a variety of market or fund-based mechanisms. The system rests on national terrestrial carbon accounting and monitoring, but allows national- and sub-national-level activities and participation by the private sector and civil society.

THE WOODS HOLE RESEARCH CENTER (WHRC)

"STOCK-FLOW APPROACH"

Authors
Andrea Cattaneo

Website
www.whrc.org

Date
August 2008

SUMMARY
The "stock-flow" approach by WHRC proposes a new allocation mechanism to address concerns in existing proposals. Cattaneo builds on the "compensated reduction" approach in a way that avoids the implicit penalty imposed on countries with a historically low rate of deforestation, and proposes an approach that is along the lines of the "combined incentive" approach, but with a stronger underlying economic rationale.

To distribute funds, the stock-flow approach uses an analogy between forest carbon and financial assets, paying for avoided depreciation of the carbon stock (REDD) and providing dividends for stock as an incentive to avoid leakage. The global revenue is calculated from the overall emission reductions - paid by Annex I countries (demand) - at the market price for REDD credits. The global revenue is distributed - to REDD providers in non-Annex I countries (supply) - according to a negotiated price to be paid for national emission reductions. The funds arising from the price difference are distributed as a dividend per ton of standing carbon stock.

A low price for suppliers of emissions reductions activities will therefore mean a higher dividend price for carbon stock and vice versa. Similarly higher prices of demand will lead to higher prices received for both maintaining carbon stock and reducing emissions.

HOW DO THEY COMPARE?

SCOPE:
What the proposals include

This diagram shows the proposed scope of the various governmental and non-governmental proposals.

Proposals have either chosen to include emissions from deforestation (RED), deforestation and degradation (REDD), or deforestation, degradation and enhancement (REDD+).

Proposals have been grouped into non-governmental, developed and developing country proposals.

S
R D F

Deforestation (RED)

CERDI		BRAZIL
EDF		
GREENPEACE		

Deforestation and Degradation (REDD)

CATIE*	AUSTRALIA	CfRN
CCAP	CANADA	CHILE
CISDL	EU	COLOMBIA
CSERGE I	JAPAN	INDONESIA
CSERGE II	NEW ZEALAND	MEXICO
IIASA	NORWAY	MALAYSIA
JRC		PARAGUAY
WHRC		

Deforestation, Degradation and Enhancement (REDD+)

TCG	USA	COMIFAC
		INDIA

*Chile and Paraguay have not been shown here as they essentially use the nested approach proposed by CATIE.

Non-governmental proposals | Developed countries | Developing countries

SCOPE: Conclusions

There is an overwhelming consensus that a future mechanism for REDD should include both deforestation and forest degradation. A minority of proposals explicitly emphasise that carbon enhancement activities should be considered of equal importance as reduced emissions.

Although deforestation and degradation are the immediate priorities, there is widespread recognition that a future REDD mechanism could have a staggered approach, that phases in degradation and/or enhancement activities at later stages.

The rationale behind this approach is mainly practical for reasons including: the political feasibility of negotiations under the UNFCCC with a simpler scope; and the need for developing countries to build capacity in carbon accounting practices.

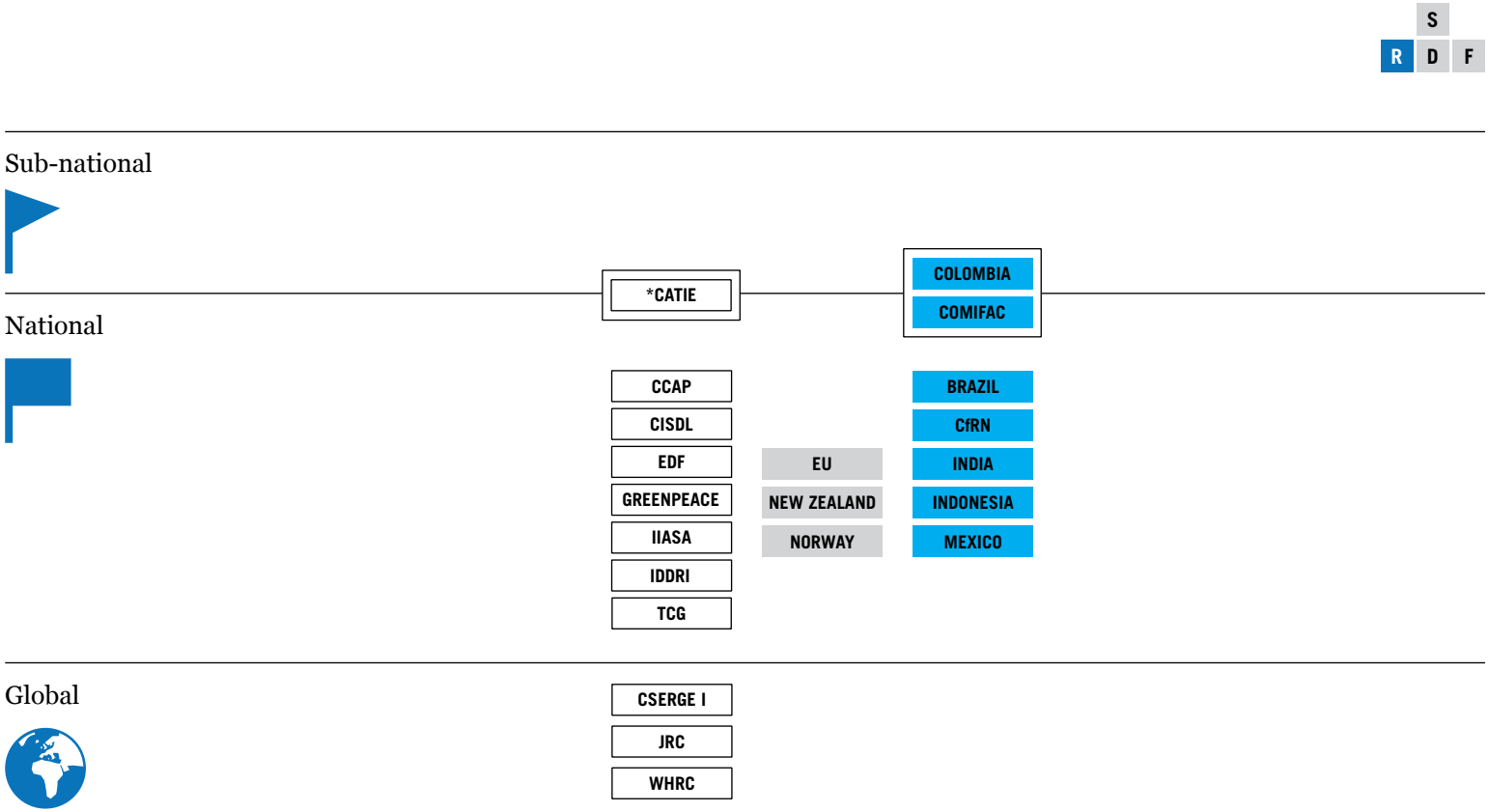
There is agreement that only developing countries can participate in REDD, and participation should be on a voluntary basis only.

Most proposals make no reference to the carbon pools that might be included under REDD.

REFERENCE LEVEL:
The scale of reference levels

The diagram opposite shows whether proposals specify a reference level at the sub-national, national or global scale.

Some proposals use multiple reference levels and are shown here on the line between two options.



IIASA and USA do not specify a scale for the reference level.

*Chile and Paraguay have not been shown here as they essentially use the nested approach proposed by CATIE.

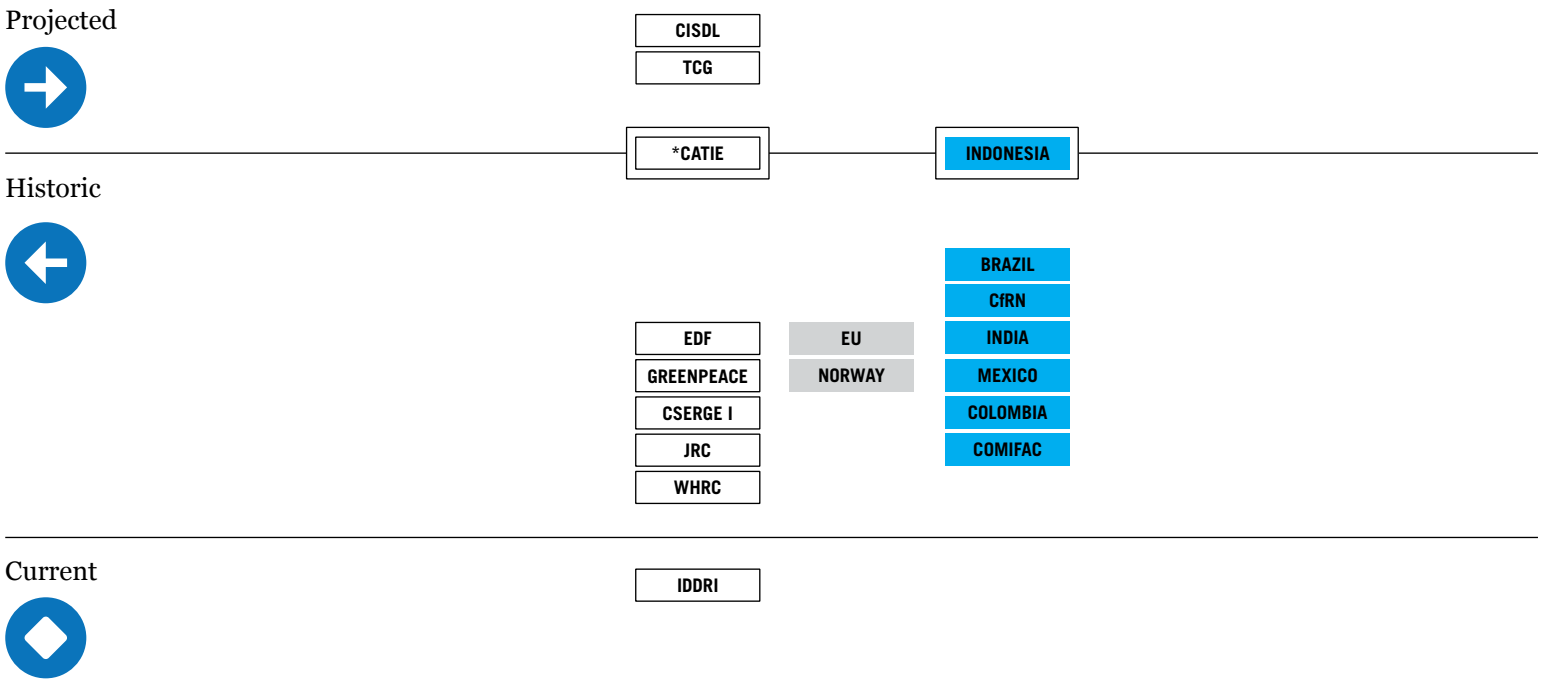
Non-governmental proposals | Developed countries | Developing countries

REFERENCE LEVEL: The reference period chosen by proposals

The following diagram shows the choice of reference period specified by the proposals.

Proposals specify either a projected, historic or current reference level.

The proposals by CATIE and Indonesia use two reference periods and are therefore located on the line between two reference periods.



IIASA, USA, Australia, CCAP and New Zealand do not specify a reference period in their proposals.

* CATIE uses two reference periods and is therefore located on the line between two reference periods.

Non-governmental proposals | Developed countries | Developing countries

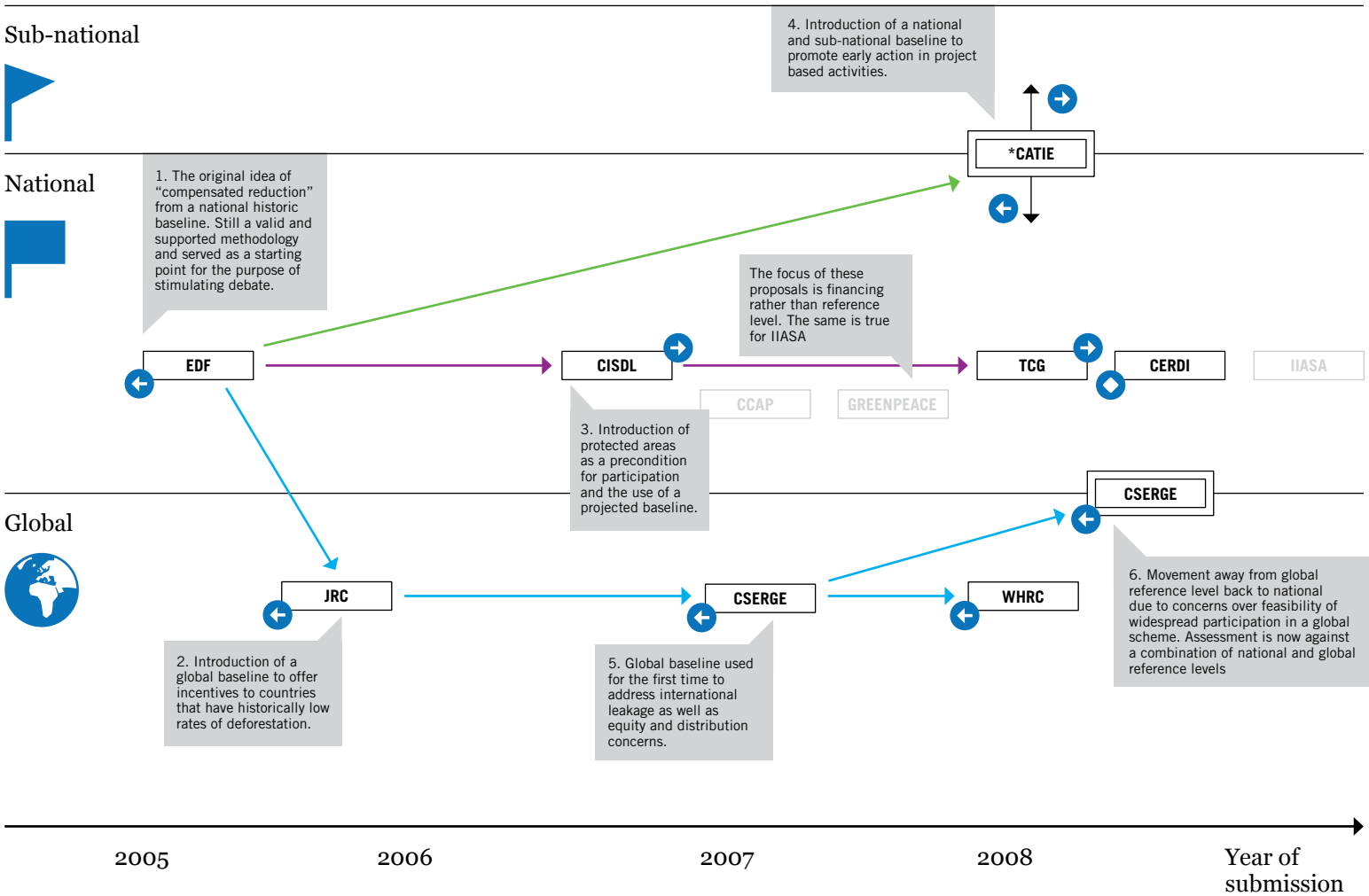
REFERENCE LEVEL: Evolution of thinking from 2005 – 2008

The following diagram shows the evolution of the reference level methodology specified in non-governmental proposals.

Some key milestones in the development of ideas have been highlighted.

Proposals that use two scales, i.e. both a sub-national and national reference level, are located on the line dividing two groups.

The coloured arrows denote the evolution of different lines of thinking.



*Chile and Paraguay have not been shown here as they essentially use the nested approach proposed by CATIE.

Non-governmental proposals | Developed countries | Developing countries | Projected | Current | Historic

REFERENCE LEVEL: Conclusions

Scale
There is a strong consensus that reference levels should be at the national scale. With only a few proposals supporting sub-national or global reference levels.

Sub-national reference levels are used for several reasons:

- to allow developing countries who do not have the capacity to create national carbon accounting mechanisms to participate at some level in REDD (COMIFAC, Colombia, Malaysia);

- to provide an incentive for both project level and national level activities, as proposed in the "nested approach" (CATIE, Chile, Paraguay);

- as a transitional mechanism in which a country may start with a sub-national reference level, and move to a national reference level in the long term (EU, Norway, New Zealand, Mexico).

Global reference levels have been proposed to address concerns over international leakage (CSERGE, WHRC) and to allow for a distribution of benefits to historically low deforesting countries (JRC, CSERGE, WHRC).

Reference Period
There is a clear preference for national and global proposals to use reference levels based on historic emissions, whereas sub-national approaches may be better suited to a projected reference level, as proposed by CATIE.

In the end though, there may be little difference between the use of historic or projected reference levels; many of the proposals that use an historic reference period argue for the incorporation of a 'development adjustment factor' or something similar (Canada, CfRN, COMIFAC, Costa Rica, EU, Japan, Mexico, EDF), which effectively creates a projected reference level.

IDDRI is a unique case in this picture; instead of using either a projected or an historic baseline proposes to establish efforts by analysing the current causes of deforestation given national socioeconomic circumstances.

CATIE is an interesting proposal as it specifies a projected, forward-looking baseline for sub-national activities (in line with current CDM A/R methodologies), but uses a historic baseline for national-level activities (in line with the majority of proposals).

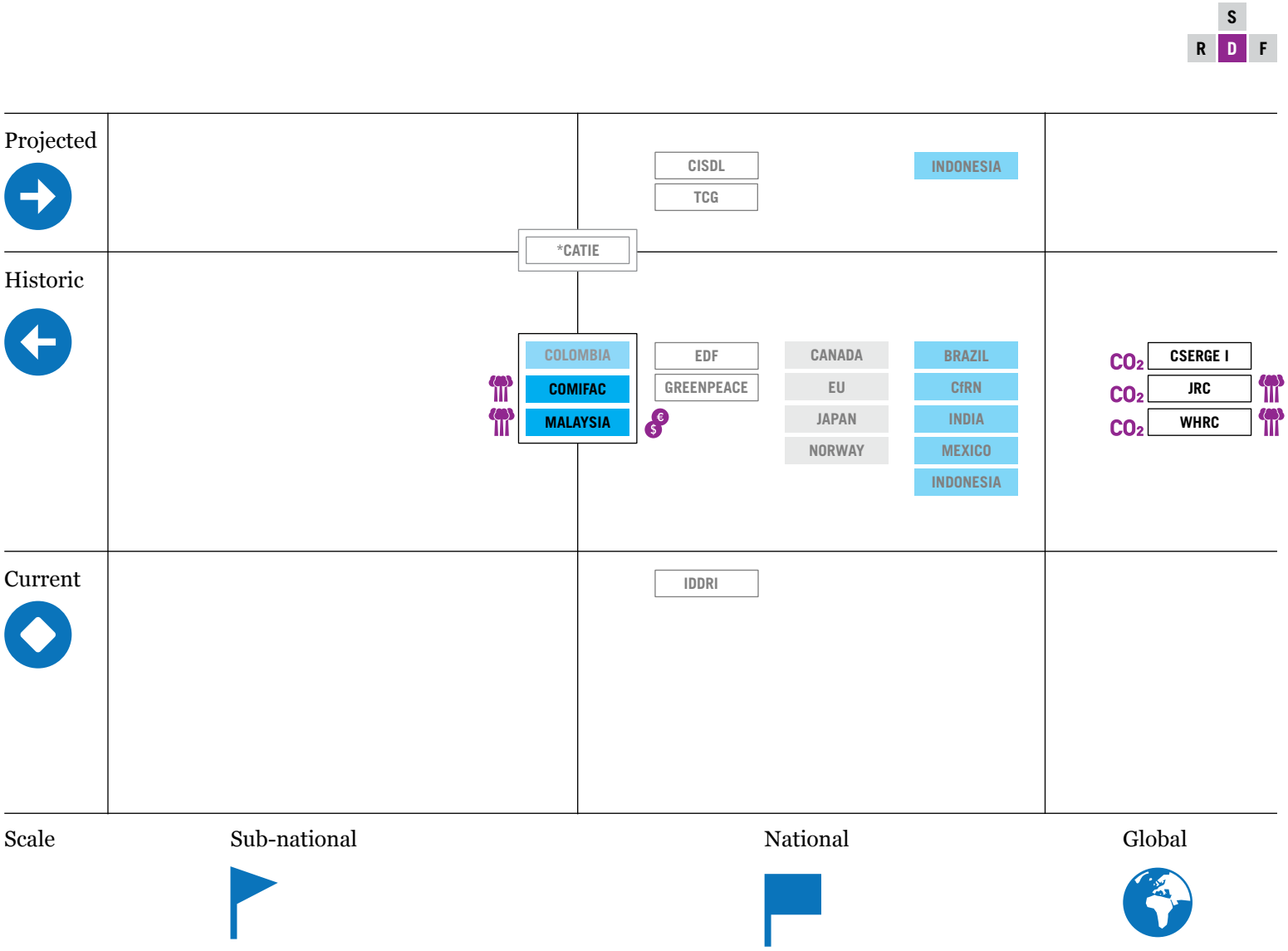
Indonesia also uses dual baselines; these are not, however, according to scale and both operate at the national level. National historic rates are proposed for unplanned emissions and a national projected rate for planned activities.

DISTRIBUTION: Proposals with explicit distribution mechanisms

The diagram opposite shows the proposals that explicitly define a distribution mechanism.

The proposals that are represented here in transparent boxes have *distributional implications* but do not specify an actual *distribution mechanism*. These proposals all award benefits directly in proportion to generated emissions reductions.

Proposals that have solid boxes specify an *explicit distribution mechanism*. These proposals all allocate a proportion of benefits to countries other than those directly generating emissions reductions. The small icon in the corners of these proposals denotes which assets are rewarded under these mechanisms.



*Chile and Paraguay have not been shown here as they essentially use the nested approach proposed by CATIE.

Non-governmental proposals | Developed countries | Developing countries | CO_2 Emissions | Stock | Oportunity Costs

DISTRIBUTION: Conclusions

Generally, distribution implications are simply implicit in the reference level methodology. Most countries don't suggest any further redistribution of benefits (and New Zealand is strongly against it).

The implication of implicit distribution mechanisms (or lack thereof) is that the majority of proposals reward historically high emitters and exclude low.

Some proposals (including CfRN) make reference to the possibility of allocating notional reference levels (incorporating a development adjustment factor) to low emitting countries, which would in effect redistribute funds to these countries. It seems that Parties are increasingly open to this option.

Three proposals explicitly specify a distribution mechanism to redistribute funds to countries that would otherwise not benefit (CSERGE, JRC and WHRC). All three proposals use a global historic baseline to calculate emissions reductions and then use a variety of mechanisms to allocate a proportion of benefits to countries other than those generating emissions reductions.

COMIFAC proposes a stabilisation fund to support countries with low rates of deforestation that could be partly derived from a share of proceeds from REDD credits.

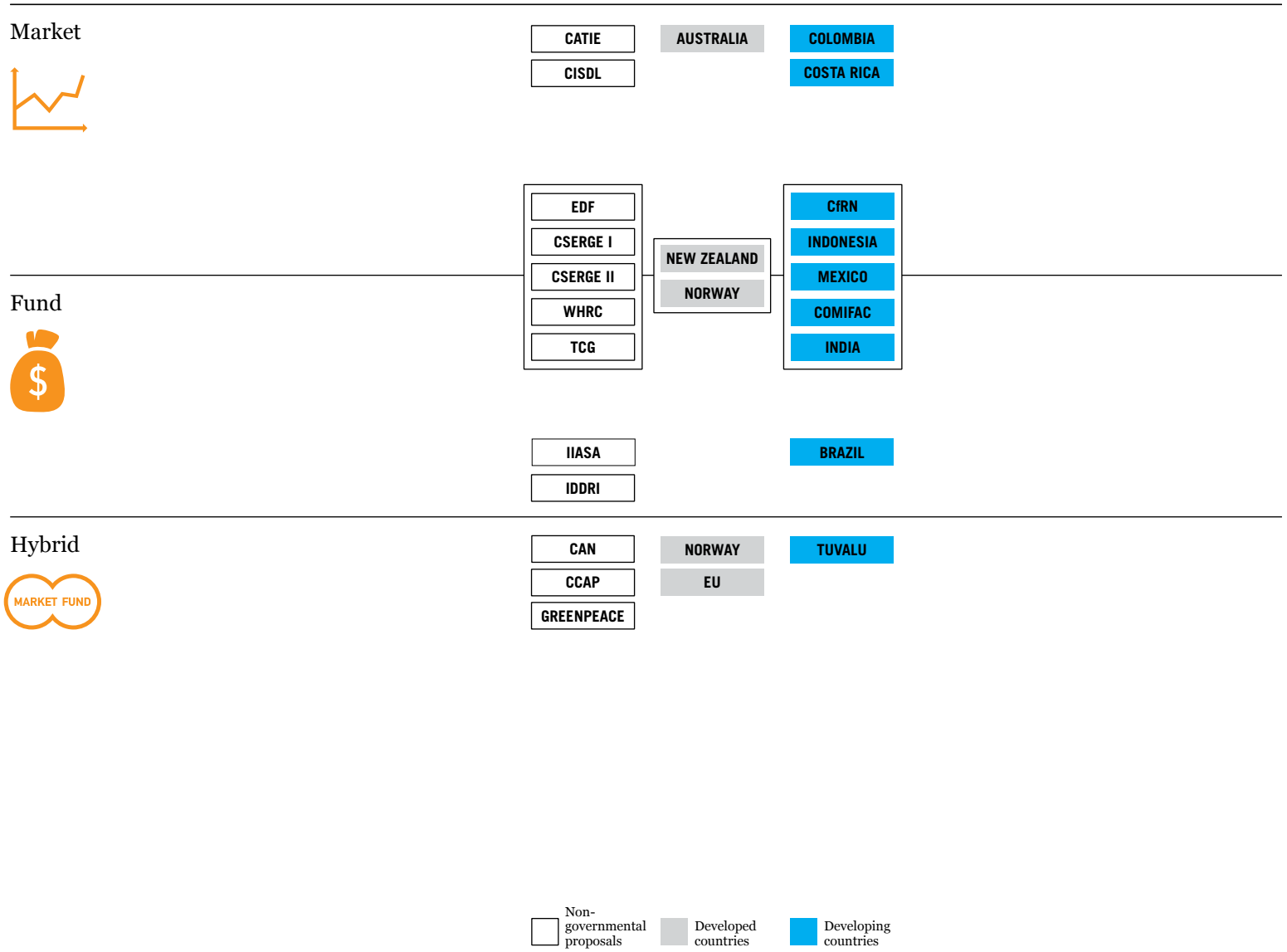
Malaysia believes that policy approaches for REDD should be based on both measures taken as well as opportunity costs foregone.

FINANCING: The choice of financial mechanism of the proposals

The diagram opposite shows whether proposals choose to use a market, fund or hybrid/market linked mechanism to finance REDD activities.

Proposals that use two financial mechanisms are located on the line dividing two groups.

Norway is represented in three areas at it proposes three financing vehicles.



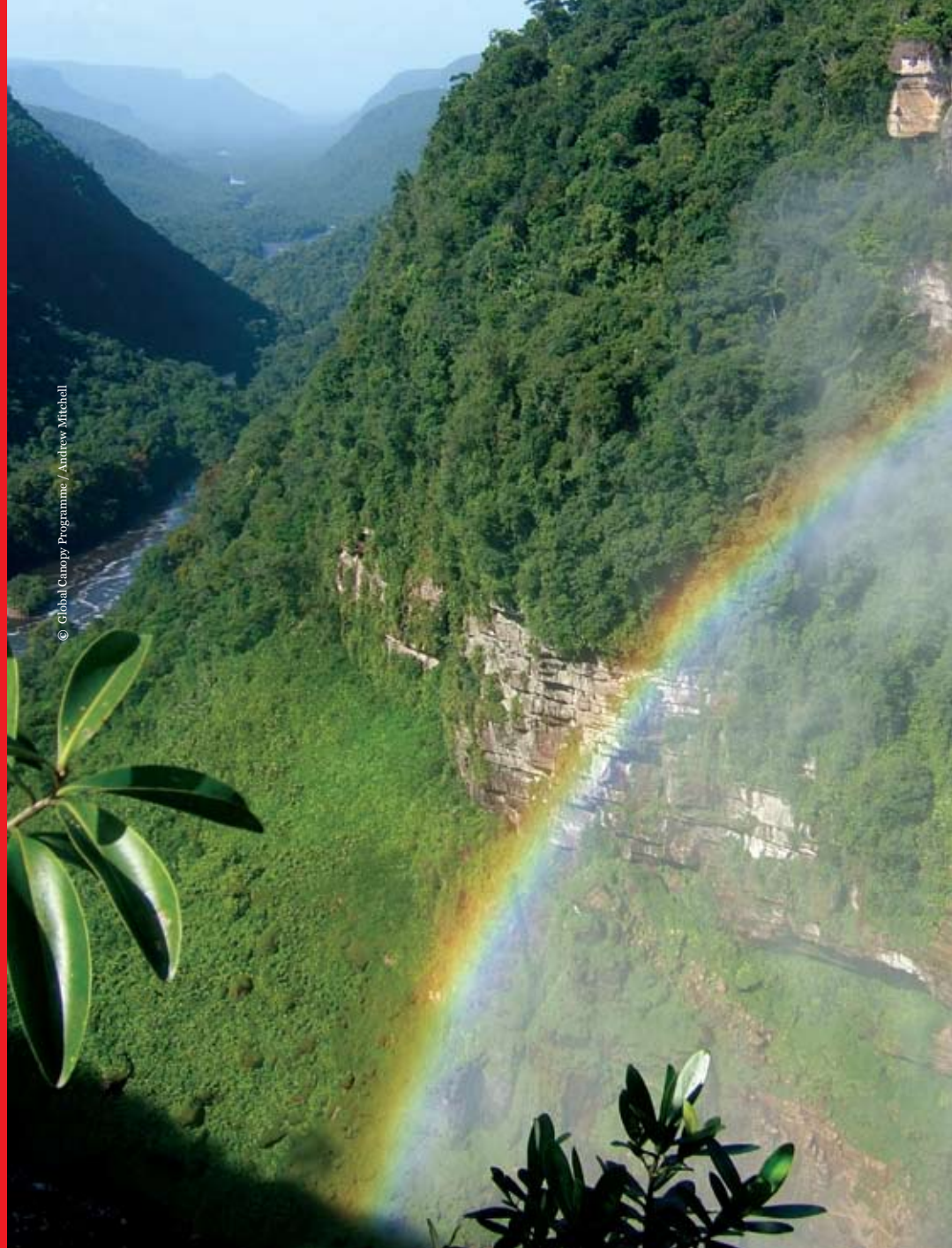
FINANCING: Conclusions

Many proposals support both a fund and a market mechanism for different types of activity.

- Funds are considered to be more appropriate for capacity building and pilot activities.
- Funds are also proposed for the conservation of standing forests.
- Markets are often recognised as providing more consistent and greater funding potential in the long term.

Several countries explicitly refer to a Basket of Approaches (CfRN, COMIFAC, Indonesia) that focuses on combining different sources of financing for different aspects of REDD on appropriate timescales. This idea is discussed further on page 92).

Some proposals explicitly state that sub-national entities will be authorised to engage directly with financing systems, however the majority give no indication who the principle agents are, nor how money is transferred.



WHERE DO WE GO FROM HERE?

COLLABORATIVE MODELLING INITIATIVE ON REDD ECONOMICS

Terrestrial Carbon Group, University of East Anglia, Conservation International, Environmental Defense Fund, and Woods Hole Research Center

The "Collaborative Modelling Initiative on REDD Economics" aims to provide relevant economic information to support UNFCCC negotiations on REDD. The Initiative will build an open source data set and model to evaluate the carbon emission and financial implications of alternative approaches to providing positive economic incentives for REDD, ensuring comparability of results.

Participating organizations include the Terrestrial Carbon Group, Conservation International, Environmental Defense Fund, University of East Anglia, and Woods Hole Research Center, with input from the International Institute for Applied Systems Analysis and the Prince's Rainforests Project.

This group will initially evaluate five proposals from the participating organizations. Preliminary results will be available by the UNFCCC COP in Poznan in December 2008, with further results available by March 2009. The data and model will also be available to those interested in modelling and understanding the likely impacts of various proposals.

Results will compare and contrast the findings of different approaches with respect to the following factors:

(a) The maximum volume of carbon emissions that could be rewarded under each proposal (overall and on a country-by-country basis); and,

(b) The likely volume of carbon emission reductions, forests conserved, revenues generated, and international leakage at given carbon prices based on assumptions and dynamic modelling (overall and on a country-by-country basis).

Figure 6. Forest area conserved by REDD incentives (don't forget With and without REDD incentives)

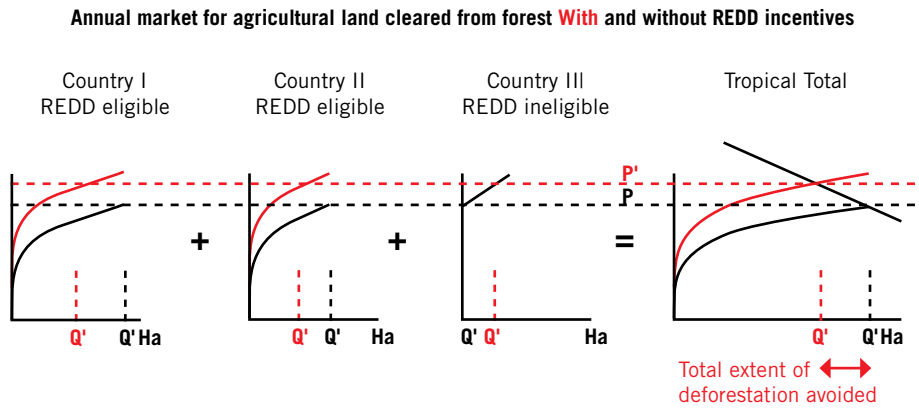


Figure 6 shows the analytical framework of country level supply curves for deforestation, and shifts in these supply curves due to the implementation of global REDD policies and the effect of leakage. Results predict land clearance, reductions in emissions, and revenues by country according to different proposed REDD policies and different carbon prices.

The participating organizations plan to hold a side event at the Poznan COP to present preliminary results, and would welcome engagement from the wider community interested in REDD.

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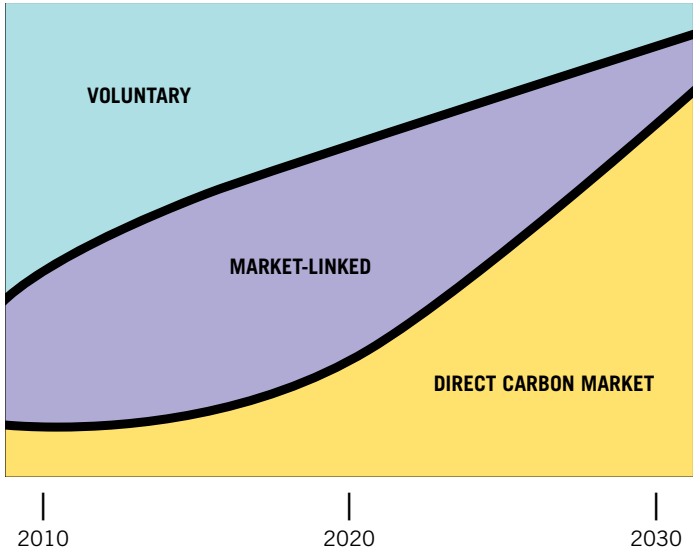
COMPLEMENTARY FINANCING

Union of Concerned Scientists

With many financing options emerging, the "Complementary Financing" approach (discussed by CfRN and the WRI, among others) focuses on combining different sources of financing for different aspects of REDD on appropriate timescales. The complementary financing approach utilizes three important sources of potential money for REDD: **direct carbon market funding, market-linked funding and voluntary funding.**

Figure 7. Expected Evolution of Funding Needs



In **direct carbon market** funding, industrialized countries purchase REDD credits for use as emissions allowances in their national cap-and-trade systems, potentially thereby purchasing the right to emit more domestically than their caps allow, by offsetting their emissions abroad. **Market-linked** approaches generate funding by using auction revenues or allocated allowances for REDD, or by establishing systems in which REDD credits are not fungible with industrial country allowances. In market linked options, funding increases as cap-and-trade markets and the price of carbon increase, but, crucially, the REDD credits are not offsets. Finally, **voluntary** funding provided by countries or individuals is unconnected to their cap-and-trade markets such as official development assistance (ODA) or Norway's $2.6 billion commitment announced at Bali.

The complementary financing approach aims to connect these three financing methods with the timeframe in which it can be most useful towards achieving overall REDD goals (see Figure 7) and emphasizes that all three financing approaches are needed, and should be complementary to maximize their effectiveness. In the short-run, the flexibility of voluntary approaches presents the quickest way to build up capacity. Approaching 2020, more funding will be needed to bolster REDD, but risks of leakage, non-additionality and monitoring errors constrain how much should come directly from a carbon market. During this time period, market-linked options should play a large role, which helps to avoid the risks from leakage and non-additionality. Finally, in the 2020s, and beyond, presuming a built-up capacity, a broad experience base and near-global participation, the direct carbon market can provide the large and continual funding needed for REDD.

The debate over REDD financing must address which methods meet the unique objectives of different time periods in building credible and long-lasting REDD regime. Each method plays an important role, providing smaller or larger amounts of funding over time as the REDD process evolves. The complementary financing approach seeks to maximize the benefit of each financing option by applying them to different time periods in complementary ways.

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INTEGRATING REDD INTO THE GLOBAL CLIMATE PROTECTION REGIME

CIFOR

CIFOR's work on REDD focuses on a wide range of issues from technical methodologies to national level governance and international policy related to the climate negotiations. Ongoing work encompasses:

- Developing cost-efficient methods for determining REDD baselines and monitoring changes in carbon stocks;
- Improving policies, institutional arrangements and reward mechanisms for efficient, effective and equitable REDD schemes; and
- Establishing appropriate REDD architecture, including consistent policies linking local contexts to national and global regimes.

Current projects include work on the global architecture and design of REDD (with ODI); learning lessons from Payments for Ecosystem Services for REDD (with IIED/WRI), introducing REDD into tools for capacity building on donor assistance to forests and climate change, work on regional mechanisms for REDD in Eastern and Southern Africa (with IIED and WWF), and investigating the potential for REDD and local people in Brazil, Ghana, Laos, Vietnam and southern Africa.

The work on the global architecture and design of REDD focuses on analytical priorities of relevance to the negotiations. These priorities were informed by consultations among representatives of climate negotiators, key research institutions, advocacy organizations, and the private sector. The key themes include:

- The implications of different scales in approaches to REDD: national, sub-national and nested approaches
- The implications of different methodological approaches to degradation
- Linking country needs and financing sources for REDD
- Lessons from economic models for the role of REDD in stabilizing greenhouse gas concentrations

CIFOR has also produced a book on major issues related to REDD. The book aims to add clarity to the debate surrounding the negotiations, and to help readers focus on the critical issues. Both of these streams of work aim to clarify what the options are and to assess their implications in term of effectiveness, efficiency and equity.

CIFOR is engaged in the REDD debate in several countries. For example, in Indonesia CIFOR has been involved in supporting the design of the national REDD architecture. This work covered issues such as the policy framework, land-use strategies, reference levels and monitoring systems.

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FOREST LAW ENFORCEMENT GOVERNANCE AND TRADE (FLEGT)

FERN

FERN's work on REDD follows on from involvement in the development and implementation of the EU Forest Law Enforcement Governance and Trade (FLEGT) Action Plan, presented in 2003. The Action Plan sets out a range of measures that aim to tackle illegal logging by improving forest governance, strengthening local peoples' tenure rights, developing a licensing scheme that assures timber has been legally produced and creating a system for independent monitoring of the implementation process. Over the past five years, FERN has been working closely with partners in Cameroon, Congo, Gabon, Ghana, Liberia and Malaysia to create a legally sound basis for an EU-FLEGT partnership agreement with these countries.

Governance and Law Enforcement
There is a growing consensus that improved forest governance, the 'G' in FLEGT, including local peoples' tenure rights, is a pre-condition for forest protection and sustainable forest management.

The second step is law enforcement, the 'LE' in FLEGT; without having just and equitable laws in place, law enforcement will often backfire. Illegal forest use, in most cases, is not just an outcome of poor governance and corruption but is an integral part of local and national political economies. Revenues from illegal forest exploitation can therefore keep existing political parties, policies and practices in operation. Hence, simple law enforcement may therefore increase conflict and poverty and not contribute to better forest management.

For successful FLEGT agreements, it is essential to start a political dialogue with producer countries focused on forest sector reform, increasing transparency, strengthening land tenure and access rights, and reducing corruption. The first FLEGT agreement, signed between the EU and Government of Ghana in September this year, was a good example: it was based on a proper consultation process and has taken the first steps towards strengthening community rights and conserving biodiversity.

These lessons are as applicable to REDD as to FLEGT: the World Bank's readiness programme for Ghana clearly shows it can and will build on the framework created by the EU FLEGT Programme.

Current projects include:

- putting into practice the lessons learned from FLEGT in the design of REDD programmes at the national and international level, with our partners in various countries;
- strengthening networks of local and regional NGOs to allow them to take part in the negotiations of forest-climate agreements;
- researching the tenure situation in countries that may engage in REDD to clarify ownership rights over land, forest and carbon;

FERN is also producing a series of briefing sheets on REDD including:

- key principles for an effective and equitable agreement;
- REDD financial mechanisms;
- effective REDD consultation processes;
- development and implementation of World Bank's REDD plans.

The first of these is already available on our website.

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ELIASCH REVIEW: 'CLIMATE CHANGE: FINANCING GLOBAL FORESTS'

United Kingdom Office of Climate Change

The Eliasch Review is an independent report commissioned by the British Prime Minister, Gordon Brown, and led by Johan Eliasch, Special Representative on Deforestation. It provides a comprehensive analysis of the financing and mechanisms needed to support sustainable management of forests and reduce emissions associated with deforestation.
The Review finds that:

- The international community should aim to support forest nations to halve deforestation by 2020 and make the global forest sector 'carbon neutral' by 2030 – i.e. with emissions from forest loss balanced by new forest growth.

- Reducing emissions from deforestation should be fully included in any post-2012 global climate deal at Copenhagen.

- National Governments should develop their own strategies to combat deforestation in forest countries, including establishing baselines, targets and effective governance and distribution of finances.

- In the long term, the forest sector should be included in global carbon markets.

- Public and private sector funding will be needed in the short to medium term as carbon markets grow.

- The international community should provide support for capacity building where necessary. Total capacity building costs are estimated at up to $4 billion over 5 years for 40 forest nations.

Website: www.occ.gov.uk

TEEB: THE ECONOMICS OF ECOSYSTEMS AND BIODIVERSITY

German Federal Ministry for the Environment and the European Commission

Nature provides human society with a vast diversity of benefits such as food, fibres, clean water, healthy soil and carbon capture and many more. Though our well-being is totally dependent upon the continued flow of these ecosystem services (ES), they are predominantly public goods with no markets and no prices, so are rarely detected by our current economic compass. As a result, biodiversity is declining, our ecosystems are being continuously degraded and we, in turn, are suffering the consequences.

Taking inspiration from ideas developed in the Millennium Ecosystem Assessment, The Economics of Ecosystems and Biodiversity (TEEB), aims to promote a better understanding of the true economic value of ES and to offer economic tools that take proper account of this value. The results of this work aim to contribute to more effective policies for biodiversity protection and for achieving the objectives of the Convention on Biological Diversity.

TEEB has two phases; Phase I demonstrates the huge significance of ecosystems and biodiversity and the threats to human welfare if no action is taken to reverse current damage and losses; and Phase II will expand on this and show how to use this knowledge to design the right tools and policies.

PHASE I
Findings on the cost of inaction suggest that, with a "business-as-usual" scenario, by 2050 we will be faced with serious consequences:

- 11% of the natural areas remaining in 2000 could be lost, chiefly as a result of conversion for agriculture, the expansion of infrastructure, and climate change;

- almost 40% of the land currently under low-impact forms of agriculture could be converted to intensive agricultural use, with further biodiversity losses;

- 60% of coral reefs could be lost – even by 2030 – through fishing, pollution, diseases, invasive alien species and coral bleaching due to climate change.

The ultimate aim of TEEB is to provide policy makers with the tools they need to incorporate the true value of ES into their decisions. Key challenges in developing and applying suitable methodologies include ethical choices to be made between present and future generations and between peoples in different parts of the world and at different stages of development. Without taking these aspects into account, the Millennium Development Goals cannot be achieved. Some promising policies are already being tried out and are already working in some countries. Examples come from many different fields, but they convey some common messages for developing the economics of ecosystems and biodiversity:

- rethink today's subsidies to reflect tomorrow's priorities;
- reward currently unrecognized ES and make sure that the costs of ecosystem damage are accounted for, by creating new markets and promoting appropriate policy instruments;
- share the benefits of conservation;
- measure the costs and benefits of ES.

PHASE II

The economic approach in Phase II will be spatially specific and will build on knowledge of how ecosystems function and deliver services. Phase II will also examine how ecosystems and their associated services are likely to respond to particular policy actions. It will be essential to take account of the ethical issues and equity, and of the risks and uncertainty inherent in natural processes and human behaviour.

The fundamental requirement is to develop an economic yardstick that is more effective than GDP for assessing the performance of an economy. National accounting systems need to be more inclusive in order to measure the significant human welfare benefits that ecosystems and biodiversity provide. By no longer ignoring these benefits, such systems would help policy makers adopt the right measures and design appropriate financing mechanisms for conservation.

Website: ec.europa.eu/environment/nature/biodiversity/economics/index_en.htm

REDD BASELINE MODELING USING A NEW CLASSIFICATION OF COUNTRY CIRCUMSTANCES

The Nature Conservancy, TerraCarbon

The analysis by The Nature Conservancy and TerraCarbon compares the quantity of credits generated by the different reference levels specified in seven of the current proposals for REDD (EDF, Brazil, JRC, Corridor Approach, WHRC, CSERGE, and TCG). The goal is to make a first approximation of the quantity of credits expected to be generated from different baseline proposals, depending upon country circumstances, using real data on forest carbon emissions.

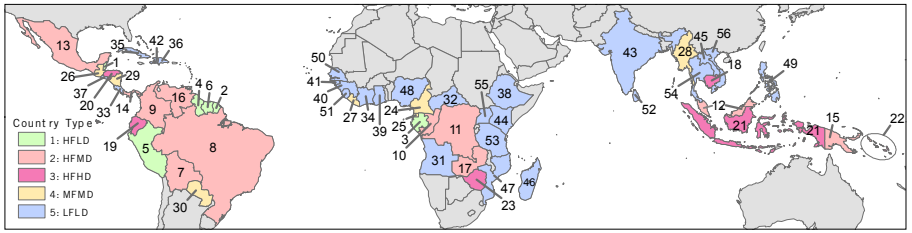
This can be done with the benefit of hindsight: A hypothetical scenario is used in which a REDD agreement was created in year 2000, thus the actual "business-as-usual" baseline is known, since FAO-FRA reported emissions from 2000 to 2005. It is assumed that tropical countries perform equally during the first 5 year period of the REDD mechanism, reducing their emissions by 10% below the known "business-as-usual" emissions.

Credits generated by each proposal are determined by the difference between emissions under the 10% REDD scenario, and the "negotiated baseline" emissions determined by the rules presented in each proposal (referencing historic forest carbon emissions FAO data from 1990 – 2000). The Nature Conservancy welcomes input from authors of individual proposals to improve the interpretation of their rules and to make reasonable assumptions about the negotiated outcomes associated with some proposals.

Name	Description	Forest Cover	Annual Rate Forest Loss	Dominant Location
HFLD	Highest forest cover, low rate of deforastion	85 - 100%	0 - 0,1%	Latin America
HFMD	High forest cover, medium rate of deforestation	50 - 85%	0,04 - 0,8%	Latin America
HFHD	High forest cover, high rate of deforestation	50 - 95%	0,8 - 1,5%	SE Asia
MFMD	Medium forest cover, medium rate of deforestation	35 - 50%	0,3 - 0,8%	Scattered
LFLD	Low forest cover, low rate of deforastion	1 - 35%	0 - 0,3%	Africa

Table 3. Characteristics of Country Types

Figure 8. Geographic distribution of countries sorted into country types



Type 1: HFLD
1 - Belize
2 - French Guiana
3 - Gabon
4 - Guyana
5 - Peru
6 - Suriname

Type 2: HFMD
7 - Bolivia
8 - Brazil
9 - Colombia
10 - Congo
11 - Congo, DRC
12 - Malaysia
13 - Mexico
14 - Panama
15 - Papua New Guinea
16 - Venezuela
17 - Zambia

Type 3: HFHD
18 - Cambodia
19 - Ecuador
20 - Honduras
21 - Indonesia
22 - Solomon Is.
23 - Zimbabwe

Type 4: MFMD
24 - Cameroon
25 - Equatorial Guinea
26 - Guatemala
27 - Liberia
28 - Myanmar
29 - Nicaragua
30 - Paraguay

Type 5: LFLD
31 - Angola
32 - Central African Republic
33 - Costa Rica
34 - Cote d'Ivoire
35 - Cuba
36 - Dominican Republic
37 - El Salvador
38 - Ethiopia
39 - Ghana
40 - Guinea
41 - Guinea-Bissau
42 - Haiti
43 - India
44 - Kenya
45 - Laos
46 - Madagascar
47 - Mozambique
48 - Nigeria
49 - Philippines
50 - Senegal
51 - Sierra Leone
52 - Sri Lanka
53 - Tanzania
54 - Thailand
55 - Uganda
56 - Vietnam

In order to understand how outcomes depend upon country circumstances, five types of REDD countries are identified using multivariate statistical analysis of data on historic rates of deforestation and percent remaining forest from 56 tropical countries (see Table 3). These countries are represented geographically in Figure 8.

Future analyses will consider economic, governance, and demographic variables to better understand the country circumstances and deforestation drivers for the five types of REDD countries.

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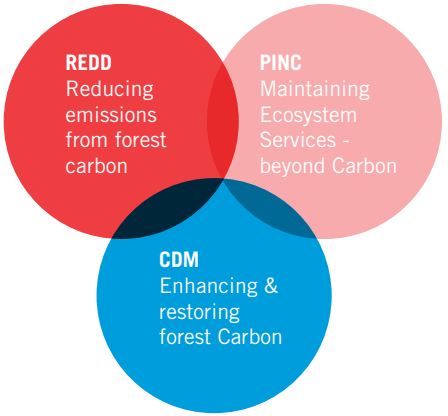
PINC: PROACTIVE INVESTMENT IN NATURAL CAPITAL

Global Canopy Programme

PINC is a funding framework proposed by Global Canopy Programme and other collaborators in the Forest Now network that specifically focuses on large areas of standing tropical forests, not immediately threatened by deforestation and which may or may not benefit from REDD. It suggests a mechanism to economically reward the function of large areas of intact forests as 'global utilities' providing ecosystem services that underpin food and energy security at local to global scales. PINC is therefore not specifically related to carbon emissions reduction but calls for straight-forward funding or investment on a per hectare basis for tropical forests, which store carbon, create rain, moderate weather conditions and protect biodiversity.

As the services provided by natural ecosystems have become more widely recognized, Payments for Ecosystem Services (PES) are growing in popularity as a method of funding conservation and sustainable development.

Figure 9. How PINC will interact with other UN mechanisms



Tropical forests offer multiple ecosystem services, beyond carbon storage, that are currently not being valued by world markets. The bundling of other ecosystem service payments in with carbon credits may not fully realize the potential future value of these services. Under REDD, forests emitting carbon dioxide are likely to attract higher payments than those that are not.

PINC addresses these shortcomings and suggests that payments can be sourced either from donor funds or patient capital attracted to the emerging new market in 'Forest Bonds' or 'Ecosystem Service Trading Certificates' which seek to value the services standing forests provide. REDD payments may transition to PINC as deforestation declines. PINC could also be applied to biodiversity outside forests.

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WHAT ARE THE CHALLENGES?

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Much progress has been made since COP 11, when Papau New Guinea first proposed integrating REDD under the UNFCCC. This is illustrated by a general coalescence of REDD proposals submitted over time, the increasing number of REDD demonstration activities that are emerging, and the rising volume of funds that are being mobilized to support capacity-building or "readiness" for REDD.

A number of challenges to REDD implementation are still to be resolved to develop a REDD mechanism (whether fund or market-based) that is able to deliver environmentally-effective and economically-efficient emission reductions. The key challenges identified and highlighted here include:

- Monitoring, reporting and verification for national inventory purposes.
- Capacity building and ensuring enabling policy environments, including land tenure.
- Minimising perverse incentives.

High quality national greenhouse gas inventories are the backbone of the international climate regime, and provide a means to monitor national progress with respect to international obligations. High quality data from the land use, land use change and forestry sector, which is consistent and comparable across developing countries, is therefore a critical requirement especially if REDD is to be integrated into the international carbon market. Historical trend data on deforestation are a key starting point, and need to be supplemented with data on emissions or changes in carbon stocks. Historical data are needed to establish baselines, the reference against which performance can be assessed. Data of this type therefore need to be made officially available as soon as possible.

Building capacity for an effective REDD mechanism in developing and least developed countries is critical. This may include support for monitoring systems, institutional development, technical assistance and training and educational programmes.

In terms of achieving emission reductions, it is important to recall that deforestation and forest degradation are caused by a number of multiple drivers. That there are no existing incentives to capture and market the global public carbon services provided by forests is just one of these. Other drivers of deforestation include the lack of secure land tenure systems and clearly defined property rights, insufficient capacity for effective law-enforcement, and agricultural and energy subsidies, amongst others. Though public funds can and should be mobilized and used to support capacity building in developing countries, the 2006 OECD Council Recommendation on Good Practices for Public Environment Expenditure Management states that "public funds cannot and should not substitute for weak environmental policies". Concerted efforts will therefore also need to be made by developing country governments to address these. Similarly, governments around the world will need to redress policies with adverse implications for the forestry sector at the international scale, such as biofuels, agricultural and energy policies, amongst others.

Though there are a number of other REDD issues that remain to be solved (including inter alia scope, leakage and permanence), appropriate features could be built into the design of a mechanism to address these (e.g. national baselines and insurance reserves). It is essential however that the basic building blocks for an effective REDD mechanism are put into place. These building blocks are the same whether REDD is fund or market-based and comprise clear goals and objectives; eligibility criteria (and prioritisation in the case of funds); sufficient and sustainable sources of financing; and monitoring and evaluation of performance over time[d].

Finally, any new REDD mechanism will need to be flexible and to evolve as national circumstances across developing countries change over time. Actions on REDD should aim to work towards the long-term "shared vision" for climate change mitigation that is necessary to meet the ultimate objective of the Convention; to achieve the stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

The ideas expressed in this section are those of the author and do not necessarily represent the views of the OECD, or its member countries.

* See Karousakis and Corfee-Morlot (2007) for further discussion[14]

POLITICAL MILESTONES

December 05
Papua New Guinea and Costa Rica table the first proposal to "stimulate action to reduce emissions from deforestation". This will go on to become REDD.

October 06
The Stern Review draws global attention to the financial impacts of climate change and the importance of curbing deforestation.

October 07
The World Bank launches the Forest Carbon Partnership Facility (FCPF).

December 07
The Bali Roadmap gives the world community 2 years to negotiate REDD in its final form.

May 08
German Chancellor, Angela Merkel pledges €500 million per year, from the auctioning of emissions permits, to protect tropical forests and biodiversity.

June 08
The Congo Basin Forest Fund is set up to battle deforestation in central Africa. British Prime Minister Gordon Brown and Norwegian Prime Minister Jens Stoltenberg together pledge £108m.

August 08
Brazil's President Lula launches international 'Forest Fund' to raise $21 billion by 2021. Norway pledges €1 billion to the fund through to 2015.

October 08
The Forests Dialogue issues guiding principles for including forests in climate change negotiations at the IUCN World Conservation Congress in Barcelona.

October 08
The Eliasch Review concludes that market-based mechanisms are essential to reach the levels of funding required to halt deforestation.

KEY STEPPING STONES TO 2012 / 13

December 08
UNFCCC COP 14, Poznan: REDD-watchers hope for growing consensus and guidelines on early action during the countdown to Copenhagen.

December 08
EU Plenary: will the EU climate package pass, and what will be the outcome for forests?

June 09
Meeting of the Subsidiary Body on Scientific and Technical Advice – Technical experts must begin to finalise a REDD architecture.

December 09
UNFCCC COP 15 Copenhagen – the framework for a Global Climate Deal including forests must be finalised, leaving time for ratification by 2012.

December 12
Kyoto II ratified and REDD begins to be funded as part of the international community's new deal on climate change.

WHERE TO FIND OUT MORE

www.ForestsNow.org

This website is focused on forests and climate change, and on the countdown to the key UN climate meeting in Copenhagen in December 2009. It is a resource for the wider global community working to protect tropical forests. Its main aim is to offer tools which facilitate communication and collaboration amongst that community.

At the site's heart is a political calendar: a timeline at the top of each page pulls out key milestones along the countdown to Copenhagen, while fully-featured year, month, and week views provide information about relevant events around the world. Practical information is available for each event, and you can also share your own events with the community and call on colleagues to take specific actions.

UN Bali 2007 UN Poznan 2008 UN Copenhagen 2009

ANNEXES

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GLOSSARY OF TERMS

Additionality
A programme of activity (PoA) is additional if it can be demonstrated that in the absence of the CDM (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that noncompliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. This shall constitute the demonstration of additionality of the PoA as a whole[13].

Afforestation
Afforestation is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources [13].

Carbon Pool
A system which has the capacity to accumulate or release carbon. Examples of carbon pools are forest biomass, wood products, soils, and atmosphere. The units are mass (e.g., t C)[14].

Carbon Stock
The absolute quantity of carbon held within a pool at a specified time[14].

Deforestation
Deforestation, as defined by the Marrakech Accords, is the direct human-induced conversion of forested land to non-forested land. A forest is defined as a minimum area of land of 0.05-1 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 percent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ. Actual definitions can vary from country to country as the Kyoto Protocol permits countries to specify the precise definition within these parameters to be used for national accounting of emissions.

In contrast, deforestation as defined by the FAO is "the conversion of forest to another land use or the long-term reduction of the tree canopy cover below the minimum 10 percent threshold"[15].

Degradation
A definition for forest degradation has not yet been agreed upon. Forest degradation is the depletion of forest to tree crown cover at a level above 10 percent, however beyond this general statement, the IPCC has not provided a specific definition[15].

Fungible
Being of such a nature that one part or quantity may be replaced by another equal part or quantity in the satisfaction of an obligation. Oil, wheat, and lumber are fungible commodities. Throughout this book we refer to the fungibility of a tonne of carbon dioxide equivalent (CO2e).

Hot Air
Hot air often refers to emissions reductions that are not additional[16].

Leakage
Leakage is defined as the net change of anthropogenic emissions by sources of greenhouse gases (GHG) which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity[13].

Permanence
The longevity of a carbon pool and the stability of its stocks, given the management and disturbance environment in which it occurs[14].

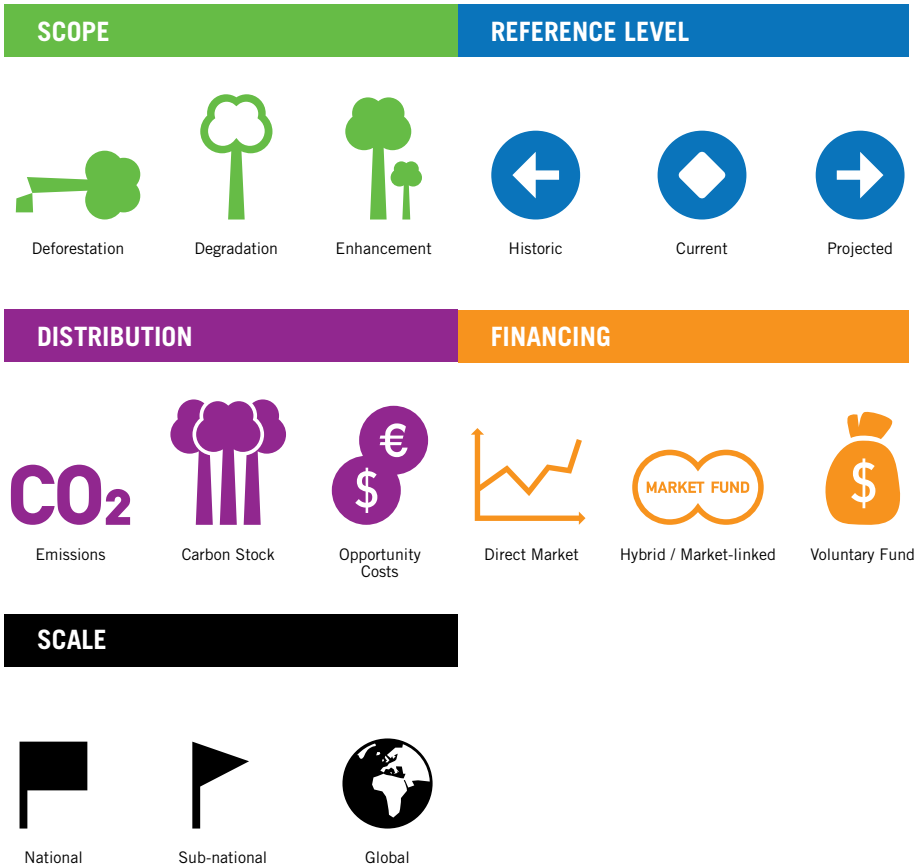
Reforestation
Reforestation is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989[13].

Sequestration
The process of increasing the carbon content of a carbon pool other than the atmosphere[13].

Sink
Any process or mechanism which removes a greenhouse gas, an aerosol, or a precursor of a greenhouse gas from the atmosphere. A given pool (reservoir) can be a sink for atmospheric carbon if, during a given time interval, more carbon is flowing into it than is flowing out[14].

Source
Opposite of sink: A carbon pool (reservoir) can be a source of carbon to the atmosphere if less carbon is flowing into it than is flowing out of it[14].

KEY TO ICONS



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The Little REDD Book will be constantly updated online in the run up to COP 15 in Copenhagen. To follow developments in research and the evolution of REDD proposals visit www.littleREDDbook.org

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