

# The Little REDD+ Book

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

+ a resource CD containing: Translations into Bahasa Indonesia, French, Portuguese, Simplified Chinese and Spanish; the full proposals; further research on REDD.



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 three 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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\* These proposals have been updated or added in this second edition of The Little REDD Book.

The Little REDD Book is now available in French, Spanish, Portuguese and Bahasa Indonesia. The Global Canopy Programme would like to thank the following organisations for their generous efforts in translating the second edition of the Little REDD Book:



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**THE CLIMATE GROUP**

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

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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](http://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?

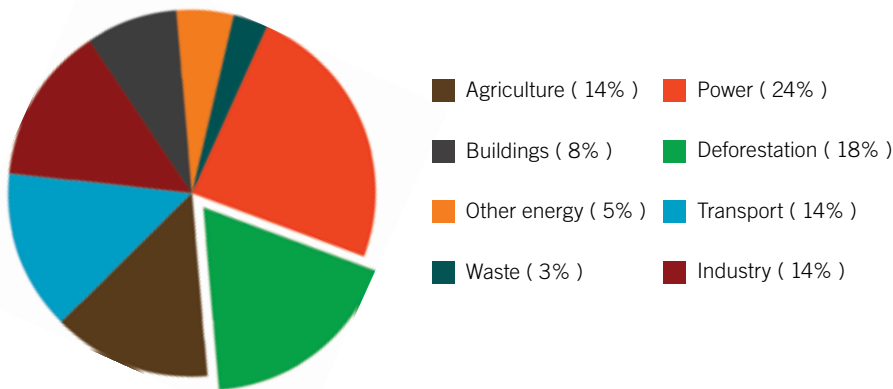
COMBATING CLIMATE CHANGE

Tropical forests cover about 15% of the world’s land surface<sup>1</sup> and contain about 25% of the carbon in the terrestrial biosphere<sup>2</sup>. 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<sup>1</sup>. This loss accounts for around a fifth of global carbon emissions, making land cover change the second largest contributor to global warming<sup>3</sup> (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<sup>4</sup>. 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.

Figure 1. GHG emissions in 2000 by source<sup>5</sup>: From ‘Stern Review on the Economics of Climate Change’. In the rest of this report, the IPCC’s estimate of deforestation as 20% of global emissions has been adopted.



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<sup>2</sup>.

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 soy 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<sup>5</sup>.

Figure 2. 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<sup>6</sup>. 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 historical 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<sup>7</sup> 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; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.”*

More recently, the “+” in REDD+ has drawn increasing attention towards the activities after the semicolon, related to the conservation and enhancement of carbon stocks. 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<sup>8</sup>.

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<sup>9</sup>.

### 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-two governmental and non-governmental proposals submitted to the UNFCCC. Nineteen 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 33 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?
- **Financing:** Where does the money come from?
- **Distribution:** Where does the money go to?

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 3.

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.

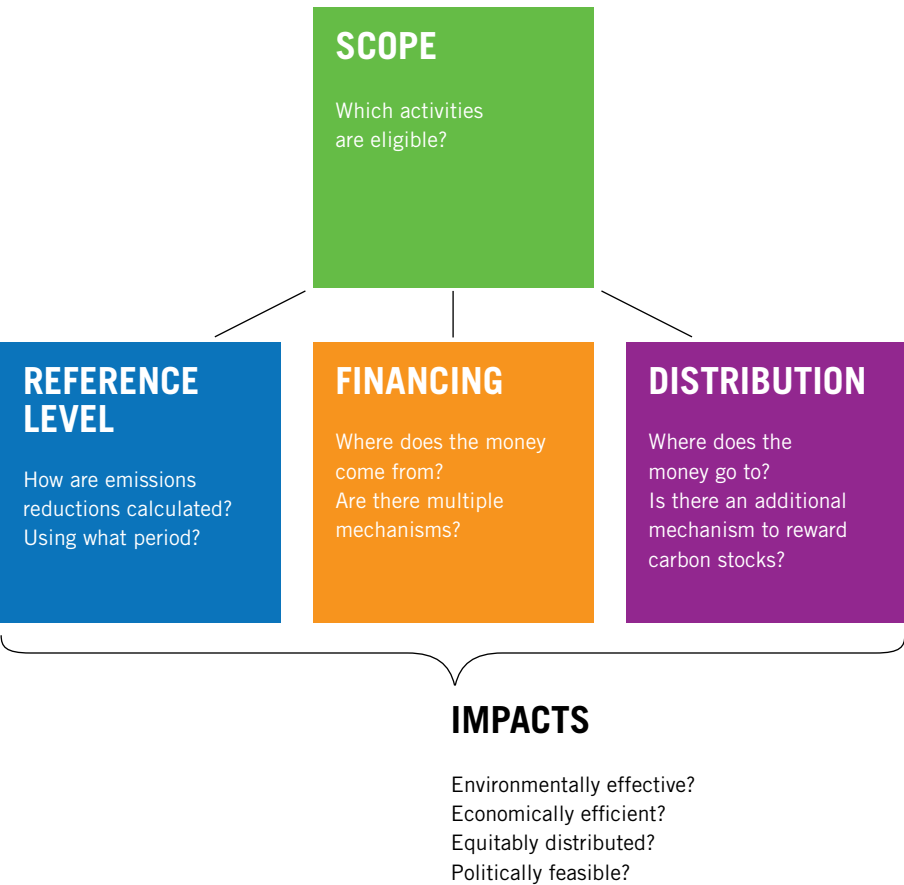
## MIX AND MATCH OPTIONS

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’ has been developed from analysis by The Prince’s Rainforests Project<sup>18</sup>. For further information, email Anna Creed, now at [anna.creed@terrestrialcarbon.org](mailto:anna.creed@terrestrialcarbon.org) or visit: <http://www.rainforestsos.org/pages/project-activity>

Figure 3. 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.

The first step in understanding REDD proposals is to quantify what is included. The *scope* refers to the activities, 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 Reducing emissions from deforestation and degradation and 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).

Scope, as it is defined here, relates to *emissions reductions*. The activities outlined above refer to flows of carbon between the land and the atmosphere: Reducing emissions from deforestation and degradation (REDD) are both activities that decrease additions of carbon into the atmosphere; enhancement of carbon stocks (the "+" in REDD+) refers to carbon sequestration or removals of carbon from the atmosphere. The scope of REDD+ in its broadest sense, however, also includes the conservation of carbon\*. Stocks are distinct from emissions in that they do not imply a change in the concentration of greenhouse gases in the atmosphere and are therefore not recognised as a climate change mitigation activity. For the purpose of this framework carbon stocks are captured separately in the distribution module.

Finally, REDD is not always constrained to emissions occurring from increases and decreases of carbon stocks in rainforests. Some proposals indicate that REDD should be incorporated in a broader AFOLU approach that includes other land use.

\*The draft decision reached in COP14 refers to the "role and contribution of conservation, sustainable management of forests, changes in forest cover and associated carbon stocks and greenhouse gas emissions and the enhancement of forest carbon stocks to enhance action on mitigation of climate change and to the consideration of reference levels."

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

**Reference period:** Historical baseline, Historical adjusted baseline, Projected baseline

**Scale:** Sub-national, national, global

Reference levels define a benchmark scenario against which future emissions reductions can be measured and potentially rewarded. They are used to determine the additionality of a given activity, or in other words, how many emissions reductions have occurred because of the implementation of a REDD mechanism over and above what would have otherwise happened. There are two fundamental types of reference levels - either historical or projected.

Historical reference levels use past rates of deforestation as a proxy for future behaviour. As an example, if a country deforested 1 million ha of forest containing 1GtCO<sub>2</sub> every year between 1990 and 2005 then its historical baseline would be 1GtCO<sub>2</sub>/yr\*. Under this rationale, any reduction in deforestation amounting to less than 1GtCO<sub>2</sub>/yr would be counted as additional and would be eligible for some form of incentive payment (see Figure 4). Some limitations of the historical approach are that it requires a minimum quality and availability of data to be implemented; therefore ruling out certain countries who do not have these data, and it does not recognise potential changes in country circumstances, including changing rates of deforestation, over time.

To address this latter issue, certain proposals have suggested a development adjustment factor (DAF) that can be applied to the historical baseline to reflect predicted changes in future drivers of deforestation. This type of reference level has been classified here as an historical adjusted baseline and lies somewhere in between pure historical baselines and projected baselines. Using the example above, applying a DAF of 10% to the historical

\* The figure of 1GtCO<sub>2</sub> released from 1 million ha uses the IPCC figure of 250tC/ha stored in tropical forest<sup>14</sup> and assumes that all of this carbon is converted into carbon dioxide. This figure is therefore likely to be an overestimate but is used here for example purposes only.

baseline would give an historical adjusted baseline of 1.1GtCO<sub>2</sub>/yr and emissions reductions would be calculated as anything below this level. Since we could in theory create higher baselines than purely historical ones under an historical adjusted baseline, *increases* as well as decreases in emissions could be credited using this approach (see Figure 5). If traded in an international compliance market, these “emissions reductions” would create net *increases* in atmospheric GHG concentrations (often referred to as hot air).

Negative as well as positive DAFs could be applied to historical baselines to reflect that a given country is likely to deforest less over future years. It is unlikely though that any country would propose such a scenario as it would limit potential future revenues under an international regime.

Figure 4. Historical Baseline: The reference level is established during the reference period (in this example from 1990 – 2005). Crediting against this baseline (shown in blue) begins during the crediting period. If emissions during the crediting period are below the historical baseline emissions reductions are generated (shown in orange).

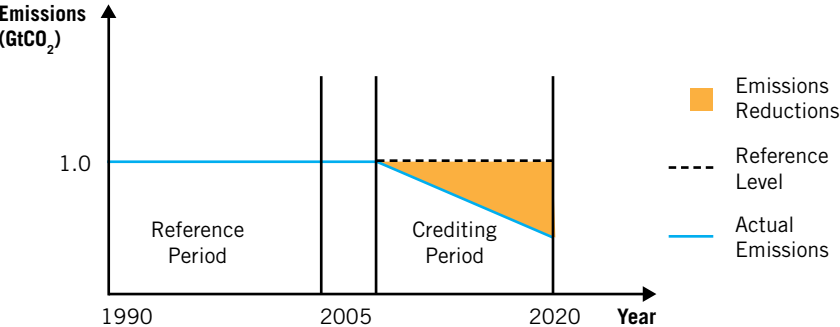
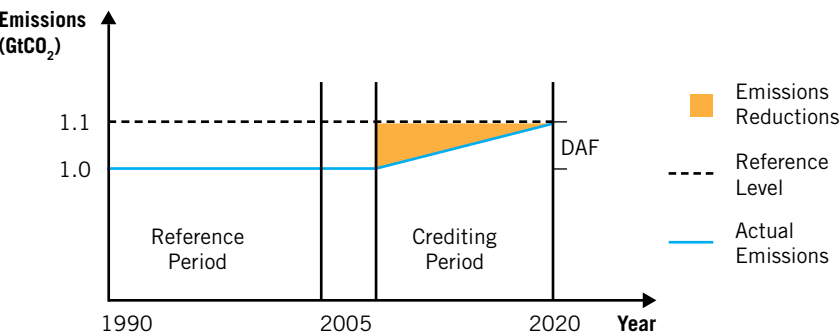


Figure 5. Historical Adjusted Baseline. The reference emissions level can be adjusted either above or below the historical baseline, using a development adjustment factor (DAF). Emissions reductions below this new reference level are counted as additional.



The second way to establish reference levels is to use a projected baseline. Projected baselines aim to predict how deforestation rates might change in the future and can use a variety of methods. Econometric models can be used that analyse the underlying socio-economic or structural forces driving deforestation. Drawbacks of this theoretical approach are that it would require adequate data on key variables to be accurate, and that, due to its complexity, it might be difficult to negotiate in a forum such as the UNFCCC<sup>17</sup>. It would, however, arguably be a more robust approach to establishing future deforestation rates as it incorporates a broader range of driving factors than just historical behaviour. Another way to calculate projected baselines, as used by the Terrestrial Carbon Group, is to establish areas that would be biophysically and economically viable to deforest over a given time period and to classify all of that land as at risk.

Reference levels that use a projected baseline could create baselines that are either higher or lower than historical levels depending on the approach and assumptions that are taken in the model. It is unlikely, however, that total emissions allowances under a projected model will equal current global emissions from deforestation (and degradation). There is a potential, therefore, under a market-based approach that projected baselines could generate “hot-air”. The level of conservativeness of the assumptions within the models will play a key factor in determining how many emissions reductions will be generated from projected and historical adjusted reference levels.

Although the choice of reference level greatly impacts the types of country that can generate ERs (see Box 1) it need not necessarily influence which countries benefit from a future REDD mechanism. The distribution or allocation of benefits to actors other than those generating the reductions is discussed in the distribution module.

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<sup>10</sup> and as such both historical 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.

The scope and reference level determine how many emissions reductions will be generated. Of equal importance is how benefits in the form of financial incentives might be distributed or allocated to countries with standing forests who might not directly benefit from an emissions based approach to REDD. The majority of proposals advocate incentives or compensation directly in line with a Party's own actions. Other proposals suggest that benefits should flow to Parties other than those generating emissions reductions through a *distribution mechanism*.

### OPTIONS

**Mechanism:** Redistribution mechanism, Additional mechanism

The choice of how benefits are distributed has the potential to greatly influence the ability of countries to participate in a REDD mechanism. To address equity concerns arising from differing national circumstances (usually developmental), some proposals suggest that a DAF can be applied to historical baselines to allow historically low emitters who may deforest more in the future to benefit from REDD. This mechanism has been discussed in the reference level module.

The distribution module of the framework, discussed here, describes how different proposals seek to reward countries with high forest cover and low rates of deforestation (HFLD) for their standing forests or carbon stocks (see Box 1). Typically the objective of a distribution mechanism is to avoid international leakage or address equity concerns within REDD mechanisms that reward solely based on emissions reductions. The argument goes that if HFLD 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 to compensate HFLD countries can be classified broadly into two groups; a redistribution of REDD revenues or additional sources of funding. Proposals that specify a redistribution mechanism can allocate revenues in a variety of ways. Initial proposals, including the "Combined Incentives" and "Incentive Accounting" approaches, use a global baseline against which a proportion of revenues are allocated. The rationale behind this approach is that awarding emissions reductions against a global baseline provides incentives for HFLD countries whose rates of deforestation are below this global average. To generate revenue for these

payments, high deforesting countries would receive less under such an allocation mechanism, as part of their emissions will be accounted above the global baseline. A second way to redistribute revenues uses a withholding mechanism in the form of a levy or tax on emissions reductions, as proposed by WHRC and TNC. Under these mechanisms a proportion of revenues is withheld in a fund and then paid out to REDD countries in the form of stock payments. The key to both of these approaches is that the revenue required to support HFLD countries is generated from the mechanism itself. Potential disadvantages of these approaches are the distorting effect that redistribution could have on incentives to reduce emissions in countries with high rates of deforestation.

The alternative to a redistribution mechanism is to use an additional financial mechanism. Many proposals suggest a "stabilisation fund" that would use additional funding to address leakage and equity concerns in HFLD countries. The revenue for a stabilisation fund could come through a variety of sources including voluntary funds or innovative finance mechanisms such as the auctioning of allowances or levies on shipping or aviation.

It is worth noting that some proposals also suggest that DAFs could be used to address leakage and equity concerns in HFLD countries. Whilst these proposals would generate incentives to maintain carbon stocks in HFLD countries, as discussed in the reference-level module, care would need to be taken that these constructed baselines would not lead to net increases in GHG emissions, thereby undermining the fundamental goal of REDD.

The final step in defining the framework of a REDD proposal is where the money comes from. The sources of financing discussed in this module refer explicitly to revenue that would be used to incentivise emissions reductions under a REDD mechanism, as opposed to other funding that might be targeted at capacity building or conservation of carbon stocks (as discussed in the Distribution module).

### OPTIONS

**Source:** Voluntary fund, Market-linked, Direct-market, "Phased" approach

Finance for REDD can be grouped into three main categories; voluntary funding, direct-markets, or market-linked mechanisms<sup>11</sup>.

A voluntary fund could operate at the national or international scale. Official Development Assistance (ODA) such as Norway's \$2.6 billion commitment is an example of voluntary funding. In general non-Annex I Parties call for new and additional contributions from developed countries. A key feature of voluntary funds is that emissions reductions generated through a fund cannot be used for compliance targets.

A market-linked approach can generate finances through a variety of mechanisms. An auction process, such as Norway's proposal to auction Assigned Amount Units (AAUs) at the international level, or Germany's "International Climate Initiative" at the national level, would generate revenue through the auction of emissions allowances. At both national and international levels, the auctioning process could generate revenues at scale, and emissions reductions would by design be additional to existing commitments. A further example of a market-linked approach is the creation of a dual-market, as proposed by CCAP or Greenpeace, in which REDD credits are linked to but are not fungible with existing CERs. In a dual-market approach it is discretionary whether ERs generated through REDD would be additional to or instead of existing Annex I commitments. In both cases, however, emissions reductions could be used to meet compliance targets.

In direct-markets REDD credits would be tradable alongside existing certified emissions reductions (CERs), and could be used by companies and national governments to meet emission reduction targets in their national cap-and-trade systems.

Each of these mechanisms has its strengths and weaknesses. A growing consensus is emerging, however, that a combination of these financial mechanisms will be needed to match the different stages of development and differing needs of tropical rainforest nations<sup>11</sup>. This system is often referred to as the phased approach (see page 96 for more detail); where proposals have suggested such an approach this will be highlighted within the analysis.

**BOX 1: WHO CAN BENEFIT?**

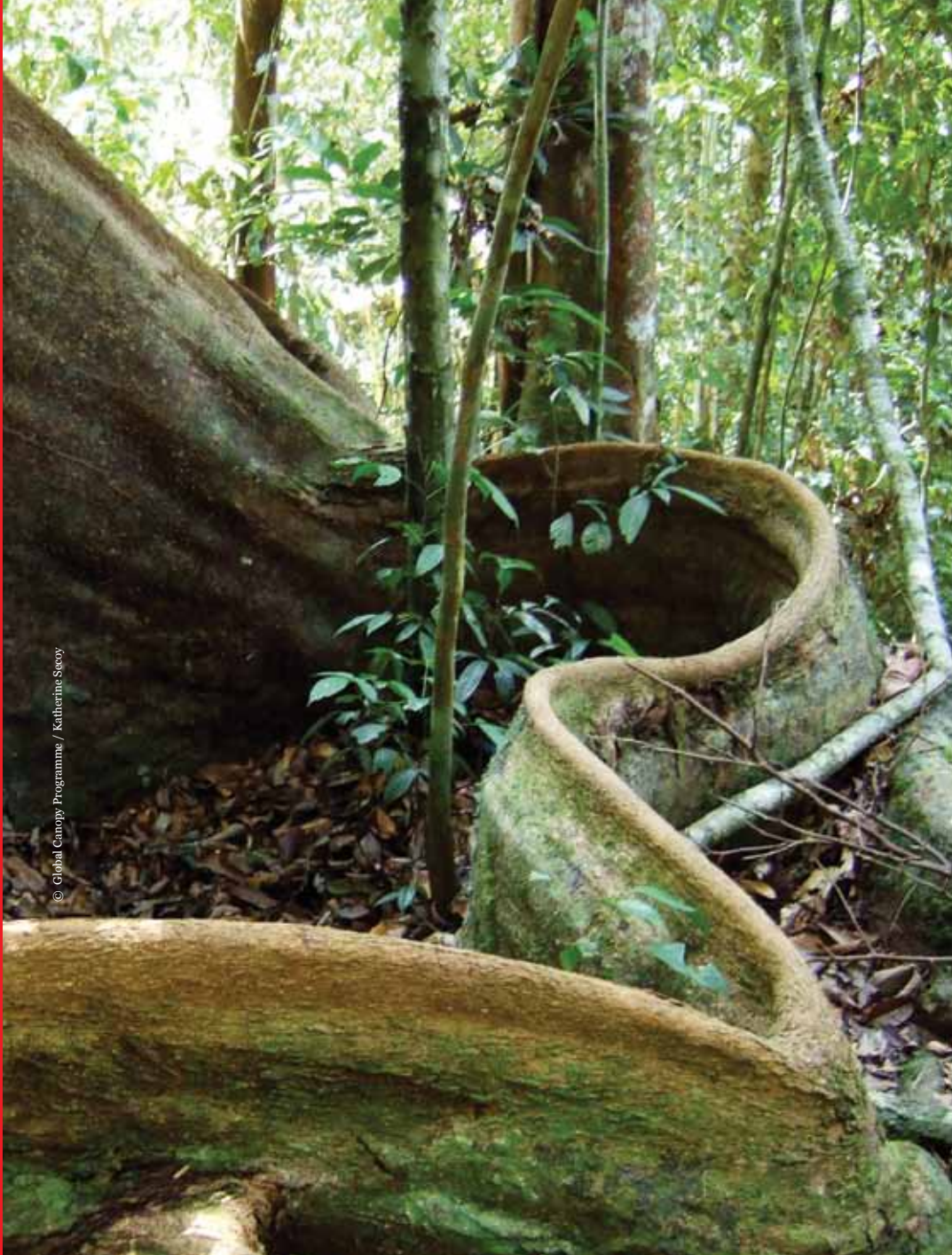
Fonseca and colleagues<sup>12</sup> have devised a matrix to show that developing countries fall into four basic categories or quadrants based on their forest cover and recent deforestation rate (see Table 1).

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<sup>12</sup>.

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



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# PROPOSALS

GUIDE TO THE PROPOSALS

The following pages present a guide to the thirty-two 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.

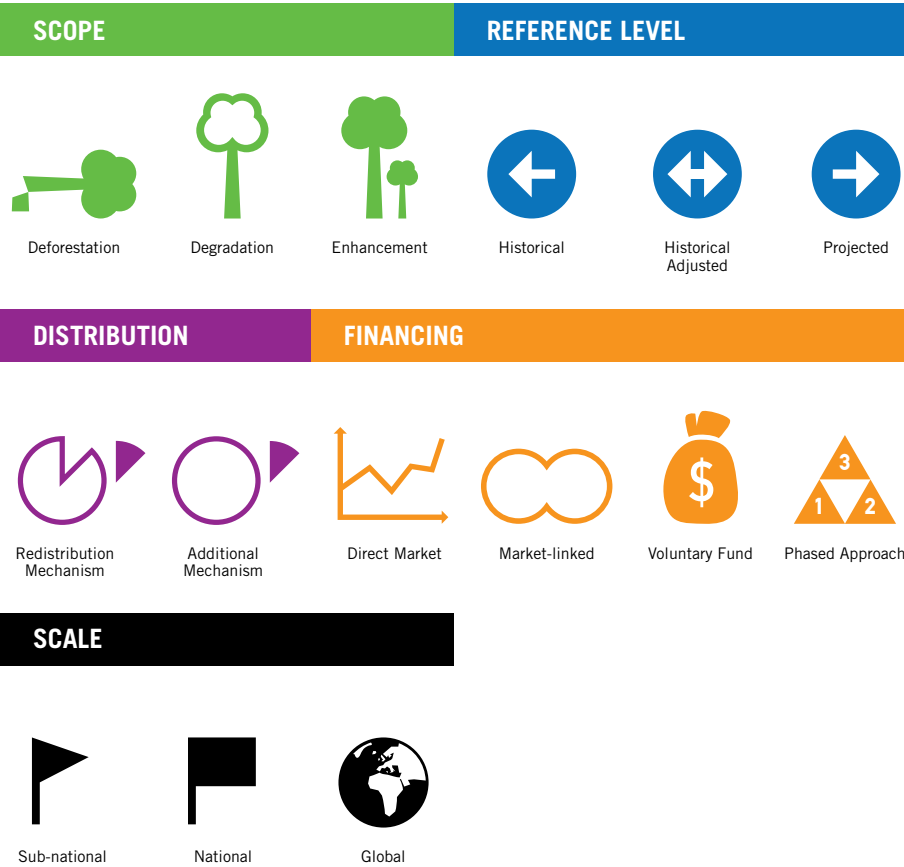
The icons will be presented at the top of each proposal in an ‘icon bar’ (see Figure 6 below). Not all proposals aim to define all of the modules of the framework. To simplify matters, all icons in the icon bar will be grey by default and only the options that are explicitly proposed in the submissions will be highlighted in colour. The colour will correspond to the module of the framework in which the icon is grouped.

Figure 6. Icon bar



The example in Figure 6 above indicates that the scope of this hypothetical proposal includes deforestation and degradation, the reference level is historical, the proposal hasn't specified an explicit distribution mechanism and the financing is through a market-linked fund.

Figure 7. Key to Icons



# GOVERNMENTAL PROPOSALS

ALLIANCE OF SMALL ISLAND STATES (AOSIS)\*



UNFCCC Document Code  
FCCC/AWGLCA/2008/MISC.5/Add.2 (Part 1)

Date: December 2008

SUMMARY

AOSIS believe that consideration of all actions under the REDD agenda should ensure that there are no adverse consequences for biodiversity or for the livelihoods of indigenous peoples or local communities and should explore demand side measures relating to the drivers of deforestation (e.g. export of timber and forest products) noting, however, possible implications for discriminatory trade measures.

Recognising that further work is required to develop methodologies to assess degradation, AOSIS state that REDD should include both deforestation and forest degradation, and the definition of forest degradation should relate to the loss of carbon stocks in remaining forest land. REDD could be addressed at both the national or sub-national level, although countries should be encouraged, where possible, to undertake national measures to reduce the likelihood of national leakage. Approaches to establishing national reference levels should be flexible depending on national circumstances.

AOSIS propose that financing for conservation should come from a REDD fund as well as funding associated with adaptation as the conservation of forests is also an adaptation strategy. For developed country Parties and for developing country Parties there should be no mixing or fungibility of market based mechanisms under the Kyoto Protocol and any market mechanisms developed, if appropriate, under the Bali Action Plan.

\* The Alliance of Small Island States (AOSIS) is a coalition of some 43 low-lying and small island countries, most of which are members of the G-77, that are particularly vulnerable to sea-level rise.

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,  
FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I), FCCC/AWGLCA/2009/  
MISC.1/Add.2

Date: March 2009

SUMMARY

Australia’s proposal for a forest carbon market mechanism includes reducing emissions from deforestation and degradation as well as increasing removals through afforestation and reforestation with a view towards broader inclusion of the land sector in the future. The mechanism will aim to avoid perverse outcomes, including for biodiversity and benefits will be maximized by the active inclusions of local and Indigenous communities in host Party activities. The forest carbon market mechanism is a national level approach, which can support sub-national implementation.

Reductions in emissions and increases in removals relative to an agreed national forest emissions level will generate tradable forest carbon credits. The emission level will be set using a holistic approach that will be a conservative projection of future anthropogenic net emissions derived using the above information. Market confidence measures could include participation in an international “confidence buffer”; an international pool of credits that can be used as a last resort to make up forest carbon credits when a major anthropogenic event results in non-permanence. Significant readiness and capacity building will also be required to enable developing country Parties to participate in a forest carbon market mechanism. This will include assistance for carbon monitoring and accounting, policy development and institutional capacity building. Support for this readiness and capacity building will be provided through non-market arrangements in the short-term.



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

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).



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

Date: April 2008

SUMMARY

Canada recognises the importance of the IPCC and GOFC-GOLD and recommends the IPCC 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.

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,  
FCCC/AWGLCA/2008/MISC.5, FCCC/AWGLCA/2009/MISC.1/Add.4

Date: March 2009

SUMMARY

Recognising that national circumstances vary across developing countries, CfRN propose a stepwise implementation to maximise participation in REDD activities. Movement between categories is voluntary and activities between categories may occur simultaneously in some cases. Category I - Readiness and Capacity Building - would primarily use new and additional ODA to strengthen capacity and support demonstration activities. Category II - Expanding Implementation under the Convention - could be funded by revenues generated from the auction of AAUs and carbon taxes within Annex I countries, and would support the scaling-up of demonstration activities including a range of national, sub national, local and project-level activities in developing countries under the Convention. Category III - MRV Emissions Reductions through a Market Mechanism – would use global carbon market funds that could be supported by the auction of AAUs and carbon taxes to finance REDD.

CfRN propose a national reference emissions or removal level using historical data over a period of at least five years. This level can be either elevated or reduced using a developmental adjustment factor that takes into account both national circumstances and capabilities and countries with historically low rates of deforestation and forest degradation.

\* Belize, Central Africa Republic, Costa Rica, Dominican Republic, Democratic Republic of Congo, Ecuador, Equatorial Guinea, Honduras, Ghana, Guyana, Kenya, Madagascar, Nepal, Nicaragua, Panama, Papua New Guinea, Singapore, Solomon Islands, Tanzania, Thailand, Uganda, Vanuatu, & Vietnam.

CHINA 



UNFCCC Document Code  
FCCC/AWGLCA/2008/MISC.5

Date: September 2008

SUMMARY

China propose a REDD mechanism that treats equally reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. The implementation of REDD shall promote sustainable development and poverty reduction as well as maximise co-benefits in the forest region in developing countries.

The successful implementation of REDD in developing countries relies on adequate, predictable and sustainable financial resources, financial and technical support, and the provision of new and additional resources including official and concessional funding for developing countries. China welcomes discussions on both non-market and market-based mechanisms related to policy approaches and positive incentives and encourages demonstration activities at both sub-national and national levels, so that sufficient lessons and experiences can be accumulated.



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

*Date:* April 2009

**SUMMARY**

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.

A special climate change fund shall be established by the COP to finance activities, programmes and measures, relating to REDD+, that are complementary to those funded by the resources allocated to the climate change focal area of Global Environment Facility and by bilateral and multilateral funding, in the following areas:

- Enhancing the capabilities of developing countries to monitor changes in their forest cover and the carbon stocks associated to them;
- Designing and implementing policies that reduce deforestation and degradation; and
- Supporting ongoing forest conservation and forest carbon stock enhancement efforts in developing countries.



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

*Date:* March 2008

**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 stabilisation 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. Third, 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.

**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

*Date:* July 2008

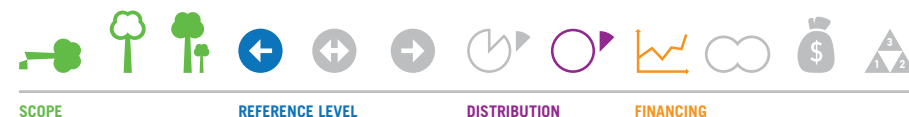
## SUMMARY

The EU proposes that policies should focus on positive incentives to reduce emissions from deforestation and forest degradation while promoting conservation, SFM and enhancement of forest carbon stocks.

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, however, national reference emission levels 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 regarding the 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, FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I)

*Date:* December 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 assesses i) changes in carbon stocks and GHG emissions due to conservation and sustainable management of forest, and ii) reductions in emissions from deforestation and degradation.

India states that, since constant forest carbon stocks do not include *flows* of carbon, it is not possible to link these stocks to the Global Carbon Compliance Market. Nor can compensation for maintaining forest carbon stocks be a voluntary matter for individual developed countries. This would place this payment in the realm of “donor” funding and, judging by the history of climate change actions, lead to serious under compensation. Accordingly, the compensation payments should be on some norms for assessment, agreed under the BAP, related to both responsibility and capabilities of each developed country.

On the other hand, given sound monitoring and assessment of changes in forest carbon flows, it would seem feasible to provide positive incentives for REDD by including REDD credits in the global carbon compliance market. India recognises, however, that flows of REDD credits could be very large and might therefore need to place limits on the extent to which a developed country may meet its GHG mitigation commitments through the use of REDD credits.



*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, FCCC/AWGLCA/2008/MISC.5/Add.2 (Part I), FCCC/AWGLCA/2008/MISC.5/Add.2 (Part II)

*Date:* December 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 historical 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 market-based approach including domestic, regional or international emissions markets, accompanied by deeper targets for Annex I Parties.



*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

*Date:* August 2008

**SUMMARY**

Japan recognises 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. As forest resources are under quite diverse circumstances from country to country, establishment of reference level should be conducted based on historical change of forest resources, taking account of socioeconomic factors when necessary, in such a way that reflect context of countries/regions in an objective and flexible manner. In countries where the rate of deforestation and degradation is low but is foreseen to rise, future socioeconomic trends could be reflected when setting the reference level. Where forest resources and deforestation/forest degradation are foreseen to come to an end soon this should also be reflected in the reference levels.



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

Date: February 2007

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 maximised 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.



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

Date: August 2008

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,  
Recent Submission

*Date:* May 2009

### 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. New Zealand supports a phased approach with some form of fund 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, FCCC/AWGLCA/2008/MISC.5

*Date:* October 2007

### SUMMARY

Norway believes the focus of REDD should be on deforestation and forest degradation due to the high rate of emissions from these activities. Recognizing, however, that there are countries with historically low rates of deforestation that are likely to increase in the future, and countries with currently low rates of deforestation due to much of the forests already having been deforested, Norway supports a future regime that promotes both conservation of existing forests, sustainable management of forests and incentives to enhance carbon stocks in existing forests.

Norway believes in principle that reference levels should be based on historical emission data, but recognizes 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 the risk of within country leakage.

Acknowledging the different capacities in developing countries as well as the varying rates of deforestation and degradation, Norway supports a stepwise approach that uses differentiated incentives and policy approaches to encourage broad participation. A combination of market- and fund-based mechanisms is needed. Markets could be useful in mobilizing resources from the private sector, but would be less effective for countries with low rates of deforestation. Further, a market-based mechanism would not be relevant for capacity-building. If a fund-based mechanism is introduced, without an offset mechanism, it is essential that a robust and sustainable system for mobilizing financial resources is established. The auctioning of allowances could be used to finance a fund-based REDD mechanism.



*UNFCCC Document Code*  
FCCC/SBSTA/2006/MISC.5, FCCC/AWGLCA/2008/MISC.5

*Date:* April 2009

### SUMMARY

Panama proposes a flexible two-track REDD+ mechanism that would aim to accommodate the multiple activities contemplated under REDD.

Track 1, would establish a compliance market that would allow emissions reductions from REDD activities to be sold in international markets and used by Annex 1 countries to meet their own emissions reductions targets. Acceptable activities under Track 1 would be those in which a differential in emissions or carbon stock could be measured such as reductions of emissions from deforestation and forest degradation as well as increases in forest carbon stocks.

Track 2 would be financed through funds and would support capacity building and fund conservation efforts and sustainable forest management. Activities to reduce emissions from deforestation and forest degradation could also be financed through funds depending on host countries' preferences. Developed countries Parties would pledge a percentage of auctioned national emissions trading allowances or a percentage of AAUs auctioned on the international market to generate stable and sufficient source of replenishment for a REDD fund.

Reference scenarios on GHG emissions from deforestation should take into account historical trends and must insure that countries with traditionally low deforestation rates are not at a disadvantage and that countries with historical high rate of deforestation are not rewarded. A possible mechanism to ensure fairness is to use the global deforestation baseline for the developing world as a reference.

\* On behalf of Costa Rica, el Salvador, Honduras, Nicaragua and Panama



*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

### SUMMARY

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

Establishing emissions reductions against baselines has a number of inherent problems. It may be difficult to determine whether an area had been intended for logging or forest destruction or not and consideration would need to be given to whether baselines are based on gross or net emissions. Establishing ex-post assessment of these baselines may partially help to resolve some of these concerns.

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.

*UNFCCC Document Code*

FCCC/SBSTA/2006/MISC.5, FCCC/SBSTA/2007/MISC.14,  
FCCC/SBSTA/2008/MISC.4

*Date:* March 2008

**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.



# **NON- GOVERNMENTAL PROPOSALS**

## 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 Oyhançabal

*Website:* [www.catie.ac.cr](http://www.catie.ac.cr)

*Date:* May 2009

#### SUMMARY

The “Nested Approach” initially put forward by CATIE and the German Emissions Trading Association BVEK aims to combine the respective advantages of project- and national-level accounting and crediting mechanisms. The approach supports national-level GHG accounting, but allows the crediting of the GHG reductions achieved by individual projects to be credited.

Project level emission reductions are to be calculated conservatively and any credits issued for projects deducted from any national level credits. Any project claiming credits has to be supported by the respective REDD country, which may decide to claim a share of the project credits for a leakage and permanence buffer. Projects may also be authorised in countries that do not yet qualify for national accounting systems.

After its initial release the Nested Approach has since been supported by a number of organisations and Latin American countries (including Chile, Peru, and Panama on behalf of Costa Rica, el Salvador, Honduras, Nicaragua and Panama).

## CENTER FOR CLEAN AIR POLICY (CCAP)



### “DUAL MARKETS APPROACH”

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

*Website:* [www.ccap.org](http://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 SOCIAL AND ECONOMIC RESEARCH ON THE GLOBAL ENVIRONMENT (CSERGE)



### “COMBINED INCENTIVES”

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

*Website:* [www.uea.ac.uk/env/cserge/](http://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, the “combined incentives” mechanism proposes that each country receives two kinds of incentives simultaneously. The first is based on the “compensated reduction” concept and is an incentive to reduce its emissions in comparison with its historical emissions. The second follows the “expected emissions” concept that connects the incentive to the ecosystems carbon stock while maintaining global additionality. It is an incentive to emit less than it would emit if it followed an average behaviour given by the global baseline emission 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. To avoid national leakage, the core mechanism would operate at the national level and, since incentives are allocated per avoided tonne of CO<sub>2</sub>, the mechanism can accommodate any source of funding.

## ENVIRONMENTAL DEFENSE FUND (EDF) & AMAZON INSTITUTE FOR ENVIRONMENTAL RESEARCH (IPAM) & INSTITUTO SOCIOAMBIENTAL (ISA)



### “COMPENSATED REDUCTIONS”

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

*Website:* [www.edf.org](http://www.edf.org), [www.ipam.org.br](http://www.ipam.org.br), [www.socioambiental.org/](http://www.socioambiental.org/)

*Date:* December 2006

#### SUMMARY

The “compensated reductions” approach by EDF, IPAM and ISA 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.



## "FORESTS FOR CLIMATE" / "TDERM"

*Authors:* Bill Hare, Kirsten Macey, Christoph Thies, Roman Czebiniak

Website: [www.greenpeace.org/forestsforclimate](http://www.greenpeace.org/forestsforclimate)

*Date:* December 2008

## SUMMARY

The Forests for Climate / Tropical Deforestation Emission Reduction Mechanism (TDERM) proposal suggests a market-linked fund to finance REDD. A critical element of this proposal is to attain both climate and biodiversity objectives in a manner that fully respects the rights of local and indigenous peoples.

Industrialized countries would provide financing for REDD - through the purchase of a newly created currency called Tropical Deforestation Emission Reduction Units (TDERUs) - proportional to their overall emission allowances (Assigned Amount Units, AAUs) in the second commitment period. The significant distinguishing factor between the market-linked mechanism proposed here and direct carbon market-offset mechanisms (see page 102) is that reductions in forest emissions would be additional to, not in exchange for, domestic reductions made by industrialized countries.

The mechanism would seek to properly align incentives for both industrialized and developing countries. Industrialized countries that take drastic action to reduce emissions at home would only have to make a minimal mandatory contribution to REDD. Developing countries who accurately monitor and report on their mitigation actions would receive a higher return for their services, providing a strong incentive for countries to continually improve their forest protection programs.



## “CARBON STORES APPROACH”

*Authors:* Alistair Graham, Rod Holesgrove, Nicola Beynon

Website: [www.hsi.org.au](http://www.hsi.org.au)

*Date:* April 2009

## SUMMARY

HSI proposes 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: i) HSI supports the inclusion of a REDD market mechanism in the UNFCCC post 2012 agreement and proposes the use of trust funds to allow up-front capital payments to be converted into permanent income streams for landholders and communities conditional on the ongoing success in maintaining and restoring natural ecosystems; ii) HSI strongly encourages governments and other agencies to maintain and substantially increase funding (in parallel to any market funding) for the protection of carbon stores and biodiversity and urges donor governments to assist recipient governments to develop lists of priority areas where cost-effective protection of carbon dense landscapes with high biodiversity conservation values can be achieved.

## INSTITUTE FOR SUSTAINABLE DEVELOPMENT AND INTERNATIONAL RELATIONS (IDDRI) & CENTRE D'ÉTUDES ET DE RECHERCHES SUR LE DÉVELOPPEMENT INTERNATIONAL (CERDI)



### “COMPENSATED SUCCESSFUL EFFORTS”

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

*Website:* [www.iddri.org](http://www.iddri.org), [www.cerdi.org](http://www.cerdi.org)

*Date:* June 2008

#### SUMMARY

The “compensated successful efforts” methodology put forward by IDDRI and 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](http://www.iiasa.ac.at)

*Date:* April 2009

#### 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 advocates reference scenario modelling based on co-ordinated collection, reporting and subsequent processing of earth observation, and deforestation and degradation driver information in a globally consistent manner. This information should be made available on a joint platform that would allow individual countries and projects to compute reference emission scenarios for planning “real” REDD efforts and for determining compensation baselines according to the outcomes of the ongoing negotiations. As well as consistency gains, globally coordinated data collection will lead to drastically lower monitoring costs.

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.

## JOANNEUM RESEARCH



### "CORRIDOR APPROACH"

*Authors: Bernhard Schlamadinger et al.*

*Website: [www.joanneum.at](http://www.joanneum.at), [www.ucsusa.org](http://www.ucsusa.org), [www.whrc.org](http://www.whrc.org)*

*Date: February 2007*

#### SUMMARY

The "corridor approach" submitted by Joanneum Research, Joanneum Research, UCS, WHRC, IPAM proposes the use of corridors - a range between upper and lower reference levels - to address issues of inter-annual variability in levels of deforestation. Countries would establish, through negotiation or otherwise, an upper and lower reference level for emissions, based on emissions over an agreed historical period.

If a country brings its emissions below the lower reference level, credits are generated. There are two ways to address emissions above and within the corridor. In variant 1 if a country's emissions rise above the upper reference level, then a debit against future credit is initiated, as in the Brazilian proposal. For emissions within the corridor, credits could accrue but not be eligible for redemption or sale until emissions fall below the lower boundary. In variant 2 no debits accrue for emissions above the upper reference level. Emissions within the corridor would be discounted; credits per ton of emissions would increase from 0 at the upper reference level to 1 at the lower reference level.

The advantage of banking credits in variant 1 is that it avoids the potentially difficult negotiation of specific discount levels, as well as the possible perception that reductions within the corridor are second-rate. The advantage of discounting credits in variant 2 is that it would provide an earlier and potentially steadier financial incentive, as opposed to the time lag imposed by banking the credits until the lower reference level is reached.

## JOINT RESEARCH CENTRE (JRC)



### "INCENTIVE ACCOUNTING"

*Authors: Danilo Mollicone et al.*

*Website: [www.jrc.it](http://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 half the global average are rewarded for reducing emissions from forest conversion.

## TERRESTRIAL CARBON GROUP (TCG)



*Authors:* Ralph Ashton et al.

*Website:* [www.terrestrialcarbon.org](http://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 NATURE CONSERVANCY (TNC)



### "INTEGRATED INCENTIVES APPROACH"

*Authors:* Bronson Griscom, Greg Fishbein, Rane Cortez et al.

*Website:* [www.tnc.org](http://www.tnc.org)

*Date:* May 2009

### SUMMARY

To address concerns about environmental integrity, equity, efficiency, and effectiveness, TNC draw upon elements from the “Stock-Flow Approach” as well as the Brazil and COMIFAC proposals. Reference emissions levels are set using a 10-year moving national historical average of emissions from deforestation and forest degradation. Countries that reduce emissions below this reference level will receive credits to sell in international compliance markets, and countries that go over this level would be required to make up the difference in future performance periods before credits can be sold. Accounting would be at the national level, with optional project-level credit ownership (valid only if national emissions are below a national reference level). TNC propose a new Stabilization Facility to address international leakage and equity concerns among countries with historically low rates of deforestation (see Box 1). This facility could also be used to establish permanence buffers in later performance periods. Revenue for the Stabilization Facility would be generated through a levy applied to all REDD+ credit transactions, and would be allocated to tropical countries as a function of their proportion of tropical forest carbon stocks that are vulnerable to emissions in later performance periods.

The Stabilization Facility could be topped up through public funds generated from ODA, the auctioning of AAUs (see Box 2) or taxes. TNC also suggest supplementary financing for a Readiness Fund - which could come from the auctioning of AAUs or other sources - to build capacity in non-Annex I and a Catalyst Fund - that could be backed by bonds - to stimulate private investment in countries where investment risk is perceived to be higher.



### “STOCK-FLOW APPROACH WITH TARGETS”

*Authors:* Andrea Cattaneo

*Website:* [www.whrc.org](http://www.whrc.org)

*Date:* April 2009

#### SUMMARY

The “stock-flow with targets” 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.

Since countries’ participation in REDD will be voluntary, the design of the incentives has to take into consideration both the environmental target to be reached and how to distribute rents to encourage broad participation. Trying to do both with just the baseline as a parameter can be difficult because there are implicitly two objectives: reaching an environmental target among participating countries and maximising country participation.

The basic “stock-flow” approach uses two instruments, the baseline and withholding level, to pursue these two objectives. Countries’ baselines are set to historical emissions so that all emitting countries have an immediate positive incentive to lower emissions. The withholding rate, relative to the price of carbon, generates the funds to be distributed as dividends. To maximise incentives in the REDD mechanism, the “stock flow with targets” approach introduces a third instrument, the “target”, below which the withholding rate will not apply. This approach is more effective because stock funds are still available for countries with low rates of deforestation, but the marginal incentive to reduce deforestation beyond the target for high deforesting countries is greater.



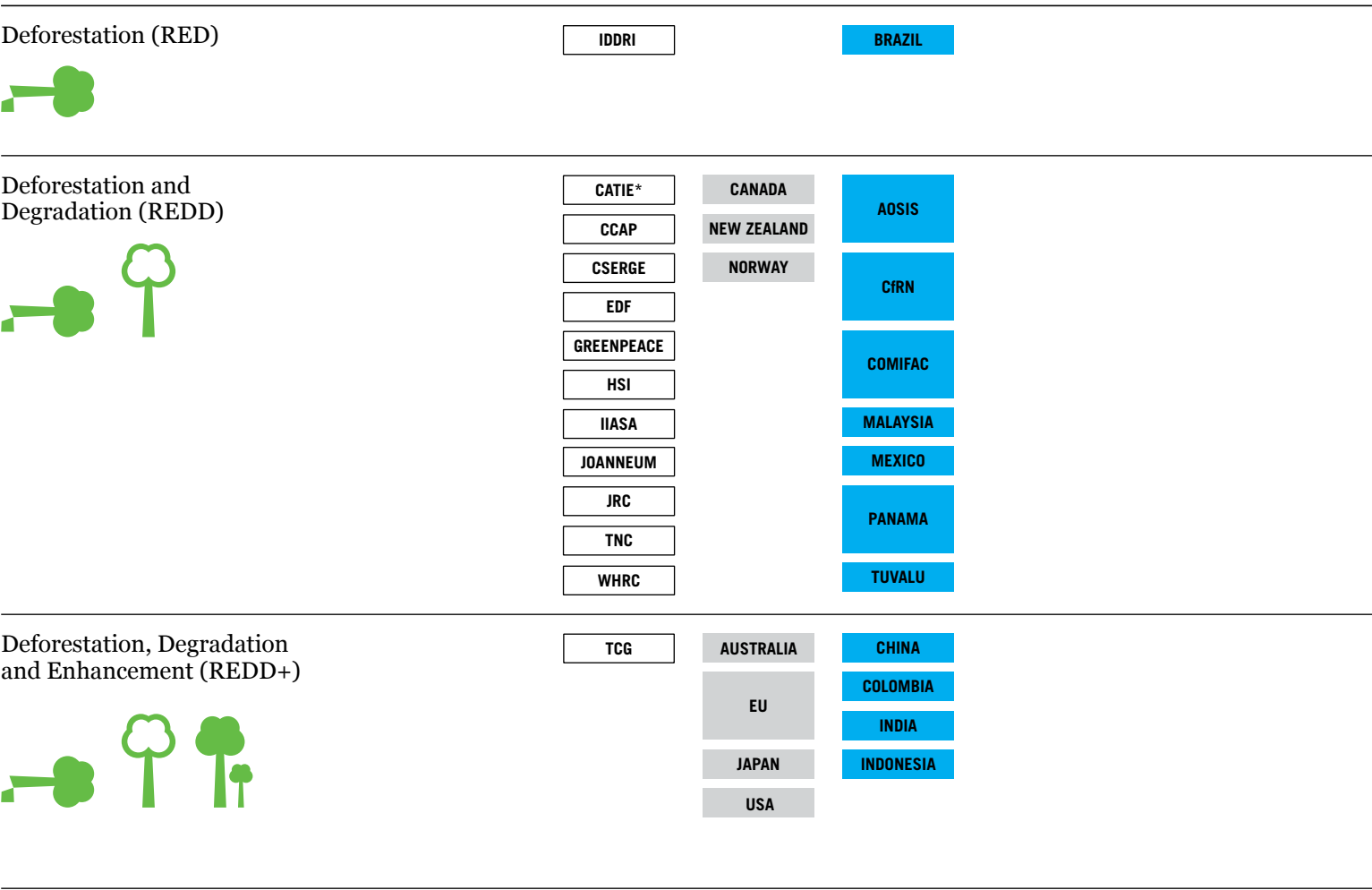
**HOW DO THEY  
COMPARE?**

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.



Not Specified

\* Supported by Latin American countries including Chile, Peru and Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama.

Larger boxes denote submissions made on behalf of a number of countries.

**SCOPE: Conclusions**

There is an overwhelming consensus that a future mechanism for REDD should include both deforestation and forest degradation. An increasing number of proposals also explicitly emphasise that carbon enhancement activities should be considered alongside activities that reduce 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.

Likewise, some proposals indicate that REDD should be incorporated in a broader AFOLU approach that includes other land use and land use change including agriculture, but again via a staggered approach for practical reasons.

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



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.

Sub-national



National



Global



Not Specified

CATIE\*

AUSTRALIA

CCAP

EDF

GREENPEACE

HSI

IIASA

IDDR

CANADA

EU

JAPAN

NEW ZEALAND

NORWAY

AOSIS

CHINA

COLOMBIA

COMIFAC

MALAYSIA

PANAMA

BRAZIL

CIRN

INDIA

INDONESIA

MEXICO

CSERGE

JRC

USA

\* Supported by Latin American countries including Chile, Peru and Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama.

Larger boxes denote submissions made on behalf of a number of countries.

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 historical, historical adjusted or projected reference level.

The proposals by CATIE and Indonesia use two reference periods and are shown twice in this diagram.

Historical



CATIE*	BRAZIL
CSERGE	INDIA
GREENPEACE	INDONESIA
IIASA	
JRC	
TNC	
WHRC	

Historical Adjusted



EDF	CANADA	AOSIS	MALAYSIA
JOANNEUM	EU		MEXICO
	JAPAN	CIRN	PANAMA
	NORWAY	COLOMBIA	
		COMIFAC	

Projected



CATIE*	AUSTRALIA	INDONESIA
TCG		

Not Specified

CCAP	NEW ZEALAND	TUVALU
HSI	USA	
IDDRI		

\* Supported by Latin American countries including Chile, Peru and Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama.

Larger boxes denote submissions made on behalf of a number of countries.

Non-governmental proposals

Developed countries

Developing countries

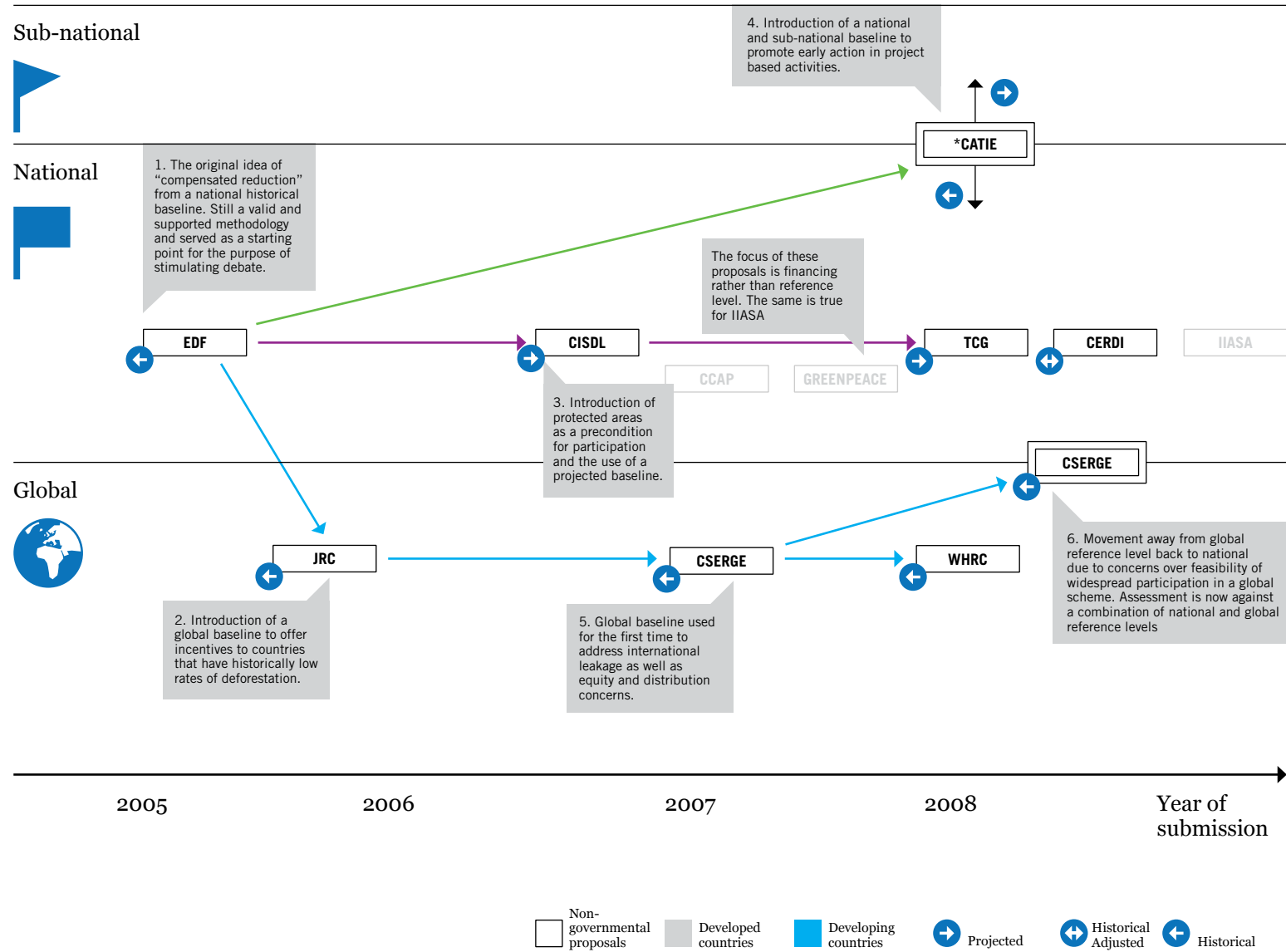
REFERENCE LEVEL: Evolution of thinking from 2005 – 2008

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.



## 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;
- To provide an incentive for both project level and national level activities, as proposed in the “nested approach”;
- 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.

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

### Reference Period

The majority of non-governmental proposals and some governmental proposals (Brazil, India, Indonesia) use reference levels based on historical emissions. Historical reference levels are chosen for the following reasons:

- To demonstrate “actual” reductions relative to past emissions from deforestation;
- As the simplest methodology for calculating emissions reductions.

There is a strong consensus among governmental proposals to use either historical reference levels with a development adjustment factor (DAF) (AOSIS, Canada, CfrN, Colombia, COMIFAC, EU, Japan, Malaysia, Mexico, Norway, Panama) or a projected reference level (Australia, Indonesia). The difference between historical adjusted and projected reference levels is mainly methodological as both are aiming to anticipate future changes in deforestation patterns.

Joanneum propose an upper and lower limit on reference-levels in conjunction with either discounting or banking of REDD credits to address inter-annual variability and business as usual activities.

IDDRI is a unique case; instead of using a projected or historical baseline it 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 historical baseline for national-level activities (in line with the majority of proposals).

Indonesia also uses dual baselines; these are not, however, related to the scale at which the activities are measured and both operate at the national level. National historical 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 to create positive incentives for the conservation of standing carbon stocks.

There are inherent distributional implications within REDD for countries with high forest cover and low rates of deforestation (HFLD) (see Box 1). Some proposals, in an attempt to address equity and leakage concerns for HFLD countries propose a distribution mechanism.

Proposals can either specify a redistribution of existing revenues or an additional funding mechanism (often referred to as a stabilisation fund).

The proposals by COMIFAC and JRC use both a redistribution and additional funding and are therefore located on the line between two distribution mechanisms.

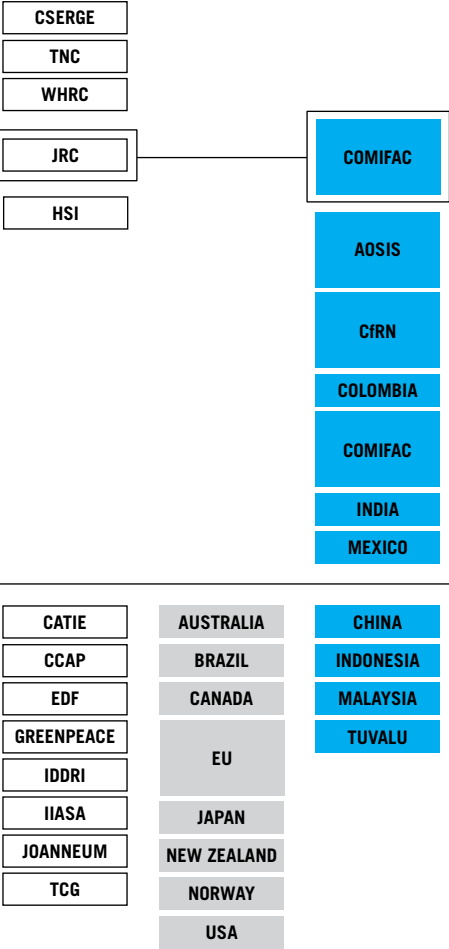
Redistribution Mechanism



Additional Mechanism



Not Specified



\* Supported by Latin American countries including Chile, Peru and Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama.

Larger boxes denote submissions made on behalf of a number of countries.

Non-governmental proposals Developed countries Developing countries

## DISTRIBUTION: Conclusions

Generally, distribution implications are implicit in the reference level methodology: Most countries don't suggest any further redistribution of benefits (and New Zealand is strongly against it). The outcome of this is that the majority of proposals would reward historically high emitters and exclude low emitters.

Five proposals (COMIFAC, CSERGE, TNC, JRC and WHRC) explicitly specify a distribution mechanism that redistributes funds from the revenues generated from emissions reductions to HFLD countries (that would otherwise not benefit from REDD). The distribution mechanisms follow two basic methodologies:

- A global historical baseline is used to allocate a proportion of benefits to countries other than those generating emissions reductions (CSERGE, JRC);
- A fixed portion of revenues are withheld from countries generating emissions reductions and redistributed to countries with carbon stocks (COMIFAC, TNC, WHRC);

Some proposals (AOSIS, CFRN, Colombia, COMIFAC, HSI, India, Mexico, Panama) support a stabilisation fund that would use a revenue stream that is separate from the financing of emissions reductions to support conservation activities.

TNC propose that revenues withheld using a stabilisation mechanism could also be held in a buffer to address permanence issues

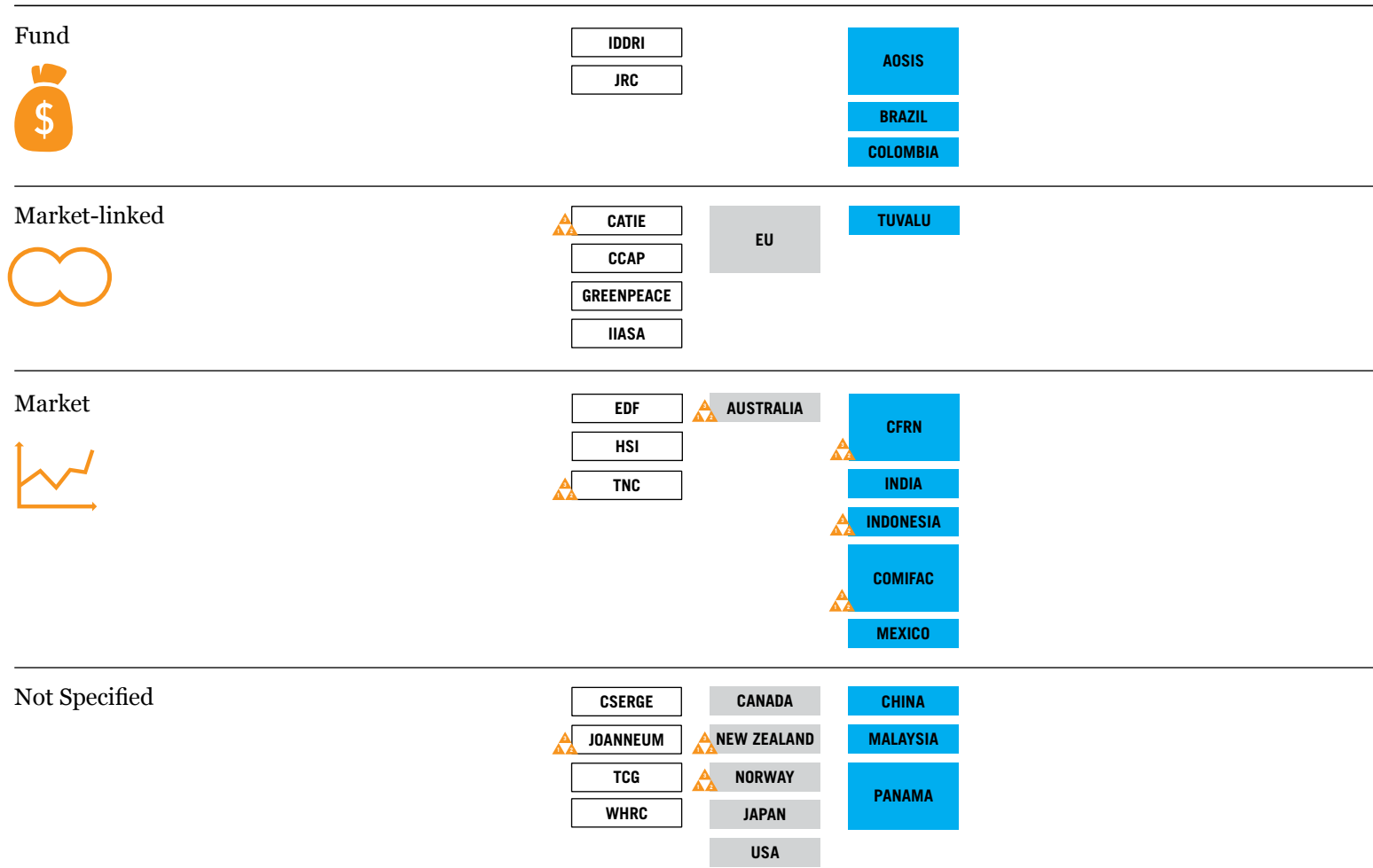
Both COMIFAC and TNC propose that a redistribution of revenues from emissions reductions to reward carbon stocks could be supported by a stabilisation fund.



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FINANCING: The choice of financial mechanism of the proposals

The diagram opposite shows whether proposals choose to use a market, fund or market-linked mechanism to finance the full scale implementation of REDD activities. Proposals that support a phased approach are also indicated (see page 96).



\* Supported by Latin American countries including Chile, Peru and Panama on behalf of Costa Rica, El Salvador, Honduras, Nicaragua and Panama.

Larger boxes denote submissions made on behalf of a number of countries.

Non-governmental proposals

Developed countries

Developing countries

 Phased approach

## FINANCING: Conclusions

There is a growing consensus that a phased approach is required that focuses on combining different sources of financing for different aspects of REDD on appropriate time-scales (This idea is discussed further on page 96).

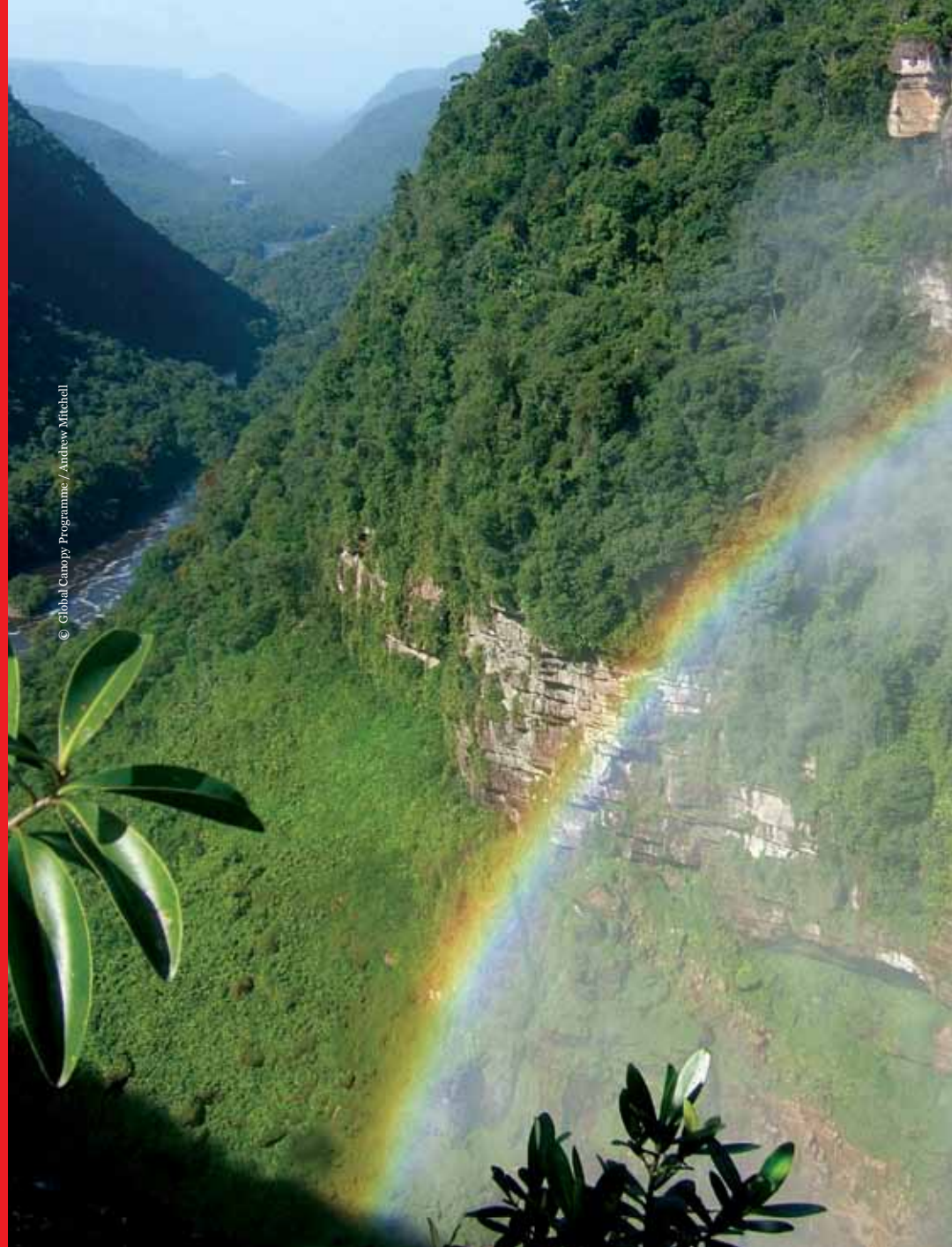
- Funds are considered to be more appropriate for capacity building and demonstration activities.
- Market-linked approaches can be used to scale up the implementation of REDD activities.
- Markets and market linked approaches are often recognised as providing more consistent and greater scale for the long term financing of emissions reductions.

Many proposals do not specify a financing mechanism stating that both funds and markets could be used to finance emissions reductions. Joanneum, New Zealand, Norway and Panama all support the phased approach but do not have a preferred mechanism for the final (emissions reductions) phase.

Market-linked approaches can use revenues generated through the auctioning of allowances or from emissions trading within a dual market:

- In an auctioning process, emissions reductions from REDD would be additional to existing developed country commitments. The percentage of allowances and scale of auctions (national, multinational, international) could be agreed by the COP.
- Dual-markets could use emissions reductions from REDD to meet existing Annex I commitments (CCAP) or could require that emissions reductions are additional to existing targets (Greenpeace). Both of these approaches would require that is that emissions reductions from REDD are not fungible with other emissions reductions.

Emissions reductions that are financed through voluntary funds cannot be used to meet Annex I commitments.



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# WHAT'S HOT?

### REDD: AN OPTIONS ASSESSMENT REPORT

#### *Meridian Institute for The Government of Norway*

The Bali Road Map should lead to a Copenhagen agreement that commits to climate stabilisation at a maximum 2°C temperature increase, consistent with atmospheric CO<sub>2</sub> concentrations below 450 parts per million (ppm). Reducing emissions from deforestation and forest degradation (REDD) will address a source of greenhouse gas (GHG) emissions larger than the entire global transportation sector. Without REDD, the 2°C climate stabilisation goal will not be reached.

This report assesses several important considerations for a future REDD mechanism within the UNFCCC, and strives to clarify and inform some of the critical choices that will need to be made about including REDD in a Copenhagen agreement. At the international level, a good outcome for REDD would create the enabling conditions for effective implementation in REDD countries, including:

- Financial incentives;
- Procedures for setting reference levels;
- Methodologies for monitoring, reporting, and verification; and
- Processes to promote the participation of indigenous peoples and local communities

Capturing the mitigation potential of REDD requires a flexible, phased approach to implementation in order to accommodate (i) the diverse capabilities of REDD countries; (ii) an expanded scope of REDD to include conservation, sustainable management of forests, and enhancement of forest carbon stocks; and (iii) the near-term constraints of the current global financial crisis.

#### **PHASE 1**

National REDD strategy development, including national dialogue, institutional strengthening, and demonstration activities. These activities should continue to be supported by voluntary contributions that are immediately available, such as those administered through the World Bank's Forest Carbon Partnership Facility (FCPF), UN REDD, and other bilateral arrangements. Eligibility for access to funds should be based on a

demonstrated national commitment to REDD strategy development.

#### **PHASE 2**

Implementation of policies and measures (PAMs) proposed in those national REDD strategies. These activities should be supported by predictable funding from a global facility supported by an internationally binding finance instrument with enforceable commitments, such as assigned amount units (AAU) auctioning revenue. Eligibility for access to those funds should be based on a demonstrated national commitment to REDD strategy implementation, with continued access based on performance including proxy indicators of emission reductions and/or removal enhancements (e.g., reduction in area deforested). Once the financial instrument for Phase 2 has been established, most Phase 1 activities could be incorporated into the Phase 2 instrument.

#### **PHASE 3**

Payment for performance on the basis of quantified forest emissions and removals against agreed reference levels. This could be financed on a large scale by the sale of REDD units within global compliance markets or a non-market compliance mechanism, with eligibility contingent upon compliance-grade monitoring, reporting, and verification (MRV) and accounting of emissions and removals. No Phase 3 REDD units should be earned for emission reductions or enhanced removals achieved during Phase 2, but Phase 3 should allow crediting for the results of the continuation of policies and measures initiated in Phase 2.

The timing of graduations from one phase to the next will vary, and REDD countries could skip a particular phase provided they meet the eligibility criteria for the next phase. Within countries, overlap between phases may also be necessary and even desirable. MRV should advance progressively with phase graduation, and should be upwardly compatible with a future framework that could encompass the whole agriculture, forestry, and other land uses (AFOLU) sector of Intergovernmental Panel on Climate Change (IPCC) guidelines for GHG inventories. Although participation in a REDD mechanism would be voluntary, liability for participating countries would increase from one phase to the next, with an eventual national sectoral commitment in Phase 3.

#### **Website:**

[www.redd-oar.org](http://www.redd-oar.org)

## EMERGENCY PACKAGE FOR TROPICAL FORESTS

### *The Prince's Rainforests Project (PRP)*

The Prince's Rainforests Project (PRP) has developed a proposal for an emergency financing package for tropical forests. Its goal is to achieve a significant reduction in tropical deforestation in the near-term by making annual payments to rainforest nations to help them embark on alternative, low-carbon development paths. It would be funded by an innovative public-private partnership in developed countries, which could include the issuing of Rainforest Bonds.

The PRP proposes that an institutional framework be set up to perform several critical new functions: negotiate multi-year deals with rainforest nations based on the costs of switching to a low-deforestation development path; raise necessary funding from public and private sources; verify country performance against deforestation targets, as well as governance/transparency standards; transfer money to rainforest nations based on agreements and results achieved; help co-ordinate and/or fund assistance to rainforest nations for development planning, monitoring systems, technical forestry issues etc.

In aggregate this framework is called the Tropical Forest Facility. The PRP's emergency package proposal sets out the principles that should govern the design of the framework but stops short of proposing a specific solution.

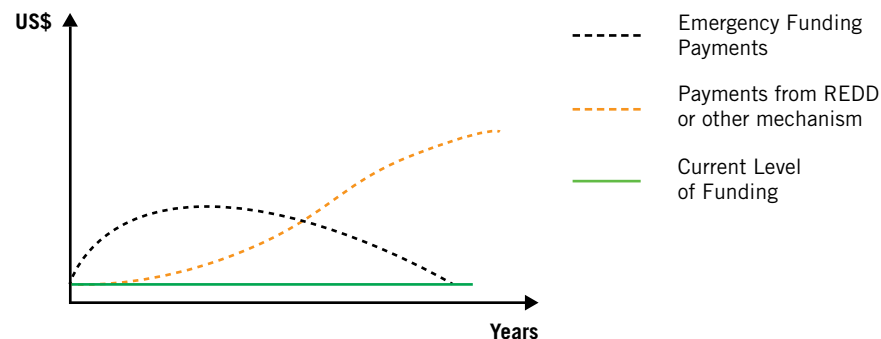
Under the PRP proposal, developed countries would be free to decide how to finance their obligations. Some may use general taxation, others may generate revenues by auctioning CO<sub>2</sub> emission allowances, others still may elect to introduce special levies on aviation, insurance or other sectors. The PRP is also developing a proposal for governments to generate a substantial part of the funding through the issuance of Rainforest Bonds in private capital markets. In a similar manner to the International Financing Facility for Immunisation (IFFIm) these Rainforest Bonds would be underwritten by the participating developed world governments and financed on maturity through revenues from public financing mechanisms.

#### **An interim measure**

The proposal is complementary to forest carbon mechanisms currently being negotiated under the United Nations Framework Convention on Climate Change (UNFCCC). It is designed to fill the funding gap that will arise before

the UNFCCC mechanisms are implemented at scale and to facilitate and accelerate the transition to these future arrangements.

Figure 8. Funding needs will increase as more Rainforest Nations participate in the Emergency Package and decrease once payments begin to flow from REDD or other UNFCCC mechanisms.



#### **A catalyst for action**

The PRP proposal does not contain all the answers. In some cases, it sets out alternative options for implementation, all of which have merits. Ultimately, the implementation of any emergency package will depend on acceptance by the governments and communities of rainforest nations and the governments of major developed countries, together with the active involvement of private capital markets.

Following an agreement brokered by the PRP at the time of the G20 meetings held in London in 2009, an International Working Group has been set up with the participation of 33 countries from among the rainforest nations and the developed world to further investigate proposals for interim funding for tropical rainforests. Interim findings of the Working Group will be presented at the G8 Summit meetings in July, with a final set of recommendations presented at the UN General Assembly in September 2009 and World Bank Annual meeting in October 2009.

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#### **Website:**

[www.rainforestsos.org/](http://www.rainforestsos.org/)  
[www.rainforestsos.org/pages/emergency-package/](http://www.rainforestsos.org/pages/emergency-package/)

OPEN SOURCE IMPACTS OF REDD INCENTIVE SPREADSHEET (OSIRIS)

Conservation International (CI), Centre for Social and Economic Research on the Global Environment, University of East Anglia (CSERGE), The Woods Hole Research Center (WHRC), Environmental Defense Fund (EDF) and Terrestrial Carbon Group (TCG)

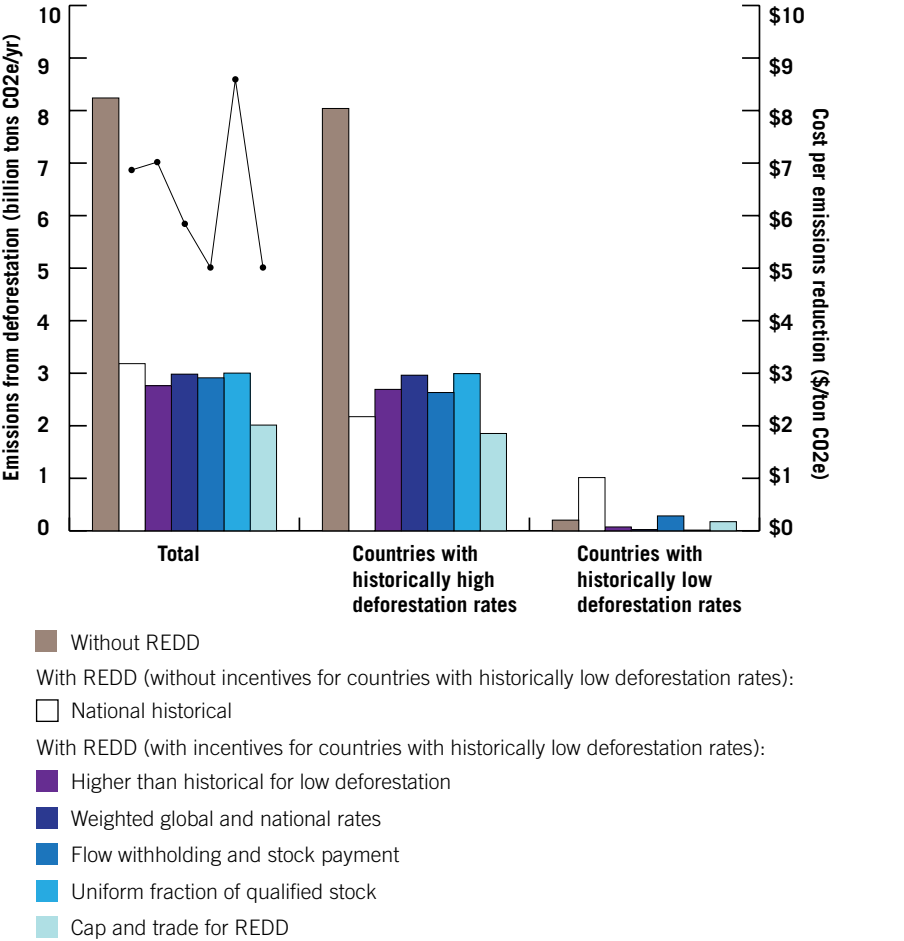
OSIRIS is an economic modelling tool to support UNFCCC negotiations on REDD reference levels. For a broad range of REDD reference level designs, OSIRIS provides click-of-a-button global, regional, and country-by-country estimates of likely: Emissions reductions relative to business as usual (ton CO<sub>2e</sub>/yr); avoided deforestation (Ha/yr); distribution of revenue from REDD (\$/yr); and cost-efficiency of emissions reductions (\$/ton CO<sub>2e</sub>).

OSIRIS users can adjust input parameters, including: Carbon price (\$/ton CO<sub>2e</sub>); management cost and transaction cost (\$/Ha or \$/ton CO<sub>2e</sub>); fraction of forest soil carbon eligible for REDD; suite of countries ready to participate in REDD; elasticity of global demand for frontier land agricultural output.

The REDD design questions which can be addressed using OSIRIS include: How would different REDD reference level designs contribute to emissions reductions, accounting for deforestation displacement risk (“leakage”)?; what would be the likely magnitude and distribution of financial flows to countries from different REDD reference level designs?; how can reference levels be set for countries with differing levels of forest cover and historical rates of deforestation to promote effectiveness, efficiency, and equity?; what are the implications if not all countries are ready to participate in a REDD mechanism immediately?; how do design implications differ for a REDD fund of a fixed size rather than a REDD market with a fixed credit price?

Key findings and policy implications of research using OSIRIS include: REDD can be an effective and efficient source of emissions reductions; if only a subset of forest nations participate in an international REDD mechanism, there is a risk that deforesting activities will shift to nonparticipating countries; extending REDD incentives to countries with historically low deforestation rates through higher-than-historical reference levels can prevent leakage to those countries, making the REDD mechanism more effective overall; the overall effectiveness of REDD will also depend on the extent to which agricultural needs can be met outside of the tropical forest frontier.

Figure 9. REDD designs that provide incentives to countries with historically low deforestation rates can prevent leakage to those countries, resulting in an overall more effective REDD mechanism. From Busch et al (in review).



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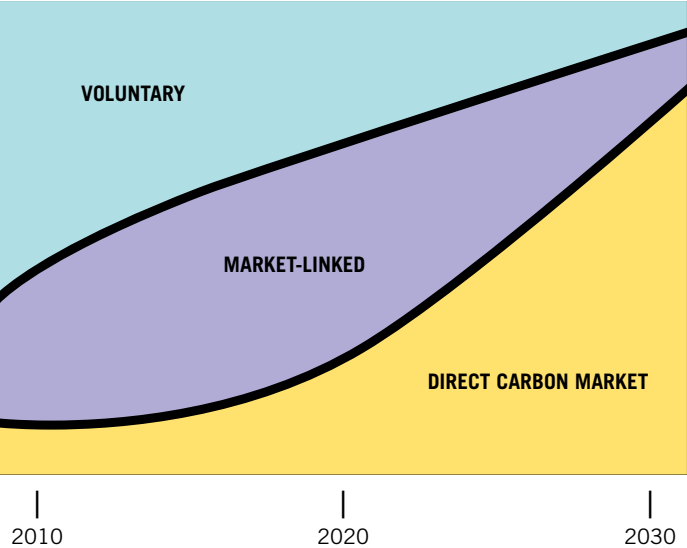
www.conservation.org/osiris

## 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 10. 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 10) 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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[http://www.ucsusa.org/global\\_warming/solutions/forest\\_solutions/REDD.html](http://www.ucsusa.org/global_warming/solutions/forest_solutions/REDD.html)

## RESEARCH ON REDD AND THE ROLE OF FORESTS IN MITIGATING CLIMATE CHANGE

### 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.

#### Analyzing Future Options for Forests in the Post 2012 Climate Regime

Objective: To inform the current policy debate, so that international post-2012 climate regimes and national REDD schemes are constructed in a manner that produces real reductions of emission from deforestation and forest degradation, using methods which effective, efficient, and equitable. It will provide a critical review of potential barriers to adoption of REDD policies based on global analysis of the political economic influences within and outside the forestry sector, and disseminate this research through a media seminar, television debates and a parliamentarian road show.

#### Comparative Analysis of Redd Demonstration Activities

Objective: To provide REDD policymakers and practitioner communities with the information, analysis and tools they need to ensure effective and cost-efficient reduction of carbon emissions with equitable impacts and co-benefits. Tools will be developed that are tailor-made to the needs of policy formulation and strategy design, including toolkits, guidelines and manuals; an overview of reference-level conditions in 20–30 REDD demonstration sites and control sites will be provided; and a tested REDD project designed manual will be developed, to facilitate application of the approach in novel circumstances.

#### Forest and Climate Change

Objective: To determine how climate change trends may affect USAID's ongoing and future programming in the forest sector and to build understanding and technical proficiency within USAID staff and local partners. This research will design and facilitate training workshops on topics identified in the above analysis, to build understanding and technical proficiency within USAID staff and local partners.

#### Peatlands and Wetlands Greenhouse Gas (GHG) Emissions Measurement Campaign

Objective: To determine best practice for estimating carbon stocks in tropical biomes by reducing uncertainties in emission factors. It's hoped this research will culminate in a database and models for estimating below and above-ground carbon stock in peatlands and mangrove ecosystems.

#### REDD-ALERT

Objective: To slow deforestation rates in tropical areas by contributing to the development and evaluation of market and non-market mechanisms and the institutions needed to change stakeholder behaviour. It's hoped this research will provide support to international policy-makers by providing information about the relevant assumptions and external factors which shape these institutions.

#### Research to Support Design and Implementation for REDD Effectiveness

Objective: To promote the design of international post-2012 climate regime and national REDD schemes, which are efficient, equitable and provide benefits to affected communities in developing countries. It's hoped this research will establish cost-efficient methods for REDD baselines and for monitoring changes in forest carbon stocks, while developing international strategies which take into account barriers to adopting REDD schemes.

#### Strengthening REDD Implementation

Objective: This project has two main objectives. In the short-term, to improve climate change literacy at all levels of Indonesian society. In the long-term, to support the implementation of REDD demonstration activities worldwide which are based on research and scientific information relating to effectiveness, efficiency and equity. It's hoped this research will result in cost-efficient methods for REDD baselines and for monitoring changes in forest carbon stocks, while shaping national policies and international strategies which favour cost-efficient REDD schemes and protect the economically marginalised.

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[www.cifor.cgiar.org/carbofor/projects/globalredd/introduction.htm](http://www.cifor.cgiar.org/carbofor/projects/globalredd/introduction.htm)

## 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. REDD schemes must build on FLEGT-type consultation processes, support governance reforms, strengthen the rights of forest peoples, and ensure that local communities receive benefits for their role in protecting forests. Building on existing

FLEGT consultation processes in countries where this exists, and replicating this type of process in countries where it doesn't, provides an opportunity for future REDD initiatives to effectively contribute to forest conservation and better forest management.

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:

- an overview of REDD proposals and the impact of these on local peoples rights;
- a comparison of 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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## 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](http://ec.europa.eu/environment/nature/biodiversity/economics/index_en.htm)

REDD BASELINE MODELLING USING A NEW CLASSIFICATION OF COUNTRY CIRCUMSTANCES

The Nature Conservancy, TerraCarbon

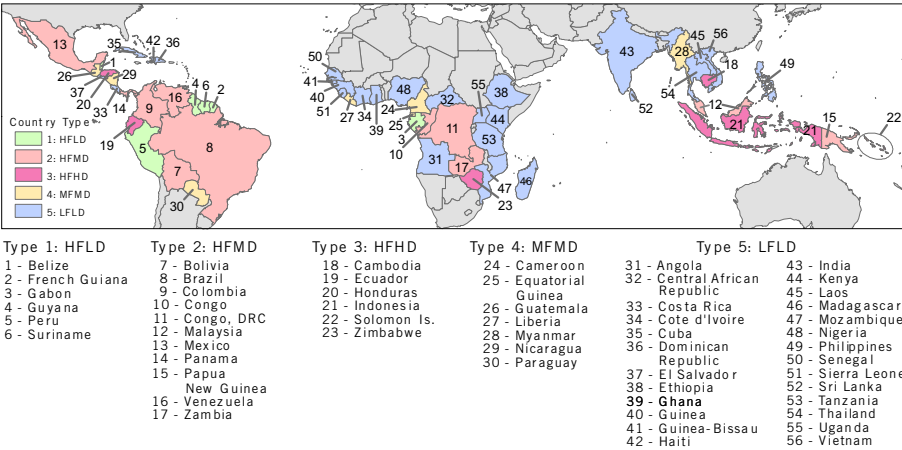
The analysis by The Nature Conservancy and TerraCarbon compares the quantity of credits generated by the different reference levels specified in seven of the current proposals for REDD (EDF, Brazil, JRC, Corridor Approach, WHRC, CSERGE, and TCG). The goal is to make a first approximation of the quantity 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 historical 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 deforestation	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 deforestation	1 - 35%	0 - 0,3%	Africa

Figure 11. Geographic distribution of countries sorted into country types



In order to understand how outcomes depend upon country circumstances, five types of REDD countries are identified using multivariate statistical analysis of data on historical rates of deforestation and percent remaining forest from 56 tropical countries (see Table 2). These countries are represented geographically in Figure 11.

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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## **TRANSITION PATHWAYS: BREAKING THROUGH BARRIERS BY STARTING WITH THE “IMMEDIATELY POSSIBLE” AND MOVING TO THE “ULTIMATELY NECESSARY”**

### ***Terrestrial Carbon Group***

The Terrestrial Carbon Group’s work in 2009 builds on our proposal on ‘How to Include Terrestrial Carbon in Developing Nations in the Overall Climate Change Solution’, published in July 2008 and is focused on demonstrating the importance of agreeing to the appropriate scope (starting with forests and including all terrestrial carbon over time) and reference emission levels (a robust and credible view of the future). The TCG are building detailed transition pathways to break through technical, financial, and policy barriers in these contexts, starting with the “immediately possible” and moving to the “ultimately necessary” over the period 2010-2050.

These transition pathways are underpinned by technical papers that will be released during the remainder of 2009, including:

- **Reference Emission Levels:** “How to” guide to setting robust and credible reference emission levels (that are compatible at the national and sub-national / project scales) including a description of necessary data, based on a review of existing methodologies.
- **Scope:** Assessment of the state of the science and methodological issues on all aspects of terrestrial carbon (or “AFOLU”) and a suggested multi-year program of work to fill gaps, especially on agriculture and other land use.
- **MARV:** Options paper on monitoring, assessment, reporting, and verification requirements, costs, and efficiencies for REDD and AFOLU scenarios.
- **Institutions and Regulation:** Global review of existing institutional and regulatory approaches by developing and developed countries to land use in the context of climate change, lessons learned for other countries, an options paper detailing necessary policy choices and their implications, and regulatory building blocks for national and sub-national implementation.

In addition, TCG continue to work with key partners on national-scale implementation, including supply-side readiness (the ability to undertake and track activities that generate carbon credits or attract other incentives) and demand-side readiness (ensuring there are buyers of the credits or providers of the incentives). This both draws on and informs the technical and policy work and the transition pathways.

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## PHASES OF NATIONAL REDD DEVELOPMENT

### WWF

WWF supports a strong, effective REDD framework in a post-2012 agreement under the UNFCCC. Substantial reductions in emissions from deforestation are critical in limiting global average temperature increase to well-below 2°C above pre-industrial levels. A well-designed REDD mechanism should also provide important benefits for protecting biodiversity and supporting the livelihoods of many indigenous peoples and other forest-dependent communities.

Most observers recognise that reducing and ultimately halting emissions from deforestation will be most effective through national programmes that address deforestation in a comprehensive manner, by tackling key national and local drivers of deforestation and supporting institutional and technical capacity building in developing countries. WWF believes a phased approach to REDD would help developing countries build capacity and produce lasting, measurable, reportable and verifiable emissions reductions.

Building on the work undertaken by other organisations and parties, such as the Options Assessment Report commissioned by the Norwegian Government and proposals from parties, including the Coalition for Rainforest Nations, WWF is working to identify criteria and thresholds for a phased approach that would create a step-wise process for development of national REDD programs. Below is a draft summary of key elements for a phased approach and thresholds that might be applied for an effective phased development of REDD.

WWF would welcome feedback on the proposed elements and thresholds for a phased approach, which is part of its broader work on REDD.

### *Thresholds For Phases of National REDD Development*

#### PHASE 1: PLANNING

Assessment, planning, stakeholder consultations and institutional capacity building to develop a national REDD plan.

By the end of phase 1, the following requirements will have been achieved:

1) Well-established process and institutional arrangement for engaging stakeholders with a credible and monitorable participation plan;

2) Identification of national government REDD authority; 3) Base-level MRV capability and plan to acquire capability necessary to meet all reporting requirements; 4) Approval of a national REDD plan that includes an assessment of the drivers of deforestation in the country and a first cut at a national baseline.

#### PHASE 2: PREPARATION

Development, initial implementation and monitoring of policies and measures in accordance with the national REDD plan.

By the end of phase 2, national REDD framework would be established through: 1) Full MRV capability; 2) Authentic engagement of stakeholders via a transparent and documented participatory process that reflects prior informed consent of affected forest dependent peoples; 3) Testing elements of the framework (MRV, engagement, improved capacity) through pilot activities at the sub-national and national level; 4) Approval of framework and institutional readiness, including a national baseline by the appropriate international body designated by the convention.

*Global Agreement and Framework:* In addition to in-country development of a national REDD programme, the ability to move into full execution is dependent on the adoption of a global framework by the UNFCCC.

#### PHASE 3: EXECUTION

Full scale implementation of the emission reduction measures under the national REDD plan.

Based on development during phases 1 and 2, by phase 3 countries would have in place a: 1) Fully-functioning national REDD authority and other national bodies to verify emissions reductions; 2) Fully-functioning MRV capability operationalised with assessments of deforestation and forest degradation conducted at intervals sufficient to meet all international standards. Assessment results should be independently verified and fully transparent; 3) Fully-functioning dispute or conflict resolution capacity to ensure fair and equitable treatment and revenue sharing with indigenous or forest-dependent people.

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## PINC: PROACTIVE INVESTMENT IN NATURAL CAPITAL

### *Global Canopy Programme*

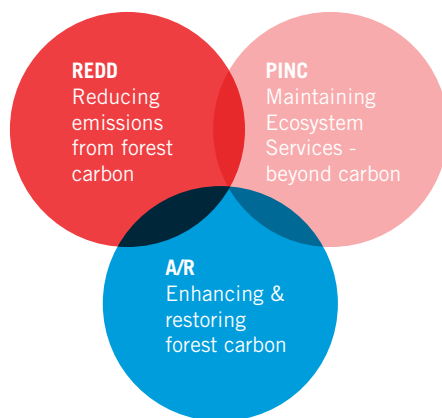
PINC is a funding framework proposed by Global Canopy Programme and other collaborators in the Forest Now network that specifically focuses on large areas of standing tropical forests, not immediately threatened by deforestation and which may or may not benefit from REDD. It suggests a mechanism to economically 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.

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

Figure 12. How PINC will interact with other UN mechanisms



declines. PINC could also be applied to biodiversity outside forests.

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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](http://www.occ.gov.uk)

**WHERE DO WE  
GO FROM HERE?**

## WHAT ARE THE CHALLENGES?

*Katia Karousakis, OECD*

Much progress has been made since COP 11, when Papua 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<sup>14</sup>.

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.*

THE ROAD TO COPENHAGEN

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.

December 08

UNFCCC, COP 14, Poznan: REDD-watchers see negotiations on REDD recede rapidly into the distance. See <http://www.globalcanopy.org/main.php?m=120&sm=169&bloid=37> for more detail.

March 08

UNFCCC meeting of AWG-LCA and AWG-KP, Bonn: Progress on policy issues for REDD as Parties meet at two focus groups to discuss mitigation and financing mechanisms in relation. See <http://www.globalcanopy.org/main.php?m=120&sm=169&bloid=38> for further information

KEY STEPPING STONES TO 2012 / 13

June 09

UNFCCC, SBSTA 30, Bonn: Technical experts must begin to finalise a REDD architecture.

August 09

UNFCCC, AWG-LCA and AWG-KP, Bonn: Intersessional informal consultations to further the policy track on REDD.

September 09

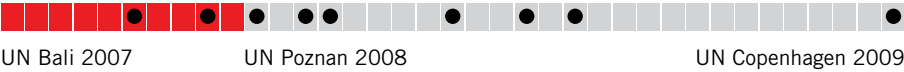
UNFCCC, AWG-LCA and AWG-KP, Bangkok: Ninth session of the AWG-KP and seventh session of the AWG-LCA.

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](http://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.



# ANNEXES

## BIBLIOGRAPHY

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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<sup>13</sup>.

### 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<sup>13</sup>.

### 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)<sup>14</sup>.

### Carbon Stock

The absolute quantity of carbon held within a pool at a specified time<sup>14</sup>.

### 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"<sup>15</sup>.

### 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<sup>15</sup>.

### 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 (CO<sub>2</sub>e).

### Hot Air

Hot air often refers to emissions reductions that are not additional<sup>16</sup>.

### 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<sup>14</sup>.

**Permanence**

The longevity of a carbon pool and the stability of its stocks, given the management and disturbance environment in which it occurs<sup>14</sup>.

**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<sup>13</sup>.

**Sequestration**

The process of increasing the carbon content of a carbon pool other than the atmosphere<sup>13</sup>.

**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<sup>14</sup>.

**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<sup>14</sup>.


**ACRONYMS**


AAU	Assigned Amount Unit
AFOLU	Agriculture, Forestry and Other Land Use
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
REDD	Reducing Emissions from Deforestation and 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


KEY TO ICONS


SCOPE


  
Deforestation

  
Degradation


  
Enhancement


  
Historic


  
Historic Adjusted


  
Projected


DISTRIBUTION


  
Redistribution Mechanism

  
Additional Mechanism


  
Direct Market


  
Market-linked


  
Voluntary Fund

  
Phased Approach

SCALE

  
Sub-national

  
National

  
Global



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](http://www.littleREDDbook.org).

