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Reducing emissions from deforestation in developing countries: approaches to stimulate action

**Views on issues related to further steps under the Convention related to  
reducing emissions from deforestation in developing countries:  
approaches to stimulate action**

**Submissions from Parties**

**Addendum**

1. In addition to the 10 submissions contained in document FCCC/SBSTA/2007/MISC.14 and the four submissions contained in FCCC/SBSTA/2007/MISC.14/Add.1 and Add.2, one further submission has been received.
2. In accordance with the procedure for miscellaneous documents, this submission is reproduced\* in the language in which it was received and without formal editing.

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SUBMISSION FROM TUVALU

TUVALU

**Reducing Emission from Deforestation in Developing Countries: Approaches to Stimulate Action**

**A further submission from the Government of Tuvalu**

Tuvalu welcomes the opportunity to provide a more elaborate response to the issue of “Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action” for consideration at COP 13.

**Introduction**

The issue of reducing emissions from deforestation (RED) is complex. Similarly the causes of deforestation are also complex. Therefore finding actions under the UNFCCC to reduce emissions from deforestation requires careful consideration of a number of inter-related factors.<sup>1</sup> The IPCC<sup>2</sup> suggests that during the period 2000 to 2005 gross deforestation continued at a rate of 12.0 million ha/yr. They suggest that this is due to converting forests to agricultural land, expansion of settlements, infrastructure and unsustainable logging practices.<sup>3</sup> Using FAO figures the IPCC suggests that net carbon stocks in forest biomass decreases by about 4,000 MtCO<sub>2</sub> annually between 1990 and 2005.<sup>4 5</sup>

**Offsetting Opportunity Costs:**

The major focus to date on actions to reduce emissions from deforestation has to been to look at finding financial means to offset opportunity costs. That is to find a financial incentive that is greater than removing tropical forests and gaining income from the process of removal or alternative land uses. Counterbalancing opportunity costs is only one part of the complex processes needed to bring about change in practices.

For the purposes of this discussion, this submission will review options for financing that may act to counterbalance opportunity costs. The submission is divided into a number of parts:

- Part I. Key Principles
- Part II: Definitional Issues: Deforestation and Forest Degradation
- Part III: Consideration of Market-based Options for RED
- Part IV: Conclusion to the Consideration of Market Based Mechanisms
- Part V: Consideration of Pilot Projects
- Part VI: Conservation of Existing Carbon Stocks

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<sup>1</sup> See for example, Helmut J. Geist and Eric F. Lambin, “Proximate causes and underlying driving forces of tropical deforestation”, 2002, *Bioscience*, Vol 52 No. 2.

<sup>2</sup> Nabuurs, G.J., O. Masera, K. Andrasko, P. Benitez-Ponce, R. Boer, M. Dutschke, E. Elsidig, J. Ford-Robertson, P. Frumhoff, T. Karjalainen, O. Krankina, W.A. Kurz, M. Matsumoto, W. Oyhantcabal, N.H. Ravindranath, M.J. Sanz Sanchez, X. Zhang, 2007: *Forestry. In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

<sup>3</sup> This summation may not be consistent with the IPCC’s definition of deforestation as it appears to capture some elements of forest degradation (see later discussion on definitions).

<sup>4</sup> Ibid, p, 544

<sup>5</sup> As this is a net figure removals would also be considered in this calculation

Part VII: Non Market Approaches:

Part VIII: Early Action: The Bali Initiative on RED

### **Part I. Key Principles**

#### **Reductions in Greenhouse Gas Emissions:**

The crucial element in the consideration of tropical forest loss under the UNFCCC is the reduction of greenhouse gas emissions at the global level. This must be the principle objective of any action taken by the COP. Other considerations will be important. In fact co-benefits may be possible but these should not outweigh the key principle of reducing emissions at the global level. This principle has significant implications for what can and cannot be achieved with respect to possible actions under the UNFCCC to reduce emissions from deforestation.

#### **Perverse Consequences:**

In establishing an international regime to reduce emissions from deforestation every effort must be made to avoid perverse consequences. This includes avoiding consequences that may infringe the rights of indigenous peoples and local communities. It should avoid actions that may adversely affect biodiversity both in the locale of the action and elsewhere. This latter point is very important. Unless actions produce real reductions in emissions, the ongoing effect of climate change may affect biodiversity in other tropical forest regions or other biomes elsewhere (e.g. coral reefs, alpine, Arctic and Antarctic regions etc.). A holistic approach to biodiversity conservation must be taken. It is not simply a matter of considering the biodiversity where the deforestation takes place.

### **Part II: Definitional Issues: Deforestation and Forest Degradation**

#### **Deforestation:**

Currently deforestation is defined as: “the direct human-induced conversion of forested land to non-forested land”.<sup>6</sup> This definition may have limitations with respect to reducing emissions from tropical forests. This is for a number of reasons:

1. The use of the term “direct human-induced” may not include forest fires. The IPCC GPG tends to consider wildfires as “natural”. This is despite the fact that many fires in tropical forests are human induced. Extensive forest clearing and burning accounts for considerable emissions. Furthermore, it could be argued that the IPCC GPG is erroneous when it refers to managed and unmanaged land as a proxy for “direct human-induced”. As a consequence it may eliminate consideration of emissions from “unmanaged land” even though human causes may be responsible for the emissions, (e.g. forest fires that have escaped from other land areas into so called unmanaged forests). It would be unfortunate if restricted or erroneous definitions eliminate potential emissions from tropical forests.<sup>7</sup>
2. The requirement of conversion of forested land to non forest land may not include emissions from the conversion of primary forest to plantation forests, as the land remains a “forest” under the definition of a forest.<sup>8</sup> It is reasonable to suggest that the regrowth of some plantation types such as oil palms would not replace the carbon stocks lost from the clearing of the original primary forest. This is particularly the case where primary forests are located on peat lands or other soils with high carbon content.

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<sup>6</sup> See Decision 16/CMP.1, Annex 1 (d), FCCC/KP/CMP/2005/8/Add.3.

<sup>7</sup> It should be noted that Article 4.1 (b) refers to “addressing anthropogenic emissions by sources and removal by sinks of all greenhouse gases not controlled by the Montreal Protocol,…” This would tend to suggest that the word “direct” in the context of human induced activities, which appears in Decision 9/CP.4 (FCCC/CP/1998/16/Add.1) may not be consistent with the provisions of the Convention.

<sup>8</sup> See Decision 16/CMP.1, Annex 1 (a)

3. The conversion of primary forest to secondary forest is likely to result in a loss of carbon stocks. As indicated earlier, the IPCC considers that “unsustainable logging practices” are a key source of emissions from deforestation. However, logging practices (whether sustainable or unsustainable, depending on one’s definition) would not represent a complete land use conversion and hence would not trigger the definition of deforestation. These emissions would be not considered.

#### **Forest Degradation:**

Many studies suggest that significant emissions may occur without the complete conversion of tropical forest land to non-forest land. The change from primary forest to secondary forest or fragmented forest is often called “forest degradation”. There are numerous definitions of forest degradation.<sup>9</sup> In the context of reducing emission in tropical forests the term “forest degradation” could simply refer to any loss of biomass density (or carbon stocks) over a prescribed period of time. FAO believes that the term “forest degradation” has negative connotations as it implies a long-term impairment of a forest. While this concern may be relevant in the context of silvicultural practices it is not necessarily an issue in the consideration of reducing emissions from deforestation and is therefore not relevant in this context. If sensitivities are important then the term “de-stocking” may be an alternative.

Including forest degradation/de-stocking within a new legal arrangement for reducing emissions from deforestation, while providing a more comprehensive assessment of emissions from tropical forests, does have significant implications for measurement and verification requirements. Measuring forest degradation/de-stocking is far more complex than measuring land use change (see later discussion).

For the purposes of this discussion, any reference to reducing emissions from deforestation (RED) also includes consideration of forest degradation/de-stocking.

#### **Recommendations:**

At COP 13 Parties may wish to:

- (a) Revise the definition of the term “deforestation” for the purposes of any new arrangement for reducing emissions from deforestation.
- (b) Develop a decision that places a caveat on the use of IPCC GPG with respect to consideration of “land” to be considered in the context of reducing emissions from deforestation.
- (c) Develop a definition for “forest degradation” or “forest de-stocking” in the context of reducing emissions from deforestation. This definition may need to have a time bound component, possibly consistent with any commitment period considerations.

### **Part III: Consideration of Market-based Options for RED**

#### **Carbon Offsetting:**

A number of Parties have suggested the need to include market-based measures to provide additional financial resources to counterbalance the opportunity costs of deforestation.<sup>10</sup> Primarily these proposals relate to a sectoral carbon trading mechanism or a project-based CDM-type mechanism. Inherent in these proposals are the assumption that reductions of emission in Non Annex I countries will be traded into a market for Annex I Parties to use to meet the quantified emission limitation and reduction commitments. In other words, the traded emission reductions will be offset against emission reduction targets set by

<sup>9</sup> See Dieter Schoene, Wulf Killmann, Heiner von Lüpke, Mette LoycheWilkie, “Definitional issues related to reducing emissions from deforestation in developing countries”, 2007, *Forests and Climate Change Working Paper 5*, FAO, Rome, 2007.

<sup>10</sup> See UNFCCC, “Views on issues related to further steps under the Convention related to reducing emissions from deforestation in developing countries: approaches to stimulate action”, 2007, *FCCC/SBSTA/2007/MISC.14*.

Annex I Parties. This implies that these approaches will not bring about any additional reduction of emissions over and above those set by Annex I Parties. They are simply cost transfer devices. Apart from anything else, this places a substantial burden on Annex I Parties to set significantly high emissions reduction targets for the next commitment period.

There are inherent problems in such carbon trading market approaches and any consideration of including such approaches would need to address these problems. Without addressing these problems, there is no real reduction in greenhouse gas emissions and potentially there could be an increase in emissions if the transfer of emission rights is based on a false credit. It is for this reason that some Parties rejected the consideration of “avoided deforestation” under the Clean Development Mechanism in the first commitment period.

Carbon trading presumes that the money generated from the trade will be used to counterbalance the opportunity costs associated with deforestation. Providing “new” money to address deforestation may be important, but it is not a guarantee that the underlying causes of deforestation will be addressed. As discussed earlier, these underlying causes are complex and may not be resolved by creating new market finances. Some underlying causes may relate to macro-economic policies which may not be easily resolved by applying a price to carbon in forests.

#### **Types of Market Approaches:**

There may be many approaches to establish markets for RED, however, three options present themselves as the most prominent. Each of these approaches has inherent complications which would need to be resolved before a decision is made to incorporate market approaches for RED in a new international legal regime. The three prominent approach types are included in this discussion:

##### **Type 1: Sectoral CDM (using a national baseline):**

This is a CDM-like approach but uses a nation-wide baseline. National governments would enter into an agreement to reduce their emissions over a period of time and would sell their emissions reduction to Annex I Parties. Actions under this approach would be offset against Annex I quantified emission limitation and reduction commitments (QELROs).

##### **Type 2: CDM project activity (using a project level baseline):**

This would be similar to the existing CDM. Communities, governments or the private sector could establish a project to reduce the emissions for a defined project area. RED Certified emission reductions would be sold to Annex I Parties and these would be offset against Annex I QELROs. These would not be fungible.

##### **Type 3: Voluntary targets (using a national baseline):**

Non Annex I Parties would take on a voluntary commitment to reduce their emissions from deforestation. This target would apply for the whole country. Rules may be developed to allow a non-lose target. If a country does not reach its target it would not face a penalty. If it exceeded the target (against an agreed reduction target) it could sell these excess credits through emissions trading. This would expand the scope of commitments under the Kyoto Protocol to include developing countries.

#### **Inherent Problems with Market Approaches:**

There are a number of inherent problems with the three market approaches for reducing emissions from deforestation. Unless these inherent problems are resolved, there may be little benefit and possibly negative implications in creating a carbon market for reducing emissions from deforestation.

Some of these inherent problems with carbon markets include:

- A. Definitional issues:
- B. Devaluing the Market

- C. Over-burdening Annex I Parties
- D. Leakage
- E. Permanence
- F. Additionality
- G. Institutional and governance issue
- H. Measurement Difficulties
- I. Baseline setting
- J. Infringement on the rights of Indigenous Peoples and local communities
- K. Loss of sovereign rights

**A. Definitional issues:**

Some of these issues have been discussed earlier. Depending on the definition, significant sources of emissions may be included or excluded from an accounting framework. This could lead to significant under-reporting of emissions or engineering of outcomes that benefit the market more than the atmosphere.

**Options for Addressing Definitional Issues:**

As discussed earlier a clear definition of deforestation and forest degradation/de-stocking needs to be developed that doesn't allow for maximising market benefits and minimising greenhouse gas emission reductions.

**Recommendation:**

At COP 13 Parties may wish to:

- (d) Establish a process for resolving definitional issues. A workshop may assist in this process.

**B. Devaluing the Market:**

There are concerns that allowing carbon credits generated from reducing emissions from deforestation could devalue the carbon market by the over-supply of carbon credits generated from reducing emissions from deforestation. This is particularly the case if carbon credits are generated from nation-wide baselines. Devaluing the price of carbon will make efforts to reduce emissions in other sectors, (e.g. renewable energy, energy efficiency and reducing emissions from transport) less economically viable. As these emission sectors represent a major proportional of all emissions this could have negative implications for overall reductions in greenhouse gas emissions.<sup>11</sup>

**Options for Addressing Market Devaluation:**

There are at least three approaches for protecting the energy market from being devalued by the entry of carbon credits generated from reducing emissions from deforestation. These include:

- a. Dual targets
- b. Expanding the commitment of Annex I Parties
- c. Green emissions reductions
- d. Discounted credits

**a. Dual Markets:**

In this approach, Annex I Parties would meet a portion of their post-2012 reduction target through purchasing RED credits from tropical forest countries.<sup>12</sup> The proponents of this Dual Market Approach suggest a number of components:

- a) RED units would not be directly fungible with the post-2012 carbon market

<sup>11</sup> For a more extensive discussion of this issue see for example: Matthew Ogonowski, Ned Helme, Diana Movius, Jake Schmidt, *Reducing Emissions from Deforestation and Degradation: The Dual Markets Approach*, 2007. Center for Clean Air Policy, August, URL: <http://www.ccap.org/international/FINAL%20REDD%20report.pdf>.

<sup>12</sup> Ibid, page 2

- b) Developing countries would begin establishing and reporting national LULUCF inventories annually (capacity building assistance would be required).
- c) Annex I Parties would commit to dual targets, one for domestic action and the use of the approaches and another for RED.
- d) The COP decides the maximum amount that can be achieved by the RED market. This may be in proportion to the global emissions from the RED sector.
- e) Annex I Parties can meet shortfalls in their RED targets through borrowing from a future commitment period.
- f) Annex I Parties specify from the outset which developing countries they will purchase RED credits from.

**b. Expanding the Commitment of Annex I Parties:**

This is based on the idea that Annex I Parties make an emissions reduction commitment for the next commitment period then add on an additional commitment for RED credits. This means that Annex I Parties would need to take significantly larger reductions than they had originally calculated.

**c. Green Emissions Reductions:**

In this approach, Annex I Parties that have net emissions in the LULUCF sector in their national inventories may purchase RED credits from tropical forest countries to offset these emissions. This is to recognise the green carbon cycle and not to include emissions from fossil fuels.

**d. Discounted Credits:**

In this approach the value of credits generated by RED would be discounted in proportion to the global emissions generated from this sector. For instance, a RED credit may have a value of 20% of credits generated in other sectors because RED generates 20% of global emissions. A precise discount rate would need to be developed.

The four approaches to address the devaluation of the carbon market do not resolve some of the other inherent problems associated with RED carbon markets such as leakage, measurement difficulties, etc. (see later discussion). Therefore, these approaches are not solutions in themselves and would need to be considered in connection with other arrangements to address the inherent problems associated RED carbon markets. Defining what is an additional emission reduction commitments as suggested in the 'expanding the commitment approach' (b) would be difficult to show and is unlikely to address the devaluation of the market.

**Recommendation:**

At COP 13 Parties may wish to:

- e) Undertake a review of approaches to address the devaluing of carbon markets. Such a review would need to be taken in tandem with other reviews associated with RED markets.

**C. Over-burdening Annex I Parties**

Current proposals for RED carbon markets place the burden on Annex I Parties to substantially increase their quantified emission limitation and reduction commitments in the next commitment period to offset against new "forest carbon" entering the market. (This is a requirement of the 'expanding the commitment' approach (b) above. While respecting the principle of "common but differentiated responsibility, adding new target burdens on Annex I Parties may be considered unfair and politically unrealistic, particularly as a global approach to reducing greenhouse gas emissions is urgently needed.

Others may see this as a means of relieving their burden by the creation of "cheap" carbon credits which they can purchase against their commitments. This latter perspective may have implications for achieving overall emissions reductions as indicated in the previous section (i.e. devaluing the market). It also has implications for developing countries into the future. If developing countries are to take on emissions

reduction responsibilities in the future, their easy options (the low hanging fruit concept) may have already been taken up by Annex I Parties through the carbon market. This in turn would make it more difficult for developing countries to take on emissions reduction targets in the future.

**Options to reduce the burden on Annex I Parties:**

The most direct means of reducing the burden on Annex I Parties would be for Non Annex I Parties to commit to quantified emission limitation and reduction commitments. This could be done on a sectoral basis (e.g. Type 3 Voluntary targets using a national baseline). This would expand the overall effort to reduce emissions and spread the burden. Once a commitment had been made, Non Annex I Parties could trade credits in excess of their target or purchase credits from other Non Annex I Parties to meet their target. The idea of a sectoral target rather than a full emissions target may be more achievable for developing countries.

Variations of this approach could include, no lose targets, whereby Non Annex I Parties could set an emissions reduction target. If they didn't reach this target they would not suffer a penalty. If they exceeded their target they may be able to offset these credits in a limited RED market (e.g. dual target market). Provisions would need to be established to ensure that targets set by Non Annex I Parties were realistic and achievable.

Establishing Non Annex I RED commitments would assist in relieving the burden on Annex I Parties. It would also resolve the 'low-hanging fruit' issue as developing countries would be able to take on commitments and sell excess credits on to a market rather than allowing Annex I Parties to buy up the easy options.

Despite the opportunities established by Type 3 voluntary targets, they do not resolve some of the other inherent problems associated with RED carbon markets such as leakage, measurement difficulties, etc. (see later discussion). Therefore, the Non Annex I RED commitment approach is not a solution in itself and would need to be considered in connection with other arrangements to address the inherent problems associated RED carbon markets.

**Recommendation:**

At COP 13 Parties may wish to:

(f) Undertake a review of the necessary arrangements required for Non Annex I Parties to make quantified emission limitation and reduction commitments based on the RED sector. This should include consideration of "no-lose" options. Such a review would need to be taken in tandem with other reviews associated with RED markets.

The other option for relieving the burden on Annex I Parties is to agree to only establish non-market arrangements to reduce emissions from deforestation (see later discussion).

**D. Leakage**

The displacement of emissions through the process known as leakage is one of the most vexing issues associated with market-based approaches. This is due to the fact that the causes of deforestation are often linked to international markets and traded commodities. The production of timber, beef, soya beans, palm oil, sugar (and ethanol) are all international commodities that are being produced for national and international markets.<sup>13</sup> Tropical forests are being destroyed or severely altered to make way for these commodities and the demand for these commodities is rising. Efforts to reduce emissions from

<sup>13</sup> See for example, FAO tropical round log export figures market figures in Paper No. 9: Tuvalu, in UNFCCC, "Views on issues related to further steps under the Convention related to reducing emissions from deforestation in developing countries: approaches to stimulate action", 2007, *FCCC/SBSTA/2007/MISC.14*.



deforestation in one country may lead to accelerated emissions in other tropical forest countries due to processes associated with leakage. Therefore giving carbon credits for RED actions may be totally negated by leakage.

While establishing national baselines in Type 1 and Type 3 approaches does to some extent encapture sub-national leakage, it does not resolve the problem of international leakage.

The difficulties with leakage seriously jeopardise robust Type 2 project based RED approaches. While efforts have been shown to suggest that project level leakage can be resolved in some instances, these efforts may be negated at the national level or international level. Therefore it is considered inappropriate to include project-based market approaches for RED. Project level RED efforts should be financed through non-market measures.

**Options to Address Leakage:**

Some instances of leakage may be at the sub-national level and actions may be undertaken to reduce the causes of this leakage (e.g. local fuel wood supplies). Providing alternative incomes for local communities who may be the potential cause of leakage is one documented example. Establishing a national baseline or national reference level is another method of accounting for sub-national leakage.

Actions to address international leakage are far more complicated. In effect it requires an “all-in” approach. All tropical forest countries would need to commit to a RED market mechanism before it could be effective in addressing leakage. This would need to encompass RED national baselines for all tropical forest countries as a means of ensuring that all emissions displacement is accounted for. This may prove difficult for a number of reasons:

- (a) some countries may not have the expertise or technology to effectively establish and monitor national RED baselines;
- (b) some countries experience institutional and governance difficulties (see G below)
- (c) calculating the carbon stocks in legitimate forest product exports may be difficult for some countries.

It may be possible to devise a “progressive buy-in system”, whereby countries that are capable of developing national baselines for RED would be eligible for carbon trading, but only on a discounted value for the traded carbon. This discounted value could be developed using a “leakage discount factor”. It would need to take into account the proportion of other tropical forest developing countries that participate in the market and the proportion of export commodities derived from the deforested or degraded/destocked land. If only one country participates then the value for traded carbon would be discounted significantly. The mechanics and implications of such a system would need to be considered carefully.

As indicated earlier, the inherent problems of leakage associated with project based market approaches suggest that these activities should not be eligible for the carbon market. Projects aimed at addressing RED should be financed through non-market approaches.

Other measures to address leakage could be considered. These could include labelling systems for commodities derived from tropical forests or commodities that avoid the destruction of tropical forests. Timber certification labelling is one example, although currently it only represents a very small proportion of the market. Another example is the international efforts to address illegal logging.

Establishing an international labelling system could be complicated and undoubtedly would have implications with respect to the WTO. It is difficult to imagine whether some of the current consumers of commodities derived from deforestation would be willing to be regulated at the international level through labelling schemes.

Alternatively it may be considered that the problem of leakage is too difficult to address and that market-based RED approaches are likely to fail. Therefore they may be no solutions and hence non-market financing may be the preferred option. Non-market financing would not resolve leakage, but it may reduce the consequences of trading carbon against emissions reduction targets.

**Recommendations:**

At COP 13 Parties may wish to:

- (g) Undertake a review of measures to address leakage in RED markets and make an assessment whether leakage can be affectively resolved;
- (h) Agree to exclude project-level RED market approaches in any post 2012 regime;
- (i) As a result of (i) above, agree to refrain from establishing pilot projects based on project-level RED market approaches.

**E. Permanence:**

Another complication with carbon markets associated with reducing emissions from deforestation is the issue of permanence. The treatment of permanence depends on the methodology used. This will be different for:

1. national baseline approaches (Type 1 and 3)
2. project level carbon offsetting (Type 2)

In essence the market is purchasing an emission reduction at a national level (national baseline or at a project level and offsetting that against an emission from a fossil fuel emission in an Annex I country. The issue relates to whether the reduction in emissions from a tropical forest can be considered equivalent to an emission that has taken place using a fossil fuel. One evolves a relatively short carbon component of the carbon cycle and the other a much longer component of the carbon cycle. To be equivalent and hence exchanged in a market place, there has to be a guarantee that the reduced emission in tropical forests will be permanent as is the emission that has been allowed in the Annex I country. This is not so easy to demonstrate at either a national or a project level. Deforestation may be reduced or halted in an area for a period of time and then recommence due to changes in management, government policy or opportunity costs. Therefore the reduction gains and carbon credits generated are lost.

For national baseline carbon trading (Type 1 and 3) it is necessary to determine the rate of deforestation over a historical period and compare this with the rate of deforestation over an accounting period (for instance 5 years). While it may be possible to predict or model changes in deforestation rates, the most reliable approach is to use *ex poste* assessments. This determines the actual changes in deforestation rate rather than predicted changes.

**Options to Address Permanence:**

Developing approaches to ensure permanence for either national baseline carbon crediting or project level crediting is problematic. Reductions in deforestation rates must be permanent. Therefore at the end of each assessment period (for instance 5 years) it must be determined that the rate of deforestation must be less than the previous period, otherwise the carbon credits generated are not permanent. This means that rates of deforestation must be assessed on an ongoing and long term basis. If it is determined that the deforestation rate has increased then a replacement of the emission entitlement must be paid.

For project based carbon offsets (Type 2), the land determined to be subject to RED activities must be measured and the carbon stocks determined. The identified carbon stocks subject to change need to be spatially geo-referenced so that any later changes in these carbon stocks could be assessed. For Type 2 carbon accounting it would need to be shown that the carbon stocks designated under the RED scheme had not been lost over subsequent periods. Therefore the carbon stocks would need to be identified and accounted for permanently or replaced using a temporary crediting system.

For national level crediting (Type 1) the issue can be partially resolved by only crediting *ex poste* reductions. That is the reductions have to be shown to have been undertaken before a carbon credit is granted. Then, there needs to be a guarantee that that carbon emission transfer represents a permanent reduction. This means that there must be ongoing liability. The timeframe for determining the change in emissions must be fixed and kept to a minimum period of time (no more than 5 years) so that any change in the rate of deforestation is quickly picked up in any subsequent period. Therefore once a country enters the accounting framework it must stay in that accounting system. If it opts out it must replace the carbon credits generated from the emissions reductions. Therefore a system of temporary “Deforestation Reduction Units” (tDRUs) would need to be established. The liability for the replacement of the tDRUs would depend on the accounting system established. If the system was based on a national sectoral CDM-like carbon exchange (Type 1) then the liability would rest with the purchaser.

For the Type 3 approach (sectoral QELRO), there is an ongoing obligation to meet a target. If deforestation rates increased in any subsequent commitment period, the system of “no lose” targets would need to be considered carefully and possible emission entitlement replacement requirements would need to be initiated. The liability for any subsequent increase in RED emissions would remain with the host country.

Permanence is also an issue with respect to non-market based approaches but it has less significance as no emissions are offset.

#### **F. Additionality:**

For a market mechanism to be truly effective it must be shown that the activities being credited are directly as a result of the finance that has been generated through the carbon market. This issue is mostly a concern of Type 1 and Type 2 approaches where the transfer of an emission reduction is made between a country with a QELRO and a country which has no QELRO. This is important for developing countries (particularly those that cannot finance projects themselves) as the concept of additionality ensures new and additional funding for carbon approaches. Using existing ODA for RED activities only subsidises carbon markets and takes away financing for other development priorities such as poverty alleviation.

It is also important for the climate to ensure that the transfer of emission entitlements is for additional activities and not business as usual. It is important that carbon finance is used for real and new reductions in emissions and not a trading in hot air.

#### **Options to Address Additionality:**

Showing additionality for Type 1 approaches could be extremely difficult as it may be difficult to show that the carbon finance has contributed to reducing emissions from deforestation. Ensuring *ex poste* crediting may help to some degree, but national governments would need to show that financing for reducing emissions from deforestation had an effect. This may be shown by establishing trust funds for communities, deforesting industry buy-outs etc. Some form of independent verification or auditing would be required to show that the carbon finance has been directed towards RED activities. A new form of Kyoto Protocol, Article 8 expert review teams experience in financial auditing may need to be established.

Showing additionality for Type 2 approaches may be easier to demonstrate, though the development of unilateral projects by developing countries tends to mask additionality.

Showing additionality for Type 3 approaches may not be necessary as the country has taken on a reduction target and is only selling the excess credits it has generated.

#### **Recommendations:**

At COP 13 Parties may wish to:

(j) Undertake a review of measures to ensure that additionality is incorporated in Type

1 and Type 2 approaches and whether it is necessary to consider additionality in Type 3 approaches.

### **G. Institutional and Governance Issues:**

There are many issues associated with the management of tropical forests and efforts to reduce emissions from deforestation. Some countries may not have full and effective control over activities undertaken within their territories due to such issues as: civil wars, no-go zones due to narcotic production, uncontrollable and illegal logging operations, illegal mining, uncontrollable forest fires and governance issues within the forest sector. Furthermore countries may not have adequate staff and resources to properly manage their tropical forest estate. This makes it difficult to address issues associated with, *inter alia*, leakage, permanence and the protection of rights of forest dwelling peoples. Some countries have realised these difficulties and have suggested that CDM-style RED projects is the only way to manage some of these issues. They suggest that national baselines are not feasible. Others appear to be happy to ignore these problems in the hope that setting national baselines and operating a carbon market will resolve these issues. This optimism may not be well founded. Providing carbon finance in a system that is already compounded with governance issues is unlikely to be a recipe for success.

### **Options for Addressing Institutional and Governance Issues:**

International efforts are under way to attempt to address some governance issues, such as illegal logging. Labelling schemes are one approach to this. Other more intractable problems associated with governance and civil unrest issues are more difficult to resolve. This would tend to suggest that only relatively small CDM-like projects where governance and institutional issues can be resolved may be an option. This however, does not resolve the “all in approach” necessary to address leakage and other concerns related to market based approaches.

### **Recommendations:**

At COP 13 Parties may wish to:

(k) Explore options for addressing governance and institutional difficulties associated with RED;

### **H. Measurement Difficulties:**

Measuring reductions in emissions from deforestation (and if so decided forest degradation/destocking) presents many problems. The vast diversity of forest species in tropical forests means that carbon stocks contained in different species varies quite dramatically. While it may be possible to measure changes in canopy cover through remote sensing (such as satellite imagery), such methodology may not be able to account for changes in stocks in different tree types. Furthermore, emissions from different soils types could be vastly different. Forest based on peat lands would potentially have much higher emissions than on other soil types. Consideration of which carbon stocks are in or out of the measurement process is also important. What percentage of carbon stocks are lost during logging/destocking activities and what percentage are stored in harvested wood products would need to be considered.

The nature of emissions would also create complications. Emissions from fires may be different in quantity and gas type than emissions based on decomposition after heavy logging or land clearing. The larger area being considered, the greater the chance of inaccurate measurements. Therefore, Type 1 and Type 3 approaches are obviously more complex due to the size of the areas being considered. Type 2 approaches, because of their discrete area, may be easier to measure.

Measurement difficulties are compounded if forest degradation/destocking is considered. It is very difficult for remote sensing to pick up changes in carbon stocks from forest degradation activities.

Different countries may have different levels of expertise and access to remote sensing technology. This creates complications for ensuring a “100% buy in”. This in turn creates a problem for addressing leakage.

**Options for Addressing Measurement Difficulties:**

Methodologies for measuring changes in carbon stocks and emissions in tropical forests need to be made widely available to all tropical forest countries. This includes remote sensing and ground-truthing approaches. Methodologies for measuring changes in carbon stocks and emissions in tropical forests subject to forest degradation/destocking need to be developed and made available to all tropical forest countries. Specific finance to assist in capacity building needs to be provided.

**Recommendations:**

At COP 13 Parties may wish to:

- (l) Undertake a review of methodologies for accurately measuring changes in emissions from deforestation and forest degradation (the IPCC may be invited to assist in this task);
- (m) Launch a major initiative in RED Capacity Building and develop a special window under the Special Climate Change Fund to assist countries build their capacity and create greater access to remote sensing technologies specifically designed for assessing RED activities;

**I. Baseline Setting:**

Setting baselines to determine changes in emissions is problematic particularly in relation to Type 1 and Type 3 approaches where nation-wide baselines are required. Depending on the methodology used for determining the baseline countries may over or underestimate historical emissions. Establishing emissions reductions against baselines also have a number of inherent problems. It may be difficult to determine whether an area had been intended for logging or forest destruction or not. Consideration would need to be given to whether baselines are based on gross or nett emissions.

Developing baseline methodologies for Type 2 approaches could be developed by project proponents and tested against approved methodologies (if RED projects were considered appropriate).

**Options for Addressing Baseline Setting:**

Standardised methodologies for baseline setting for Type 1 and Type 3 mechanism would need to be developed and agreed upon. Establishing *ex poste* assessments may partially helps resolve some of these concerns. Similarly methodologies for Type 2 approaches (if considered appropriate) would need to be developed.

**Recommendations:**

At COP 13 Parties may wish to:

- (n) Undertake a review of methodologies for establishing baselines for deforestation and forest degradation activities;
- (o) Develop programmes for capacity building to assist countries develop national baselines;

**J. Infringement of Rights of Indigenous and Local Communities:**

The establishment of an international carbon market based on regulating the changes to land use may infringe upon the rights of indigenous peoples and local communities. This problem may be more acute in Type 1 and Type 3 approaches where actions undertaken at the national level to reduce emissions from deforestation may not be sensitive enough to identify potential infringements on the rights of indigenous peoples and local communities. Type 2 approaches may also create problems for indigenous peoples and local communities though these problems may be more obvious through the designation of the project

area. The infringement of the rights of indigenous peoples and local communities may occur outside the country where the assessment is being made, due to the problem of leakage. Actions to reduce emissions from deforestation in one country may accelerate deforestation in another country, hence potentially affecting the livelihoods of indigenous peoples and local communities due to the loss of forests that they depend on. Furthermore if carbon market approaches fail due to the many complications associated with the market, the rights of indigenous peoples and local communities may be adversely affected by the impacts of climate change. Coastal, island, Arctic and arid indigenous peoples and communities may be affected by failed carbon market mechanisms.

On the other hand carbon markets, if appropriate legal rights are established, may generate income for indigenous peoples and local communities and may contribute to their sustainable development. They may also provide support to allow indigenous peoples and local communities to protect their forests.

#### **Options for Addressing the Infringement of Rights:**

Establishing systems to monitor the potential infringement of the rights of indigenous peoples and local communities in Type 1 and Type 3 approaches would be difficult. Model legislative measures may need to be developed to ensure that any transfer of emission entitlement and hence the right for the ownership or management of carbon on land does not infringe upon the rights of indigenous and local communities. Any international agreement to establish Type 1 or Type 3 approaches may need to have explicit clauses to ensure that the rights of indigenous peoples and local communities are properly protected.

It should be noted that non-market finance for RED activities could also adversely affect the rights of indigenous people and local communities. Depending on the source of finance, the rights to land may be transferred to an international corporate body or an international financial institution. The implications of this would need to be considered carefully.

#### **Recommendations:**

At COP 13 Parties may wish to:

- (p) Explore measures to protect the rights of indigenous peoples and local communities if RED carbon market approaches are to be considered;
- (q) Develop approaches that guarantee the indigenous peoples and local communities are appropriately consulted, considered and addressed before any new international regime is established.

#### **K. Loss of Sovereign Rights:**

The establishment of a new international regime to transfer the emissions entitlements and hence the rights of carbon management over land may create difficulties with respect to a nation's sovereign rights. This would be particularly the case with Type 1 approaches and depending on the size of project activities, on Type 2 approaches. For some countries the loss of their sovereignty over their land may be too high a price to pay. This is not such a problem with Type 3 approaches as there is no direct transfer of rights to another country.

#### **Options to Address any Loss of Sovereign Rights:**

Countries may choose to undertake unilateral activities (for Type 1 and Type 2 approaches) so that there is no transfer of rights of management or ownership of carbon on land. Doing this, however, creates difficulties in assessing additionality. Liability for failure to reduce emissions then becomes a problem for the host country rather than the purchaser of the emission reduction entitlement.

#### **Recommendations:**

At COP 13 Parties may wish to:

- (r) Explore measures to protect the sovereign rights of countries over their land without compromising important trading principles such as additionality.

#### **Part IV: Conclusion to the Consideration of Market Based Mechanism:**

The many complications associated with RED market based mechanism need to be properly addressed before a proper consideration or decisions can be made whether or not to establish such approaches. It would be premature to agree to establishing RED markets until these issues are full and properly considered. Consideration of RED markets would also need to take into account commitments made by Parties (both Annex 1 and Non Annex 1) in any post 2102 regime. Therefore it would be inappropriate to consider any “credit for early action” concepts. Similarly it would be inappropriate to establish pilot RED market projects until all complications are properly addressed (see discussion below). It may be found that these complications cannot be properly addressed and that RED market projects would not be established under a post 2012 regime.

#### **Part VI: Consideration of Pilot Projects:**

Parties will need to agree on measures to address the inherent problems of these market approaches before any consideration is given to establishing a market. While establishing “pilot projects” may help resolve some of the issues, it may further complicate the process. Many of the issues are not resolved by undertaking “pilot projects”. Many require nation-wide reforms, nation-wide capacity building and international collaborative action (to address leakage for example). A partial resolution of the problems by undertaking “pilot projects” is likely to complicate decision making processes in the future as it may create an expectation among some Parties that “pilot projects” would be eligible for crediting in a future market arrangement. This complication arose with some projects associated with Activities Implemented Jointly. This lead to less than favourable negotiations, with respect to defining the eligibility of projects under the Clean Development Mechanism, as some Parties had anticipated that certain project activities and methodologies would be eligible.

It could be argued that similar problems were also experienced with respect to “pilot projects” established by the World Bank under their “Prototype Carbon Fund”. Hence it is likely that similar problems will be faced with the Bank’s “Carbon Finance Mechanism” under its Forest Carbon Partnership Facility. It would be unfortunate if the Bank was to move ahead with financing “pilot projects” ahead of a full and proper consideration of the validity of carbon markets for reducing emissions from deforestation.

It would seem inappropriate to establish pilot projects based on carbon financing as the many problems associated with projects may make this type of mechanism unsuitable for carbon financing and carbon offsetting.

This should not stop Parties from undertaking projects using non-market mechanisms. In fact these should be encouraged.

#### **Recommendations:**

At COP 13 Parties may wish to:

- (s) Agree not to establish pilot projects until all issues associate with RED market project approaches are properly considered and resolved.

#### **Part VI: Conservation of Existing Carbon Stocks**

Some countries have indicated that they would seek carbon finance for the conservation of existing carbon stocks held in reserves. This is to offset the costs associated with protecting existing stocks.

While there is a legitimate need to ensure that existing carbon stocks are protected, it does not equate with the transference of an emission entitlement as there are no emissions being traded. Furthermore, efforts by some countries to protect their own forest estates may have resulted in considerable deforestation leakage. This is evidenced by FAO statistics on round log exports and imports.<sup>14</sup>

### **Approaches to Conserve Existing Carbon Stocks**

Countries that are interested in conserving existing carbon stocks should explore non-market mechanisms such as debt-for-nature swaps etc..

#### **Recommendations:**

At COP 13 Parties may wish to:

- (t) agree not to include the conservation of existing carbon stocks in any market-based carbon trading regime;
- (u) agree to explore other financial options for protecting existing carbon stocks.

### **Part VII: Non Market Approaches:**

Some Parties have proposed non-market sources of funding to promote RED activities. These appear to fall into two categories.

**Type 4:** Nation-wide non-market measures (using national reference scenarios)

**Type 5:** Project based non-market measures (through the establishment of community trust funds)

The reasons for considering non-market sources are due to the complications discussed above. If the market fails to deliver real reductions in emissions at a global scale and/or infringes on the rights of indigenous peoples and local communities, then precious time and effort has been wasted. This is not to say that non-market funding will not suffer some of the complications associated with market measures. Problems of leakage, permanence, measurement difficulties, baseline setting are still complications even with non-market approaches. The consequences of failure may not be so profound in non-market approaches due to the fact that there is no transference of emission entitlements.

Furthermore, non-market approaches still have the potential to infringe the rights of indigenous peoples and local communities if finances to address RED are insensitive to the rights of these peoples. Safeguards would still need to be established.

#### **Recommendations:**

At COP 13 Parties may wish to:

- (v) Explore means of addressing issues such as leakage, permanence, measurement difficulties and baseline setting with Type 4 and Type 5 non market approaches.
- (w) Develop approaches that guarantee the indigenous peoples and local communities are appropriately consulted, considered and addressed before any new international regime is established.

### **Lack of Funds**

The greatest disadvantage on non-market approaches is the limit of voluntary funds that may be available to address RED.

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<sup>14</sup> Ibid.



**Options to Address the Lack of Funds:**

It is possible to develop new sources of funding under the climate change regime, without creating the complications associated with a carbon market. Such options could include levies on aviation and maritime transport, or a RED tax on the sale of fossil fuels (at either the wholesale or retail market).

**Recommendations:**

At COP 13 Parties may wish to:

- (x) Explore new sources of non-market funding to address RED.

**Part VIII: Early Action: The Bali Initiative on RED**

There is a strong belief among countries that there is a need to come to an agreement in Bali to start work on RED immediately and to agree on a new regime for RED as soon as possible. Apart from addressing emissions from deforestation, reducing the rate of deforestation will have significant co-benefits with respect to biodiversity, water catchment protection, etc. Some countries have advocated an early start to market mechanisms with crediting being carried into the post 2012 regime. It would appear that the World Bank shares this view through its actions to establish the Forest Carbon Partnership Facility.

As indicated in this submission, there are many problems in establishing transferable emission rights associated with RED. Therefore any agreement to commence work on RED must be done carefully so as not to create a system that may fail. The COP must carefully consider the implications of taking actions on RED. Primarily it must consider whether or not actions will effectively produce climate benefits at a global scale. It must make an informed choice and not be a rushed into decision for the sake of political expediency. A step by step approach is needed.

**Approaches to Stimulate Early Action: The Bali Initiative on RED**

The Bali COP provides us with an excellent opportunity to announce an effective, prompt and comprehensive work plan to address RED. It is proposed that a Bali Initiative on RED be agreed. The Bali Initiative on RED would have a number of components. These would include:

1. Establishing an Ad Hoc Working Group on RED (AHWGRED). This group could meet inter-sessionally and work in parallel with other post-2012 work established in Bali. The AHWGRED could establish a timetable to review all the issues highlighted in this submission.
2. Agreeing to launch a special funding window under the Special Climate Change Fund to support capacity building on RED (see recommendation (m)). In establishing this RED fund under the SCCF, there would be a general call for pledges from Annex I Parties to contribute to this fund.
3. Agreeing to establish another funding window under the Special Climate Change Fund to support actions associated with the conservation of tropical forests and the protection of existing carbon stocks within those forests.
4. Agreeing to expeditiously explore options for new sources of non-market funding for RED. This may include options included in recommendation (x) above.
5. Agreeing to establish a formal dialogue process with indigenous peoples and local communities to ensure their rights are protected in any new RED regime.

### **Collation of Recommendations:**

At COP 13 Parties may wish to agree to:

- (a) Revise the definition of the term “deforestation” for the purposes of any new arrangement for reducing emissions from deforestation.
- (b) Develop a decision that places a caveat on the use of IPCC GPG with respect to consideration of “land” to be considered in the context of reducing emissions from deforestation.
- (c) Develop a definition for “forest degradation” or “forest de-stocking” in the context of reducing emissions from deforestation. This definition may need to have a time bound component, possibly consistent with any commitment period considerations.
- (d) Establish a process for resolving definition issues. A workshop may assist in this process.
- (e) Undertake a review of RED Dual Markets approaches. It is suggested that this review should not include pilot projects so as to avoid creating expectations of market opportunities in future commitment periods. Such a review would need to be taken in tandem with other reviews associated with RED markets.
- (f) Undertake a review of the necessary arrangements required for Non Annex I Parties to make quantified emission limitation and reduction commitments based on the RED sector. This should include consideration of “no-lose” options. Such a review would need to be taken in tandem with other reviews associated with RED markets.
- (g) Undertake a review of measures to address leakage in RED markets;
- (h) Agree to exclude project-level RED market approaches in any post 2012 regime;
- (i) As a result of (h) above, agree to refrain from establishing pilot projects based on project-level RED market approaches.
- (j) Undertake a review of measures to ensure that additionality is incorporated in Type 1 and Type 2 mechanism and whether it is necessary to consider in Type 3 approaches.
- (k) Explore options for addressing governance and institutional difficulties associated with RED
- (l) Undertake a review of methodologies for accurately measuring changes in emissions from deforestation and forest degradation;
- (m) Launch a major initiative in RED Capacity Building and develop a special window under the Special Climate Change Fund to assist countries build their capacity and create greater access to remote sensing technologies specifically designed for assessing RED activities;
- (n) Undertake a review of methodologies for establishing baselines for deforestation and forest degradation activities;
- (o) Develop programmes for capacity building to assist countries develop baselines;
- (p) Explore measures to protect the rights of indigenous peoples and local communities if RED carbon market approaches are to be considered;
- (q) Develop approaches that guarantee the indigenous peoples and local communities are appropriately consulted, considered and addressed before any new international regime is established.
- (r) Explore measures to protect the sovereign rights of countries over their land without compromising important trading principles such as additionality.
- (s) Agree not to establish pilot projects until all issues associate with RED market project approaches are properly considered and resolved.
- (t) Explore means of addressing issues such as leakage, permanence, measurement difficulties and baseline setting with Type 4 and Type 5 non market approaches.
- (u) Agree not to include the conservation of existing carbon stocks in any market-based carbon trading regime;
- (v) Agree to explore other financial options for protecting existing carbon stocks.
- (w) Develop approaches that guarantee the indigenous peoples and local communities are appropriately consulted, considered and addressed before any new international regime is established.
- (x) Explore new sources of non-market funding to address RED.

**The Bali Initiative on RED Recommendations:**

1. Establishing an Ad Hoc Working Group on RED (AHWGRED). This group could meet inter-sessionally and work in parallel with other post-2012 work established in Bali. The AHWGRED could establish a timetable to review all the issues highlighted in this submission.
2. Agreeing to launch a special funding window under the Special Climate Change Fund to support capacity building on RED (see recommendation (m)). In establishing this RED fund under the SCCF, there would be a general call for pledges from Annex I Parties to contribute to this fund.
3. Agreeing to establish another funding window under the Special Climate Change Fund to support actions associated with the conservation of tropical forests and the protection of existing carbon stocks within those forests;
4. Agreeing to expeditiously explore options for new sources of non-market funding for RED. This may include levies on bunker fuels used by Annex I Parties.
5. Agreeing to establish a formal dialogue process with indigenous peoples and local communities to ensure their rights are protected in any new RED regime.

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