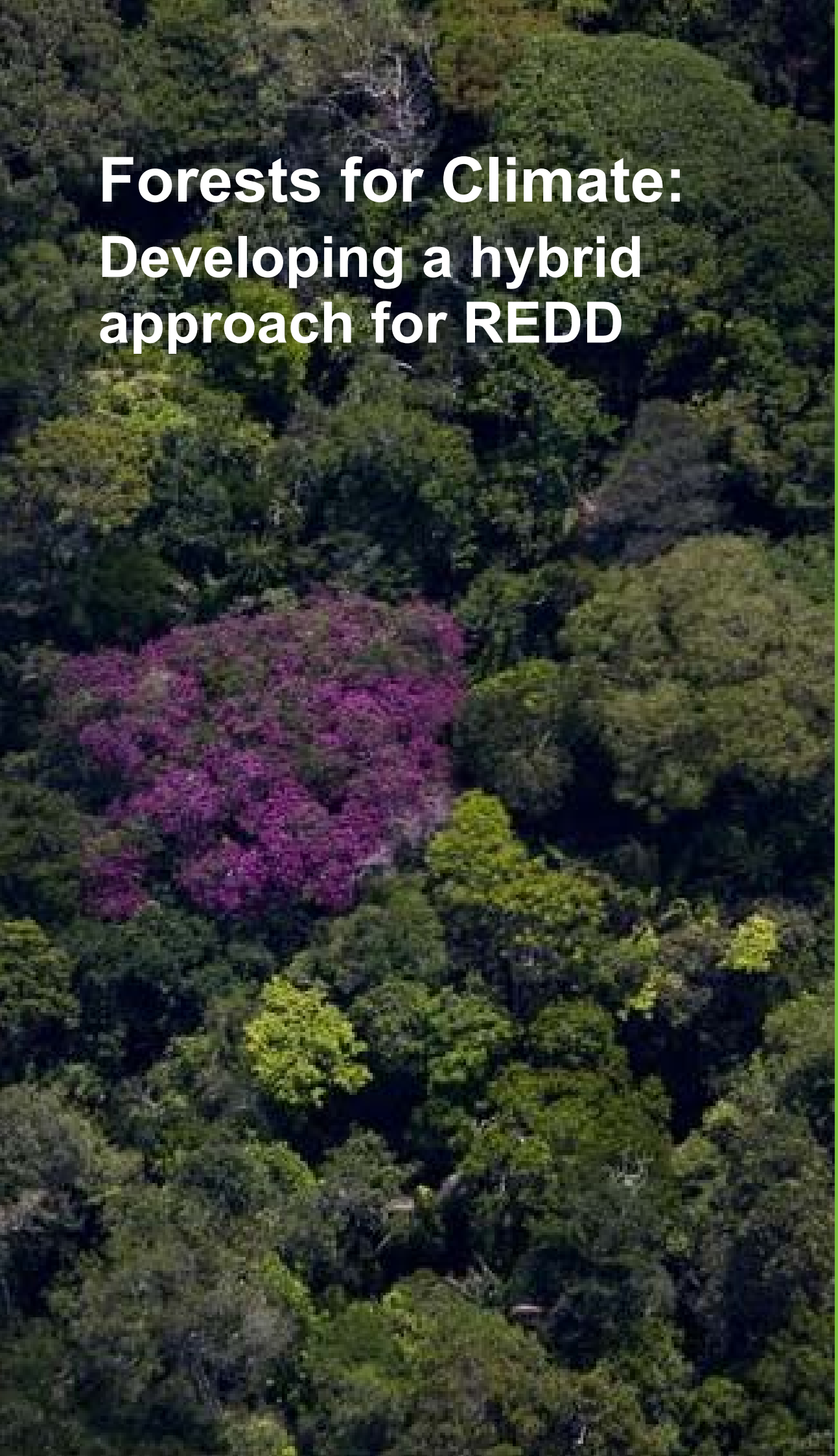

Forests for Climate:
Developing a hybrid approach for REDD

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International

Contents

For more information, contact:
enquiries@int.greenpeace.org

Authors: Christoph Thies, Roman Czebiniak

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Greenpeace International
Ottho Heldringstraat 5
1066 AZ Amsterdam
The Netherlands

Tel: +31 20 7182000
Fax: +31 20 5148151

greenpeace.org

Introduction

The Greenpeace Forests for Climate (Tropical Deforestation Emission Reduction Mechanism TDERM)[1] proposal for a hybrid market-linked fund would provide the financing needed to help protect the world's remaining tropical forests by reducing emissions from deforestation and forest degradation in developing countries (REDD). This new mechanism would become part of the next (post-2012) phase of the Kyoto Protocol, although financing could be made available as early as 2009. A critical element of this proposal or any REDD mechanism would be to attain both climate and biodiversity objectives in a manner that fully respects the rights of local and indigenous peoples.

Forests for Climate builds upon the polluter pays principle and the agreement struck in Bali that industrialised countries help finance mitigation actions in developing countries. In addition to their obligations to make deep cuts in domestic emissions, industrialised countries would provide financing for REDD proportional to their overall emission allowances (Assigned Amount Units, AAUs) in the second commitment period. Financing for a new forest fund would be provided through the purchase of a newly created currency, forest units (Tropical Deforestation Emission Reduction Units, TDERUs).[2] Reductions in forest emissions would be additional to, not at the expense of, domestic reductions made by industrialised countries. This is a significant distinguishing factor between the market-linked mechanism proposed here and proposed market-offset mechanisms for REDD, which would allow industrialised countries to increase their domestic emissions in exchange for emission reductions in developing countries.

The mechanism would seek to properly align incentives for both industrialised and developing countries. Industrialised countries' financing obligations would be directly linked to the amount of their total domestic greenhouse gas emissions and those countries who 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 programmes. The system would provide individual industrialised countries with some compliance flexibility while providing a significant and reliable stream of financing for tropical forests.

Below, we outline and elaborate on some of the critical elements of the proposal, followed by a brief comparison of market-linked mechanisms with market-offset mechanisms.

Case study:
Montreal Protocol Multilateral Fund (MPMF)

The Montreal Protocol Multilateral Fund (MPMF) provides funds to help developing countries comply with their obligations under the Protocol to phase out the use of ozone-depleting substances (ODS) at an agreed schedule. It embodies the principle agreed at the United Nations Conference on Environment and Development in 1992 that countries have a "common but differentiated responsibility" to protect the natural environment. Developed countries contribute to the Fund to help developing countries halt their use of ODS. An important aspect of the Fund is that it finances only the costs essential to the elimination of ODSs, i.e. the additional costs incurred in converting to non-ODS technologies. This process has provided a precedent for striking a balance between developing countries' national sovereignty issues and donor country control over funding priorities, while ensuring the efficient allocation of resources to actors at the sub-national level as needed.

The Fund is managed by an Executive Committee with an equal representation of seven industrialised and seven developing countries which are elected annually by a Meeting of the Parties. The Committee reports annually to the Meeting of the Parties on its operations. National governments develop national plans of actions for ending their use of ODSs which identify activities and actions that the nation would like to see funded by the MPMF. The MPMF then conducts an analysis and cost assessment of the various activities to determine which are funded and how much funding they should receive. The Fund provides finance for a broad range of actions including the closure of ODS production plants and industrial conversion, technical assistance, information dissemination, training and capacity building aimed at phasing out the ODS used in a broad range of sectors.

New fund for forests

Deforestation results from a complex set of direct and underlying causes.[3] While the direct economic drivers are well known and generally the focus of REDD discussions, the indirect causes must also be successfully addressed in order for REDD to succeed.[4] The challenge is to establish a REDD mechanism that can address different drivers, the varying capacities of the countries with tropical forests, and the rights of local and indigenous peoples.

While any REDD mechanism will have to deal with the many issues associated with implementation, the overall architecture of the mechanism could affect the way implementation takes place. A mechanism designed to provide offset credits for compliance purposes could lead to policies and actions very different to those promoted by a mechanism whose goals are to reduce emissions, protect biodiversity, and respect the rights of local and indigenous peoples.

The governance and administration of the REDD mechanism will be critical to ensuring the equitable distribution of benefits among and within countries with tropical forests. The broadest participation of countries will be needed to address the problem of leakage and a fund would have the flexibility to encompass countries in very different stages of development. The fund should include a supervisory board with equal representation from developing and industrialised countries, as well as other stakeholders including indigenous peoples, civil society members, and representatives of the other Rio Conventions.[5] This could include representatives from the UN Permanent Forum on Indigenous Issues (UNPFII), providing greater participation and transparency to the decision-making and implementation processes.

In terms of implementation, developing countries with tropical forests should establish national strategic action plans for REDD, in coordination with their long term land use, development, and infrastructure plans. The plans should clearly lay out the consultation and participation process with local and indigenous peoples.

Both market-offset and market-linked mechanisms could provide ex post payments for verified emission reductions. However, a market-linked fund could go beyond this to provide payment for performance which perhaps could not be easily quantified as an offset credit, such as the prevention of deforestation in countries with forests at risk (e.g. stabilisation) and capacity building efforts (if needed). Different tracks for developing countries with differing capacities could be established, providing an incentive for developing countries to consistently improve their forest protection programmes in order to receive a higher rate of return for their services. Financing for mitigation actions could then be provided consistent with the quality of their strategies, governance structures, monitoring and reporting capabilities, and willingness to take on liability. This would provide an incentive for the greatest number of countries to take immediate action to protect their tropical forests regardless of their capacities and historical deforestation rates.

Fund fact: flexibility

A fund can be designed to do whatever its designers would like it to do. A fund can act like a market or can provide financing under only the strictest of standards. For instance, a fund could hold a reverse auction with revenues received whereby countries with tropical forests would bid on the amount offered per tCO_2e from REDD. The benefit of such an approach compared to the direct inclusion of fully fungible REDD credits in the markets is that the revenues provided would better approximate the costs of actions to REDD, rather than be driven by the market price for tCO_2e. The flexibility of a fund to address the many complex issues associated with REDD provides a strong argument for its adoption by Parties to the Kyoto Protocol.

A new currency for forests:
Benefits for industrialised and developing countries

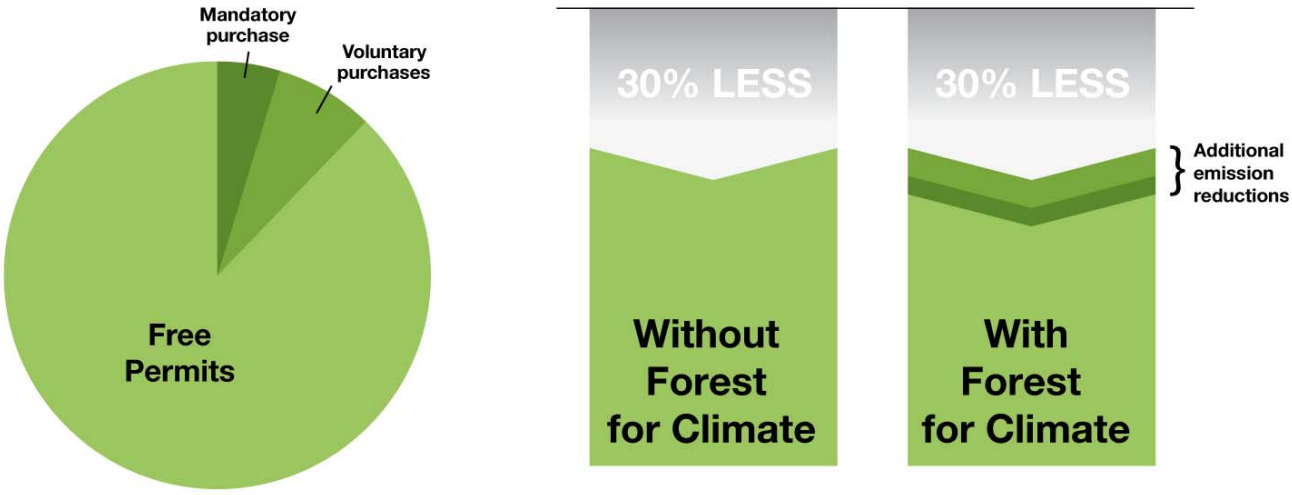
A major benefit for industrialised countries is that the units would act as hard currency for compliance purposes, since the fund would be responsible for achieving the emission reductions. The price of the new unit for tropical forests therefore be would linked to the world market price of other high quality carbon permits whose emission reductions are guaranteed. A major benefit for developing countries is that a certain significant amount of funding for REDD would be guaranteed, which would not be the case with a market-offset mechanism. Obtaining a high value for these units would also allow the fund to expend resources not only on reducing deforestation, but also preventing deforestation in high risk areas and on capacity building efforts (if necessary).

New currency for forests

Forests for Climate (TDERM) would create a new currency, forest units, which would signify a visible commitment by the global community to begin valuing tropical forests for the environmental services they provide. Building upon the polluter pays principle, industrialised countries would be required to purchase a mandatory minimum of the new forest units proportional to their total emission permits (AAUs), which they currently receive for free. Tropical forests would become fully incorporated into the next phase of the Kyoto Protocol and a significant guaranteed level of funding would be available to countries who commit to protecting their tropical forests.

While industrialised countries would bear ultimate responsibility for financing their tropical deforestation reduction commitment, the creation of forest compliance units could create opportunities to pass on the purchasing of the units to companies and other purchasers of compliance units. Although financing from the purchase of the new forest units would be genuinely additional to industrialised countries' domestic reduction commitments, they could offered in a manner that would provide these countries some flexibility in their compliance efforts. This purchase could be done as part of the greater auction (see below) or through a sale of forest units at a price linked to the world market price for emission allowances. The availability and initial purchasing price for these units, as well as the actions they fund, could be set in a manner to encourage their purchase over other generic emission allowances.

Industrialised countries' overall commitment to climate



Market-linked mechanisms like Forests for Climate (FFC) offer the ability to reduce emissions beyond the commitment made by industrialised countries. For instance, if Annex I countries agreed to a 30% reduction target, they could reduce global greenhouse gas emissions by more than 30% through Forests for Climate. Under a market-offset approach, the original 30% commitment would likely be weakened due to the REDD problems of leakage, additionality and permanence.

A new compliance unit for tropical forests would also provide other major benefits. The forest units would make transparent the transfer and operation of other carbon units within domestic and regional carbon markets, in turn helping to improve future rules relating to trading, holding, etc. The transparency of these systems will help ensure the comparability of efforts. Also, compared to generic emission allowances and other options, the forest units could be an attractive compliance option for companies wishing to bolster their image as contributing to climate change mitigation. Finally, if the fund is successful in attaining its objectives, the creation of a new unit could open up additional financing opportunities by allowing the fund to generate and sell non-compliance forest units to countries, companies, non-governmental organisations and others interested in financing the protection of tropical forests could contribute to the fund's efforts to safeguard the climate, biodiversity, and local and indigenous rights.

New forest units (Forests for Climate)	Market offset credits for forests
Additional climate benefits	No net climate benefits
Supplemental to industrialised country reductions and strengthens commitments to climate protection	At the expense of industrialised country reductions and weakens commitments to climate protection
Brings the global community closer to the 2°C target	Takes the global community further from the 2°C target
Reduces long-term compliance costs for all parties	Reduces short-term compliance costs for companies in industrialised countries

New auction for forests

Industrialised countries would be required to make a "tropical deforestation commitment" and purchase of the new forest units proportional to a small amount of their overall emission permits (AAUs). This mandatory minimum purchase would guarantee a significant and steady stream of funds to protect tropical forests in developing countries. For instance, the purchase of only 2% of these units could raise approximately €9 billion per year (see Table 1[6]). This minimum contribution could be achieved either through a separate sale of units at a price linked to the world market price of comparable units, or in combination with the auctioning of all forest units.

Individual industrialised countries would then be allowed to purchase additional forest units up to an established limit, which could provide them with some compliance flexibility while addressing the "free rider" problem associated with the negotiation of individual targets.[7] The total amount of forest units made available would be limited consistent with the overall target established by Annex I Parties. For the purposes of this auction (or sale), individual industrialised countries would be assigned an emission reduction range. Each unit purchased by a country would be one unit less than could be purchased by another country. Thus, unlike with forest offset credits, the new forest units would mean that industrialised countries collectively meet or exceed their overall emission reduction target.

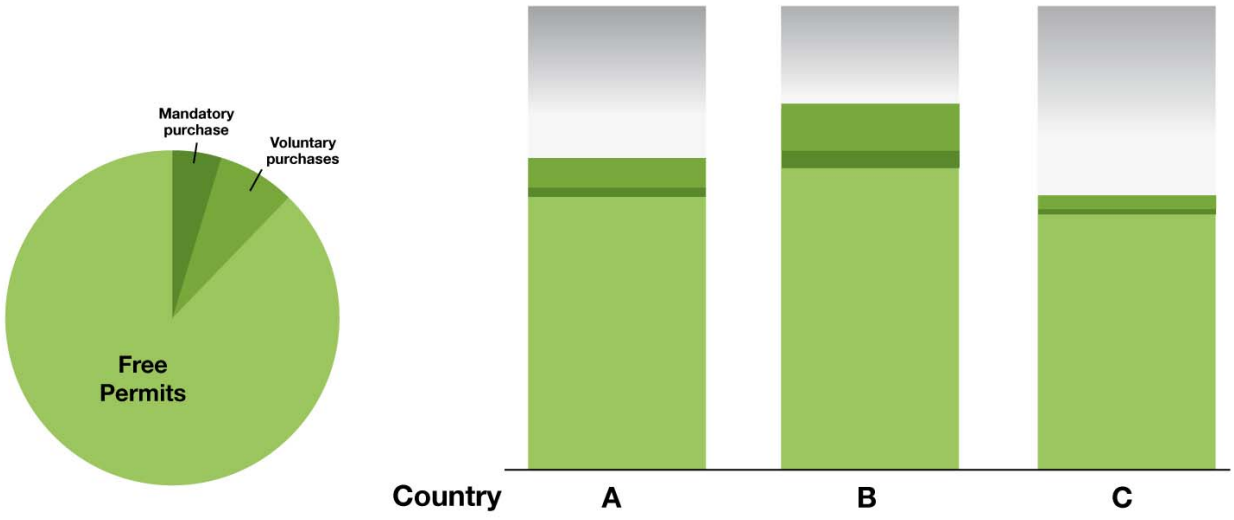
Greenpeace supports holding general auctions with individual limits on purchases and a collective limit tied to the overall cap for industrialised countries. This would guarantee that reductions from deforestation are entirely supplemental to industrialised countries emission reduction commitments and ensure that all industrialised countries take significant actions to reduce their domestic emissions. Another option would be to remove the limit on individual country purchases and hold a general auction across all industrialised countries. While this option would likely attain the highest price for the units, a single country could potentially monopolise the purchase of units (and take little domestic action on emissions). Finally, countries could establish their limits such that the mean (or some standard deviation from the mean) of the collective individual target ranges would be roughly equivalent to the overall Annex I reduction target. Under this option, each country would have the unrestricted option to purchase additional forest units up to its allotted cap without regard to the quantity purchased by other countries. However, we do not support this option since it could potentially allow industrialised countries to fail to meet their overall emission reduction target.

Table 1: Illustrative examples of values of different forest unit (TDERU) limits [8]

Percentage of 1990 base year Annex I industrial gas emissions (22.8 $GtCO_2e/yr$)	Value of forest units € billions per year (at €20/tCO_2e)	Forest units that would be allowed ($MtCO_2e/yr$)
1 %	4.6	228
2 %	9.1	456
3 %	13.7	684
4 %	18.2	912
5 %	22.8	1140

Finally, forest units could be made available to purchasers in any number of ways.[9] The best option is for the forest fund to hold an international auction of forest units with the responsibility for purchasing units falling to each industrialised country.[10] Under certain circumstances, countries might be allowed to pass purchasing the units onto companies in their domestic or regional emissions trading scheme. Alternatively, industrialised countries could dedicate the revenues from auctioning a set percentage of their domestic emission allowances to the new forest fund. This approach, however, would not have the advantages of an international auction in terms of transparency, efficiency, and uniformity. In terms of timing, there could be a single auction held for the entire commitment period or auctions held every week. Periodic auctions of the forest units are likely to provide the best mix in terms of compliance flexibility and financing and address the numerous other concerns.[11]

Financing and flexibility with new forest units



Under the Forests for Climate proposal, industrialised countries would be required to purchase a minimum amount of forest units, then have the option of purchasing additional units, up to a limit, through an auction.

Comparison of approaches to REDD

Market offset mechanisms for REDD: Do the numbers add up?

Potential supply of REDD offset credits 5.8-7.2 billion (deforestation only, not including degradation).[12]

Potential demand of REDD offset credits from carbon markets:
USA: 867 million offset credits[13]
EU: 261 million offset credits[14]

There is a significant over supply of potential REDD offset credits relative to the anticipated demand for such credits in the next (post-2012) phase of the Kyoto Protocol. This has led to fears that the inclusion of REDD offset credits in the carbon markets could deflate the price of carbon and destabilise (or even "flood") the markets.

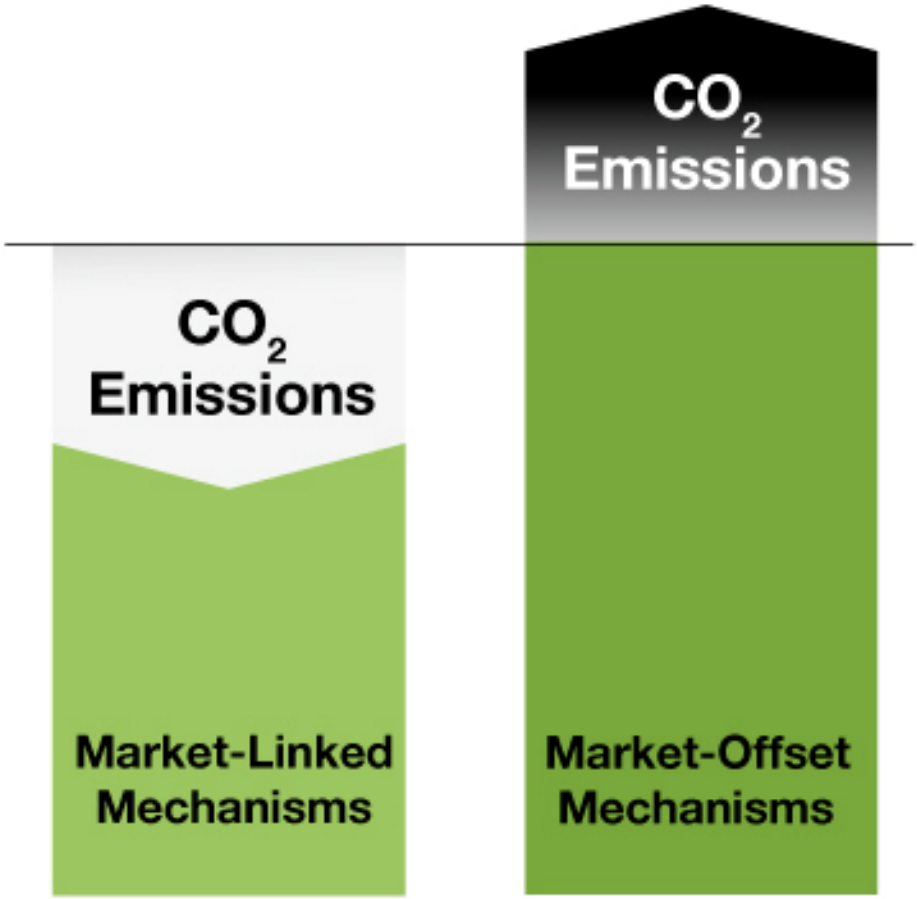
Environmental integrity

The single overriding principle Parties must consider in establishing a mechanism to Reduce Emissions from Deforestation and Degradation (REDD) is to ensure its consistency with goal of keeping global temperature rise as far below 2°C as possible. Competing REDD proposals must be carefully examined with respect to their role in the overall climate regime and whether as part of this package they would bring the world closer to (or further away from) the UNFCCC objective of avoiding dangerous anthropogenic interference with the climate.

REDD offers an excellent opportunity to reduce global greenhouse gas emissions in a cost effective and equitable manner; yet some industrialised countries may be seeking to turn this opportunity into an offset. While the argument is often made, there is little to no evidence that industrialised countries would be willing to take on stricter legally binding domestic targets in the hope that they can meet the tougher target by purchasing offset credits from developing countries who both choose to, and are successful in, reducing their emissions from deforestation and forest degradation. Thus, the proposed inclusion of forest offset credits in the carbon markets under the next phase of Kyoto is an attempt to provide additional means for industrialised countries to weaken their domestic emission reduction commitments.

Below we discuss some concerns with market-offset mechanisms for REDD and their ability to attain certain environmental and equity goals in comparison to a market-linked mechanism, specifically the hybrid market-linked fund proposed by Greenpeace. We conclude by arguing that market-offset mechanisms for REDD should not become part of the Kyoto (post-2012) agreement on climate change and that newer more innovative alternatives should be pursued.

Implications for global greenhouse gas emissions from market-linked mechanisms versus market-offset mechanisms



Emission reductions achieved through auctioning emission allowances or the purchase of forest units under the Greenpeace Forests for Climate proposal would be additional to industrialised countries' domestic reduction commitments. Due to problems of leakage, permanence and additionality, a market-offset mechanism for REDD could potentially increase global greenhouse gas emissions.

Consistency with UNFCCC and the 2°C goal

In order to avoid catastrophic climate change the world must keep global temperature rise as far below 2°C as possible.[15]

The Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) have demonstrated that carbon prices will need to increase in a consistent and rapid manner to bring about the infrastructure changes needed to avoid a 2°C rise in global temperatures.[16] The IPCC has shown that carbon prices in 2030 would need to be in the range of 80 to 200 dollars per tonne of CO_2, with the International Energy Agency (IEA) arguing that even higher prices would be needed to deliver at least a 50% reduction in greenhouse gas emissions by 2050.[17]

Recent studies have shown that including cheap forest offset credits in the carbon markets could crash the price of carbon by almost 50%.[18] The finding is consistent with prior studies which have found that forest offset credits would have a similar impact on the price of carbon allowances.[19] These studies also indicate that the inclusion of REDD credits would significantly reduce incentives to invest in clean and renewable technologies in both industrialised and developing countries.[20] While discussions have largely focused on the impacts of including REDD credits in the carbon markets on incentives in industrialised countries, scant attention has been paid to the impact of forest credits on energy and technology investments in developing countries, particularly in China and India. However, some recent models clearly show that cheap REDD credits would "crowd out" the more expensive credits generated from energy and industrial emission reductions.[21] The ability of forest credits to crowd out fossil credits would have significant implications for overall architecture of the next international agreement on climate, specifically the need for developing countries with significant energy and industrial emissions to take national mitigation actions to reduce such emissions.

Leakage, permanence, baseline uncertainties

Leakage (emissions displacement) refers to forest destruction halted in one part of a country being moved to another part or across an international border. Additionality refers to the need to prove that compensated reductions would not have occurred in the absence of the rewarded activity. Permanence refers to the need for emission reductions to be permanent, not temporary. This is especially problematic for forest emissions due to possible reversal of carbon benefits caused by human or natural disturbance (fires, disease, pests or even climate change). A major issue with permanence is who would be liable (buyer, seller, joint, other) in the event that the forest is later destroyed.

Any approach to REDD will have to deal with the significant problems of leakage, permanence (and liability), and baseline-setting. However, these issues are especially problematic with market-offset mechanisms, which would allow energy and industrial emissions to increase if "equivalent" reductions in forest emissions are made. For example, under a market-offset mechanism, if a country's baseline is incorrectly established, it could end up generating non-additional reductions – i.e. "fake" emission reduction credits (or "hot air") - and allow an industrialised country to increase its emissions. The result is that global greenhouse gas emissions could actually increase under a market-offset mechanism.

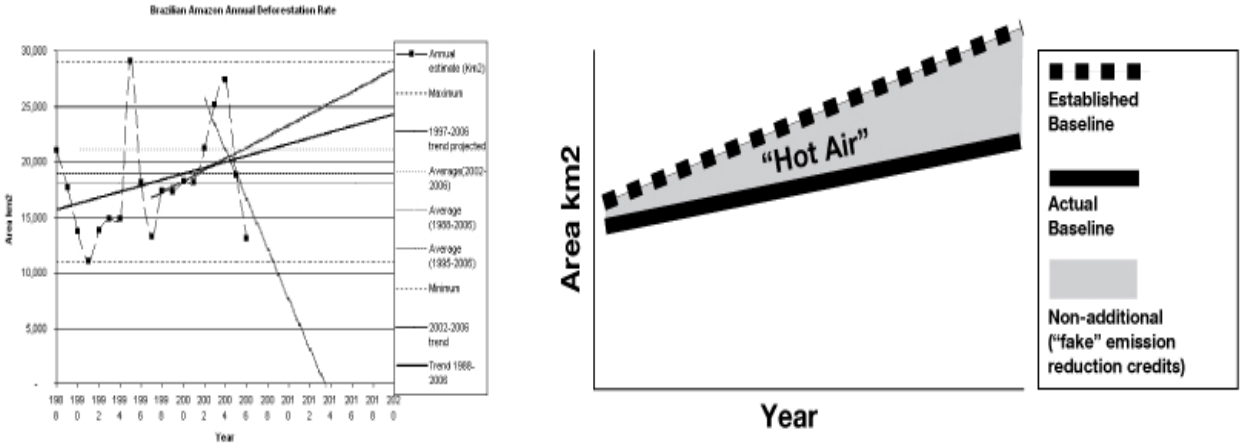
In order to provide real benefits for climate and biodiversity, a REDD mechanism must meaningfully address the problems of national and international displacement (or "leakage"). Although international leakage may not be explicitly addressed in other sectors, the risk of leakage is likely greater in the area of deforestation than in other sectors. A fund approach is best equipped for these purposes as it could be designed to make financing available to the broadest array of countries with tropical forests, including those with differing capacities as well as those with high and low deforestation rates. Carbon markets must retain their strict entry standards in order to provide a level playing field for market participants and to prevent countries from gaming or cheating the system. However, most developing countries with tropical forests are unlikely to meet these standards in the next commitment period and attempts to water down these high standards would severely undermine the environmental integrity of the system.

Limiting the amounts of forest offset credits allowed

Given the problems associated with allowing an unlimited number of forest offset credits to enter the carbon markets, many proponents are now proposing to allow a limited number of REDD offset credits to enter the carbon markets. These proposals remain problematic for a number of reasons. First, limits on REDD credits would do nothing to change the quality of such reductions and their equivalency and comparability to fossil fuel emissions. Such credits still suffer from the problems of leakage, permanence, baseline-setting, etc. and the argument for focusing the markets on the more easily quantified and comparable trade in fossil fuel emissions would not be changed. Second, the payments obtained for REDD credits would likely bear little to no relation to the cost exerted to reduce forest emissions, resulting in windfall profits for countries and the inefficient expenditure of resources for mitigation.[22] Third, the risk of market monopolisation would be increased since offset purchasers seeking low-cost low-risk opportunities would likely cluster around the one or two countries with traditionally high rates of deforestation who could deliver reductions on a continuous basis.

This in turn would increase the risks of international emissions displacement (i.e. "leakage") and provide little or no benefit to climate or biodiversity. Fourth, because of their anticipated low costs, studies have shown that such credits would likely "crowd out" investments in clean and renewable energy technologies in developing countries. Finally, while limiting the amount of forest offset credits allowed might minimise the direct impacts on the price of carbon, they would not decrease the less quantifiable indirect effects on investment strategies in the energy and industrial sectors. As long as the potential for more cheap forest offset credits is there, private and government actors could anticipate their future availability (and carbon stock offsets, etc.), or worse, use their resources to continuously lobby for their increase instead of devoting resources to low-carbon technologies. Such "slippery slope" arguments appear especially relevant for proposals to allow in only a limited amount of forest offset credits.

Potential for fake emission reductions



The graph on the left shows the difficulty in establishing an accurate baseline for deforestation. Under a market-offset mechanism, a baseline that is established incorrectly (through genuine error or political manoeuvring) could lead to the generation of non-additional REDD offset credits and increase global emissions.

Equity

Deep cuts in industrialised countries' domestic greenhouse gas emissions

In Bali, industrialised countries committed to making deep domestic cuts in greenhouse gas emissions and to providing financing and other incentives for significant emission reductions in developing countries including REDD-related actions. However, there appears to be movement among some industrialised countries to do less at home in exchange for cheaper reductions in developing countries. Not only does this represent a back-tracking from commitments made in Bali, but it also takes the focus off of the need for countries historically responsible for the climate crisis to reduce emissions at home.

Significant and reliable financing for developing countries with tropical forests

Tens of billions of dollars per year (or more) will likely be needed to reduce and ultimately halt tropical deforestation.[23] Developing countries who take action to protect their tropical forests must be rewarded for their successes.

While much has been made of the potential financing for forests available through carbon market offset credits, none of this financing is guaranteed. Actual finance would be subject to the decisions of a large number of independent actors. Furthermore, recent analyses indicate that the inclusion of REDD credits in the carbon markets would not provide financing at the scale or timeframe needed to end tropical deforestation.[24]

The unpredictability of offset financing could diminish the number of developing countries willing to participate in a REDD mechanism. Developing countries facing difficult development decisions may find it difficult to significantly change their current land use practices when there is no guarantee their actions will be rewarded down the line. The promise of future payment based on an estimated demand that may never materialise will likely not be a sufficient incentive for developing countries faced with many short-term needs.

The urgency of the climate and extinction crises demands that industrialised governments provide countries with tropical forests an incentive to change policies immediately. Parties must commit to providing funding for REDD in a predictable manner at the scale needed to halt emissions from deforestation within a decade. As shown above, auctioning even a small percentage of the overall emission allowances would raise financing in the range of many billions of Euros per year.

Equity among countries: an approach open to the greatest number of countries with tropical forests

A solution is needed that will get as many countries with tropical forests involved as quickly as possible. Most drivers of deforestation are global in nature, caused by demand for wood products and agricultural commodities. The international approach to REDD must halt forest destruction where it has traditionally occurred and prevent it from shifting to other places at risk. Otherwise, benefits to the climate, biodiversity, and forest peoples will be marginal at best.

Experiences with carbon markets to date raise concerns about whether a market offset mechanism for REDD could provide for the participation of a large number of countries with tropical forests. The most relevant example is the Clean Development Mechanism (CDM), where approximately 90% of all credits have been issued from four countries (China, India, South Korea, and Brazil) and about 1% spread among the least developed countries (LDCs).[25] While incentives should be performance-based, a system that would only define performance as ex post financing for verified emission reductions would be skewed towards a very small number of countries with high tropical deforestation rates and biased against countries with low deforestation rates and limited capacities. This would have major implications for certain developing countries, such as those located in the Congo Basin.

The global situation calls for the creation of a flexible mechanism that could address the very different circumstances and capacities of countries as diverse as Brazil, Indonesia, and the Democratic Republic of the Congo. A system solely dependent upon the creation and trade of fully fungible forest credits seems ill suited for addressing deforestation emissions in a comprehensive manner.

A forest fund could provide financing to developing countries where provisions for emission reductions, biodiversity protection, and the protection of local and indigenous rights have been made. National approaches are needed to reduce transaction costs, address domestic leakage and ensure the integrity of baselines. But, in instances where national governments may not have sufficient capacities, those governments in combination with the fund's board could allow for the direct financing of sub-national programmes and activities. Such financing becomes defensible when the projects are not being used as offsets and the mechanism has objectives in addition to emission reductions.

Watering down standards for REDD?

Carbon markets are significant tools in the fight against climate change and must remain stable to be effective. Strong uniform standards are critical to ensure quality reductions and the comparability of actions. Under existing rules, industrialised countries who take on binding national targets under the Kyoto Protocol, and meet its strict monitoring, reporting and verification requirements, are allowed to generate and sell offset credits generated from forestry if such reductions exceed their overall emissions target. Therefore, there are no legal or political objections to preventing developing countries from selling REDD offset credits on the carbon markets so long as they take on Annex B commitments and meet all applicable standards and requirements. Existing proposals for market-offset mechanisms for REDD are problematic because they would lower the standards required of countries to sell credits on the carbon markets. Issues of permanence and liability, additionality, and leakage raise the stakes for the issue of REDD. Allowing standards to be weakened would call into question the environmental integrity of the carbon markets and the overall climate regime.

Equity within countries: an approach that promotes climate and biodiversity objectives while respecting the rights of local and indigenous peoples

There is little reason to believe that a market offset mechanism for REDD would encourage reductions that meet goals unrelated to carbon and compliance, such as biodiversity and respect for local and indigenous rights. For instance, the Clean Development Mechanism (CDM) was established with dual objectives of promoting sustainable development and assisting Annex I parties with their compliance efforts.[26] However, experience with this market mechanism shows that investments have flocked to the least expensive offset credit providers based on costs, without little to no regard for the goal of promoting sustainable development.[27] Half of all the offset credits issued through March 2008 came from trifluoromethane (HFC-23) emission reduction projects, yielding significant profits for chemical companies and carbon traders but no benefit for sustainable development.[28]

Indigenous peoples and local communities

Serious questions have been raised by Indigenous Peoples Organisations (IPOs) and southern civil society organisations about the impacts of REDD on their rights and livelihoods.[29] While every REDD mechanism will have to address issues of implementation, the overall architecture of this mechanism will have a profound impact on how it will work in practice. These concerns seem especially poignant when dealing with systems that would seek to generate offset credits for compliance purposes, i.e. market offset mechanisms. In this context, placing forests directly into the carbon markets could have the added risk of pitting forest peoples whose land tenure rights have either not been acknowledged or not enforced against a model seeking to provide services at the lowest possible cost.[30]

A properly designed REDD mechanism could strengthen and advance the rights of indigenous and other forest dependent peoples while a poorly designed policy could potentially place their rights at risk. While any system will have to address this issue, a mechanism with a stronger governance structure, such as a fund, has a much better chance to be designed and implemented with outreach, participation, and transparency and other criteria that will help ensure that the rights of local and indigenous peoples are fully respected. A governance structure that includes developing and industrialised countries as well as civil society representatives would also provide for the greater comparability of efforts and their relative successes and failures.

UNDRIP and REDD

On 13 September 2007, the United Nations General Assembly adopted the U.N. Declaration on the Rights of Indigenous Peoples (UNDRIP) after over twenty years of negotiations between indigenous peoples and governments. UNDRIP has major implications for REDD, the long term success of which will largely depend upon the attention paid to rights, social and livelihood issues. In order to be successful in the long term, Greenpeace believes that REDD must fully respect the land, resource use and ownership rights of indigenous peoples and directly engage such communities in the development and implementation of a REDD mechanism. REDD policies must provide for the free, prior, and informed consent of these communities and ensure that benefits are equitably shared. Parties to the UNFCCC should therefore seek to establish a REDD mechanism which fully respect the rights of local and indigenous peoples, consistent with the UN Declaration on the Rights of Indigenous Peoples.

Biodiversity

Harvard biologist E.O. Wilson has argued that we are in the midst of the world's sixth greatest extinction.[31] But unlike the other historical mass extinctions, this one is completely man-made.

The United Nations has acknowledged this crisis and, in response, has adopted the target to significantly reduce global biodiversity loss by 2010.[32] Recent scientific studies have confirmed the urgency of this extinction crisis, and one recent report demonstrated that 20-30% of the world's remaining species would be at increased risk of extinction if global temperature rise exceeds 2ºC.[33] Thus a REDD mechanism that would weaken efforts to stay well below 2°C could perversely result in catastrophic climate change that may be worse for tropical forests than the status quo.

Forests are more than carbon. Yet, the UNFCCC does not distinguish between ancient forests that have stood for hundreds of years and industrialised tree plantations planted 30 years ago. Focusing REDD on gross emission reductions and ascribing value to biodiversity is essential to avoid creating market incentives to turn natural old growth forests into production forests (with a corresponding loss of species and livelihoods) or to allow their continued destruction to be offset by industrial tree plantations at the national level. It would be perverse to support a system to protect the Earth's climate that would not be designed to protect its inhabitants.

A market offset mechanism would render the protection of biodiversity to mere chance. Biodiversity and social considerations could be viewed as an added "cost" by project developers, carbon traders and companies engaged in a "race to the bottom" to provide offset credits for compliance purposes at lowest possible costs. Given the anticipated revenues for REDD, a domain which has to date largely been encompassed by non-governmental organisations, could very quickly become a for-profit enterprise. Drivers of deforestation (such as logging companies and agricultural commodity producers) could shift from high-carbon low biodiversity areas to low-carbon high biodiversity areas, resulting in net gains in terms of climate but losses in terms of biodiversity.

Instead, parties should focus their resources on a well-designed mechanism for REDD that will promote both climate and biodiversity objectives while fully respecting the rights of local and indigenous peoples. This could be done by prioritising countries with large intact forests and other natural forests with high biodiversity values at risk of deforestation. Benefits would be provided to countries showing progress in attaining both climate and biodiversity objectives, with the free, prior and informed consent of local and indigenous peoples. Only countries meeting these standards would be eligible for REDD incentives.

Parties have supported collaboration between the UNFCCC and the UNCBD[34] and must communicate a strong position that any future REDD mechanism be designed and implemented to promote the objectives of both Conventions consistent with the UN Declaration on the Rights of Indigenous Peoples.

Efficiency

Efficiency in the context of REDD means the ability to provide permanent emission reductions in forest emissions at lowest costs. However, in the REDD debate, efficiency is often discussed in terms of how to lower the short term compliance costs for large industries in developed countries. These two interests are not necessarily the same.

Greenpeace believes that the long term success of REDD will be determined by the extent to which financing for REDD is directed to protect biodiversity and the rights of local and indigenous communities. A mechanism designed to provide offsets at lowest costs for compliance purposes in the short term, may not be implemented in a way that encourages developing countries to progress along a long-term sustainable and rights-based development pathway.

A major efficiency issue is the extent to which the market price paid for forest offset credits would bear a relation to the forgone opportunity costs of not deforesting. One recent study seemed to demonstrate that the demand for offset credits would drive the price more than the supply, which could result in significant profits for REDD offset credit providers at the expense of greater mitigation efforts.[35] One study has shown that prices paid for CDM offset credits in the European Emissions Trading Scheme (ETS) were 10-100 times greater than the costs of the reductions themselves.[36]

In contrast, a fund for forests could be designed to compensate countries only for foregone costs of not deforesting. That is the experience of the Montreal Protocol Multilateral Fund (see above) which only compensates countries and projects for the incremental (i.e. "additional") costs to conversion to non-ozone depleting technologies. The result would be the more efficient expenditure of limited mitigation resources and lower overall compliance costs for industrialised countries.

The efficiency of offsetting with REDD

Advocates of market-offset mechanisms for REDD often argue it would provide the most efficient means of reducing forest emissions. However, the mismatch between the anticipated supply of REDD credits and the likely demand for such credits from the carbon markets significantly undermines such arguments since the price paid for a REDD offset credit would likely bear little relation to the actual costs incurred in reducing deforestation. For instance, in one well-publicised expose, chemical companies and carbon traders providing offset credits to European and Japanese credit purchasers were expected to garner nearly $6 billion in payments for reductions whose actual costs were approximately $100 million.[37] The result is the inefficient expenditure of mitigation financing and windfall profits for a select few beneficiaries. Would a market-offset mechanism for REDD do the same?

Private vs. public funding

The financing discussion for REDD often focuses on the identity of the funding source(s), rather than on the availability and predictability of financing to reward countries for successful mitigation actions. Both public and private sources of finance could apply under either a market-offset mechanism or a market-linked mechanism. Similarly, both funds and markets could enable public, private, and non-governmental entities to finance the implementation of REDD actions and activities. However, arguments that significant efficiencies would be gained by allowing the private sector to provide direct financing for REDD may be overstated, since emission reductions from REDD should be achieved at the national level, and the world's remaining tropical forests are largely contained within a small number of developing countries.[38]

Conclusion

Given the limited time in adopting a REDD mechanism prior to Copenhagen, parties should allow the carbon markets to remain focused on the more easily quantifiable and comparable fossil fuel emissions rather than introducing the complexity and uncertainty associated with forest emissions. At this juncture, market-offset mechanisms for REDD could become an inequitable, inefficient, and potentially counterproductive way of addressing the urgency of the climate crisis. Perhaps solutions to the aforementioned problems can ultimately be found, but this will not occur in the timeframe needed to adopt and implement a REDD mechanism for the next (post-2012) phase of the Kyoto Protocol.

Therefore, the ongoing negotiations on REDD would best be served by developing an innovative new mechanism which can ensure the reductions are genuinely additional to deep domestic reductions in industrialised countries and finance performance which achieves both climate and biodiversity objectives consistent with the rights of local and indigenous peoples. Only then can the potential rewards of REDD, outweigh any potential risks.

A comparison of different approaches to REDD[39]

	Voluntary funding mechanism	Market-linked mechanism	Market-offset mechanism
	Official development assistance, voluntary offset purchases	Forests for Climate (TDERM); auction revenues, etc.	Forests credits in the CDM, ETS and other carbon markets
Funding potential and costs			
Sufficient financing	No	**Yes**	**Yes**
Reliable financing	No	**Yes**	No
Lowers compliance costs	No	**Yes**	**Yes**
Impact on global emission reductions			
General impact	**Additional reduction**	**Additional reduction**	Zero or increased
Impact if leakage occurs	**Lower emission reduction**	**Lower emission reduction**	Increased emissions
Impact if not additional	**Lower emission reduction**	**Lower emission reduction**	Increased emissions
Impact if baselines incorrect	**Lower emission reduction**	**Lower emission reduction**	Increased emissions
Designed to address biodiversity and social concerns			
Local and indigenous rights	**Maybe**	**Yes**	No
Biodiversity	**Maybe**	**Yes**	No
Ability to encourage a broad range of countries and actions			
Verified emission reductions	**Yes**	**Yes**	**Yes**
Preventing deforestation (stabilisation)	**Yes**	**Yes**	No
Capacity building	**Yes**	**Yes**	No

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3. Helmut Geist & Eric Lambin, What Drives Tropical Deforestation? A Meta-Analysis of Proximate and Underlying Causes of Deforestation Based on Subnational Case Study Evidence (LUCC Report Series No. 4, Louvain-la-Neuve 2001).

4. Do Trees Grow on Money? The implications of deforestation research for policies to promote REDD, Markku Kanninen, Daniel Murdiyarso, et al. (CIFOR 2077).

5. Both country and civil society representation should include participants from all major regions with tropical forests.

6. Financing amounts would depend on the targets established by industrialised countries and the world market price for other emission allowances. Estimates provided are at 1990 emissions levels at a forest unit value of €20.

7. The free rider problem described the likelihood that each individual country will negotiate in a manner that would result in an individual target that is less than its fair share of the total burden agreed to by Annex I parties. The price of forest units could initially be offered at a rate slightly lower than the world market price for similar emission allowance.

8. Modified table from Tropical Deforestation Emission Reduction Mechanism: A Discussion Paper (December 2007). We use forest units here interchangeably with the TDREU forest units described in the Discussion Paper.

9. See e.g. European Commission: Auctioning of CO_2 Allowances in the EU ETS (2006); http://ec.europa.eu/environment/climat/emission/pdf/etsreview/ets_co2_emission_auctioning.pdf http://www.electricitypolicy.org.uk/pubs/tsec/hepburn.pdf (on tradeoffs between the frequency of auctions; every other week to once every 5 years)

10. Countries could choose to finance their purchase in any number of ways such as through auctioning at the domestic (or regional level); the imposition of domestic levies or taxes, etc.

11. The auction(s) could be designed to promote a number of values including: historic responsibilities; flexibility for industrialised countries and emission sources the free rider problem; the creation of secondary markets; etc.

12. IPCC Fourth Assessment Report, Working Group III, Chapter 9: Forestry (2007); Stern Review, the Economics of Climate Change, part III, at 176 (2006); Carbon Sunk: The Potential impacts of Avoided Deforestation Credits on Emissions Trading Schemes, Paul Leach, Rainforest Foundation (Jan. 2008) (based on FAO figures).

13. Estimate based on the modest US Warner Lieberman Climate Security Act (S.2191 2007) (assuming 15% offsets all of which would be met through the purchase of REDD offset credits not other means).

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20. See supra note 18, Anger & Sathaye et al.

21. See supra note 18, Anger & Sathaye et al.

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26. Kyoto Protocol, Article 12.2.

27. Christoph Sutter & Juan Parreno, Does the Current Clean Development Mechanism (CDM) Deliver its Sustainable Development Claim? An Analysis of Officially Registered CDM Projects, Climatic Change Vol. 84, No. 1 (Sept. 2007); Karen Olsen, The Clean Development Mechanism's Contribution to Sustainable Development: A Review of the Literature, Climatic Change Vol. 84, No. 1 (Sept. 2007); Lambert Schneider, Is the CDM fulfilling its environmental and sustainable development objectives? An evaluation of the CDM and options for improvement, Report prepared for WWF Berlin (Nov. 2007).

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39. While it is difficult to generalise about the myriad of proposals on REDD, this graph provides a brief comparison of three major competing proposals based on important criteria. While it is possible that sufficient amounts of Official Development Assistance (ODA) could be provided for purposes of REDD, the amount of ODA historically directed towards forest programmes makes this unlikely. The Greenpeace Forests for Climate (TDERM) proposal is applied in the table above where there may be variation among market-linked mechanism proposals.

GREENPEACE

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.

Greenpeace International
Ottho Heldringstraat 5
1066 AZ Amsterdam
The Netherlands
Tel: +31 20 7182000
Fax: +31 20 5148151