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## I. IN THE PRESS

27 June 2011, Mongabay

### [Green tigers: new research shows protecting forests will deliver new economic boom for Southeast Asia](#)

A raft of new studies show that protecting Southeast Asia's forests could provide an enormous economic lift for Southeast Asia.

27 June 2011, SciDevNet

### [EU donates \\$ 2.8 million to Mexico for REDD+](#)

The European Union donated € 2 million to Mexico (U.S. \$ 2.8 million) to initiate early action to reduce emissions from deforestation and forest degradation (REDD), by an agreement signed this month (June 8).

24 June 2011, UN-REDD

### [6 New Countries Join the UN-REDD Programme](#)

The UN-REDD Programme's Policy Board agreed in an inter-sessional decision in June to welcome Côte d'Ivoire, Ethiopia, Honduras, Mongolia, Pakistan and Peru as partners of the Programme and official observers to the UN-REDD Programme Policy Board.

22 June 2011, Mongabay

### [African forests store 25% of tropical forest carbon](#)

Forests in sub-Saharan Africa account for roughly a quarter of total tropical forest carbon, according to a comprehensive assessment of the world's carbon stocks published in the journal Proceedings of the National Academy of Sciences (PNAS).

22 June 2011, Ecologist

### [Warning over REDD projects excluding rural poor from forests](#)

Global study finds forests provide one-fifth of household income in rural communities and says access for them should be prioritised in REDD-type conservation projects

22 June 2011, Mongabay

### [Tropical forests more effective than temperate forests in fighting climate change](#)

Preserving forest cover and reforesting cleared areas in the tropics will more effectively reduce temperatures than planting trees across temperate croplands, argues a new paper published in Nature Geoscience.

16 June 2011, MCPFE

### [Ministers launch negotiations for a Legally Binding Agreement on Forests in Europe](#)

European ministers responsible for forests made the historical decision yesterday to launch negotiations for a Legally Binding Agreement on Forests.

6 June 2011, NatureNews

### [Congo rainforest summit stops short of commitments](#)

Rainforest nations failed to agree on formal commitments last week during the United Nations-backed Summit of the Three Rainforest Basins in Brazzaville, Republic of Congo. Among the shelved proposals was the creation of a permanent body to coordinate efforts between rainforest regions.

31 May 2011, Ecosystem Marketplace

### [Up in Smoke: Can Carbon Markets Help Reduce Forest Fires?](#)

Wildfires in the US are growing larger and more severe — a trend expected to worsen with climate change. Top forest managers see getting ahead of the wildfire curve as the best solution, deploying preventative treatments to remove potential fuels before a fire occurs. Doing so isn't cheap, however, and many policymakers and forest managers have been highlighting the greenhouse gas emissions caused by wildfires. But can carbon money really come to the rescue?

30 May 2011, Bioscience

### [The true cost of saving rainforest and improving food security](#)

New research shows international plans to pay developing countries to reduce tropical forest destruction may increase rural poverty because critical income streams to rural people have been ignored.

29 May 2011, NatureNews

### [Smart-REDD plan targets causes of deforestation](#)

A scheme to pay people in developing countries to curb carbon emissions from deforestation is plagued by 'leakage' — trees that aren't cut down in one forest are just cut down in another to provide people with the resources they would have foregone. But a study by an international team of scientists has come up with a way of dealing with leakage.

26 May 2011, Ecosystem Marketplace

### [Writing the Rules for a New REDD Paradigm: Norway and Guyana](#)

In the global fight against deforestation, incentives for Reducing Emissions from Deforestation and forest Degradation (REDD) typically mean countries should improve from their historical rate of forest loss. But with vast and relatively undisturbed forests, Guyana is pushing for a bold new model for REDD payments, with Norway's backing, and not everyone is happy about it.

## II. UNFCCC NEGOTIATIONS AND RELATED DISCUSSIONS

### The Bonn Climate Change Talks and UNFCCC Subsidiary Bodies 6 - 17 June 2011

The latest round of climate change meetings under the UNFCCC was held from 6 - 17 June 2011 in Bonn, Germany. The session included the two subsidiary bodies, the 34<sup>th</sup> sessions the SBSTA and SBI, as well as the fourteenth session of the Ad Hoc Working Group on Long Term Cooperative Action under the Convention (AWG-LCA) and the sixteenth session of the Ad Hoc Working Group on Further Commitments of Annex 1 parties under the Kyoto Protocol (AWG-KP).

Agreements reached in COP 16 in Cancun in December 2011 were hailed as a “balanced” outcome that represents an important stepping stone toward a final agreement. After this month’s meeting in Bonn there is cautious optimism that this could happen at COP17 in Durban, South Africa in December 2011.

While some progress was made on technical issues related to the implementation of the Cancun Agreement, several topics were held back due to the interconnectedness of the two negotiation tracks, and some parties reconsidered provisions of the Cancun Agreement. The question of the future of the Kyoto Protocol, i.e. a second commitment period and the looming regulatory gap between Kyoto Protocol commitment periods, surfaced in many groups, with back-and-forth exchanges among developing and developed countries.

It was agreed to resume the session of the AWG-LCA and AWG-KP before Durban this next round of AWG meetings will take place from **1 to 7 October 2011 in Panama City, Panama** and parties have expressed their intention to start drafting text then, in order to ensure a successful outcome for COP 17.

For the past three years, UNFCCC has been engaged in parallel-track negotiations under two *ad-hoc* working groups. One addresses actions of all parties under the Convention, including on climate change mitigation, adaptation, financing, capacity building and technology transfer. The other focuses on further emission reduction commitments of Annex 1 countries under the Kyoto Protocol. The goals are to advance collective efforts to limit global warming to within 2° C above pre-industrial levels to avoid severe consequences of climate change and to promote adaptation to the inevitable consequences of climate change.

### Issues related to forests

The forest issues addressed at Bonn included REDD+ and forest management accounting rules for Annex 1 countries under the Kyoto Protocol (LULUCF).

#### REDD+

The Cancun Agreement (COP16) confirmed the scope of REDD+, outlining five mitigation activities as well as principles and safeguards to be respected while undertaking these activities. The focus in Bonn was how to deal with the unresolved issues related to reference (emission) levels; the financing of REDD+, modalities to address measuring; reporting and verification (MRV) of REDD+ activities; and how countries will provide information on safeguards.

As part of the decision from Cancun, SBSTA was requested to work on these technical/methodological issues in relation to REDD+ and the AWG-LCA was asked to continue to work on the issue of REDD+ financing and report to COP17 in December 2011.

The developments in the SBSTA session in Bonn:

#### - Forest reference emission levels and forest reference levels

SBSTA discussed the issue of national forest reference emission levels and/or forest reference levels as a benchmark to assess the changes in forest cover and carbon stocks. Clarification is needed on many issues, including the difference between forest reference emission levels and forest reference levels, the definition of forests, adjustment of reference levels according to national circumstances, consistency between national and sub-national levels, and the possibility of including safeguards.

- System for providing information on how the safeguards are addressed

Parties identified (but did not agree to, in the end) a list of principles for the system(s), including transparency, reliability, adaptability to national circumstances, regularity, predictability, consistency and comparability. Some parties supported using national communications to report on safeguards. The draft conclusions adopted by the parties consist of a list of points to be considered as general guidance for submissions. This guidance indicates that information system(s) should include characteristics, design, provision of information, potential barriers for addressing and respecting safeguards and other relevant issues.

- Measuring, reporting and verification

Parties discussed what characteristics MRV for REDD+ should have, inter alia: they should be consistent with any guidance on MRV for NAMAs; non-intrusive and respectful of national sovereignty, circumstances and capabilities; simple; transparent; flexible; and cost-effective. However, in the final decision, countries only agreed to the fact that the characteristics for MRV should follow what is already agreed in appendix I of 1/CP.16.

Parties also agreed to request the Secretariat to facilitate an expert workshop on REDD+ before COP 17 in Durban. They also invited submissions from parties and observer organizations on issues related to the discussion in SBSTA.

In Bonn the AWG-LCA also addressed the question of the REDD+ financing modality (e.g. fund-based, market-based or a mix of the two), also with the aim of reporting to COP17. Many developing country parties raised the issue of the additional funding required for REDD+ readiness, including the need for more focus on capacity building from the early stages. Also, some parties said public financing should play a greater role in the readiness phase of REDD+ - with a focus on capacity building - and that the third phase should build on "a basket" of (alternative) financing options. This could include public funding at the national and international levels; a possible REDD+ window under the Green Climate Fund (see points under Finance below); and market mechanisms. However, several parties warned against using market mechanisms for REDD+. Finally, it was emphasized by many parties that each country should be able to decide on the sources of funding they would seek. Highlighting information gaps, many countries underscored the importance of MRV of finance for REDD+.

Also on finance for REDD+ separate negotiations are taking place in the Transitional Committee of the new Green Climate Fund. The Green Climate Fund is intended to support projects, programmes, policies and other activities in developing countries using thematic funding windows. Funding for REDD+ could be a separate thematic funding window.

### Clean Development Mechanism

Discussions on the Clean Development Mechanism (CDM) were linked with the key issue of what happens in the case of a gap between the current commitment period of the Kyoto Protocol and the next commitment period, or if agreement cannot be reached to continue the Kyoto Protocol.

Many parties expressed concerns about the fact that, should access to CDM credits be made conditional on second commitment period targets, parties might be forced to create their own rules through bilateral deals. Other parties emphasized the role of the CDM in promoting sustainable development and technology transfer in non-Annex I countries. A group of parties underscored that access to the flexibility mechanisms, including Joint Implementation and the CDM, would be difficult to agree to in the absence of a second commitment period.

The earlier discussion on including additional forest activities in the CDM, such as those related to replanting or restoration of "forests in exhaustion", i.e. forests which are no longer productive, was not continued. SBSTA however requested the Secretariat to prepare a synthesis report based on parties' submissions and will continue considering the issue at SBSTA 35 in Durban.

## Land use, land-use change and forestry (LULUCF)

Under the first commitment period of the Kyoto Protocol, accounting for emissions from a number of land use activities has been voluntary. This could potentially undermine the effectiveness of emission reduction targets. Because of this, parties have been negotiating possible changes to the framework of LULUCF for the last three and a half years.

The key issue in relation to LULUCF lies with accounting rules for forest management, for which reporting was made optional under the first commitment period. One of the central unresolved issues is the baseline for accounting for changes in emissions from forest management. This is important because the determination of whether emissions have gone up or down entirely depends on how the baseline is set. Agreement on this issue remains elusive after the Bonn session.

Apart from the overall discussion on forest management, the areas of debate include: whether a cap should be applied to emissions and removals from forest management; if and how emissions from extraordinary occurrences ("force majeure") would be accounted for; how to set a baseline or forest reference (emissions) level; and how to factor in changes in forest carbon stocks that are not caused by human intervention. In Bonn, progress was made on how to address harvested wood products and how to deal with force majeure.

The discussions under the KP negotiation track on carbon accounting rules for forest management -- a complex and controversial issue -- have stimulated debates on what constitutes good forest management and how to incentivize it. Of relevance to the climate change community is how forests could contribute more to climate change mitigation, while of interest to foresters is whether incentives for better forest management will be forthcoming as a result of climate change decisions.

Parties also addressed technical questions. A proposal was made for flexible land use for planted production forests. References were made to full land-based accounting and definitions related to forests. A very comprehensive streamlining of the text was also agreed, integrating various options and parties' concerns, and reducing the negotiations text from 40 to 12 pages.

Apart from being a major issue in relation to forestry, agreement on revised LULUCF accounting rules for the second commitment period of the Kyoto Protocol (after 2012) could influence the level of emission reduction commitments by Annex 1 parties and thereby have a significant influence on emission pledges by parties. Furthermore, the approaches agreed under LULUCF might have an effect on developing countries as they might be reflected in the modalities to be agreed upon for REDD+.

### **III. EVENTS & MEETINGS**

#### **Past meetings:**

##### **REDD+ Partnership**

12 June, Bonn, Germany

The REDD+ Partnership Meeting on 12 June meeting included a progress report of the Voluntary REDD+ Database (VRD), a discussion on financing gaps and overlaps, a preliminary review of the effectiveness of multilateral REDD+ initiatives and a discussion on future priorities for the Partnership. The attendees appreciated the progress of the VRD development and the discussion gave a substantive basis for action on improvements. Partners concluded that immediate priorities for the Partnership should be to enhance the completeness of the data in the VRD, to intensify communication among Partners on the reporting of financing data, and to increase the time dedicated to workshops in the Partnership. Prioritized topics for future discussion include financing options, safeguards, drivers of deforestation, results-based actions and institutional arrangements.

18 June, Köln, Germany

The REDD+ Partnership Workshop themed "Scaling up REDD+ Finance" took place on 18 June, and it covered four themes: mobilizing private sector finance, lessons from the fast-start (practical pilot experiences of scaling up result-based incentives), characteristics of the funding needs for REDD+ and barriers to scaling up REDD+ finance/enabling environments. Major topics of discussion were the problems of market based mechanisms, the need for public-private partnerships in development and implementation of innovative financing options, and the need for local adaptation of financing mechanisms based on local drivers of deforestation and forest degradation.

#### **Upcoming Meetings:**

##### **International Year of Forests, 2011**

1 January - 31 December 2011

UN General Assembly has designated 2011 as International Year of Forests. The secretariat of the UN Forum on Forests serves as the focal point for the implementation of the International Year of Forests, in collaboration with governments, the members of the Collaborative Partnership on Forests and international, regional and subregional organizations and processes as well as relevant major groups. [More](#).

##### **Africa Carbon Forum**

4-6 July 2011, in Marrakesh, Morocco

The third All-Africa Carbon Forum - "Marrakech Plus 10" - regional trade fair and knowledge sharing platform for carbon investments. The event is being co-organized by the Nairobi Framework partners - UNFCCC, UNDP, UNEP/UNEP Risoe, IETA, UNITAR, UNCTAD, the World Bank, and the African Development Bank. [More](#).

##### **Payments for Ecosystems Services: What role for a green economy?**

4-6 July 2011, Geneva, Switzerland

The UN Economic Commission for Europe (UNECE), the Food and Agriculture Organization (FAO) and the Swiss Federal Office for the Environment and the Finnish Environment Institute. The aim of the workshop is to address issues linked to payments for different ecosystem services, particularly in the forest and water sectors, to explain the sectoral relevance of environmental research linked to the valuation and payment of ecosystem service. [More](#).

##### **Climate Change and Genetic Resources for Food and Agriculture: State of Knowledge, Risks and Opportunities**

16 July 2011, FAO, Rome Italy

Organized by the Commission for Genetic Resources for Food and Agriculture (CGRFA) of the UN Food and Agriculture Organization (FAO). This seminar will include presentations covering forest genetic resources and discussions will include setting the policy scene, and agriculture biodiversity and climate change. [More](#).

## UNFCCC Subsidiary Bodies

1 - 7 October 2011 in Panama City, Panama

The third part of the sixteenth session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP 16) and the third part of the fourteenth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 14). [More](#).

## FAO European Forestry Commission and UNECE Timber Committee

10-14 October 2011, Antalya, Turkey

The European Forestry Commission (EFC) is one of six FAO Regional Forestry Commissions that cover the world's major geographic regions. [More](#).

## FAO Asia-Pacific Forestry Commission

7-11 November 2011, Beijing, China

The Asia-Pacific Forestry Commission (APFC) is one of six FAO Regional Forestry Commissions that cover the world's major geographic regions. This year's theme is "New challenges - new opportunities". [More](#).

## Asia Pacific Forestry Week

7-11 November 2011, Beijing, China.

The Second Asia-Pacific Forestry Week, promises to be the most significant forestry event of the year in the Asia-Pacific region. More details will be available soon on the website of the Asia-Pacific Forestry Week. [More](#).

## Forest Day 5

4 December 2011, Durban, South Africa

Forest Day 5 will seek to inform the UNFCCC global agenda and forest stakeholders on ways to implement an international REDD+ funding mechanism that produces social and environmental benefits, above and beyond avoided emissions. The event will have a particular African focus, looking at the tropical forests of the Congo Basin and elsewhere, and the continent's wide expanses of dry forest areas. [More](#).

## IV. RESEARCH ARTICLES

### Benchmark map of forest carbon stocks in tropical regions across three continents

Sassan S. Saatchi, Nancy L. Harris, Sandra Brown, Michael Lefsky, Edward T. A. Mitchard, William Salas, Brian R. Zutta, Wolfgang Buermann, Simon L. Lewis, Stephen Hagen, Silvia Petrova, Lee White, Miles Silman, and Alexandra Morel

*Proceedings of the National Academy of Sciences of the United States of America, Published online before print May 31, 2011, doi: 10.1073/pnas.1019576108*

Developing countries are required to produce robust estimates of forest carbon stocks for successful implementation of climate change mitigation policies related to reducing emissions from deforestation and degradation (REDD). Here we present a "benchmark" map of biomass carbon stocks over 2.5 billion ha of forests on three continents, encompassing all tropical forests, for the early 2000s, which will be invaluable for REDD assessments at both project and national scales. We mapped the total carbon stock in live biomass (above- and belowground), using a combination of data from 4,079 in situ inventory plots and satellite light detection and ranging (Lidar) samples of forest structure to estimate carbon storage, plus optical and microwave imagery (1-km resolution) to extrapolate over the landscape. The total biomass carbon stock of forests in the study region is estimated to be 247 Gt C, with 193 Gt C stored aboveground and 54 Gt C stored belowground in roots. Forests in Latin America, sub-Saharan Africa, and Southeast Asia accounted for 49%, 25%, and 26% of the total stock, respectively. By analyzing the errors propagated through the estimation process, uncertainty at the pixel level (100 ha) ranged from  $\pm 6\%$  to  $\pm 53\%$ , but was constrained at the typical project (10,000 ha) and national ( $>1,000,000$  ha) scales at ca.  $\pm 5\%$  and ca.  $\pm 1\%$ , respectively. The benchmark map illustrates regional patterns and provides methodologically comparable estimates of carbon stocks for 75 developing countries where previous assessments were either poor or incomplete.

## **Forest management for mitigation and adaptation to climate change: Insights from long-term silviculture experiments**

Anthony W. D'Amato, John B. Bradford, Shawn Fraver, Brian J. Palik

*Forest Ecology and Management, Volume 262, Issue 5, 1 September 2011, Pages 803-816*

Developing management strategies for addressing global climate change has become an increasingly important issue influencing forest management around the globe. Currently, management approaches are being proposed that intend to (1) mitigate climate change by enhancing forest carbon stores and (2) foster adaptation by maintaining compositionally and structurally complex forests. However, little is known about the compatibility of these two objectives or the long-term efficacy of a given management regime at simultaneously achieving adaptation and mitigation. To address this need, we examined stand-level carbon and complexity responses using five long-term (>50 yrs) silviculture experiments within the upper Great Lakes region, USA. In particular, live tree carbon stores and sequestration rates, and compositional and structural complexity were analyzed from three thinning experiments in *Pinus resinosa* and two selection method experiments in northern hardwood systems to elucidate the long-term effects of management on these ecosystem attributes and the general compatibility of mitigation and adaptation objectives. As expected, we observed a general increase in large tree densities with stand age and positive relationships between stand stocking level and live tree carbon stores. More importantly, our results clearly identify tradeoffs between the achievement of mitigation and adaptation objectives across each study. For example, maintaining higher stocking levels (i.e., enhanced mitigation by increasing carbon stores) resulted in decreases in stand-level structural and compositional complexity. In addition, rates of live tree carbon increment were also the lowest within the highest stocking levels; despite the benefits of these stand conditions to maximizing carbon stores. Collectively, these findings underscore the importance of avoiding rigid adherence to a single objective, such as maximum on-site carbon stores, without recognizing potential consequences to other ecosystem components crucial to ensuring long-term ecosystem functioning within the context of environmental change. One potential stand-level strategy for balancing these goals may be to employ multi-aged management systems, such as irregular shelterwood and selection systems, that maintain a large proportion of carbon stores in retained mature trees while using thinning to create spatial heterogeneity that promotes higher sequestration rates in smaller, younger trees and simultaneously enhances structural and compositional complexity.

## **Forest tenure reform in the age of climate change: Lessons for REDD+**

Anne M. Larson

*Global Environmental Change, Volume 21, Issue 2, May 2011, Pages 540-549*

Numerous authors have stressed the importance of guaranteeing and protecting the tenure and human rights of indigenous and other forest-based communities under schemes for reducing emissions from deforestation and forest degradation (REDD, or REDD+); and important international indigenous organizations have spoken out strongly against REDD+. This article examines two specific issues that present risks for local communities: rights to forests and rules for resource use. It draws on the findings of a study conducted by the Center for International Forestry Research (CIFOR) on forest tenure reforms in selected countries in Asia, Africa and Latin America from 2006 to 2008. The study underlines the numerous obstacles faced by communities after rights are won, in moving from statutory rights to their implementation and to access to benefits on the ground. It argues that there is currently little reason to expect better results from national policies under REDD+ without binding agreements to protect local rights.

## **Small temperature benefits provided by realistic afforestation efforts**

Vivek K. Arora & Alvaro Montenegro

*Nature Geoscience (2011), 10.1038/ngeo1182 Published online 19 June 2011*

Afforestation, the conversion of croplands or marginal lands into forests, results in the sequestration of carbon. As a result, afforestation is considered one of the key climate-change mitigation strategies available to governments by the United Nations<sup>1</sup>. However, forests are also less reflective than croplands, and the absorption of incoming solar radiation is greater over afforested areas. Afforestation can therefore result in net climate warming, particularly at high latitudes. Here, we use a comprehensive Earth system model to assess the climate-change mitigation potential of five afforestation scenarios, with afforestation carried out gradually over a 50-year period. Complete (100%) and partial (50%) afforestation of the area occupied at present by crops leads to a reduced warming of around 0.45 and 0.25 °C respectively, during the period 2081-2100. Temperature benefits associated with more realistic global afforestation efforts, where less than 50% of cropland is converted, are expected to be even smaller, indicating that afforestation is not a substitute for reduced greenhouse-gas emissions. We also show that warming reductions per unit afforested area are around three times higher in the tropics than in the boreal and northern temperate regions, suggesting that avoided deforestation and continued afforestation in the tropics are effective forest-management strategies from a climate perspective.

## **Implementation and opportunity costs of reducing deforestation and forest degradation in Tanzania**

Brendan Fisher, Simon L. Lewis, Neil D. Burgess, Rogers E. Malimbwi, Panteleo K. Munishi, Ruth D. Swetnam, R. Kerry Turner, Simon Willcock & Andrew Balmford  
*Nature Climate Change Volume: 1, Pages: 161-164 Year published: (2011)*

The Cancún Agreements provide strong backing for a REDD+ (Reducing Emissions from Deforestation and Forest Degradation) mechanism whereby developed countries pay developing ones for forest conservation<sup>1</sup>. REDD+ has potential to simultaneously deliver cost-effective climate change mitigation and human development<sup>2, 3, 4, 5</sup>. However, most REDD+ analysis has used coarse-scale data, overlooked important opportunity costs to tropical forest users<sup>4, 5</sup> and failed to consider how to best invest funds to limit leakage, that is, merely displacing deforestation<sup>6</sup>. Here we examine these issues for Tanzania, a REDD+ country, by comparing district-scale carbon losses from deforestation with the opportunity costs of carbon conservation. Opportunity costs are estimated as rents from both agriculture and charcoal production (the most important proximate causes of regional forest conversion<sup>7, 8, 9</sup>). As an alternative we also calculate the implementation costs of alleviating the demand for forest conversion—thereby addressing the problem of leakage—by raising agricultural yields on existing cropland and increasing charcoal fuel-use efficiency. The implementation costs exceed the opportunity costs of carbon conservation (medians of US\$6.50 versus US\$3.90 per Mg CO<sub>2</sub>), so effective REDD+ policies may cost more than simpler estimates suggest. However, even if agricultural yields are doubled, implementation is possible at the competitive price of ~US\$12 per Mg CO<sub>2</sub>.

## **Climate change vulnerability of sustainable forest management in the Eastern Alps**

Seidl, R. Rammer, W. Lexer, M. J.  
*Climatic Change. 2011. 106: 2, 225-254*

Considering climatic uncertainties in management planning is a prerequisite for sustainable forest management (SFM). The aim of the study was to evaluate climate change vulnerability of the current SFM strategy for commercial forests managed by the Austrian Federal Forests. To that end vulnerability indicators were defined in a stakeholder process (selected indicators were productivity, timber and carbon stocks, biodiversity, disturbances, a tree species' position in fundamental niche space, silvicultural flexibility and cost intensity) and their performance under climate change scenarios assessed with an ecosystem model. Multi criteria analysis techniques were employed in a partial aggregation of indicators to locate forest stands on a vulnerability surface. Results revealed high vulnerability particularly in the second half of the twenty-first century, where 39.6% of the 164.550 ha study area were assessed highly vulnerable to climate change, indicating a strong decline in the functions and services represented by the indicator system. Water-limited sites on calcareous bedrock were most negatively affected whereas assessment units at higher altitudes responded predominately positive to climate warming. The presented approach, transparently integrating multiple management objectives and allowing a quantitative comparison of vulnerabilities between sites and management strategies, contributes to the development of operational and efficient climate change adaptation measures in forest management.

## **Adapting forestry and forests to climate change: A challenge to change the paradigm**

Dieter H.F. Schoene, Pierre Y. Bernier  
*Forest Policy and Economics, Available online 31 May 2011*

Carbon in forest biomass has historically been the fulcrum for major changes in forestry and forests. Following T.S. Kuhn, these breaks with the past are seen as paradigm changes. We perceive planned adaptation of forestry and forests under climate change as a new paradigm change, precipitated once more by forest carbon. To be sustainable, forest management and conservation must embrace planned adaptation to and mitigation of mitigation of and adaptation to climate change. The current initiative of Reducing Emissions from Deforestation in Developing Countries (REDD) represents, beyond its original mitigation goal, a major facet of planned adaptation of forests and adjoining sectors in developing countries. The initiative is gaining a powerful momentum for enhancing sustainable forest management in developing countries. REDD may also adapt relations between developing and developed countries in another paradigm change. Worldwide observations of climate change impacts on forests and IPCC forecasts project an image of forests and forestry entering a new era. Dealing with this future by relying on autonomous adaptation is unlikely to suffice. Climate change will alter site and ecological conditions, increase risk in many forests, create new gaps in knowledge, increase the value of forest carbon and wood energy, and expand the international and human dimensions of forestry. Ending the proverbial seed dormancy of new developments in forestry, change is underway and appears expedient. We conclude that anticipatory planned adaptation of all facets of forestry to climate change imposes mitigation and adaptation as new boundary conditions for sustainable forest management and conservation, and amounts to a paradigm change.

## **A framework for structuring the global forest monitoring landscape in the REDD+ era**

Alan Grainger, Michael Obersteiner

*Environmental Science & Policy, Volume 14, Issue 2, March 2011, Pages 127-139*

The proposed launch of a Reduced Emissions from Deforestation and Degradation (REDD+) scheme by the UN Framework Convention on Climate Change provides a new incentive to improve global forest monitoring. By evaluating the state-of-the-art in government and scientific monitoring this paper shows that enhancements and new standards are needed for three key monitoring roles – measurement, reporting and verification – for governments at national scale and scientists at global scale. It outlines a new knowledge exchange matrix framework that can match different organizations to monitoring roles. Conversion of data into useful knowledge is represented by a knowledge exchange chain comprising a series of cycles, each divided into data collection, information production, reporting, verification and synthesis stages. Each stage potentially involves operational, facilitating and coordinating functions at local to global scales. Combining stages, functions and scales forms the knowledge exchange matrix. Organizations are matched to cells in the matrix by their competence and rules governing their operation. Applying the matrix to global forest monitoring shows that existing organizations can contribute complementary facilitating and coordinating functions to support REDD+. Yet none can harness satellite data operationally to produce information at the required spatial and temporal resolution. Two empty national and global operational niches could be filled by new national measurement, reporting and verification systems, operated by governments and facilitated by the Group on Earth Observations and other bodies; and an autonomous science-based World Forest Observatory whose information base could advance global change science and help to verify national REDD+ reports.

## **International support of climate change policies in developing countries: Strategic, moral and fairness aspects**

Dirk T.G. Rübhelke

*Ecological Economics, Volume 70, Issue 8, 15 June 2011, Pages 1470-1480*

International transfers in climate policy channeled from the industrialized to the developing world either support the mitigation of climate change or the adaptation to global warming. From a purely allocative point of view, transfers supporting mitigation tend to be Pareto-improving whereas this is not very likely in the case of adaptation support. We illustrate this by regarding transfer schemes currently applied under the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto framework. However, if we enrich the analysis by integrating distributional aspects, we find that international adaptation funding may help both the developing and developed world. Interestingly this is not due to altruistic incentives, but due to follow-up effects on international negotiations on climate change mitigation. We argue that the lack of fairness perceived by developing countries in the international climate policy arena can be reduced by the support of adaptation in these countries. As we show – taking into account different fairness concepts – this might raise the prospects of success in international negotiations on climate change. Yet, we find that the influence of transfers may induce different fairness effects on climate change mitigation negotiations to run counter. We discuss whether current transfer schemes under the UNFCCC and the Kyoto framework adequately serve the distributive and allocative objectives pursued in international climate policy.

## **Appropriate measures for conservation of terrestrial carbon stocks—Analysis of trends of forest management in Southeast Asia**

Nophea Kim Phat, Wolfgang Knorr, Sophanarith Kim

*Forest Ecology and Management, Volume 191, Issues 1-3, 5 April 2004, Pages 283-299*

The 21st century has brought new challenges for forest management at a time when global climate change is becoming increasingly apparent. Additional to various goods and services being provided to human beings, forest ecosystems are a large store of terrestrial carbon and account for a major part of the carbon exchange between the atmosphere and the land surface. Depending on the management regime, forests can thus be either a sink, or a source of atmospheric carbon. Southeast Asia or ASEAN comprises 10 countries of different cultures and political background. Rapid economic development and fast-growing population in the region have raised much concern over the use of natural resources, especially forest resources. This study aims at finding the appropriate measures for sustainable use and management of tropical forests on a long-term basis. Between 1990 and 2000, about 2.3 million ha of forest were cleared every year and lost to other forms of land use. In terms of carbon emissions, a net amount of approximately 465 million t per year was released to the atmosphere over the same period, which amounts to 29% of the global net carbon release from deforestation worldwide. This study provides an approach to analyzing the implications of alternative forest and land management options on forest carbon stocks. This is done in three steps: First, observed trends in land use are expressed in terms of a model in order to create a scenario for the period 1980-2050. Second, forest management practices and timber production rates are analyzed and three management scenarios are created: (1) continuing the current rate of exploitation, (2) management for long-term economic gains, and (3) climate-

beneficial management. Third, the impact of the three scenarios on regional carbon storage is estimated on the basis of a carbon balance model. Comparing the additional rate of carbon sequestration of scenario (3) over scenario (2), and taking into account differing management costs, we also discuss a framework for industrialized countries to invest in carbon credits in the region in order to fulfil their commitments under present and future climate protection agreements.

## ***V. PUBLICATIONS, REPORTS AND OTHER MEDIA***

### **Points of Reference, Finding Common Ground among Reference Level Approaches to Move REDD+ Forward**

*Union of Concerned Scientists*

This paper presents an overview of the literature on all the major methods for establishing reference levels that have been proposed to date, and it draws from that overview some fundamental conclusions for guiding negotiators as they work out the details of global REDD+ mechanisms. The [paper](#).

### **Modalities for REDD+ Reference Levels: Technical and Procedural Issues**

*Meridian Institute*

The Modalities for REDD+ Reference Levels report identifies key terms, overarching principles and analyzes technical and procedural issues central to the development of REDD+ Reference and Reference Emissions Levels. This analysis is undertaken to inform the Government of Norway's International Climate and Forest Initiative and other key stakeholders and government negotiators in the run up to COP-17. The [report](#).

### **Global Corruption Report Climate Change Extract: Forestry Governance**

*Transparency International*

The book provides essential analysis to help policy-makers, practitioners and other stakeholders understand risks and develop effective responses at a critical moment when the main architecture for climate governance is being developed. The [report](#).

### **The State of Forests in the Amazon Basin, Congo Basin and Southeast Asia**

*FAO & ITTO*

This report was prepared as a background document for the Summit of the Three Rainforest Basins, taking place in Brazzaville, Republic of Congo, on 31 May-3 June 2011. It draws on work undertaken by the FAO Forestry Department and the International Tropical Timber Organization (ITTO), two international organizations at the forefront of providing information on these forests and promoting their sustainable management. The [publication](#).

### **Making Biodiversity Safeguards for REDD-plus Work in Practice**

*UNEP & WCMC*

The report provides operational guidelines to assist countries in implementing biodiversity safeguards for REDD-plus and address both the potential risks to biodiversity presented by REDD-plus, and the many opportunities for REDD-plus to benefit biodiversity conservation. The [report](#).

### **REDD-plus and Biodiversity**

*CBD*

The report aims to inform National Focal Points and other biodiversity experts about REDD-plus design and implementation efforts. The [report](#).

### **Some Key REDD+ Players**

*Carbon Trade Watch*

The publication is an overview of some of the key players who are behind designing, implementing and profiting from REDD+. The [publication](#)

## **Guidance For the Provision of Information on REDD+ Governance**

*UN-REDD*

This draft document offers a guidance for the provision of information on key governance issues for implementing REDD+, including REDD+ safeguards. The [guide](#).

## **Reforming forest tenure Issues, principles and process**

*FAO*

The publication is intended to provide practical guidance for people involved in forest policy reforms associated with tenure and for those reflecting on the effectiveness of existing tenure systems. The main target audience is government policy-makers and others concerned with addressing forest tenure reform in ways that achieve desired forest management objectives, which generally encompass sustainable forest management and improved rural livelihoods. The publication identifies key issues that need to be addressed when approaching tenure reform, formulates a set of principles to be followed, and proposes a deliberative, adaptive process for undertaking tenure reform. [More](#).

## **International Dialogue on REDD Readiness - summary report**

*TDF*

The Forests Dialogue has just released a summary report for its International Dialogue on REDD Readiness, which took place in Gland, Switzerland on 17-18 March 2011. This Gland Dialogue summary outlines the main discussion points as well as some practical ways forward and stakeholder actions suggested by participants to overcome challenges identified throughout TFD's REDD Readiness Initiative. [More](#).

## **Framework for Monitoring and Assessing Forest Governance**

*FAO & PROFOR*

This new framework seeks to guides countries through the process of assessing the laws, institutions, management, policies, and social conventions that establish how forests are used and who can use them. It includes a thorough checklist for identifying and addressing governance problems. [More](#).

## **BioCarbon Fund Experience - Insights from Afforestation and Reforestation CDM**

*WB*

This report presents insights from the BioCF's seven years of experience designing and implementing A/R CDM projects in 16 developing countries. All of the projects directly benefit poor farmers. The report is intended to inform project developers of the challenges and opportunities that A/R CDM projects have encountered on the ground. The [report](#).

## **Reports on REDD+ and Stakeholder Engagement**

*ICRAF*

As part of the REDD Alert programme ICRAF has released three papers that explore issues related to stakeholder perceptions of REDD+. Stakeholder Perspectives on 'Fair and Efficient' Benefit Distribution along the C-REDD Value Chain. Local Perspectives on REDD+ in Comparison with Those at the International Negotiation Tables and their Representation in Quantitative Scenario Models. Abatement Cost Curves Relating Past Greenhouse Gas Emissions to the Economic Gains they Allowed. [More](#).

## **Status of tropical forest management 2011**

*ITTO*

The report provides a assessment of progress being made towards sustainable forest management (SFM) in ITTO member country and identifies remaining challenges and notes that 26 of 33 surveyed countries are participating in at least one initiative related to REDD. The [report](#).

## VI. JOBS

### Forest Carbon Project Officer

*WWF Laos Country Program*

The Forest Carbon Officer will lead the development and implementation of Forest Carbon projects for WWF Laos, building on the recommendations of the RESET report and taking advantage of country-specific and relevant regional opportunities for raising financial support for WWF field projects through REDD+ and for influencing national and regional REDD+ policy development. [More](#).

### Senior Program Officer, Forest Carbon

*WWF, Washington*

The successful candidate will be responsible for following and developing advocacy strategies around international institutions working to develop forest carbon policy, including the UN Framework Convention on Climate Change, the Interim REDD+ Partnership, and international financial institutions. [More](#).

### REDD+ Projects Manager - Climate Program, Ecuador

*Rainforest Alliance*

The REDD+ Projects Manager will contribute to strengthening the institutional and local capacity required to facilitate the implementation of REDD+ demonstration activities, policies and legal framework in Colombia, Ecuador and Peru. (S)he will do so by coordinating the development of climate-related elements of the Rainforest Alliance and partners' activities in sustainable agriculture and forestry and supporting the development of REDD+ strategies in the regions of interest to the AmaZONAS Andinas project. [More](#).

### REDD Technical Experts

*Ecosystem Services*

The main function of the two positions is to support the conceptualization and technical development of several new REDD projects in Peru and Brazil, including direct participation in deforestation modeling and PDD writing. Both experts will work under the direction of the Principal Forestry Advisor and/or the Sr. Forestry and Sustainability Specialist. [More](#).

## VII. ANNOUNCEMENTS

### REDD Countries Database

*REDD-Desk*

The REDD Countries Database is a centralised and collaborative database of the diverse and rapidly evolving range of ongoing REDD activities in tropical forest owning nations. Organized and aggregated by country, the REDD Countries Database summarizes key information across a range of areas including policies, plans, laws, statistics, activities and financing. The [database](#).

### Finance Portal for Climate Change

*UNFCCC*

This portal was designed in response to a mandate by the COP, requesting the secretariat to collect information on activities funded in developing countries to implement the Convention. The Portal aims to assist parties in monitoring the financial mechanism of the Convention, in particular through provision of information on bilateral, multilateral and regional resources provided by developed country parties to developing countries; and inform the intergovernmental process under the UNFCCC and relevant stakeholders on the mobilization of resources to support developing countries in implementing their commitments under the Convention, in particular with regard to the preparation of national communications. The [portal](#).

### Platform on Climate Funding Options

*WB*

This Platform aims at providing comprehensive guidance on financial options available for climate action in developing countries. It contains information on where to access the wide range of funds available from multilateral and bilateral institution, as well as public and private sources. The site include information about how funds are governed and whether projects are eligible and users are invited to be a resource to share their

experiences with investment projects and offer feedback and comments on ongoing projects. The [site](#).

## **CLIM-FO INFORMATION**

The **objective** of CLIM-FO-L is to compile and distribute recent information about climate change and forestry. CLIM-FO-L is issued monthly.

Past issues of CLIM-FO-L are available on the website of *FAO Forest and Climate Change*:  
<http://www.fao.org/forestry/climatechange/en/>

For technical help or questions contact [CLIM-FO-Owner@fao.org](mailto:CLIM-FO-Owner@fao.org)

The Newsletter is compiled by Jesper Tranberg and Susan Braatz.

We appreciate any comments or feedback.

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