

In just a few days, I will have the pleasure of seeing many of you in Copenhagen for perhaps the most important climate summit of our times. Expectations are high on all sides. For the UN-REDD Programme and to all those who have been working hard to pilot REDD+ activities around the world, it is clear that an agreement on REDD+ must be reached. Finding a more cost effective abatement solution will not be easy and we don't have the luxury of time. We need to act now.

And there are many reasons why we cannot wait. Each day we do nothing we lose valuable goods and services that forests provide, such as shelter, food, clean water, let alone their potential for climate change mitigation.

The REDD challenges ahead are numerous yet surmountable. Strong and coordinated partnerships at national and international levels, significant scaling up of activities, interim financing mechanisms and well-planned actions between now and 2015 are key elements for overcoming the hurdles.

I hope we will remember 2009 as the year we stood up for fundamental change and opted to act decisively to address the climate challenge. The UN-REDD Programme looks forward to a successful outcome in Copenhagen and stands ready to support the implementation of a future REDD+ mechanism.

Yemi Katerere  
Head of the UN-REDD Programme Secretariat

## News

### Spain becomes a donor to the UN-REDD Programme

The Government of Spain pledges €15 million to the UN-REDD Programme's multi-donor trust fund



*United Nations Development Programme (UNDP) Administrator Helen Clark and Spanish Secretary of State for International Cooperation, Soraya Rodriguez, signed multi-year Strategic Partnership Agreement for close to €400 million, of which €15 million was allocated to the UN-REDD Programme.*

The Spanish Government became the UN-REDD Programme's third donor last week after Norway and Denmark, by pledging €15 million (approximately US\$22.5 million) to the multi-donor trust fund.

"We are very pleased with Spain's move," says Mr. Yemi Katerere, Head of the UN-REDD Programme Secretariat. "There is a growing interest in the UN-REDD Programme by developing and developed countries and a clear recognition that REDD cannot happen without this partnership. Donors are recognizing the Programme's value at a time when requests to join the Programme are increasing."

Donor contributions to the UN-REDD Programme go towards supporting developing countries in building their capacity and readiness for REDD+. This includes methods and tools for measuring and monitoring greenhouse gas emissions and forest carbon flows; promoting and facilitating broad-ranging consultations among stakeholders, including indigenous peoples and other forest-dependent communities; and establishing linkages with existing national programmes in the areas of governance, development, poverty reduction, food security and natural resource management.

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For more information on the UN-REDD Programme visit [www.un-redd.org](http://www.un-redd.org)

Donor funds will also contribute to the UN-REDD Programme's global activities, to develop common approaches, analyses and guidelines and to provide guidance and share knowledge on how to implement REDD+.

So far, six of the Programme's nine member countries—The Democratic Republic of

the Congo, Indonesia, Papua New Guinea, Panama, Tanzania and Viet Nam—have seen

their national programmes approved by the UN-REDD Programme's Policy Board, for a

total financing of US\$24 million. ■

## Indonesia and UN sign programme to tackle deforestation and climate change

The Indonesia UN-REDD programme was signed at the National Dialogue on Climate Change, a high-level meeting organized on 23 November by the Ministry of Environment and the United Nations Development Programme (UNDP)

In an effort to address climate change by stopping the destruction of Indonesia's vast forests, the Ministry of Forestry and UN agencies signed the UN-REDD national programme on 23 November, just in time for the upcoming Copenhagen climate change negotiations this December. The REDD concept is expected to be one of the most crucial agendas to be discussed in Copenhagen.

The UN-REDD programme was signed at the National Dialogue on Climate Change, a high-level meeting organized on 23 November by the Ministry of Environment and UNDP. Indonesia is one of nine UN-REDD Programme pilot countries and part of a global effort.

REDD has become an eminent priority for Indonesia and the global community, since deforestation and forest degradation represent a major source of greenhouse gas emissions, in addition to hindering human development and threatening biodiversity. Indeed, according to the Second National Communication also launched today, more than half of Indonesia's greenhouse gas emissions are related to forestry peat land sectors (except 2003).

According to Norwegian Minister of the Environment and International Development, H.E. Mr. Erik Solheim, present in the signing ceremony, "Globally, almost 20 percent of the world's greenhouse gas emissions come

from deforestation and forest degradation. Therefore, Norway is committed to support developing countries, like Indonesia, to stop the devastating destruction of the forest."

The Stern Review states that addressing deforestation and forest degradation is a cost effective method of reducing GHG emissions, while also preserving biodiversity and local livelihoods. Further, it is important from the UN perspective to ensure that in any REDD scheme the rights of local communities and other issues pertaining to the MDGs are fully considered.

"A key challenge will be to ensure monitoring, reporting and verification – this will be a priority for the UN-REDD Programme" said Man Ho So, FAO Representative in Indonesia. "Most of Indonesia's green house gas emissions come from deforestation and degradation of land" said Hakan Bjorkman, UNDP Country Director in Indonesia. "This initiative is therefore central to Indonesia's response to climate change". ■

## Official launch of the UN-REDD Programme in Tanzania

Over 80 people from various national organizations, NGOs, government, and community groups attended the official launch of the UN-REDD Programme in Tanzania in early November

The official launch of the UN-REDD national programme for Tanzania took place on 6 November 2009 in Morogoro, Tanzania. More than 80 people from various national organizations, NGOs, government ministries, and community groups were on hand to celebrate the event. In the spirit of national coordination, the Tanzania Forest Conservation Group Mjumita Community REDD project was also launched on the same occasion.

Special guest included Dr. Ladislaus Komba, Permanent Secretary, Ministry of Natural Resources and Tourism (MNRT), Mr. Alain Noudehou, Country Director of the United Nations Development Programme (UNDP), Mr. Jon Lomoy, Norwegian Ambassador, Mr. Donatius Kamamba, Director of Antiquities,

MNRT and Mr. Patrick Qorro, Chairman, Tanzania Forest Conservation Group.

Dr. Kilahama, Director of the Tanzanian Forestry and Beekeeping Division, provided background on the momentum for REDD activities in Tanzania including the process of approval by the UN-REDD Programme Policy Board. He discussed the importance of the UN-REDD Programme helping to build up capacity and to seek agreement from key stakeholders on a national REDD framework. Dr. Kilahama noted the creation of the National Task Force on REDD under the Vice President's Office and the MNRT that will expand to include other stakeholders and support the development of a comprehensive REDD strategy.

A representative from the National REDD Task Force, Mr. Haule, highlighted the major issues of concern in developing a National REDD Strategy in Tanzania. He covered opportunities, such as the potential for contributing to national forest incomes, and challenges, including the quality of databases and the lack of clear and coordinated institutional framework.

Prof P. Munishi addressed more technical issues: he outlined existing measurement and assessment projects as well as the need to expand activities to be able to fully establish and map permanent carbon monitoring plots.

Mr Alain Noudehou stressed that Africa is likely to be hit hard by climate change and that the UN-REDD Programme is a critical response for Tanzania and an important aspect of the global efforts. The UNDP Country Director paid tribute to the Government of Tanzania on its commitment to forests and



Dr. Ladislaus Komba, Permanent Secretary, Ministry of Natural Resources and Tourism (MNRT), officially launches the UN-REDD national programme.

the Government of Norway for its generous financial support.

Mr. Jon Lomoy, Norwegian Ambassador to Tanzania, stressed that preservation of forests must happen not only at the local level but also requires the framework to be in place at the global level. Echoing his remarks, Permanent Secretary of the MNRT,

Dr. Ladislaus Komba, emphasized the need for community involvement in order for REDD to succeed. "It is only right that they be paid for this globally essential service", he stated. Dr. Komba also addressed the issue of good governance and keeping REDD free of corruption as well as the important role of the private sector.

On the following day, approximately 20 of the attendees participated in a site visit to a forest plot in the Uluguru mountains. The pressures of subsistence agriculture were evident as well as the challenges in monitoring the forest coverage and in working with the local population to ensure that forest conservation supports their livelihoods. ■

## Enhancing carbon monitoring systems through satellite imagery

A new Global Forest Resources Assessment internet portal will help monitor forests and reduce emissions from deforestation and forest degradation



The FAO Global Forest Resource Assessment (FRA), along with the U.S. Geological Survey Earth Resources Observation and Science Center, the South Dakota State University, and the European Union Joint Research Center, have recently launched an internet portal with worldwide, free and ready-to-use high-resolution satellite imagery and indexes of tree canopy cover.

For the past 30 years satellite remote sensing technology has improved the knowledge of our planet and now through this new portal landsat images will be available to contribute to sound and objective estimates of global forest and land cover change. The Global Forest Resources Assessment Portal offers samples of satellite data that will help monitor forests and help reduce emissions from deforestation and forest degradation (REDD). Monitoring will be cheaper, more accurate

and transparent for countries that want to participate in REDD.

The Global Forest Resources Assessment portal provides access to data in a global sample grid at 13,000 locations world-wide and provides tools for their interpretation. It enables the search, display and download of tile information, associated satellite imagery and auxiliary data. It also allows for international collaboration for the assessment of forest cover change for the periods comprising 1990, 2000 and 2005. The location of the samples can be viewed in Google Earth.

Enabling countries to have a robust monitoring system for carbon accounting is key in preparing for REDD. Measurement, reporting and verification systems of carbon must be in place for carbon accounting and payments to be carried out in an appropriate and transparent manner.

By combining the knowledge provided by these images on forest cover change with required field verification, the knowledge of the carbon dynamics not only will be enhanced but it will also help in measuring the multiple benefits of REDD and understand best the drivers of deforestation.

Access the Global Forest Resources Assessment portal here: <http://geonetwork4.fao.org/geonetwork/srv/en/fra.home> ■

## Viet Nam study on a benefit distribution system to be released at COP15

A team of national and international experts examined the requirements for a benefit distribution system compliant with REDD+

Under the leadership of the Viet Nam Department of Forestry of the Ministry of Agriculture and Rural Development, the UN-REDD Programme, with co-financing support from the German Agency for Technical Cooperation (GTZ), gathered a team of national and international technical experts and advisors over the last few

months to analyze the requirements for a benefits distribution system compliant with REDD+ in Viet Nam.

The study reviews experiences and lessons from various systems of benefit-sharing in Viet Nam in the forest and natural resource management sector; identifies current

constraints that prevent strengths and weaknesses relevant to the establishment of an efficient, transparent and equitable system for distribution of benefits arising from REDD, and propose policy options to overcome those constraints; and develops a programme of work to implement the necessary legal, policy and institutional changes required to overcome the identified weaknesses.

The conclusions of the study will be released at COP15 in Copenhagen, and on the UN-REDD Programme website, and broadly worldwide. ■

## Features & Commentary

### Ecuador: taking firm steps towards REDD

By Marco Chiu, Advisor of the Undersecretary of Natural Patrimony



Due to the relatively high rate of deforestation in Ecuador (1,46% per year) the current Government has decided to set actions designed to

reduce deforestation as a high priority. Thus, the National Development Plan, designed under the leadership of the National Planning Office (SENPLADES), has set up stopping deforestation as one of its main objectives. This way, the Ministry of Environment has assumed the challenge to reduce deforestation and is proactively taking innovative measures to reduce deforestation.

Traditionally, command and control measures have been applied for forestry control, but on September 2008 the Ministry of Environment launched its Socio Bosque Program (PSB). Socio Bosque is the implementation of an incentive-based policy that provides an economic incentive to land owners who voluntarily decide to protect their forest. Socio Bosque aims at preserving native forests and other native ecosystems and thereby protecting their enormous ecological, economic, cultural and spiritual values. Secondly, it aims at a significant reduction of deforestation and its associated emissions of greenhouse gases (GHG). Finally, it aims at increasing human well being by providing financial resources to the poorest people in rural areas.

The Programme is fully financed by public funds. However, in order to accomplish the goals of the Programme, additional funds will be needed. Therefore, the Ministry of Environment decided to explore additional sources of funding. One of the alternatives taken seriously by the Ministry is REDD. Inspired by the Socio Bosque Programme, the Ministry decided to start taking actions to prepare the country for participating in a scheme such as REDD.

The Ministry started by identifying the elements that constitute a National REDD Strategy. Many of those elements include actions already implemented in the country, but many of those actions might need to be

expanded. Other elements have been identified taking as a reference the international discussions around REDD. Thus, the Ministry of Environment has defined actions to be implemented in order to implement a National REDD Strategy, at least in the following areas: forestry control, management information systems, GHG monitoring system (MRV), land tenure regularization in forestry areas, sustainable management of forests, afforestation and reforestation activities, legal and institutional framework, and Socio Bosque.

Socio Bosque is an important element of the strategy. Besides constituting the implementation of a domestic incentive-based policy to tackle deforestation, it offers a clear and transparent mechanism for delivering benefits to local communities, including indigenous peoples. The mechanism has benefited over 20,000 people and has included in conservation agreements over 300,000 hectares of forest and other native vegetation ecosystems since September 2008. The expectation is to expand the Programme in terms of area of conservation and number of beneficiaries.

Another relevant element which is a priority at the moment is setting up a legal and institutional framework to regulate REDD activities in the country. Taking into account some new legal instruments being developed in Ecuador to assist the development of environmental actions, a new framework needs to be designed and implemented to regulate environmental services in Ecuador. Such a framework will also assist the development of REDD activities in the country. The expectation is to develop a full framework in the course of year 2010. This activity must complement the already existing incentive policy put in place through the Socio Bosque Program. Notably, the structure of rights (i.e. over the land) must be clarified in this process, as well as a benefit-sharing scheme which has to be fair to the local communities.

In regard to the implementation of an information system, there are two projects being carried out at the moment by the Ministry of Environment to provide input for such system. One is the development of a National Forest Inventory, in technical cooperation with FAO. The project aims at characterizing the current situation of the forestry sector in Ecuador as well as to provide key information for REDD, such as the carbon content in different types of forest in the country.

The second project is the definition of the Reference Scenario of Emissions by Deforestation. This project counts with the technical support of regional experts and includes an historical analysis of deforestation through a multi-temporal land use change analysis, using remote sensing. For the two projects a methodological protocol is currently in advanced phases of design. For 2010, the expectation is to collect data and to run the appropriate analysis.

Delivering social and environmental benefits through the implementation of Socio Bosque and REDD activities in the country is a priority for the Ministry of Environment. Socio Bosque aims at preserving native ecosystems in the country as well as increasing the well-being of the population. For the Ministry of Environment it is relevant that REDD activities similarly deliver both: social and environmental benefits. With regard to the second objective, a work program has been initiated in partnership with the Climate, Community and Biodiversity Alliance to develop and implement the "REDD+ Standard" for national REDD initiatives. A set of principles, criteria, and indicators have been proposed. Currently, external consultations are being carried out. Two workshops were held in Ecuador on October 2009 to receive feedback from civil society, including indigenous communities, about the set of proposed principles, criteria, and indicators. For the beginning of 2010, the final version of the standard will be launched and a second phase of the work program will follow to include a national interpretation of the standard, pilot implementation, and the definition of a National Standard Committee.

Despite the tremendous progress made so far, there are still many aspects to be worked out before implementing REDD activities in Ecuador. An overall economic assessment for REDD is still needed as well as the development of a (MRV) GHG monitoring system. In the same way, a National Registry and Reporting System need to be put forward, as well as outreach, among others.

Ecuador is committed to demonstrating that REDD can deliver sound environmental and social benefits if designed properly, at the same time that reducing deforestation in tropical forests, within which the most relevant areas for biodiversity conservation are located.

*Mr. Chiu is the Government of Ecuador's Advisor of the Natural Patrimony Undersecretary at the Ministry of Environment. He started working with the Government in 2008 with the team that designed the Socio Bosque Program and later became the UNFCCC negotiator for Ecuador and took part in designing Ecuador's National REDD Strategy. Mr Chiu started his career in 1997 as a techni-*

cian for characterizing water resources in tropical ecosystems. Later, he worked at an Ecuadorian NGO named EcoCiencia where he was involved in projects related to conservation of biodiversity, from the definition of policies to the implementation of specific conservation strategies on the ground. Then, he worked at ECOLEX (an Environmental Law NGO) where he

started complementing biodiversity conservation measures with planning strategies designed to be implemented in local governments. Finally, he worked in 2004 and 2005 at two Seattle based NGOs where he was involved in projects designed to apply measures for habitat restoration in the first NGO and project management, information management, and

fund-raising activities in the second NGO. Mr. Chiu studied Geography and Environmental Studies at the Pontifical Catholic University of Ecuador in Quito, and hold a Master's degree in Environmental Studies and Sustainability Science from Lund University in Sweden. ■

## Reports & Analysis

### UN-REDD Programme in Latin America: highlights on recent dialogue with civil society

The success of REDD national processes will depend on the engagement of all national stakeholders. In Latin America and elsewhere, the UN-REDD Programme is engaging in regular dialogues with indigenous and civil society representatives to educate, inform and respond to—sometimes vivid—concerns. Below are two summaries of these discussions, in Bolivia and El Salvador.

#### Bolivia

On 29 October 2009, the UN-REDD Programme was invited to make a presentation at a meeting organized by the Confederation of Indigenous Peoples of Bolivia (CIDOB), the Coordinator of the Indigenous Organizations of the Amazon Basin (COICA), and the Forum on Readiness for REDD.

The national-level workshop was the last one in a three country series that had started in Colombia, followed by Ecuador, and that ran from 26 to 31 October. Aimed at raising awareness of REDD for indigenous peoples, the workshop included two days on education on climate change and REDD; one day of dialogue with representatives of government, the private sector, and multilateral organizations engaged in REDD, such as the UN-REDD Programme and the Forest Carbon Partnership Facility (FCPF); and a day for strategy building.

The national-level workshop was followed by a two-day technical workshop organized by Woods Hole Research Center scientists to provide a basic course on forest maps and monitoring, map creation and interpretation, and a field exercise to learn basic measurement techniques for ground-based carbon inventory.

The UN-REDD Programme was represented by Ms. Karen Arleth from UNDP Bolivia. On a panel with the National Coordinator of the National REDD Team Mr. Edgar Arias, and representative of the National Climate Change Programme in Bolivia Mr. Carlos Fuentes, Ms. Arleth first exposed the current

status of the development of the UN-REDD Bolivia Programme and the country's plans for COP15. She detailed the UN-REDD Programme framework for engagement of indigenous and forest-dwelling communities, and outlined ways in which the UN-REDD Programme and the FCPF work together on the readiness process.

The indigenous and local community representatives took the opportunity to express their support for the UN-REDD Programme. An initial skepticism arising from concerns relating to the need to clarify how, if at all, benefits proceeding from REDD will reach communities on the ground prompted an engaged discussion. Addressing the government representatives, the audience underlined the need to institute an adequate consultation process with indigenous and local stakeholders throughout the readiness process. The conversation concluded with a reiterated joint commitment by the UN-REDD Programme and government representatives to the continued involvement of indigenous peoples in the REDD readiness process.

#### El Salvador

Two weeks later in Salvador, the UN-REDD Programme participated in the Mesoamerican Dialogue on REDD: Implications for Forest Communities, organized by the Coordinating Association of Indigenous and Community Agroforestry in Central America (ACICAFOC), the Bank Information Center (BIC), and the Salvadoran Research Programme on Development and the Environment (PRISMA). Held over five days, the workshop brought together leaders from in-

igenous and farmer organizations in Central America, as well as government, donor and multilaterals' representatives to further the dialogue and understanding on social and environmental considerations in developing national REDD plans.

Mr. Gabriel Labbate, the UN-REDD Programme Focal Point for Latin America and the Caribbean at UNEP, gave an overview of the Programme and its mechanisms for ensuring genuine participation of indigenous and forest-dwelling communities in UN-REDD Programme activities. Mr. Labbate, together with representatives of the National Coordinating Body of Indigenous Peoples of Panama (COONAPIP)—the indigenous organization that worked alongside the Environment Ministry (ANAM) in the drafting and approving of the National Programme—reported on the recent experience of elaborating the Panama UN-REDD Programme. Both parties made it clear that COONAPIP had agreed to come to the table and engage in a dialogue but also recognized there are a number of issues that need to be resolved, such as ownership of carbon; security of land titles in many parts of Panama; and benefits for communities that conserve the forest. All recognized that although there are no easy answers at the moment, the commitment to dialogue and to proceed towards solutions together is strong.

While a majority of participants were rather skeptical about REDD, the discussion was



marked by dialogue and nuanced perspectives, centred around three main topics. First, there are shared suspicions on whether REDD will allow forest communities to continue earning a living from forest resources. Some participants however expressed the alternative perspective that REDD would allow communities to maintain their way of living since REDD wouldn't require to stop all activities, but rather that the mosaic of activities in a given track of forest maintains a certain carbon stock over time. Second, many are concerned about whether REDD would take away land rights from communities, although a minority view emerged that considered REDD as a potentially effective

tool to ensure that forest communities strengthen their claims to land. Finally, it was often expressed that REDD was providing an easy "way out" for developed countries, sparing them of their obligations to reduce emissions. Others argued that given the level of reductions necessary to stabilize emissions and avoid dangerous climate change, and the contribution of land use changes to total emissions, REDD alone could not provide developed countries with the level of reductions required to meet all of their expected obligations.

All in all participants recognized the genuine effort undertaken by the UN-REDD

Programme to include indigenous and forest-dwelling communities and civil society in the design, decision-making and implementation of the REDD national programmes. Furthermore, it is understood that these programmes are seriously committed to supporting pro-poor forest conservation policies and to responding to a variety of long standing demands of indigenous and forest-dwelling communities as, for example, the strengthening of their rights to land and their rights to manage the resources under their formal or informal jurisdictions.

Este artículo está disponible en Español:  
<http://tinyurl.com/REDD-in-Latin-America> ■

## Planning for REDD readiness -- the Tanzania case

### An illustration of concrete steps and activities initiated or planned under the Programme as they relate to REDD readiness components

In the August issue of the UN-REDD Programme newsletter we described how the UN-REDD Programme and the Forest Carbon Partnership Facility have developed harmonized thinking on what constitutes REDD readiness, facilitating the activities and coordination for countries supported by both readiness platforms. While Tanzania launched its national UN-REDD Programme on 6 November 2009, this article illustrates the concrete steps and activities initiated or planned under the Programme as they relate to REDD readiness components. These activities include:

#### Coordinating REDD activities

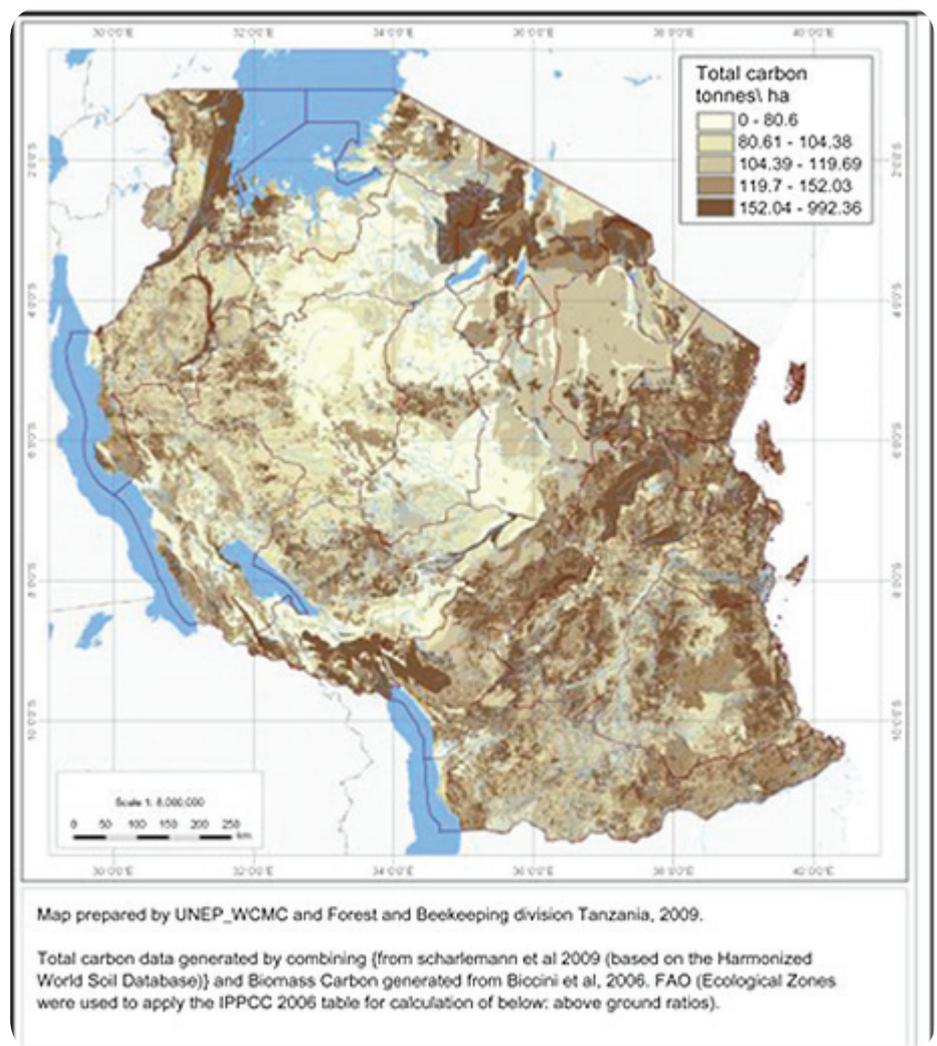
A REDD reporting structure is in place, with a Task Force leading the process of developing a National REDD Strategy and Framework and coordinating activities related to REDD in Tanzania, including those of the UN-REDD Programme, the Norwegian Government and the Forest Carbon Partnership Facility. On this Task Force are eight members from the Vice President Office (Environment Division) and Forestry & Beekeeping Division (FBD), and from the academic, non-governmental and private sectors. The Secretariat is hosted by the Institute of Resource Assessment of the University of Dar es Salaam.

#### Engaging stakeholders

Stakeholder engagement has begun with developing and implementing an awareness programme around the issues raised

by REDD, including the potential for REDD and how it may reduce carbon emissions. To build broad consensus with forest communities regarding the REDD framework, national and regional workshops are planned: ward and village representatives from selected districts will provide stakeholders information on the potential for REDD, hear their concerns and build their understanding of

the process. A pilot rural appraisal to establish community opinions on the potential for REDD is also in preparation. The Tanzania UN-REDD Programme will also establish linkages and partnerships with the 14 existing REDD-related initiatives funded by national and/or international partners in Tanzania. At the regional level, stakeholders from neighbouring countries have recently shared



Carbon pools in Tanzania

and learned from the Tanzania REDD process during a Southern Africa Development Community (SADC) conference hosted in Dar es Salaam mid-November 2009.

### Designing a REDD strategy and implementation framework

The strategy under the UN-REDD Tanzania Programme is embedded into the Tanzanian National Forest Programme, a framework with specific aims for elaborating the role of forests in national development. Building on its leadership in community forestry in Africa, Tanzania's roll-out mechanism for REDD will be participatory forest management, both community-based forest management and joint forest management. With support from the World Bank and the Danish Government, a report commissioned by the FBD reviewed the past 15 years of experience with participatory forest management in Tanzania, and recommended specific actions towards the legal basis for sharing costs and benefits, approaches to service delivery, monitoring and evaluation and safeguards to avoid leakage.

The Tanzania UN-REDD programme work plan includes opportunity costs analyses of forest goods and services in select forest landscapes and barriers to triggering sustainable forest management from unsustainable forest resource use; mapping the distribution of costs and benefits (social, private and budget); performing economic analyses of nature-based adaptation options in forest landscapes to reduce vulnerability to climate change; and developing a REDD cost curve for Tanzania, plotting abatement costs against abatement potential for different land uses (protected areas, production forests, village lands, etc.), including deforestation drivers. Capacity building of stakeholders to understand and participate in these

cost analysis is a cross cutting component of this work plan.

### Elaborating an equitable benefit distribution systems

Under the National REDD Framework, REDD payments can take the form of direct payments, social or infrastructure services, direct employment, community development grants or microcredit loans. In order to be optimal, solutions will be location-specific. The benefit mechanism in Tanzania will likely combine REDD payments with payments for non-carbon ecosystem services, such as payment for water and biodiversity services. These will be tested under the Tanzania UN-REDD programme in the two pilot landscapes of Uluguru and East Usambara.

### Developing a reference scenario

As the baseline for forest area and deforestation is only partial in Tanzania, efforts will be necessary to provide the statistics relevant to establishing a reference scenario that builds on historical trends and takes into account national development projections. Work to develop the reference emission levels will involve a combination of remote sensing, verification on the ground and local level resource assessments. This work will be informed by the numerous initiatives with high relevance to forest carbon undertaken by national and international partners on community carbon monitoring, carbon storage, forest disturbance and impact on carbon.

### Establishing a monitoring system

Capacity building on carbon measurement, reporting and verification (MRV), which will be implemented by the FBD and the Vice President's Office, will start with training on remote sensing, Geographic Information Systems, the InterGovernmental Panel on

Climate Change's Good Practice Guidance, and will link to the Tanzanian National Inventory work launched in May 2009. A system for REDD information synthesis and sharing will be established at the FBD and linked to the National Forestry Database (NAFOBEDA). This will include a mechanism for sharing data linked to the Forestry Database. Training, starting with the establishment of MRV systems for REDD will be provided to forest staff. Targeted field work will calculate the degradation of forest habitats in specific areas across Tanzania.

Finally, Tanzania has started creating simple maps of carbon distribution linked to biodiversity and livelihoods, which can be used for advocacy purposes. In November 2009, the UNEP World Conservation Monitoring Centre, based in Cambridge, provided practical training to members of the FBD in geographic information systems whilst undertaking novel analysis of the distribution of carbon and co-benefits in Tanzania. This workshop produced a new carbon map for Tanzania that includes estimates of carbon in biomass and soils to one meter depth, as well as analyses of the distribution of carbon in relation to human population, protected areas, key biodiversity areas and fire. They illustrate the extent to which areas that are high in carbon are also high in other benefits such as biodiversity, and conversely, which forests are low in carbon but nevertheless offer ecosystem benefits. As mentioned above, this effort will contribute to developing mechanisms that bundle payments for non-carbon services to REDD as to deliver a higher premium on reduced emissions.

Please download the detailed report here: <http://tinyurl.com/Tanzania-case-study-report> ■

## Carbon Stock Assessment and Modelling in Zambia: a UN-REDD Programme study

### Results of a UN-REDD Programme study are now available as part of the ongoing activities in Zambia to establish reliable carbon assessment methodologies

Within the essential activities of measuring, reporting and verification of carbon of the UN-REDD, this study explores methodologies and options on how to estimate national level carbon stocks for various land use categories and carbon pools, what data are available for estimating deforestation in Zambia and what is the estimated annual deforestation rate of the country, based on the analyses of existing field data from the Integrated Land Use Assessment (ILUA) in Zambia from 2005 to 2007.

The study seeks to respond to several issues on how to estimate national level carbon stocks for various land use categories and carbon pools, what data are available for estimating deforestation in Zambia and what is the estimated annual deforestation rate of the country, based on the analyses of existing field data from the Integrated Land Use Assessment (ILUA) in Zambia from 2005 to 2007.



*Tree measurements using calipers for the Integrated Land Use Assessment in Zambia*

The estimates of annual decrease in forest carbon stock from deforestation and degradation in Zambia are presented in this study

as well as useful analyses that can feed into the design of the next ILUA development which will be adapted to the measuring, reporting and verification of carbon for REDD.

The report highlights how the choice of method for estimating carbon stock strongly affects the magnitude of estimate, recommending that studies are made prior to embarking in any carbon stock assessment to verify the applicability of the available methods in each country. It also stresses the

need for more in-depth and scientifically sound analysis of remotely sensed data sets to calculate accurate deforestation estimates.

In relation to a future REDD+ scheme, the report suggests potential for carbon sequestration, both through reforestation and afforestation given the identified gap between the current and historical carbon stock levels.

The study was carried out in close collaboration with FAO staff members in the National

Forest Resources and Assessment (NFMA) programme and the Zambian Forestry Department (ZFD) under the Ministry of Tourism, Environment and Natural Resources as a contribution towards building a measuring reporting and verification system for REDD with special focus on the South African region.

Please download the report here: <http://tinyurl.com/Zambia-case-study-report> ■

## Looking ahead

### United Nations Climate Change Conference (COP15)

7-18 December 2009, Copenhagen, Denmark

### Forest Day 3

13 December, Copenhagen, Denmark.

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