Climate Change Financing – Fresh Resources for Sustainable Land Management or Re-labelling?

Issues for the post-2012 regime

Background and account of discussions by an expert panel at a side-event to the 28th Session of the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA), Bonn, June 13, 2008
This publication contains a partial summary of presentations and remarks made by participants at a scheduled panel discussion that was held as side-event to UNFCCC SBSTA 28 in Bonn, Germany, on June 13, 2008.

Its purpose is to serve as an unofficial work of reference for use by anyone interested in the subject matter.

This publication is not a formal record of proceedings, nor do the views expressed in these pages necessarily represent the policies of any of the organizations who were represented at the event or were involved in its planning and organization.
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Participants

Chair

Harald Loßack
Head of Section “Biodiversity, Forests, Governance of Natural Resources”;
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH;
harald.Lossack@gtz.de

Speakers and discussants

Luc Dubreuil
Natural Resources Management Officer, Investment Centre, UN Food and Agriculture Organization (FAO); luc.dubreuil@fao.org

Sven Harmeling
Senior Advisor Climate and Development, Germanwatch; harmeling@germanwatch.org

Alejandro Kilpatrick
Programme Coordinator, Latin American and the Caribbean, and Climate Change and Environmental Services Strategic Programme, Global Mechanism;
a.kilpatrick@global-mechanism.org

Professor Lucio Pedroni
Head of Global Climate Change Group, Center for Tropical Agronomy Research and Education (CATIE), Costa Rica, lpedroni@catie.ac.cr

Alexander Müller
Assistant Director General, UN Food and Agriculture Organization (FAO);
alexander.mueller@fao.org

Robert Tippmann
Head of Policy Advisory Services, EcoSecurities Global Consulting Services;
robert@ecosecurities.com

Reinhard Wolf
Special Task Officer “Forest and Climate”, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH; reinhard.wolf@gtz.de
The panel discussion “Climate Change Financing: Fresh Resources for Sustainable Land Management or Re-labelling?” was held on June 13, 2008, as one of several side-events to the 28th Session of the Subsidiary Body for Scientific and Technological Advice (SBSTA 28) of the UN Framework Convention on Climate Change (UNFCCC) in Bonn, Germany.

The event, focusing on climate change mitigation, not adaptation, was organized by the FAO Investment Centre and the Global Mechanism (GM) of the UN Convention to Combat Desertification (UNCCD), together with GTZ and CATIE. These organizations are engaged in joint efforts to identify suitable financial instruments and sources of sustainable land management (SLM) funding as negotiations build momentum towards agreement on the post-2012 climate change regime.

International concertation on reducing emissions from deforestation and degradation (REDD) was initially proposed by the governments of Papua New Guinea and Costa Rica at the 11th Conference of the Parties to the UNFCCC (COP 11) in Montreal in December 2005. Since then the SBSTA has been at the forefront of a joint initiative to bring REDD onto the climate change agenda, where sustainable land management is emerging as a major cross-cutting issue.*

* http://unfccc.int/methods_and_science/lulucf/items/4123.php
Few would quarrel with Yvo de Boer: securing adequate financing will be fundamental to ensuring a climate change agreement to succeed the Kyoto Protocol at the 15th Conference of the Parties (COP 15) of the UNFCCC in Copenhagen in December 2009. The report you now hold in your hands is a contribution to the negotiations and discussions leading up to that event.

Since adoption of the Kyoto Protocol in 1997, the picture of the causes and effects of climate change has sharpened, the threats as well as the opportunities have broadened and the number of areas demanding action for climate-change mitigation and adaptation has multiplied. Previously excluded from the UNFCCC financial mechanisms, the issue of reducing emissions from deforestation and degradation (REDD) is now forcing its way onto the agenda. It is already clear that the carbon market cannot

Move faster towards Copenhagen

"While progress has been made, there is no doubt that we need to move forward more quickly. We need concrete proposals from Parties on what could be written into a Copenhagen deal, including concrete ideas on the five main elements that will make up the new agreement. These are a shared vision and enhanced action on mitigation, adaptation, technology and finance."

UNFCCC Executive Secretary Yvo de Boer, 2008
meet all the substantial new financing needs for REDD procedures, including sustainable land management (SLM). The situation calls for innovative new funding instruments.

**SLM’s broad reach**

The practice of SLM means ensuring that land, water, and vegetation adequately support land-based production systems for current and future generations. SLM’s key principles are the productivity, security and protection of natural resources, economic viability and social acceptance. The concept, still evolving, embraces not only sustainable agriculture but all land resources like tree cover, biodiversity and soil quality, regardless of whether they serve agricultural purposes or not.

And as an antidote to climate change, SLM offers multiple benefits. Quite apart from sustainably securing rural development and agricultural production, SLM can combat desertification and protect biodiversity as well as both mitigate climate change and foster adaptation to its inevitable impact.

**Not “relabelling” but “mainstreaming”**

Our side-event on June 13, 2008, bore an intentionally provocative title. But the international panelists soon pointed out that the issue was not about “relabelling” existing funds or even assuring a separate funding pipeline for SLM. Instead, they argued, SLM’s core contribution to both mitigation and adaptation qualified it for immediate inclusion in the mainstream of global discussions on remaking the financial architecture of climate change.

“We have a very limited window of opportunity. Situations like this come only once every 10 or 20 years. Climate financing is by definition about carbon. So, if performance is a criterion, then most financing will go to high-carbon loss areas like deforestation. However, if we had a fund, rather than having to rely on a market, we could allocate money according to other criteria, say, 30% of funds to areas with high populations and low-carbon forests. But that’s not possible at present. If we don’t find the funds, a lot of forest will be gone for good. Many people will have to change their way of working and living.”

“Beyond that, we have to cope with the risk that, even if the money can be raised, there will be insufficient performance. Poor governance and lack of capacity remain huge problems in many countries. And we should realize that, given the current high prices for foodstuffs, some countries may think they can earn more money converting their rain forests into palm oil and soy bean plantations than they can from any carbon credit scheme.”

Reinhard Wolf, GTZ
Reverse the decline in agricultural investment

They also reminded us that significant new financial flows for SLM depend on a number of conditions. First of all, as proven all too clearly by the food price crisis of 2008, the world must reverse the catastrophic investment decline in food production in developing countries, especially in Africa. Agriculture is the most climate-sensitive of all economic sectors. Climate change directly affects agricultural production, cutting farm incomes, increasing poverty and forcing households to use up meagre savings just to survive. At the national level, climate change can also significantly cut revenues and raise spending needs, thus worsening public finances.

The sheer size of the investments needed and the required variety and flexibility of the necessary financial instruments demand that we redouble our efforts to involve business and other civil society actors in this cause. This report provides hopeful signs that such cooperation is getting underway.

Absorptive capacity

Finally, both public and private sector investors have to feel reasonably certain that policies and institutions in developing countries are capable of absorbing new infusions of funding and can use the money toward effective and efficient mitigation and adaptation activities. National governments in developing countries must take more account of climate change risk variables in their development policies and in their plans to foster enabling environments both for national investment and for foreign direct investment (FDI). This will demand accurate information, national and local expertise, institutional strength, good governance, transparency and accountability.

SLM is one of the broadest bases upon which we can find common ground. Raising the money for it means an innovative expansion of carbon credit schemes, targeted official development assistance (ODA) and new, tailor-made funds. The hour calls for coordination, concentration and creativity. The clock is ticking.
The recent surge of global consensus on the need for greater investment in developing-country agriculture was welcome news, Mr Müller said, but also highlighted the importance of simultaneously addressing carbon sequestration, natural resource management, and sustainable livelihood development.

The June 2008 world food summit in Rome strongly endorsed the notion that farmers were key players in stopping the degradation of vital ecosystems, but ensuring their participation, he said, required fundamental changes in agricultural policies, institutions and practices. There was also an urgent need for a global analysis of the environmental impacts associated with agriculture, along with a strategic framework for identifying ecologically and economically sound approaches.

**Innovative new funding**

The US$ 50-60 billion needed annually to address these tasks and to restore agriculture to its rightful place at the forefront of development exceeded the capacity of existing funding mechanisms, Mr Müller pointed out. Innovative new mechanisms were needed to promote investment in the agricultural sector, for example, the public-private investment facility currently under development by the FAO Investment Centre and the Global Mechanism, together with EcoSecurities.

“Agricultural paradigms will change completely in next 20 years”, he said. The challenges to food production, he pointed out, included the growth of the world’s population from 6.5 billion at present to 10 billion by 2050, and swelling urban populations. The poor were the most vulnerable to hunger, and their food security had to be assured. Agriculture’s role in climate change was also coming into sharp relief: “Farming and forestry account for more than one-third all CO2 emissions, but agriculture and forestry also has potential to sequester carbon in huge amounts.”

A recent FAO report, Mr Müller continued, showed that “agriculture currently accounts for about 15 billion tons of CO2 emissions per year, but also has a sector-strengthening mitigation potential” of up to 10-20 billion tons of CO2. “Used properly”, he said, “new financial mechanisms could thus reduce agriculture to carbon neutral status.”
“A strong green light”

FAO World Food Summit calls for agriculture’s inclusion in climate change funding

After decades of relative neglect, agriculture is returning to prominence on the development agenda. And increasingly, the world is recognizing that farmers, forest dwellers and fishers, the agents of sustainability, must be rewarded more explicitly for their stewardship. Representatives of 181 countries, including 42 heads of state and government, reaffirmed these trends at the High-Level Conference on World Food Security, an emergency summit meeting convened at FAO headquarters in Rome in early June 2008 at the peak of the global food price crisis.

Support for SLM

Healthy agroforestry systems resist weather extremes, capture carbon, lower emissions and provide other environmental services at the same time. But making the world food production systems more resilient to climate change, said the summit statement, meant developing funding systems to reward reduced carbon emissions from farms, forestry operations and fisheries. Sustainable land management is central to that process.

“We urge governments”, the declaration said, “to create opportunities to enable the world’s smallholder farmers and fishers, including indigenous people, in particular in vulnerable areas, to participate in, and benefit from, financial mechanisms and investment flows to support climate change adaptation, mitigation and technology development, transfer and dissemination. We support the establishment of agricultural systems and sustainable management practices that positively contribute to the mitigation of climate change and ecological balance.”

For the FAO’s Alexander Müller, a key organizer of the summit, the implications are clear. “Much of the discussion regarding biodiversity, climate change and bioenergy has taken place in the past without the effective inclusion of the agricultural sector and relevant ministries. Finally, this is changing. We have a strong green light now. Our clear mandate is to link food security not only to climate change but also to emissions management.”

Negotiating better carbon-finance opportunities for SLM and agriculture, forestry and other land use (AFOLU) activities will be a “huge task”, Professor Pedroni cautioned. The links between SLM and REDD first had to be better understood, he said, and it was likely that SLM could not be funded through carbon incentives alone.

As a first step, however, Professor Pedroni argued, the world needed urgently to review present constraints on carbon funding for AFOLU. He conceded that much depended on cost, political will and the permanence of the resulting effects. “But given that land use is now broadly recognized to cause 20% of all greenhouse gases (GHG), then shouldn’t 20% of the reduction effort be devoted to land-use solutions?”, he asked.

Dismal figures

Professor Pedroni contrasted the hefty contribution of AFOLU to total global GHG emissions with the tiny share of AFOLU-related initiatives currently registered under the Clean Development Mechanism (CDM), reminding the session that only afforestation and reforestation (A/R) projects were currently admitted under the CDM, while measures to reduce deforestation and land degradation were excluded.

And even for A/R projects, Professor Pedroni pointed out, the figures recorded so far were dismal. Citing 2007 data from the UNFCCC and the UNEP-sponsored initiative, Capacity Development for the Clean Development Mechanism (CD4CDM), he said that only one out of some 1,100 CDM-registered projects concerned A/R. And that single project, he said, accounted for a mere 5.4 megatons of CO₂-equivalent (MtCO₂-eq), less than 1% of the total 665 MtCO₂-eq permitted for A/R projects by the current CDM regime. Based on the current CDM pipeline, he predicted, no more than 11 further A/R projects would be registered before 2012. “Something went terribly wrong with the original calculations”, he said.
The “flooding” of the carbon market with cheap A/R credits and “bad” projects that many had predicted never materialized, he said. In fact, potential buyers seem to have shunned the temporary credits (tCERs) imposed by the CDM A/R regime. As a further deterrent, complex CDM modalities and procedures for A/R had led to an awkward array of 13 methodologies and 11 tools. And on top of that, Professor Pedroni pointed out, there remained major barriers to project implementation and finance.

Rethink the ways and means

His recommendations: whatever solutions that were applied to non-permanent CERs had to ensure greater fungibility with other types of carbon credits. Furthermore, current CDM criteria for defining project boundaries, additionality and baselines as well as the eligibility of lands for A/R projects needed urgent review. The CDM’s modalities and procedures (M&P) were also a problem, he said: “There’s a lot of room for better methodologies and more user-friendly tools”.

The second set of tasks would be to “shape a post-2012 regime that creates an appetite for AFOLU credits”, Professor Pedroni said. The way to boost demand would include setting higher targets for emission reduction than what is currently required for A/R credits and, if a cap on the value of these credits were necessary, to set it at a minimum 20% of the permissible annual total of CERs. Just as importantly, he said, the present meagre supply of AFOLU credits could be significantly increased through project-level, rather than national-level, accounting.

Project-level accounting will attract private sector

The form of national-level accounting for A/R carbon credits that was currently in force, Professor Pedroni said, meant that credits could be issued only if all registered A/R projects successfully met that given country’s national emission reduction target. “That’s far too much risk for a private investor”, he said. Project-level accounting, on the other hand, would still reward those individual A/R projects that were successful, even if the national reduction target were not met, as long as there were some net reductions of emission. This should go a long way in overcoming private-investor reluctance to invest in A/R carbon credit schemes.
Decision makers on climate policy and financing mechanism had to start seeing SLM as an integral part of REDD, Professor Pedroni said: “The REDD procedures that are now being developed won’t work properly if they don’t take account of sustainable land management”. Deforestation was closely linked to the demand for non-forest land and the degradation that came with unsustainable land management. At the same time, although SLM reduced pressure on forests, he said, blending SLM into REDD raised technical problems. For example, REDD’s focus on forests meant disparity between the large and rapid change in carbon stocks it would generate and the smaller, slower change in carbon stocks implied in non-forest SLM. Professor Pedroni also pointed out that REDD’s success depended on resolving uncertainties about the ultimate beneficiaries of REDD credits: would it be poor farmers and forest-dwellers themselves, or others?

**How to “save a slice” for SLM**

The incorporation of SLM into REDD measures would work best in countries with high rates of deforestation, he asserted. As the lion’s share of carbon credits for AFOLU was likely to go to REDD programmes, the best way “to save a slice for SLM, A/R and revegetation would be to ensure that all types of AFOLU activities are included in the post-2012 regime, and to design projects that integrate SLM and A/R with REDD from the start”, he said. However, carbon incentives were far less likely to provide much finance for SLM in countries experiencing low deforestation, Professor Pedroni concluded, because the emission reductions from non-REDD activities, unless permitted over very wide land areas, would be slower, lower and more costly to achieve.

Download Prof. Pedroni’s presentation at [www.desertifikation.de/uploads/media/L.pedroni-SLM-Perspectives.pdf](http://www.desertifikation.de/uploads/media/L.pedroni-SLM-Perspectives.pdf)
Non-permanent tCERs (see above) and long-term CERs (lCERs) emerged as a global compromise. Global discussions on carbon incentives for AFOLU strove to balance two competing interests, the one being environmental integrity, the other being the desire of poor countries to preserve development options for the future.

Environmental interests argued that since carbon stored in vegetation could be released back into the atmosphere at any time in the future through degradation, fire or disease, the resulting carbon credits should embody that liability. Thus, credits from afforestation and reforestation should not have the same value as those from “permanent” emission reductions achieved, for example, from the replacement of coal-fired power with hydroelectricity.

Opportunity cost trumps likely credit income

For their part, some developing countries made a case for a time limit to the validity of such CERs, fearing that any deals to lastingly “lock up” lands under A/R carbon incentive projects would infringe on national sovereignty. Critics also warned that future opportunity costs from foregone development could turn out to be much higher than any income from tCERs or lCERs awarded for A/R activities on the same land.

Despite these constraints, the private sector, including industry, traders and investment funds, has signalled interest. Theoretically, access to cheaper tCERs would afford companies greater flexibility in achieving their emission reduction targets while improving the liquidity of the carbon credit market. But some business critics echo Prof. Lucio Pedroni’s call for an overhaul of CDM principles and procedures. Anna Lehmann, Regional Manager Asia for 3C, a carbon asset management company, complained to a seminar on AFOLU carbon credits at COP 13 in Bali: “There’s a demand for temporary credits, but this market has been practically killed off even before it got started.”

Look to the earth

The soils of the world contain more carbon than the combined total amounts occurring in vegetation and the atmosphere*. Increasing soil’s ability to sequester carbon helps mitigate CO₂ emissions and also alleviate climate change.

Soil’s carbon sequestration potential depends on its depth, the vegetation it supports, its mineral composition, soil drainage, water, air and environmental temperature. Other factors include the chemical characteristics of soil organic matter and its ability to resist microbial decomposition. Evidence from improved soil and crop management systems shows that agricultural productivity can be maintained and carbon reserves increased at the same time, even for soils with depleted carbon levels.

The public and private sector have a mutual interest in working together to improve the carbon finance system and to develop new forms of funding for emissions reduction and adaptation to climate change. Both sides have inescapable obligations, Robert Tippmann said. The public players, whether nation-states or UN bodies, had legal mandates to support development and climate-change mitigation and adaptation. Business, for its part, was already held to emission reduction targets, and increasingly forced to deal with the impact of climate change on markets. “The policy framework is going to be substantially different post-2012”, he warned. “We’ll be looking at stepped-up mitigation and adaptation measures and a mix of new approaches and mechanisms alongside continuing and expanding carbon trading.”

In 2004, agriculture and forestry accounted for 13.5% and 17.4% respectively of worldwide GHG emissions, Mr Tippmann said. From 2000 to 2004, climate disasters had affected 262 million people, of whom 98% lived in developing countries. At present, 1.6 billion people worldwide were without electricity and 2.5 billion people either had no access to efficient energy supplies or relied on inefficient and unsustainable use of wood and other biomass for fuel.

Unexploited potential

Helping to ease this predicament was in the interest of business and government stakeholders, he said, both because of their obligations under emissions reduction and trading schemes, voluntary measures and investments, and the significant unexploited potential of carbon credit opportunities in the agricultural, rural and land use sectors. Soil degradation and biodiversity loss were two related areas that could be tackled through mitigation and adaptation, and government and business were increasingly recognizing the potential. “On top of their binding commitments on emissions”, Mr Tippmann continued, “the public and private sectors are also seeking to demonstrate their commitment to development mandates and environmentally-friendly, responsible social behaviour.”

Stakeholders’ interests were complementary: governments sought to promote climate change mitigation and adaptation, energy production, technology transfer and investment, while international organizations were needed to translate and embed activities into the appropriate institutional, environmental and social development processes. The necessary investment of capital and technologies, Mr Tippmann said,
were available from business and industry, while NGOs could help shape the framework conditions, support project implementation and help assure quality.

Business plan

The planned Climate Change Facility is a recent public-private sector initiative undertaken by the Global Mechanism, the FAO Investment Centre and EcoSecurities. It was being designed to screen existing opportunities and potential climate-related projects, Mr Tippmann said, and to serve as match-maker between prospective projects and investors. It would undertake financial risk analysis, due diligence and structuring, and, on request, also ensure direct supervision and management of projects.

Mr Tippmann’s company, EcoSecurities, was providing expertise and had confirmed its interest and participation in the Climate Change Facility initiative. The FAO and GM were leading promotional efforts and developing a detailed business plan. “The concept is still being developed”, Mr Tippmann said, “but we’re aiming for broader involvement based on firm commitments, including the Rome-based UN organizations and some major multinational companies.”

Converging interests

Participants at the November 2007 meeting included experts from the Rome-based UN agencies (FAO, GM, IFAD and the WFP), company representatives from CarbonRe/Global Sustainable Development Project, EcoMethane, Japan Carbon Finance and Eco-Securities and the European Investment Bank, the EU’s financing institution.

A joint working group was set up at COP 13 in Bali and held its inaugural meeting in March 2008, when discussions on the details of the Climate Change Facility started in earnest. The working group agreed to report on progress at subsequent UNFCCC events.


“We’re now approaching developing countries with new ideas, and need to build a bridge for us to move together towards these new, performance-based systems. Let’s also realize that with a mitigation agenda we are not simultaneously doing adaptation. Adaptation is a whole different step: it has a cost and someone has to pay. We haven’t even figured out how to cover the huge costs of preliminary impact studies. We shouldn’t encourage developing countries to think that just by selling cheap credits to rich countries, they have somehow already started to deal with the problem.”

Lucio Pedroni, CATIE

“Land management and reducing deforestation must be important pillars of any post-Kyoto regime. We are convinced that REDD should not be incorporated into the carbon market, but supported through other approaches, e.g. a fund which is fed by revenues from auctioning in emissions trading. The reason is that we are severely concerned about the large amounts of cheap carbon credits that a REDD system could generate and which would directly make new coal power plants in Europe more compatible than without REDD inclusion. Buying up REDD credits should not be an excuse for European countries to just build more coal-fired plants. Several different types of financial mechanisms are needed, and there has to be a stronger focus on the needs of the poorest and most vulnerable populations.”

Sven Harmeling, Germanwatch
A message to multinationals

Alejandro Kilpatrick speaks on the need for broader global awareness of the importance of sustainable land management and how it can be financed in the post-2012 climate change regime:

An essential long-term investment

The land management sector has simply not received sufficient attention in recent years. In developing countries, the investment trend in agriculture has been steadily downwards. Of course, with the food-price crisis, this may now change. But SLM is not a quick fix. The leader of a country starting a four- or six-year term in office is not going to see any results from investing in SLM within that time-frame. So SLM may seem less politically attractive than investment in health care or infrastructure, where hospitals and roads can be built relatively quickly.

However, let’s also be absolutely clear about the monetary and economic consequences of not investing in SLM. That results in people losing their livelihoods in rural areas and moving to urban centres, and means a bigger burden on the state and higher expenditure on health and social services. Neglecting SLM also has geopolitical consequences. With the growing stress on ecosystems, environmental refugees are leaving their countries in ever greater numbers. For the EU, for example, this has already become a security issue.

The links to desertification and climate change

SLM is about understanding that land is the foundation, the very substance that sustains all ecosystem functions and services. It’s the only right response to the fundamental problem of land degradation. Sustainable land management is a proactive measure: it costs much more, in both financial and socio-economic terms, to rehabilitate degraded land than to prevent its degradation in the first place.

The healthier the land, the lower is the risk of damage due to climate change and climate variability. Conversely, the more degraded land is, the greater its vulnerability. Look at Haiti, which has some of the worst land degradation in the world. When you fly over the island, the landscape is denuded, almost lunar. Recent extreme weather events...
there have spelled disaster. Hurricanes that hit the Caribbean in August and September this year caused far greater casualties in Haiti than in Cuba or the Dominican Republic, because Haiti’s extreme deforestation and loss of soil meant terrible mudslides and flooding. The same thing happened to the most degraded landscapes in Central America, when Hurricane Mitch hit in 1998.

When it’s properly combined with good climate science, SLM is an excellent tool for addressing these risk variables, and that’s why SLM has to be better integrated into new policies for addressing climate change.

How to widen REDD access to funding

REDD discussions have been framed within the forestry sector, so they focus mainly on tropical or temperate forests where the potential for capturing or sequestering carbon is the greatest. But that framework has to be widened. SLM in low-carbon density forestlands – grasslands, wetlands, scrub forest – also has carbon-sequestration potential, and low-carbon land is also much more extensive. Furthermore, it usually borders on tropical and temperate forests, so whatever degradation occurs there is eventually going to put direct pressure on the neighbouring forests. Finally, low-carbon density forestland is where most of the livelihoods are: many more people live there than in tropical forests.

REDD is not a panacea for deforestation. Instead, we should see it as a complement to other forms of available funding. A development-oriented programme with a REDD component in low-carbon density forestlands could significantly widen the programme’s overall appeal to investors, because of the greater geographical areas and populations that low-carbon density forestlands imply. Including low-carbon density forestlands could open the door for additional public- and private sector and donor funding for many types of rural development and poverty alleviation measures.

On the other hand, if low-carbon density forestlands are excluded from REDD carbon trading schemes, the private sector won’t invest in them, the poor will stay poor and the only beneficiaries from carbon trading will be the countries with big tropical forests, the multinationals and big land-owners. That’s why low-carbon-density lands and forests should be included explicitly in any agreed REDD mechanism.
Private-sector opportunities in the GM-FAO Climate Change Facility initiative

So far, the private sector has been going for the low-hanging fruit in the voluntary carbon trading market. That’s the big tropical plantations or high-carbon density forestry projects in the Amazon rain forest, in the Congo Basin or in Central America. But private investors are not paying enough attention to the agricultural and land-use sectors.

That’s the reason we started the GM-FAO Climate Change Facility initiative in November 2007. Since then private-sector representatives have told us they were willing to invest in sectors that weren’t just low-hanging fruit, but that they needed help to identify the opportunities. Here’s where the Rome-based agencies (FAO, IFAD, GM, WFP) can come in with technical know-how and a list of national-level opportunities, for example on innovative uses of agriculture waste and biomass. The FAO and IFAD, for example, could combine technical know-how with finance to help materialize a carbon initiative.

So this is my message to multinationals with portfolio projects in deforestation and interest in expanding into other sectors. We’re an honest broker and can offer a common space, contacts, networking opportunities, technical expertise, a portfolio of potential projects, and even funding sources. We can help business ensure that the money will be well-placed as well as contribute to their good image, meet their own emission reduction targets and do something concrete to alleviate poverty.

The Global Mechanism: A channel for funds

The Global Mechanism is a subsidiary body of the United Nations Convention to Combat Desertification (UNCCD), and started up in 1997. Its mandate is “to increase the effectiveness and efficiency of existing financial mechanisms...[and]...to promote actions leading to the mobilization and channelling of substantial financial resources to affected developing country Parties”. The GM works with the World Bank Group, the regional development banks and the Rome-based International Fund for Agricultural Development (IFAD), which hosts the GM.
Glossary

Additionality  See “Baselines”.

AFOLU  Agriculture, Forestry and Other Land Uses. The UNFCCC and its Kyoto Protocol require the Parties regularly to report inventories of anthropogenic GHG emissions and removals, and to publish and regularly update measures taken to mitigate climate change. Under Article 3.3 of the Kyoto Protocol, greenhouse gas removals and emissions through afforestation and reforestation undertaken since 1990 would count towards meeting the Kyoto Protocol’s emission targets. The AFOLU sector is increasingly seen as relatively cost-effective way of offsetting emissions and achieving reduction targets, for example by reducing GHG emissions such as N₂O and CH₄ in agriculture and increasing CO₂ sinks in forestry. However, due to the high complexity and definitional uncertainty of the AFOLU sector, quantifying and reporting its GHG balance across different global contexts is scientifically and technically challenging. In addition, greenhouse gases may be unintentionally released into the atmosphere – and thus hard to measure – if a carbon sink is damaged or destroyed through forest fire or disease affecting vegetation or tree-cover. As research and understanding have widened in recent years, AFOLU has become the accepted term for what was referred to until recently as LULUCF, for “Land Use, Land-Use Change and Forestry”. [www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html](http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html)

Anthropogenic  Word meaning “man-made”. In the present context, used in association with “greenhouse gases”, as in “anthropogenic GHGs”.

A/R  Afforestation/reforestation. The official UNFCCC definition of afforestation is “the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources.” Reforestation is defined as “the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land.” A/R projects (but not projects to curb deforestation) qualify for inclusion in the CDM. However, these are capped at 1% of the total amounts of MiCO₂ permissible under current CDM rules for each of the five years (2008-2012) of the Kyoto Protocol’s first commitment period. This is known as the “1% x 5 cap”. See a full glossary of CDM terms at [http://cdm.unfccc.int/Reference/glossary.html](http://cdm.unfccc.int/Reference/glossary.html)

Bali Roadmap  Also sometimes called the ‘Bali Action Plan’, the roadmap was adopted by countries participating at the UN Climate Change Conference in Bali, Indonesia, December 3-14, 2007. It lays out steps to be taken in order to reach agreement by December 2009 in Copenhagen on a treaty replacing the UNFCC’s Kyoto Protocol. [http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_act_p.pdf](http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_act_p.pdf)

Baselines  To qualify for inclusion in the CDM, a project must generate GHG benefits that are additional to “business as usual”. It must demonstrate that the purported GHG benefits are also not simply the result of incidental or non-project factors such as new legislation, market changes, or environmental. Most “additionality” issues apply equally to projects in the energy sector as to those in AFOLU. The first step in determining a project’s additional GHG benefits is the elaboration of a “without-project” baseline scenario against which changes in carbon stocks occurring in the project can then be compared. This demands knowledge of existing relevant land use practices in the affected area, the local socioeconomic situation, national, regional, or even global economic trends that may affect the project’s outputs, and other relevant policy parameters. The baseline is established by projecting these past trends and current situations into the future. Consequently, baseline scenarios are necessarily based on a range of assumptions. The UNFCCC is fostering joint global efforts to develop standards for baselines and additionality.

CATIE  Centro Agronomica Tropical de Investigacion y Ensenanza, the Centre for Tropical Agricultural Research and Higher Education, Costa Rica. [www.catie.ac.cr](http://www.catie.ac.cr)

Carbon trading  Under the UNFCCC, the carbon trading system helps industrialized countries meet their Kyoto Protocol (KP) emissions targets by allocating mission allowances, or permits to individual companies to emit a given quantity of GHGs. If a country exceeds its national emissions targets, it can buy permits from countries that have remained within their targets. Similarly, companies within a country that prove able to reduce their emissions are allowed to ‘trade’ excess permits with other, more polluting, companies. The trading system involves the issuing of carbon credits for activities such as afforestation and reforestation, as long as the forest was established after 1990 and the carbon it is sequestering can be reliably measured. Credits are issued to the individual or company that is growing the forests and thus contributing to carbon sequestration. These credits can then be bought by a carbon emitter, such as a power company, to offset its excessive carbon emissions.
Carbon sinks  Article 3.3 of the Kyoto Protocol (KP) permits a Party partly to meet its emissions reduction target by creating carbon "sinks" that absorb and thus remove carbon from the atmosphere. The growing of new forests (see A/R), agricultural soils and certain types of monoculture plantations like oil palm are considered as carbon „sinks", and the KP has established detailed rules and methodology for calculating the amount of carbon removed by sinks as well as the carbon emissions from deforestation.

CDM  The Clean Development Mechanism (Art. 12 of the Kyoto Protocol) allows emission-reduction (or emission removal) projects in developing countries to earn certified emission reduction (CER) credits that can be traded and sold, and used by industrialized (Annex I) countries and companies to meet a part of their emission reduction targets under the Kyoto Protocol. The mechanism seeks to stimulate both sustainable development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction targets. Types of permissible CDM projects include renewable energy (wind, biomass, solar or hydro), switching to alternate fuels, oil and gas development, schemes for waste management, energy efficiency and agriculture, as well as carbon sequestration in A/R projects. The CDM framework is constantly evolving. As understanding of the nature and causes of GHG emissions has improved and their implications for climate change policy have grown, complex legal, financial and technical issues have arisen. It is likely that a structure similar to the current CDM will persist post-2012, with broader applicability, deeper emissions reduction targets and a longer commitment period. See "CERs" and http://cdm.unfccc.int/index.html.

CERs  Certified emission reductions. A CER is a unit of carbon credit issued according to Article 12 of the Kyoto Protocol and is equal to 1 metric tonne of CO₂ equivalent. CERs are generated by projects under the Clean Development Mechanism and are issued by the CDM Executive Board after approval by designated national authorities in the host countries, rigorous inspection and validation of the relevant developing-country projects by UNFCCC-accredited "designated operational entities" (DOEs), and the registration of the projects by the Board. Alongside emissions allowances, CERs are an additional instrument in emissions trading to help companies in industrialized countries offset their exceeded allowances. In mid-2008, the face-value of a CER was about US$ 30. The CDM is anticipated to produce CERs amounting to more than 2.7 billion metric tonnes of CO₂ eq by 2012, the end of the first commitment period of the Kyoto Protocol.

tCERs  The "carbon currencies" adopted at COP9 of the UNFCCC (Milan, 2003) are tCERs (temporary CERs) and lCERs (long-term CERs). A tCER expires at the end of the Kyoto protocol commitment period following the one during which it was issued. lCERs expire at the end of the crediting period of the A/R CDM project activity. Critics claim these limitations undermine the non-permanent CERs "fungibility" with other carbon credits. They say this will lead to significant price discounts for credits from CDM afforestation and reforestation (A/R), and could present obstacles for the implementation of A/R projects.

COP  Conference of the Parties, the principal regular meeting of the representatives of member–states to the UNFCCC and the UNCCD.

Copenhagen  The 2009 UN Climate Change Conference is scheduled for December 2009 in Copenhagen, where a successor to the Kyoto Protocol, which expires in 2012, should be adopted. The event will mark the 15th Conference of the Parties (COP 15) to the UNFCCC. "Copenhagen" is frequently referred to as a deadline by which, according to the Bali Roadmap, details of the post-Kyoto regime will have to be worked out and broadly agreed.

FAO  The UN Food and Agriculture Organization. www.fao.org

FDI  Foreign direct investment.

GEF  The Washington, DC-based Global Environment Facility, established in 1991, helps developing countries fund projects and programs that protect the global environment. The GEF is the financial mechanism for the Convention on Biological Diversity, the UNFCCC, the Stockholm Convention on Persistent Organic Pollutants and the UNCCD.

Germanwatch  An independent development and environmental research and lobby organization promoting sustainable global development, in particular North-South equity and the preservation of livelihoods. www.germanwatch.org

GHG  Greenhouse gas(es). Anthropogenic, or man-made, greenhouse gas(es) include CO₂ (carbon dioxide), CH₄ (methane) and N₂O (nitrous oxide) from the burning of fossil and bio-energy fuels, chlorofluorocarbon compounds (CFCs) used as refrigerants, propellants and cleaning compounds and other fluorinated gases with high global-warming potential.

GM  The Global Mechanism is a subsidiary body of the United Nations Convention to Combat Desertification (UNCCD). The GM provides advisory services to UNCCD Parties to increase the volume of funds and the variety of financing options for SLM. www.global-mechanism.org

IFAD  International Fund for Agricultural Development. www.ifad.org

Kyoto Protocol  The protocol, the key part of the UN Framework Convention on Climate Change, was adopted in 1997 by Parties to the UNFCCC in Kyoto, Japan, and entered into force on February 16, 2005. It sets legally binding targets
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on industrialized countries (known as 'Annex I Parties' or countries) for cutting the emissions of six anthropogenic greenhouse gases — mostly CO₂ caused by burning coal, oil and other hydrocarbon fuels as well as by deforestation and land degradation — by an aggregate 5.2% from 1990 levels. Developing countries (Non-Annex I Parties), including China, Brazil and India, are exempt from its conditions. Controversially, the USA has not ratified the Kyoto Protocol. The GHG abatement measures specified by the Kyoto Protocol were launched in 2008 and are to be completed by 2012, the year when the Protocol expires and is to be replaced by a new global agreement. See "CDM" and also http://unfccc.int/kyoto_protocol/items/2830.php

Leakage The unanticipated decrease or increase in GHG benefits outside of the project’s accounting boundary (the boundary defined for the purposes of estimating the project’s net GHG impact) as a result of project activities. For example, conserving forests that otherwise would have been cut down for farming may displace the same farmers to an area outside of the project’s boundaries, where they could engage in deforestation. The resulting carbon emissions are referred to as leakage. Positive leakage, on the other hand, occurs when a project introduces a beneficial new land management approach or technology, such as increased use of agroforestry or higher saw mill efficiency. If this technology is then more widely adopted outside the project's boundaries, the net GHG benefits are then larger than initially estimated. See also "Project boundary".

M&P Modalities and procedures. Usually employed in conjunction with the Clean Development Mechanism (CDM). For the official CDM statutes and operational annexes, see http://cdm.unfccc.int/Reference/COPMOP/08a01.pdf

MtCO₂-eq Megatons of CO₂-equivalent, a unit of measurement used to assess the global warming potential of greenhouse gases other than carbon dioxide. 1 MtCO₂ is thus one million tons of CO₂-equivalent.

ODA Official development assistance. ODA flows comprise the financial contributions of donor government agencies, in the form of loans and grants, to developing countries (“bilateral ODA”) and to multilateral development institutions like the African Development Bank, the European Union or the World Bank.

Post-Kyoto regime or post-2012 regime The unofficial name for the system of international agreements and arrangements, currently being negotiated, that is intended to take effect as a successor to the Kyoto Protocol when the first KP commitment period expires in 2012.

Project boundary Proper determination of the physical and conceptual boundaries of a given project for carbon credits is crucial. How a project’s boundaries are defined will govern calculations of its impact on carbon stocks and thus determine the issuance of carbon credits. Carbon accounting can be narrowly limited to aboveground vegetation within the geographical area of the project, or extend broadly to below-ground vegetation and soils on the project site, the effects of wood products, fossil fuel substitution, and other changes at the national or even the international level. Standards are being negotiated for the setting of boundaries in AFOLU projects and agreement on the inclusion of secondary emissions from, for example, the preparation of land prior to project launch or the emissions from car, air travel and machinery used for the project. See also "Leakage" and, for the state of play on the UNFCCC’s search for more flexible definitions: http://cdm.unfccc.int/public_inputs/2008/guid_boundAR/index.html

SBSTA The UNFCCC’s Subsidiary Body for Scientific and Technological Advice, along with the Subsidiary Body for Implementation (SBI), is a permanent subsidiary body established under the Convention.

Rio Conventions The three Rio Conventions — on Biodiversity (UNCBD), Climate Change (UNFCCC) and Desertification (UNCCD) — derive directly from the 1992 Earth Summit. www.cbd.int/rio

SLM Sustainable land management involves land-use practices that ensure land, water, and vegetation adequately support land-based production systems for current and future generations. SLM’s key principles are the productivity, security and protection of natural resources, economic viability and social acceptance. The concept, still evolving, embraces but also goes beyond sustainable agriculture, as it includes all land resources regardless of whether they serve agricultural purposes or not.


UNFCCC United Nations Framework Convention on Climate Change. www.unfccc.int

WFP World Food Programme. www.wfp.org