



REDD and REDD+

Key point

- **REDD+ is a proposed policy mechanism for a post Kyoto 2012 Climate Change Agreement.**

REDD and REDD+ explained

REDD is the abbreviation for “reducing emissions from deforestation and forest degradation”, followed by REDD+, with the “plus” referring to “the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries”.

Greenhouse gas emissions due to deforestation and forest degradation are the second-largest sector source of greenhouse gas emissions behind only the energy sector and ahead of the transport sector. Reducing deforestation would thus significantly reduce greenhouse gas emissions; and it would provide important secondary benefits, such as protecting biodiversity and producing rainfall.

REDD+ is seen as complement to land use, land use change and forestry projects that also targets developing nations for reductions in greenhouse gas emissions. At its most basic level, REDD+ can be perceived as a payment for ecosystems services scheme. REDD+ provides developing nations an economic alternative to the more destructive use of forest lands thereby providing developing nations and their people a financial incentive to keep their forests intact.¹

How it works

Greenhouse gas emissions due to deforestation and forest degradation account for nearly 20 per cent of global greenhouse gas emissions. It is for this reason, REDD+ is considered as a necessary part of any climate change mitigation actions.

REDD+ is a proposed policy mechanism currently under discussion within the UNFCCC Conference of Parties (COP) for reducing emissions from deforestation and forest degradation as well as to foster conservation, sustainable management of forests and enhancement of forest carbon stocks in developing nations. Beyond the environmental benefits of maintaining forests, REDD+ is seen as a mechanism for directing funds from the North to the South to help expand low-carbon development and poverty reduction.

The roots of REDD were laid in the land use, land use change and forestry framework, but REDD was excluded from the Kyoto Protocol because there were policy and methodology issues that were considered too difficult to solve at the time.² The avoided deforestation proposal was formally introduced and taken up as an agenda item in 2005 at COP 11 in Montreal.

At COP 13 under the Bali Action Plan, it was decided that REDD is to be included in a post-2012 framework and the details were to be decided during the COP 15 in Copenhagen. Subsequent to Bali, a number of proposals about the design of a REDD mechanism were proposed to the UNFCCC by the governments of both industrialized and developing countries as well as NGOs.

¹ *The Economist*, “Better REDD than dead: Tropical forests’ best hope”, September 23, 2010. Available from www.economist.com/node/17062737 (accessed 26 January 2012).

² Mark Belton, “REDD progress at Copenhagen”, *Policy Quarterly* (2010), vol. 6, No. 2, pp. 8-10. Available from ips.ac.nz/publications/files/fca25b2faa5.pdf (accessed 26 January 2012).

BOX: UN-REDD Programme

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries was launched in September 2008 to assist developing countries prepare and implement national REDD+ strategies. It builds on the convening power and expertise of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). The programme currently supports REDD+ readiness activities in 42 partner countries across Africa, Asia, the Pacific and Latin America.³

There are many contentious issues that a REDD+ framework must address. The way these issues are handled significantly shapes the way REDD+ works.

Deforestation and forest degradation

Deforestation and forest degradation may occur as a result of agricultural expansion, conversion to pastureland, infrastructure development, destructive logging and fires.⁴ Deforestation and forest degradation emit greenhouse gases in two ways: 1) it removes plants that have the ability to sequester carbon dioxide, and 2) it releases CO₂ from the combustion of any of the harvested wood. Additional emissions, though, can occur in a number of other ways.

Trees and vegetation are not the only part of forests that store carbon. In fact, a greater proportion of carbon – more than 80 per cent – is stored as “soil carbon” rather than in vegetation.⁵ Soil carbon is decaying plant and animal matter at various stages of decomposition in up to a metre of soil.⁶ When organic matter decays, it releases CO₂ and CH₄ (methane), two primary greenhouse gases.⁷ Human activities, such as tilling and deforestation, reduce the physical protection that soil has against decomposition and results in an increased rate at which greenhouse gases are released into the atmosphere.⁸ Felling and burning (a common practice for clearing land) combust soil carbon, releasing it into the atmosphere as CO₂. Forests also provide secondary benefits beyond the reduction of greenhouse gas emissions, including protecting the ecosystem biodiversity, producing rainfall and cooling the Earth’s surface.

Land use, land use change and forestry

In 1997, under the Kyoto Protocol, the United Nations Framework Convention on Climate Change (UNFCCC) recognized emissions and emission reductions (or “carbon stock changes”) as a result of land use, land use change and forestry activities. The UNFCCC categorizes these activities as “a major sector of greenhouse gas emissions”.⁹ In accordance with the Kyoto Protocol, industrialized nations (those listed in Annex I of the UNFCCC) must report carbon stock changes resulting from afforestation, reforestation and deforestation and may choose to report carbon stock changes resulting from forest management, cropland management, grazing land management and re-vegetation.^{10, 11}

³ United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries website “About the UN-REDD Programme”. Available from www.un-redd.org/AboutUNREDDProgramme/tabid/583/Default.aspx (accessed 27 March 2012).

⁴ *ibid.*

⁵ The Intergovernmental Panel on Climate Change, *IPCC Special Report: Land Use, Land Use Change and Forestry – Summary for Policy-makers* (World Meteorological Organization and United Nations Environment Programme, 2000). Available from www.ipcc.ch/pdf/special-reports/spm/srl-en.pdf (accessed 26 January 2012).

⁶ The Commonwealth Scientific and Industrial Research Organisation website “Soil Carbon: The Basics” (14 October 2011). Available from www.csiro.au/resources/soil-carbon.html (accessed 26 January 2012).

⁷ The United Nations Framework Convention on Climate Change website “Reducing Emissions from Deforestation in Developing Countries” (2012). Available from http://unfccc.int/methods_and_science/lulucf/items/4123.php (accessed 26 January 2012).

⁸ W. M. Post and K. C. Kwon, “Soil carbon sequestration and land-use change: Processes and potential”, *Global Change Biology* (2000), vol.6, pp. 317–328. Available from www.esd.ornl.gov/~wmp/PUBS/post_kwon.pdf (accessed 26 January 2012).

⁹ The United Nations Framework Convention on Climate Change website “Glossary of Climate Change Acronyms” (2012). Available from http://unfccc.int/essential_background/glossary/items/3666.php#L (accessed 26 January 2012).

¹⁰ United Nations Environment Programme GRID-Arendal website “Environmental Knowledge for Change: Opportunities and Challenges” (2011). Available from www.grida.no/publications/rr/natural-fix/page/3728.aspx (accessed 26 January 2012).

¹¹ The United Nations Framework Convention on Climate Change website “LULUCF under the Kyoto Protocol” (2012). Available from http://unfccc.int/methods_and_science/lulucf/items/4129.php (accessed 26 January 2012).

Specifics regarding the Kyoto Protocol were adopted under the Marrakesh Accords in 2001. Under those Accords, Annex I countries are allowed to gain credit for emission reductions from only reforestation and afforestation projects under Clean Development Mechanism (CDM) projects. Under Joint Implementation, Annex I countries can gain credit for projects from reforestation and afforestation as well as avoided deforestation and forest management. The commonly cited reason for only including reforestation and afforestation in CDM projects has been that questions remain over the issue of “leakage” – that reducing emissions from a project were merely increasing emissions elsewhere outside of the project boundary.¹²

Despite the opportunity for industrialized countries to gain credits for reforestation and afforestation projects in developing countries via the CDM, the use of the mechanism has been limited. As of August 2011, only 28 forestry CDM projects were registered (with two additional projects requesting registration) of a total of 3,347 registered CDM projects.¹³ Researchers have cited the main hurdles to forestry CDM projects as financial constraints (cash flow and the immediacy of returns, securing financing and profitability) as well as constraints associated with knowledge, skills and other social factors (lack of knowledge of the CDM registration process, the need for coordinating a large number of local actors and the need for strong governance).¹⁴

The land use, land use change and forestry framework has been subject to criticism. Commonly cited are the restrictive rules involved with land use, land use change and forestry projects, the lack of involvement with developing nations, complex monitoring and reporting requirements, incomplete coverage of carbon sources and sinks and that emission reductions from forestry were not included in original country targets but can be used to meet them (although industrialized countries can only include land use, land use change and forestry projects to offset 1 per cent of their base year emissions). Due to these various constraints and criticisms, there is little international policy currently supporting forestry carbon projects.

How does REDD+ differ from the land use, land use change and forestry framework?

First, REDD+ is to be exclusively a mechanism for projects in developing nations.¹⁵ The land use, land use change and forestry framework focuses on increasing the carbon held in forests and allows only for afforestation and reforestation projects through CDM. REDD is mostly focused towards avoiding carbon emissions from: 1) deforestation and 2) forest degradation, both of which are not currently allowed in the CDM. At the twenty-ninth meeting of the UNFCCC Subsidiary Body for Scientific and Technological Advice in Poznan, Poland in 2008, the avoided carbon emissions from: 3) conservation of forest carbon stocks, 4) sustainable management of forests and 5) the improvement of forest carbon stocks were given the same level of priority as deforestation and forest degradation. This has since been referred to as REDD+.

Timeline of REDD+¹⁶

11 December 1997 – Kyoto Protocol adopted and includes land use, land use change and forestry as a sector of emissions.

October/November 2001 – Marrakesh Accords (UNFCCC COP 7) specifies the nature of land use, land use change and forestry.

December 2005 – Avoided deforestation is proposed and accepted as an agenda item at the UNFCCC COP 11 in Montréal by the governments of Papua New Guinea and Costa Rica.¹⁷

¹² Romain Pirard, *Reducing Emissions from Deforestation and Degradation in Non-Annex 1 Countries* (London, The Climate Group, 2008). Available from www.theclimategroup.org/_assets/files/Reducing-Emissions-from-Deforestation.pdf (accessed 26 January 2012).

¹³ The United Nations Framework Convention on Climate Change website “Project Search” (2012). Available from <http://cdm.unfccc.int/Projects/projsearch.html> (accessed 26 January 2012).

¹⁴ Sebastian Thomas and others, “Why are there so few afforestation and reforestation Clean Development Mechanism Projects”, *Land Use Policy* (2010), vol. 27, No. 3, pp.880–887. Available from www.sciencedirect.com/science/article/pii/S026483770900204X (accessed 26 January 2012).

¹⁵ Climate Action Network Australia, *Count Down to Copenhagen: LULUCF and REDD*, CANA International Climate Summary Sheet No. 6 (Sydney, 2009). Available from www.cana.net.au/sites/default/files/CANASummary6_LULUCF_REDD_060809.pdf (accessed 27 March 2012).

¹⁶ Also see timeline in Carbon Planet, *Carbon Planet White Paper: the History of REDD* (Adelaide, 2009). Available from http://unfccc.int/files/methods_science/redd/application/pdf/the_history_of_redd_carbon_planet.pdf (accessed 26 January 2012).

¹⁷ The United Nations Framework Convention on Climate Change website “REDD: Background” (2012). Available from http://unfccc.int/methods_science/redd/items/4547.php (accessed 26 January 2012).

- December 2007** – The Bali Action Plan was adopted at the UNFCCC COP 13, setting a two-year timeframe to discuss the REDD framework.
- December 2008** – Introduction of REDD+ at Poznan SBSTA 29 of the UNFCCC COP 14.
- December 2009** – Industrialized countries pledge an additional US\$30 billion between 2010 and 2012 to developing nations and a goal of US\$100 billion per year by 2020 as part of the Copenhagen Accords (COP 15), with part of the funding to go towards REDD+.
- December 2010** – The Cancun Agreements (UNFCCC COP 16) provided guidance to entities and countries assisting the REDD+ readiness process (the “fast-start period until 2012), on the phased approach and on requirements for developing countries, such as the national plans, national reference emission levels, transparent national forest monitoring systems and a safeguard compliance system.¹⁸ Agreement was also made on the creation of a Green Climate Fund.
- December 2011** – During UNFCCC COP 17 in Durban, countries agreed to a second commitment period of the Kyoto Protocol post 2012. The Clean Development Mechanism and the Joint Implementation will be operational in the second period.¹⁹

Design issues and challenges for REDD+

There are several important and contentious issues that the REDD+ framework must address. These issues are still being debated, and the actual design of REDD+ has yet to be determined. The following descriptions of the design issues capture only the basics of what are very complicated issues. Each option to address these issues has strengths and weaknesses and offers varying levels of benefits to the numerous actors involved.²⁰

Scope – Scope can refer to a number of issues:

- a. **Activities included** – One issue of scope is to determine the type of activities that would be considered in a REDD+ framework; deforestation, forest degradation, conservation of forest carbon stocks, sustainable management of forests, enhancement of carbon stocks or a combination of them.
- b. **National-based policy versus project-based policy** – Should REDD+ be instituted as a national-based policy or as a project-based policy? This is important because it also affects a number of other design issues regarding permanence and leakage. Some proposals have incorporated aspects of both.
 - i. A national-based policy would require participating countries to account for all their forestry emissions. A benefit of this type of policy is that it accounts for in-country leakage. A disadvantage is that it may create bureaucratic procedures that discourages outside investors.
 - ii. A project-based policy would resemble the current CDM system. It would be easier to implement and attract more private investment, but it may be difficult to account for leakage.

Reference level or baseline – This is the benchmark that future emissions will be compared with to determine whether and how much emissions reduction has occurred. There are several options for how to calculate a baseline. One option is a historical baseline; for example, if a country deforested 1 million hectare of forests every year between 1990 and 2005, any rate of deforestation less than 1 million hectare would be considered an emissions reduction. A severe limitation in this type of system is that it does not account for changes in behaviour over time. Another option is a projected baseline that aims to predict changes in deforestation rates through modelling, which is still imprecise and based on numerous assumptions.

Financing – Several financing options have been suggested. One option is a market-based mechanism that would trade certified emission reductions (CERs) similar to the Clean Development Mechanism in an “offsets” market in which industrialized nations can purchase emission credits to offset their emissions and thus meet their respective emissions reduction commitments. Additionally, an auction process (or a market link) has been proposed as well as a voluntary approach involving a fund.

¹⁸ World Resources Institute website “The REDD+ Decision in Cancun” (20 December 2010). Available from www.wri.org/stories/2010/12/redd-decision-cancun (accessed 6 March 2012).

¹⁹ World Resources Institute website “A Look Back on the Durban Talks” (23 February 2012). Available from <http://insights.wri.org/news/2012/02/look-back-durban-climate-talks> (accessed 6 March 2012).

²⁰ Carbon Planet, *Carbon Planet White Paper: The History of REDD* (Adelaide, 2009). Available from http://unfccc.int/files/methods_science/redd/application/pdf/the_history_of_redd_carbon_planet.pdf (accessed 26 January 2012).

Distribution of revenues – An important issue to address is where the money goes. There are some countries that are highly forested yet have low rates of deforestation. Under an emissions reduction scheme, they would not receive financial benefits for keeping their forests intact. At a more local level, the revenues a country receives must also be distributed to the people in a transparent and equitable manner.

Human rights issues – A large portion of lands that will be targeted by REDD+ will likely be lands of indigenous people and other communities. Many of the world's poorest people, including indigenous people, live in forests and depend on them for their food and livelihoods. As inhabitants, these people have an important role in preserving and protecting the forest ecosystems. The rights of indigenous people to free, prior and informed consent is internationally recognized, and a REDD+ framework must uphold their rights, as with any citizen, to self-determination, culture and livelihoods.^{21, 22}

Leakage – Leakage is the concept that a project's activities may result in greenhouse gas emissions increases or decreases outside of the project boundary. This may be a factor in any type of greenhouse gas mitigation project; but in the context of REDD+, the concern is negative leakage – that decreased deforestation in a project area would result in increased deforestation in another area.

Permanence – There are questions regarding the longevity of carbon reductions via REDD+ activities. Emissions reductions one year can be rapidly undone the next as a result of fire, pest outbreak and change in management, among other things. Some argue this is a greater concern for REDD+ than with fossil fuels, but others say that the same is true for both: emissions reductions from fossil fuel use can also be undone rapidly.

Monitoring, reporting and verification – The ability to verify the results of projects is imperative in REDD+ but measuring the amount of carbon stored in forests is difficult and imprecise. Although the technical capability and expertise to measure deforestation has become sufficient in recent years, there are still concerns as to how cost-effective these monitoring programmes can be.

Offsets versus reductions for industrialized countries – There is considerable opposition to REDD+ on the basis that it is another method by which industrialized nations can continue to pollute while not decreasing their own emissions and rather offsetting them. These critics argue that emission reductions must also come from the developed countries and cannot only come via offsets.

Current and ongoing REDD+ activities

Although the REDD+ framework is still being discussed and has not yet been ratified, work has already started, with initiatives to help prepare countries for when it begins:

Norway – Norway has taken a leading role in supporting REDD+ initiatives. Norway provided the initial US\$52 million funding to start the UN-REDD Programme for developing countries. In addition, Norway has worked with the governments of Brazil, Guyana and Tanzania in different capacities, providing funding and capacity building.

Indonesia – Norway has committed up to US\$1 billion of forest aid over the next seven to eight years (depending on performance) to Indonesia to reduce greenhouse gas emissions from deforestation and forest degradation. A first payment of US\$30 million was paid in August 2010. Notable is that this is not an offsets project because it

²¹ The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, *Perspectives on REDD+* (Geneva, Food and Agriculture Organization of the United Nations, United Nations Development Programme and United Nations Environment Programme, 2010) Available from www.unredd.org/NewsCentre/Perspectives_on_REDD+/tabid/6594/Default.aspx (accessed 26 January 2012).

²² Kingdom of Norway, Ministry of the Environment website "The Government of Norway's International Climate and Forest Initiative". Available from www.regjeringen.no/en/dep/md/Selectedtopics/climate/thegovernment-of-norways-international-/why-a-climate-and-forest-initiative.html?id=547202#The%20UN%20system (accessed 26 January 2012).

²³ Amantha Perera, "Jakarta Must Set Up Forest Bodies to Unblock Aid: Norway", *AlertNet*, August 1, 2011. Available from www.trust.org/alertnet/news/jakarta-must-set-up-forest-bodies-to-unblock-aid-norway (accessed 26 January 2012).

²⁴ Royal Norwegian Embassy in Jakarta website "Norway-Indonesia REDD+ Partnership: Frequently Asked Questions" (31 May 2010). Available from www.norway.or.id/Norway_in_Indonesia/Environment/-FAQ-Norway-Indonesia-REDD-Partnership-/ (accessed 27 March 2012).

will not count towards Norway's greenhouse gas reduction commitments. Any reductions will be additional to Norway's commitments.²⁴

Forest Carbon Partnership Facility – The Facility is a global partnership helping to prepare countries for future REDD+ activities. The Facility oversees two funds, a Readiness Fund and a Carbon Fund, which are under the trusteeship of the World Bank. The two funds total US\$447 million currently under management. Up to US\$3.6 million can be provided to partner countries as readiness grants for helping countries in their preparatory work.²⁵

Brazil's Amazon Fund²⁶ – In July 2008, Brazil's president at the time, Luiz Inácio Lula da Silva, launched the Amazon Fund to raise and collect donations for non-reimbursable investments that promote the preservation of forests in the Amazon biome. Non-reimbursable investments means that no credits for emission reductions are generated, and donors to the Amazon Fund are not able to count emission reductions generated by the Amazon Fund towards their emissions reduction targets.

The Fund is not a programme of the federal Government. It is governed by multiple actors divided into a number of groups. It is mainly governed by two committees, the Steering Committee (COFA) and the Technical Committee (CTFA). The COFA is made up of representatives from the federal and state governments as well as civil society and is responsible for posting guidelines and monitoring results. The CTFA consists of six authoritative technical and scientific experts appointed by the Ministry of Environment who certify the emissions figures from deforestation.

Funds are managed by the Brazilian National Development Bank, which retains 3 per cent of donations to cover the management costs. The Brazilian bank is responsible for the assessment of the preliminary applications.

The Amazon Fund received an initial pledge from the Government of Norway for up to US\$1 billion by 2015, based on performance. Of that US\$1 billion, the Amazon Fund had received US\$110 million as of September 2011. The Amazon Fund received its second donation from the Government of Germany through the German Development Bank (KfW), which committed to giving US\$27.8 million. Not all of the funds must stay in Brazil – up to 20 per cent may be used in other tropical countries.

The Amazon Fund works in a project-based manner: Project applications may be submitted to the Brazilian National Development Bank for consideration by government (federal, state or local bodies), NGOs, private companies, universities, etc. By decree, the Amazon Fund supports projects that fall into the following scopes:

- Management of public forests and protected areas
- Control, monitoring and environmental inspection
- Sustainable forest management
- Economic activities developed through the sustainable use of the forest
- Ecological and economic zoning, land-use planning and land-title regularization
- Conservation and sustainable use of biodiversity
- Recovery of deforested areas.

As of 15 September 2011, 59 projects had been submitted to the Amazon Fund and are active. Of them, 15 projects are in the initial stages of being "submitted"; 25 projects are "under analysis"; and 19 projects are in the final stage of being "approved."

The Amazon Fund is noted for several strengths and weaknesses.²⁷ The Fund has not yet raised additional funds beyond Norway and Germany's donations. It originally aimed to target 50 per cent of its funding towards scientific research and innovation but has not found a way to achieve this. In addition, funding has not been reaching grass-roots organizations. Many have questioned the lack of transparency of the Brazilian National Development

²⁵ The Forest Carbon Partnership Facility website "About FCPF: Introduction". Available from www.forestcarbonpartnership.org/fcp/node/12 (accessed 26 January 2012).

²⁶ Amazon Fund website "Frequent Asked Questions". Available from www.amazonfund.gov.br/FundoAmazonia/fam/site_en/Topo/FAQ/ (accessed 26 January 2012).

²⁷ Simon Zadek, Maya Forstater and Fernanda Polacow, "The Amazon Fund: Radical Simplicity and Bold Ambition – Insights for Building National Institutions for Low Carbon Development", Working Paper (Buenos Aires, Avina Foundation, 2010). Available from www.eurocapacity.org/finance/documents/Amazon_Fund_working_paper.pdf (accessed 26 January 2012).

Bank and the Fund as well as the lack of a grievance mechanism. Some critics suggest that the Brazilian bank is understaffed for such a project and that this will limit its ability to visit and reach communities to build local capacity and communication.

On the other hand, the Amazon Fund represents an early experiment for what a national climate fund could resemble. It has been cited for its quick development and its break from convention in terms of the configuration of governance and control mechanism. The Fund is also cited for its low-cost management through the arrangement with the Brazilian National Development Bank.

The medium- to long-term outlook of the Amazon Fund is unclear. The Brazilian Government had stated a need for US\$1 billion a year of international contributions and a goal of US\$20 billion by 2021. Some have questioned its medium- to long-term strategic approach, or rather, that it is lacking.

Viet Nam – In 2009, Viet Nam became one of nine UN-REDD Programme pilot countries. Approximately 40 per cent of Viet Nam is covered by forests, which sustain great biodiversity. US\$4.38 million has been approved for planning and implementing national-level activities.^{28, 29}

Further reading

The Little REDD+ Book: An Updated Guide to Governmental and Non-Governmental Proposals for Reducing Emissions from Deforestation and Degradation, by C. Parker and others (Oxford, Global Canopy Programme, 2009). Available from www.globalcanopy.org/materials/little-redd-book.

²⁸ United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, "Reports & analysis: US\$4.38 million UN-REDD+ Viet Nam programme launched", *Newsletter*, Issue 2, September 2009. Available from www.unredd.org/NewsCentre/Newsletterhome/US438millionUNREDDVietNamProgrammelaunch/tabid/1469/language/en-US/Default.aspx (accessed 26 January 2012).

²⁹ The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries website "Viet Nam" (2009). Available from www.unredd.org/UNREDDProgramme/CountryActions/VietNam/tabid/1025/language/en-US/Default.aspx (accessed 26 January 2012).