

Notes and terminology

Note 1: Carbon offset systems: Some emissions of greenhouse gases are unavoidable during the course of daily life and economic activities. Carbon offset systems are based on the idea that emissions that still occur after making as much reduction effort as possible can be offset by investing in other activities to achieve a reduction of a similar amount of greenhouse gas emissions elsewhere. This approach first took hold in Europe, and an initiative to popularize this approach in Japan was launched on the basis of the Ministry of the Environment's "Guidelines for Carbon Offsetting in Japan," published in February 2008.

In November 2008, the Offset Credit (J-VER) scheme was inaugurated to provide verification for emission reductions and removals achieved by forestry and other efforts to reduce emissions within Japan. A Carbon Neutral Certification scheme was introduced in September 2011, and in May 2012 this was combined with the Carbon Offset Certification scheme to create the unified Japan Carbon Offsetting Scheme.

See also the Ministry of the Environment website:
http://www.env.go.jp/en/earth/ets/mkt_mech.html#04

Note 2: REDD-plus: REDD (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) is an international initiative that aims to promote reductions in greenhouse gas emissions by providing financial incentives to developing countries to control deforestation and forest degradation, and to conserve forests. REDD only applies to the control of deforestation and forest degradation. REDD-plus also includes forest conservation, sustainable forest management, and efforts to increase carbon sequestration in forests.

The framework and other features of REDD-plus are currently being debated under the Framework Convention on Climate Change (UNFCCC), so international rules have not yet been fixed. Nevertheless, a number of pilot projects and projects to support capacity building in developing countries are already being conducted by developed nations, international entities, private businesses, and NGOs.

Issues raised concerning REDD-plus include how to set reference levels, how to establish monitoring techniques, and how to handle governance and ensure consideration for indigenous peoples and for biodiversity. Voluntary guidelines such as the VCS (Verified Carbon Standard) and CCB Standard have been produced, but until now there has not been a sufficiently rigorous scientific monitoring method for the carbon accumulated in tropical peatland.

More information is available in a JICA pamphlet:
<http://www.jica.go.jp/publication/pamph/pdf/redd.pdf>

Note 3: In a 2006 report, Hoojier et al. estimated the total annual carbon emissions from tropical peat (fires + aerobic decomposition) for the whole of Southeast Asia to be 554 GgC (carbon equivalent). Nearly all of those emissions appear to originate in Indonesia. In contrast, statistics show that Japan's anthropogenic carbon emissions (consumption of fossil fuels + cement manufacture) were 311 GgC (carbon equivalent) in 2010.

Note 4: MRV system (monitoring, reporting and verification system): A systematic approach to

the process of ensuring that carbon emissions reductions are measurable, reportable, and verifiable. Carbon removals are continuously quantified for use as the basis for carbon offset credits and other policy measures.

Note 5: Eddy covariance technique: A micrometeorological technique employing an ultrasonic anemometer and infrared gas analyzer to directly measure CO₂ flux between the atmosphere and an ecosystem on the ground. Used to measure the amount of CO₂ captured or released by forest or farmland over a certain period.

Note 6: El Niño: A climatic phenomenon where ocean surface temperatures are warmer than average over a wide area of the tropical Pacific Ocean from near the International Date Line to the coast of Peru in South America, and remain elevated for a period of about a year. During an El Niño period, east winds are lighter than average, and warm water that generally remains in the west extends eastward. At the same time, upwelling of cold water in the east is reduced. These conditions result in ocean surface temperatures higher than usual in the central and eastern areas of the tropical Pacific Ocean. In Indonesia, the dry season is prolonged, and drought often occurs. As a consequence, peatland ground water levels fall, and there are often large forest or peatland fires.

Note 7: SATREPS (Science and Technology Research Partnership for Sustainable Development) is a Japanese government program that promotes international joint research to address global issues through three- to five-year projects involving partnerships between researchers in Japan and researchers in developing countries. The program is collaboration between the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA). JST uses research contracts to support research costs incurred in Japan (and in other locations outside the developing country involved in the project). JICA provides support through its technical cooperation project framework to cover costs in the developing country. Overall R&D management of the international joint research is handled jointly by JST, which has expertise in funding research projects at research institutions in Japan, and JICA, which has expertise in technical cooperation in developing countries. Details are available at the JST website: <http://www.jst.go.jp/global/english/about.html>