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Carbon trade: Do we know what we are doing?

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Introduction

Despite the establishment of the Office of Climate Change and Environmental Sustainability (OCCES) and the Government's push for carbon trade, many Papua New Guineans are not conversant with the issue. Simply put, very little has been done by the OCCES to promote the concept. Moreover, scant stakeholder consultation has been carried out to gauge the views of forest owners and other interested parties on the issue.

Carbon trade was designed for a noble cause, which would foster improvement in the general living standard for the bulk of the populace in developing countries, and change the way that developing and developed nations address their environmental issues, as they affect the sustainability of the planet Earth.

Carbon trade will surely affect the lives of many Papua New Guineans and the way that they utilise or conserve their resources. Therefore, some basic information is required to assist ordinary Papua New Guineans to appreciate the importance of carbon trade and its impacts. This paper provides some basic information to assist Papua New Guineans to better

understand the concept, so that they can engage meaningfully in the debate about, and development of, the lucrative carbon trade. The paper also highlights pressing issues that must be addressed and provides recommendations to enhance the development of carbon trade legislation in Papua New Guinea.

Carbon trade and its objectives

Global warming and the resultant climate change have been attributed to a build-up of human-induced greenhouse gases (GHGs) in the Earth's atmosphere. In order to curtail the problem, experts state that, by reducing GHG emissions from human-induced activities, we may stabilise the Earth's rising temperature and reduce the adverse effects of climate change.

Carbon trade is a market mechanism that was developed to address the problem of global warming and the resultant climate change. Literally, it is the buying and selling of GHGs on carbon markets. The primary objective of carbon trading is to reduce human-induced greenhouse gas emissions from known sources.

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International obligations

International carbon trade kicked off in 2005 following the signing of the Kyoto Protocol.

Developed nations (Annex 1 countries of the Kyoto Protocol) were given the choice of spending money to cover the cost of cutting down on their GHG emissions or to keep polluting and pay someone else to cut their emissions.

Developing nations (non-Annex 1 countries of the Kyoto Protocol) were given the choice of trading carbon credits from their forests and other sources of emissions with Annex 1 countries, in exchange for the reduction of the latter's GHG emissions. Non-Annex 1 countries were not expected to reduce their GHG emissions from fossil fuel and agricultural activities because their emissions from these sources were insignificant by world standards. Nevertheless, non-Annex 1 countries which had tropical forests were required to address the issue of deforestation and degradation of forests because GHG emissions from such activities alone contributed some 17-20 percent of the world's human-induced GHGs.

Carbon markets and trends

Two types of international carbon markets exist – *the regulated (Kyoto-compliant)* and *the voluntary market*. The regulated market is driven by the need to comply with legislation, while the voluntary market is driven by the need to demonstrate corporate or personal responsibility to the environment.

Carbon is a hot market commodity and is set to become one of the biggest markets in the world. The value of the international carbon market increased from US\$14 billion in 2005 to US\$125 billion in 2008. The price per tonne of carbon dioxide also increased from US\$60 to US\$150 in the same period.

Currently, the regulated market has a larger share of the carbon trade market and is paying better prices for carbon credits that are traded. However, the voluntary market has now improved its regulations and increased its prices for traded carbon credits. The market has significantly increased since 2006. However, the regulated market has not attracted as many forestry projects as the voluntary market (1% compared to 36 %).

What can PNG do to trade carbon credits?

Papua New Guinea has 29 million hectares of natural forests and 64 000 hectares of forest plantations. Moreover, PNG has some 3.2 million hectares of grassland and savannah, a percentage of which could be developed into forest plantations and used as carbon sequestration projects. Carbon credits from these forests can be traded on the international carbon markets.

Major municipalities in PNG dispose of large amounts of solid waste each year, while households in major municipalities and oil palm mills discharge large amounts of waste water annually. The solid waste and waste water are allowed to naturally breakdown in solid waste dumps and sewage ponds, respectively, with large quantities of methane gas being emitted directly into the atmosphere. The emitted methane gas can be captured using biodigestors and used as clean, renewable energy for cooking and electricity generation. The carbon dioxide equivalents of the large amounts of methane gas that are emitted can be traded as carbon credits on carbon markets.

Natural phenomena such as hot springs, tidal currents (for example, Buka Passage), wind, solar energy, and the many rivers and creeks in PNG could be used to generate electricity without the emission of GHGs. The offset of the fossil fuel that could be used to run conventional generators can be traded as carbon credits on the carbon markets.

What are the pressing issues?

Despite the technical, bureaucratic and political setback with carbon trade in PNG, progress on the international scene is moving rapidly. Therefore, we must keep pace with the rest of the world or be left behind. In order to move forward, some pressing issues must be addressed:

Time is running out: Time is not on our side in terms of carbon trade. At the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP)-13 in Bali, Indonesia, in 2007, the Reduced Emissions from Deforestation and Degradation (REDD) of Forest concept was approved as a mitigation measure for the adverse effects of climate change.

- However, rainforest nations were encouraged to carry out further work on the concept for presentation at UNFCCC COP-15 in Copenhagen, Denmark, in December 2009. Have we done anything to present at this meeting?

The Kyoto Protocol will expire in 2012 and will be succeeded by a new treaty. However, the actions we take now will, to some extent, determine the nature of the new treaty and the future of REDD in international carbon trade. We must start to do something constructive now, as 2012 is only three years away.

- *Equity of benefit sharing:* As all natural forests in PNG are owned by customary landowners, a larger share of benefits from natural forests should go to customary landowners. However, this does not stop the Government from being the ‘gatekeeper’. The *Forestry Act* and *Forestry Policy* are the only two legal mechanisms that govern the sharing of benefits from forests in PNG. Currently, the ratio for timber royalties is generally 75:25 for landowners and the government, respectively. Should the ratio change for the benefit of carbon trade, new legislation and policies must be enacted to that effect. Anything else should be deemed illegal.

- *REDD and other mitigation measures:* The REDD concept has gained prominence and is perceived to be the only mitigation measure for climate change in PNG. The concept has the potential to generate a great deal of revenue for the country. However, it is not the only mitigation measure for climate change. Afforestation, the capture and use of methane from waste (solid and liquid), and the use of natural phenomena, as mentioned earlier for clean electricity generation, are some of the mitigation measures that can be implemented in PNG.

Since its establishment, the OCCES has not done — or said — much on these mitigation measures for climate change. Consequently, landowners and organisations responsible for afforestation, waste management, and renewable energy development are either not aware of what is happening or do not know where they fit into the carbon trade business.

- *Carbon leakage and non-permanence:* One requirement in a forest carbon project is that forests must not be deforested (clear-felled), destroyed, or degraded during the agreed

period for carbon sequestration. The deforestation, destruction, and degradation of forests during the agreed period will lead to what is known as *carbon leakage*. The existence of the forest in the same form for the agreed period of carbon sequestration is called the *permanence* of the project. Under the Clean Development Mechanism (CDM) rules, temporary certified emissions are issued every five years, and payments are made for carbon that has been sequestered, after a five-year period. However, *permanence* is an issue that has yet to be resolved.

In PNG, people own the land, and therefore, have the right to do what they want with their land and forests. Moreover, the rate of vandalism to public and private property is probably one of the highest in the world, which increases the risks of *carbon leakage* and *non-permanence* of carbon sequestration projects in PNG. Therefore, some form of mechanism must be put in place to address land use and control *carbon leakage* and *non-permanence* of carbon sequestration projects.

Recommendations

The following recommendations should be adopted in order to see some progress in PNG’s endeavour to trade carbon credits:

- The OCCES should organise roadshows to promote the technical, legal, and policy aspects of carbon trade so that ordinary Papua New Guineans understand the issues.
- Time is running out. Therefore, we must move quickly. If the OCCES does not have the capacity to do some of its work, Papua New Guinean consultants should be engaged to carry out some of its activities. If the existence and activities of the OCCES are deemed illegal, a Secretariat should be established to coordinate the carbon trade work. Respective government entities, such as the National Forests Authority, Department of Environment and Conservation, and so on should then undertake what is within their jurisdiction and contribute to the development of carbon trade.
- The legal and technical implications of separating carbon from trees is complex. People have already questioned the legality and equity of the benefit sharing scheme proposed by the OCCES, through the media and in parliament. Therefore, benefit sharing in carbon trade should adopt what is used in the forestry sector.

- The OCCES should widen its scope of work on carbon trade to include methane capture, afforestation, and the natural phenomena mentioned earlier, rather than concentrating on REDD alone. The future of REDD is still uncertain, and the Kyoto Protocol will be succeeded by another treaty after 2012. All these issues should be considered in order to be on the safe side.
- In order to control *carbon leakage* and *non-permanence*, a National Land Use Plan must be developed to cater for differ-

ent sectors of development so that conflicts of interest or competition in forested land for development can be avoided. Failure to do so could see things being done on an *ad hoc* basis and this could lead to the carbon trade business becoming unsustainable in PNG.

About the Author

Nalau Bingeding is a Research Fellow in the Social and Environmental Studies Division at the National Research Institute.

NRI Publications on Climate Change

Other NRI publications on climate change and carbon trade include:

Understanding Climate Change: Developing a Policy for Papua New Guinea.
NRI Occasional Paper No. 1, Prof. Chalapan Kaluwin, 2008 (K12).

Climate Change and Reduced Emissions from Deforestation and the Degradation of Forests. Spotlight with NRI, Vol. 2, No. 3, Nalau Bingeding, 2008 (free issue).

Contact Naime Onea, Publications Officer on 326 0300 ext. 328 to obtain copies of these publications.

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