

Land-use Change and Terrestrial Carbon Stocks: Capacity Building, Impacts Assessment, and Policy Support in South and Southeast Asia (APN 99004)

Project Leader:

Dr. Daniel MURDIYARSO
Global Change Impacts Center for Southeast Asia (IC-SEA)
Jl. Raya Tajur Km 6
P.O. Box 116
Bogor
INDONESIA
Tel: +62 251 371 655
Fax: +62 251 371 656
E-mail: d.murdiyarso@icsea.or.id

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APN Funding

US\$ 129,000

List of participating countries

Indonesia, Malaysia, Philippines, Sri Lanka, Thailand

Introduction/Background

Changes in land-use and cover in rapidly developing Asia, apart from their immediate implications for the structure and functioning of terrestrial ecosystems, also have longer and larger-scale implications for global climate and biodiversity. A key management issue is how to improve sequestration and long-term storage of carbon in the landscape, while at the same time meeting needs for food, fibre and energy. Estimating carbon stocks and understanding their dynamics is crucial, both from the perspective of sustainable landscape management and global change feedback.

This activity aims to provide technical and policy liaison support to the nations of South and Southeast Asia so they can be ready to participate in the Kyoto Protocol using the best available research-based knowledge. The project involves training workshops, a series of commissioned studies, and a science-policy workshop.

Outline of activities conducted

(1) Training Workshop

In order to anticipate the challenge the capacity of the scientists and those involved in management of natural resources, a Training Workshop on the *Assessment and Modelling of Terrestrial Carbon Stocks* was conducted. The specific objectives of the Training Workshop are:

- To build the capacity of South and Southeast Asian scientists and resource managers to assess the impacts of land-use change on terrestrial carbon stocks, including above- and below-ground biomass
- To facilitate the synthesis of commissioned reviews on the issues related to the impacts of land-use/cover change on terrestrial carbon stocks

The class and laboratory works were organised in Bogor, and the field works were conducted in Jambi Province, Indonesia (Appendix 1). The workshop which run from 3 through 16 August 1999 was attended by 20 people (Appendix 2) coming from different background (scientists, NGO personnel and government officers) from the region and supported by 5 Resource Persons.

(2) Commissioned Reviews

Following the workshop, a series of reviews on the existing data and information was commissioned to a number of people working in six different groups. Additional measurements were carried out when data was lacking. These reviews covered the following topics:

- Assessment of above-ground C-stocks using RS/GIS techniques, by Bogor Agricultural University, Indonesia
- C-stocks assessment of forest land-uses in the Philippines, by UPLB, Philippines
- C-stocks assessment in oil-palm plantations, by SEAMEO BIOTROP, Indonesia
- Assessment and simulation of above- and below-ground C dynamics, by Brawijaya University, Indonesia

- GHG emissions from soils under changing land-use, by IC-SEA, Indonesia
- Use of successional species in enhancing C sequestration in degraded lands, by University of Ruhuna, Sri Lanka.

The results of the reviews were presented in the Science-Policy Workshop described below. There is an attempt to publish the results either individually or jointly.

(3) Science-Policy Workshop

This activity is key to the overall series of the APN supported project as far as the policy support is concerned. IC-SEA, once again strives to bridge the gaps between scientific and policy communities. It was clearly declared that scientific undertaking should be policy relevant meanwhile public policy making should also be based on scientific understanding. By selecting the theme of "*Terrestrial Carbon Assessment for Possible Trading Under CDM Projects*" the event was designed to achieve the following objectives:

- To provide a forum where scientific, policy and business community could interact and share their views and experiences in understanding issues around carbon and climate change
- To anticipate the operationalisation of Kyoto Protocol especially trading of carbon through CDM Projects in land-use and forestry sector
- To seek the business opportunities and examine the risks while enhancing forest environmental services to meet sustainable development criteria

This is particularly urgent because since its adoption in December 1997, the Kyoto Protocol is continuously under scrutiny at many levels before its ratification at COP6 late this year. The operationalisation details of the Protocol are awaited with expectations ranging from enthusiasm for the golden opportunities it might create through scepticism over the willingness of the parties to make a real binding commitment to the build-up of atmospheric carbon dioxide. It is high time to communicate the results of the assessment to the policy communities and others concerned with the issue through this interactive event.

The workshop was held on 28-29 February 2000 (Appendix 3) and was attended by 41 participants (see Appendix 4) representing government agencies, business communities, NGOs, Universities and research organisations. The presentations were basically grouped into four sessions before the Breakout Working Group. Those sessions were Scientific Understanding and Support, Public Policy Responses, and Business Perspectives.

It was recommended that forestry sector may be included in the CDM Projects if it supports sustainable forest management, and the benefit and risk is shared fairly. Therefore, the group strongly felt that the most immediate action to take is that the governments need to discuss the issue more seriously. Among others are concerning with the development of National CDM Guidelines, the promotion of Capacity Building, and the development of Impact Assessment Committee.

Outcomes/Products

Trained people are now working on this field independently or in collaboration with IC-SEA. Policy network is maintained through a discussion list called SEA-SPAN (Southeast Asian Science-Policy Advisory Network for Global Change) and the URL is <http://www.icsea.or.id/sea-span/>.

The project URL is <http://www.icsea.or.id/apn/apnicsea.htm>.

Future directions/follow-up work

The following publications are under development or to be followed up:

- Policy brief
- Technical Report
- Reviewed publications

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