

CARBOPEAT Meetings in 2008

Plans are now well underway for the two CARBOPEAT meetings to be held later this year in Tullamore, Ireland and Kuching, Malaysia.

The first meeting will be held as part of the 13th International Peat Congress (see www.ipcireland2008.com) between 8th and 13th June. Reduced rates for registration will be available until 31st March 2008. On Tuesday 10th June, there will be a special session on tropical peatland (Future of tropical peatlands in Southeast Asia as carbon pools and sinks), sponsored by CARBOPEAT. A number of CARBOPEAT funded travel grants may be available to enable delegates to attend this conference - a notice will appear on the CARBOPEAT website so keep checking if you are interested.

The second meeting will be held in Kuching, Sarawak between 19th and 22nd August. The conference website has been launched and the first announcement is also now available (www.frst.unimas.my/iswtp_kch08). The closing date for submitting abstracts is 30th April and a reduced conference fee is available until 31st March - so register now.

Meet the partners

Henk Wösten

Henk Wösten graduated in soil science from Wageningen University with majors in soil physics, soil tillage and theoretical plant production. He worked at the International Institute of Tropical Agriculture (IITA) in Ibadan, Nigeria (postdoctoral fellow in the Grain-Legume improvement program). After returning to the Netherlands he was employed as senior researcher at the Netherlands Soil Survey, Staring Centre and now Alterra (see below).



Henk's PhD thesis was entitled "Use of soil survey data to improve simulation of water movement in soils". At first his professional interests were in the field of soil physical characterisation of soils, development of pedotransfer functions and sustainable use of tropical acid sulphate soils. He published papers in international journals on the functional evaluation of soil hydraulic characteristics, development and use of pedotransfer functions and soil physical measurement techniques. He co-ordinated the European Union (EU) funded project on the development and use of a European database on soil hydraulic characteristics (HYPRES). Presently he is involved in EU funded projects on the development of strategies for the sustainable management of peat soils in Borneo. He is an expert on peat subsidence in relation to land use and associated water management. He now publishes papers on soil physical aspects of sustainable peatland management and acid sulphate soils, nutrient cycling in mangrove forest, transport of water and solutes in soils and physical aspects of peat subsidence.

Alterra – Wageningen University and Research Centre



Alterra is the research institute for our green living environment, offering a combination of practical and scientific research in a multitude of disciplines related to the world around us and the sustainable use of our living environment. Flora and fauna, soil, water, the environment, geo-information and remote sensing, landscape and spatial planning, man and society: just a

few of the numerous aspects of our green environment that Alterra focuses on.

Alterra is part of the Wageningen University and Research Centre concern (Wageningen UR). In research and education it closely co-operates with the school of Environmental Sciences from Wageningen University. This partnership contributes to a high quality and sustainable green living environment. The exchange of expertise and capacity and the match between fundamental and practical research in various projects Alterra believes give them a scientific advantage. Alterra's research is divided over five centres: Ecosystems, Geo-Information, Landscape, Soil Science and Water and Climate. Employing over 500 researchers supported by staff in marketing, communications, human resources, finance and facilities.

www.carbopeat.org

Carbon–Climate–Human Interactions in Tropical Peatlands: Vulnerabilities, Risks & Mitigation Measures

CARBOPEAT News

Issue 3 January 2008



A European Union (EU) funded project involving partners from both the EU and Southeast Asia. The aim is to promote better understanding and awareness of the issues surrounding carbon-climate-human interactions in tropical peatlands.

Welcome to the latest version of the newsletter of the CARBOPEAT project. 2008 will be a busy year for CARBOPEAT as there will be a number of key publications produced as well as two important international meetings (details on page 4). The publications include a number of technical reports produced by the Working Groups and the completion of the Proceedings from last year's meeting in Yogyakarta, Indonesia. In the latest of our articles on the CARBOPEAT Working Groups, Henk Wösten provides details about Working Group 3 and in *Meet the partners* we discover a little bit more about Henk and his institute. News interest in tropical peatlands has been growing over the last few months and a number of these stories are discussed on page 3.

Dr Chris Banks, Leicester, January 2008

Working Groups

Working Group 3: Assessment of Risks to, and vulnerabilities of, Tropical Peatland Carbon Pools – Mitigation and Restoration Strategies

Working Group 3 (WG3) is responsible for:

- ♦ risk assessment of tropical peat carbon pools under different land uses and impacts, including impacts of future climate change scenarios;
- ♦ comparing sequestration potential of natural peat swamp forest with the rate of carbon loss as a result of logging, agriculture and fire;
- ♦ examining and evaluating land use changes on peat carbon losses and identifying opportunities for adaptation and mitigation;
- ♦ assessing the potential for various restoration and water management activities and evaluating information on water level elevation through damming of drainage ditches and logging extraction canals;
- ♦ collating and synthesizing data;
- ♦ determining the extent to which the rate of carbon losses from tropical peatland can be reduced and if possible reversed;
- ♦ comparing the magnitude of the carbon store, rate of carbon sequestration and rate of carbon losses between tropical peatland and boreal/temperate peatlands;
- ♦ examining case studies from Central Kalimantan (Mega Rice Project), South Sumatra (Air Hitam Laut), Riau, Sumatra (pulpwood plantations on peat) and Sarawak (oil palm and sago plantations) and Vietnam;
- ♦ preparing an action plan of its activities.

Contact

Dr Chris Banks
Dept of Geography
University of Leicester
University Road
Leicester LE1 7RH
UK

+44 116 2523441

+44 116 252 3854

chris.banks@le.ac.uk

WG3 Action Plan

There will be three major focal topics (FT) as detailed below, each of which will be led by a member of WG3. An assessment of the risks to, and vulnerabilities of, tropical peatland carbon pools will be related to groundwater dynamics in peatlands because groundwater levels determine the carbon sequestration potential of peatlands. Groundwater level threshold values will be evaluated in relation to subsidence and associated carbon loss as well as in relation to fire susceptibility and associated carbon loss. Water management strategies are evaluated in terms of their carbon adaptation and mitigation potential. Different case studies will be described to illustrate the different topics.

Focal topics

Risk assessment of tropical carbon pools under different land use changes. This will review the impact of the sequential actions: land use → optimal groundwater level → subsidence → carbon loss. The impact will be demonstrated examining case studies from Central Kalimantan (Mega Rice Project), South Sumatra (Air Hitam Laut), Riau, Sumatra (pulpwood plantations on peat) and Sarawak (oil palm and sago plantations), and Vietnam.

Risk assessment of tropical carbon pools under fire threats. This will review the fire susceptibility in relation to prevailing groundwater levels, estimate the carbon loss from fires, and estimate the restoration potential of degraded peatlands in terms of resilience of the system and prevention of long term, deep flooding. The topic will be exemplified by cases from Central Kalimantan (Mega Rice Project and Block C) and South Sumatra (Air Hitam Laut).

Water management strategies to reduce carbon losses. A review is made of which water management strategies are successful in maintaining groundwater levels close to the surface of the peatland throughout the year thereby minimising carbon losses (e.g. independent basin approach). Different types of dams are evaluated in terms of costs (big versus small), location (upstream versus downstream) and numbers (single versus cascade). The topic will be exemplified by cases from Central Kalimantan and Sarawak.



Dam in illegal logging canal in the Sabangau catchment, Central Kalimantan, Indonesia, constructed using local available material although simple the dam is effective as a water management strategy that mitigates carbon loss

Table 1: Focal topics and WG member involvement

Focal topic	Lead	Support
Impact of land use changes on carbon pools	Henk Wösten	Bostang Radjagukguk
		Le Quang Tri
		Al Hooijer
Impact of fires on carbon pools	Jack Rieley	Suwido Limin
		Bambang Setiadi
		Pep Canadell
Water management strategies to reduce carbon losses	Henk Ritzema	Suwido Limin
		Wan Sulaiman
		Hidenori Takahashi

Following preparation of reports on the focal topics these will be sent to members of the International Expert Network for assessment and improvement. The final versions will be published on the CARBOPEAT web site prior to discussion at the 13th International Peat Congress in Tullamore, Ireland in June 2008. Subsequently, revised versions of the reports will be published on the web site and hard copies made available for selective distribution.

Timelines

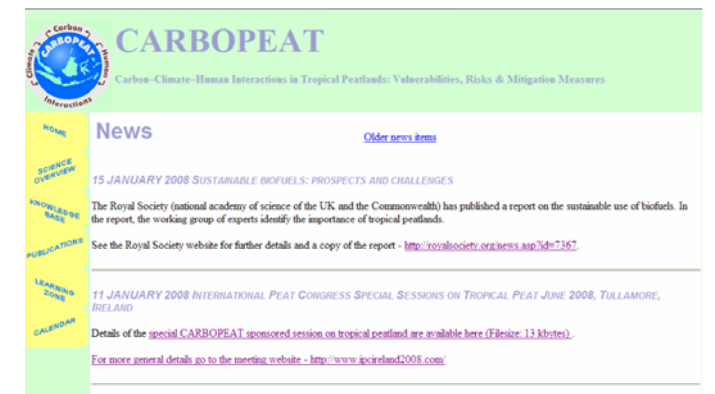
- August 2007 Draft papers prepared by WG3 and circulated to the CARBOPEAT partners and
- March 2008 Working papers finalised and disseminated to stakeholders.
- June 2008 13th International Peat Congress in Tullamore, Ireland in June 2008 to facilitate data presentation, exchange, integration, standardization and validation
- January 2009 Scientific papers published onwards

If you have expertise in any of these areas and are not already involved in Working Group 3 but would like to be, then please contact WG3 coordinator, Dr Henk Wösten (Henk.Wosten@wur.nl).

News Shorts

CARBOPEAT website

There has been a large increase in the number of hits on the project website (www.carbopeat.org). In order to best serve the tropical peat community more links to relevant news stories, events and publications are needed. Please feel free to email news@carbopeat.org with any links or news items you would like to be included. Please note that although the CARBOPEAT website is currently in English, we would also welcome materials in other languages - why not include a brief summary in English to expand the readership of the item?



Tropical peat in the news

Since the last edition of the *News*, there have been a number of stories concerning tropical peat in the media, in particular those relating to growing oil palm. In November, Greenpeace launched a new report highlighting the issues of deforestation and oil palm production mostly relating to Indonesia; Achim Steiner, the Executive Director of the United Nations Environment Programme, was interviewed on a similar subject on the BBC website and at the end of the month the "Bog Barons" appeared in *New Scientist*. December's UN climate change meeting in Bali provided the impetus for the latter story as well as a number of other articles. The issue has remained in the news in the UK, as the Royal Society published a report on the sustainable use of biofuels.

For further details and links to these stories go to www.carbopeat.org. If you see an interesting tropical peat story in the headlines, why not tell the wider community, email to news@carbopeat.org.

Workshops in Can Tho

The University of Can Tho, Vietnam (a Carbopeat partner) has recently run a series of workshops with the aim of promoting the good management of forest covered peatlands in the Mekong Delta. Three workshops were held and topics included community awareness of environmental protection and carbon emission from peatlands; the role of women and youth in the protection of peat swamp forest resources; effective farming systems for improving household income (focussing on animal husbandry and cultivation techniques on acid sulphate soils) and health care (including improvements in nutrition).

The workshops were offered mainly to women (who play a role in improving household income and educating children). However, local authority and outreach workers were also involved and around 50 people participated in each workshop.

