



**Food and Agriculture Organization  
of the United Nations**

**REPORT OF THE  
FAO SUB-REGIONAL WORKSHOP ON ONE MAP POLICY FOR  
SUPPORTING TROPICAL PEATLAND SUSTAINABLE DEVELOPMENT**

07 - 08 November 2013, Bogor, Indonesia

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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## **ACKNOWLEDGEMENTS**

This document reports on the sub-regional workshop on one map policy for supporting tropical peatland sustainable development, Bogor, Indonesia, 07-08 November 2013. The workshop contributed to the capacity development activities of the Monitoring and Assessment of Greenhouse Gas Emissions and Mitigation Potential in Agriculture (MAGHG) financed by Germany (GCP/GLO/286/GER) and Norway (GCP/GLO/325/NOR). The final document has been prepared by Riccardo Biancalani from the Climate, Energy and Tenure Division (NRC) Division from FAO with the contribution of the MAGHG team.

## **ABSTRACT**

The workshop has provided the opportunity to discuss the state of the knowledge on peatlands management and related GHG emissions in South East Asia. The actual state of information available on the ground was discussed vis-a-vis the state of the scientific knowledge as reported by national and international institutions.

Gaps in the data and in the institutional arrangements were debated, with particular focus on Indonesia. Examples of interventions for improved peatlands management were illustrated, and both successes and failures were discussed.

Advances in the scientific knowledge on peatland dynamics were discussed. Also, the latest guidelines for the assessment of GHG emissions from peatlands and wetlands were illustrated.

Proposals for joint actions between FAO and national and international partners were discussed, in order to provide stronger support to the countries, specifically for the preparation of the Biannual Update Reports and to the preparation of GHG national inventories.



## BACKGROUND

The overall objective of the FAO Monitoring and Assessment of Greenhouse Gas Emissions and Mitigation Potential in Agriculture (MAGHG) project, a component of the MICCA Programme of the Climate, Energy and Tenure Division (NRC) in close collaboration with the FAO Statistics Divisions (ESS), is to provide guidance on the assessment of mitigation options for identification of national actions that are consistent with and enhance long term agricultural productivity, food security and environmental sustainability goals. The first fundamental need towards achievement of this objective is to support Member Countries, and in particular to developing countries, in improving their ability to identify, assess and report greenhouse gas (GHG) emissions from their agriculture, forestry and other land use activities, in a manner that is consistent with international climate agreements and national data development goals.

A key component of the project is capacity development (CD) for Member Countries on GHG emissions and mitigation potentials. The activities focus at the regional level, facilitating dialogue among relevant national agencies, while highlighting key challenges and opportunities to link effective mitigation planning to national priorities in adaptation, resilience, food security, and rural development.

In this context MAGHG, in coordination with the wider mitigation programme of FAO (MICCA), has started a collaboration with Indonesia for the assessment of the GHG emissions from peatlands in that Country. Following preliminary discussions in the first semester of 2013, a sub-regional workshop was co-organized by the project and the Indonesian concerned parties, to identify the main issues that hampers the possibility of implementing a complete and robust assessment of the emissions from peatlands and to plan a way forward to overcome the difficulties, implementing the assessment and identifying mitigation options. The workshop was organized at a sub-regional level, in order to involve also neighbouring countries sharing similar issues with Indonesia (Malaysia and Papua New Guinea).

## **OBJECTIVES OF THE WORKSHOP**

The objectives of the workshop were the following:

- To initiate a process for reducing GHG emissions and develop National Mitigation Programmes with a focus on peatlands.
- Identify the needs and means for a national mapping of peatlands in Indonesia.

## **WORKSHOP DESIGN**

The workshop has been largely setup by the Indonesian host. It was organized in sessions, each chaired by a different partner party. English was the working language, although Bahasa was used in a few presentations, with slides in English. Each session included a question/comment time for the audience.

## WORKSHOP SESSIONS

Six main sessions were implemented during the two-day workshop (see also Annex A):

### Day 1:

After the opening remarks, Session 1 displayed two keynote speeches, highlighting the status and perspectives of peatland mapping in Indonesia and the potential use of maps for the implementation of the moratorium strategy to reduce the expansion of the peatland areas utilized for cultivation and forestry purposes.

Session 2 focused on issues regarding mapping of peatlands areas and the assessment of the spatial distribution of GHG emissions due to peatlands utilization and degradation. Technical and scientific institutions presented their findings, like the Hokkaido University, Deltares, ICCC and FAO. The presentations focused above all on the identification of a common definition for peatlands, as well as on the methods to analyze the fluxes of gas and the quality assessment of the existing maps.

Session 3 continued the discussion on mapping methods and their constrains, with interventions of national Indonesian agencies, like the Geospatial Information Agency, the Ministry of Forestry and the Agency for Agricultural Research and Development of the Ministry of Agriculture. In particular, the “One-map” policy was illustrated, together with the cartographic standards applied in Indonesia. Also Wetlands International presented its program for peatlands mapping and development.

Session 4 shifted the focus towards the assessment of GHG emissions in order to monitor their reduction in the context of the international commitments of Indonesia. Both international and national agencies presented, such as CIFOR, BAPPENAS and the Ministries of Environment and Public Works. The presenters highlighted the lack of sufficient information available, and underlined the efforts presently on-going to overcome it. Also, the new guidelines adopted by the IPCC for the assessment of emissions in wetlands have been described.

### Day 2:

Session 5. The first session of the second day was dedicated to technical issues regarding the mechanism of degradation of peatlands under cultivation, and to illustrate management practices in agriculture, forest and fishery that would allow to setup a more sustainable way of utilization. In particular, the causes of the failure of previous program, such as the Mega Rice Project, have been discussed. Practices have been shown to reduce the risk of wildfires, setup fish production and implement appropriate crop and forest tree production.

Session 6 focused mostly on the mitigation aspects, analyzing the GHG emissions information available in Indonesia and identifying the gaps in the data to allow a more precise calculation. In particular, the need for a more comprehensive and precise mapping of the peatlands area was illustrated. Also, legal issues and community rights and needs have been discussed. On another side, the NAMA program of Indonesia was illustrated, framing it within the general mitigation policy framework. The fact that no NAMA on peatlands has been still prepared by Indonesia was noted, despite the fact that peatlands represent the major source of mitigation to fulfil the 26% presidential commitment of the country.

Also in this session, the status of the peatlands study and initiative in Papua New Guinea was discussed. The importance of the issue in PNG was highlighted, and the willingness of the country to implement a program for a more responsible use of the peatland area was stated, in front of the threats to their persistence brought both by natural and human induced causes.

The agenda of the workshop can be found at the following web site:

<http://www.fao.org/climatechange/39090-0469d6c02723558b2c14e899edfb15445.pdf>

## CONCLUSIONS

The workshop highlighted a number of issues that call for action in order to increase the capacity of the countries to improve peatlands management and identify opportunities for climate change mitigation.

Definition of peatlands. Long discussions have been held on the definition of peatlands, opposite to the definition of organic soils (Histosols) as per soil classifications. Although this is an important issue, too much attention has been devoted to this point in my view. However, the final determination to use the definition proposed by the IPCC, involving a prescribed minimum depth of 50 cm, seems reasonable from a scientific point of view, although it may be difficult to apply in practice.

Lack of data on peatlands and land cover. More accurate and detailed maps of peatlands and land cover are needed to be able to support the biannual reporting and the preparation and implementation of NAMAs.

Lack of coordination among the several institutions that are involved. In particular, a stronger role should be taken by the mapping agency (BIG), in the collection and storage of the soil and activity data that are needed to calculate the emissions.

Difficult implementation of the new guidelines. The new guidelines on wetlands, approved by the IPCC in November 2013, require the availability of detailed data on land cover and land use, including the differentiation among different types of crops, plantations and grasslands, and the presence of a drainage system in order to define the affected areas and to be able to evaluate the Dissolved Organic Carbon.

Linkages between NAMAs and inventory of GHG. An interesting point has been raised during the presentations in the plenary, that is the possibility of establishing a linkage between potential NAMAs and the reduction of emissions as pledged by the Government of Indonesia.

At the end of the workshop, a recommendations statement was proposed, stating explicitly that a collaboration with FAO on these matters should be starting soon. (Annex 2)

## FOLLOW-UP

During a discussion between FAO representatives (FO, FI and NR) and representatives from different Indonesian institutes, it was decided that FAO will develop a project proposal to support the overall peatland mapping/data collection in Indonesia, to help develop a NAMA and to contribute to capacity development and to capture lessons learned from peatland management activities in Indonesia, including fire management, and fishery within a broader landscape approach. NR will take the lead on this with support from FO and FI.

Also, during a conversation with the representatives of PNG interest was expressed particularly to the possibility of providing support to the country in the capacity development for the implementation of the GHG inventory.

## **Annexes**

# A. Agenda of the workshop

Day 1	
08:00 - 09:00	Registration
09:00 - 09:10	Anthem Indonesia Raya : Conductor : Diah Faradia
09:10 - 09:15	Address by : Organizing Committee : Dr. Nurwadjadi
09:15 - 09:20	Prayer : Dr. Sumaryono
09:20 - 10:45	<p><b>OPENING</b></p> <ol style="list-style-type: none"> <li>Address by : Food and Agriculture Organization Representative : Mr. Mustafa Imir</li> <li>Address by : Minister of Research and Technology (Staff Ahli Bidang Pangan dan Pertanian) : Mr. Benyamin Lakitan</li> <li>Address by : Chairman of Geospatial Information Agency : Dr. Asep Karsidi</li> </ol> <p><b>Opening Ceremony by : Chairman of Geospatial Information Agency accompanied by FAO Representative, Mr. Rachmat Witoelar and Mr. Benyamin Lakitan</b></p> <ol style="list-style-type: none"> <li>Special Lecture by : Mr. Rachmat Witoelar</li> </ol>
10:45 - 11:00	<b>Coffee Break and Press Conference</b>
11:00 - 11:30	<p><b>KEYNOTE SESSION</b></p> <ol style="list-style-type: none"> <li>Keynote : Director General of the Indonesian Agency for Agricultural Research and Development (IAARD), Ministry of Agriculture : Dr. Haryono</li> <li>Keynote : Geospatial Information Agency : Dr. Nurwadjadi</li> </ol>
11:30 - 12:30	<p><b>TECHNICAL PRESENTATION</b> (Moderator : Dr. Bambang Setiadi)</p> <ol style="list-style-type: none"> <li>DELTARES Netherland: A. Hooier</li> <li>Hokkaido University Japan : Prof. Mitsuru Osaki</li> <li>Indonesia Climate Change Centre : Eli Nur Nirmala Sari, PhD</li> <li>The Biennial Update Report and Agriculture and Climate Change: Science and Policy Contexts. MAGHG Project FAO : R. Biancalani</li> </ol>
12:30 - 13:30	<b>Break Session</b>
13:30 - 17:00	<p><b>PEAT LAND MAPPING ISSUE</b> (Moderator : Dr. Sumaryono)</p> <ol style="list-style-type: none"> <li>National Standard of Peat land Mapping (Geospatial Information Agency) : Dr. Suprajaka</li> <li>Peatland mapping in Indonesia to Support One Map Policy (IAARD) : Drs. Wahyunto, M.Sc</li> <li>Wetlands International : Dr. Nyoman S</li> <li>Ministry of Forestry : Dr. Nur Masripatin</li> </ol>
13:30 - 17:00	<p><b>GHG</b> (Moderator : Prof. Dr. Supiandi Sabihan)</p> <ol style="list-style-type: none"> <li>Agency for the Assessment and Application of Technology : Dr. Bambang Setiadi</li> <li>Centre for International Forest Research (CIFOR) : Dr. Louis Verchot</li> <li>Ministry of Public Works : Ir. Eko Subekti, M.Eng</li> <li>Ministry of Environment : Ir. Arief Yuwono, M.A.</li> </ol>
Day 2	
08:00 - 09:00	<b>Registration</b>
09:00 - 11:30	<p><b>TECHNICAL PRESENTATION</b> (Moderator : Dr. Suprajaka)</p> <ol style="list-style-type: none"> <li>Sustainable Management of Degraded Peatland (IAARD) : Dr. Muhrizal Sarwani</li> <li>Agroforestry Approach in peatland management (ICRAF) : Prof. Dr. Meine van Noorwijk</li> <li>Sustainable Peatland management for Fisheries : Dr. Arief Yudiarto</li> </ol>
11:30 - 13:30	<b>Break Session</b>
13:30 - 17:00	<p><b>TECHNICAL PRESENTATION</b> (Moderator : Dr. Prihasto Setiyanto)</p> <ol style="list-style-type: none"> <li>IPCC Guidelines for Agriculture, Forestry and Other Land Use: Dr. Edvin Aldrian (BMKG)</li> <li>Main GHG issues in AFOLU – knowledge and data gaps – Indonesia : Dr. Iman Santosa</li> <li>A NAMA case for Indonesia – peatlands : Dr. Wahyuningsih Darajati (BAPPENAS)</li> <li>Papua NG : Joe Pakana, Josiah Joseph, Miller Kawanamo</li> </ol>
17:00 - 17:30	<b>CLOSING CEREMONY:</b> Dr. Priyadi Kardono

## B. Partial list of participants and organizations

Indonesia		
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Ir. Budhy Andono Soenhadi, M.C.P.	Geospatial Information Agency (BIG)	
Ir. Dodi Sukmayadi, M.Sc.	Geospatial Information Agency (BIG)	
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Dr. Ir. Yusuf Surachman Djajadiharja, M.Sc	Geospatial Information Agency (BIG)	
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Iman Santoso	Director General, Forest Development. Unit, Ministry of Forestry	
Nur Masripatin	Director, Centre for Standardization and	

	Environment, Ministry of Forestry	
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Wahyunto	Indonesian Center for Agricultural Land Resources Research and Development	
William Sabandar	Head, REDD+ transition team	
Eko Subekti	Ministry of Public Works	
Arief Yuwono	Ministry of Environment	
Arif Yudiarto	EEP Kahayan Center-Pulang Pisau -Kalteng	

Anung Karyadi	EEP Kahayan Center-Pulang Pisau -Kalteng	
Edvin Aldrian	Head of Climate Change and Air Quality, Institute for Meteorology, Climatology and Geophysics	edvin.aldrian@bmkg.go.id
Medrilzam	Directorate for Forestry and Water Conservation, BAPPENAS	m.medrilzam@uq.edu.au
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Josiah Joseph	Senior Statistician, National Statistics Office	
International		
Johan Kieft	REDD+ Coordination in Indonesia	
Hideyuki Kubo	REDD+ Coordination in Indonesia	
Joar Strand	Embassy of Norway to Indonesia	
Takahara Shigeru	JICA, REDD+ project in Indonesia	
Thomas Harvey	Australian AID	
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Mustafa Imir	FAO	Mustafa.Imir@fao.org

## C. Workshop recommendations

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### RECOMMENDATIONS

- ✓ One map policy is a strategic approach to synchronize and integrate thematic maps, including peatland maps. This One Map Policy is inline with the Presidential Instruction (Inpres No 6/2013)
- ✓ To Support Tropical Peatland Sustainable Management, one map for peatland mapping must be implemented on the basis of base map with scale of 1:50.000 produced by BIG using National Standard of Peatland Mapping (SNI 7925:2013).
- ✓ The implementation of one map for peatland will be coordinated with the related stakeholders within Peatland Working Group (Geospatial Information Agency (BIG), Ministry of Agriculture, Ministry of Public Work, Ministry of Environment, Ministry of Forestry, Ministry of Home Affair, Meteorological Climatological Geophysical Agency (BMKG), National Aeronautical Agency (LAPAN), Indonesian Agency for the Assesment and Aplication of Technology (BPPT) and Wetland International.
- ✓ The awarness of converted peatland emits high C02 and losses its various enviromental benefits has been widely undestood. Therefore, implementing sustainable management system of peatland will provide profitable business, sustainable livelyhoods and conservation of biological diversity.
- ✓ Sharing responsibility among stakeholders for GHG emission reduction will be the key to achieve of maximum emission reduction.
- ✓ Future development program for sustainable tropical peatland management initiated by FAO in this workshop should be followed by immediate action.

For Suggestion : [wulan\\_tr@yahoo.com](mailto:wulan_tr@yahoo.com)

