Position Paper: Conservation and Sustainable Management of Peatlands, key to prevent annual fire and haze

Indonesia experiences yearly returning forest and peat fires over the last two decades. Like this year, the impact is most severe during El-Niño episodes. The fires cause haze that choke large parts of the islands of Sumatra and Borneo and the mega-cities of Kuala Lumpur and Singapore. It is estimated that the current 2015 fires put a cost to Indonesia's economy in the order of billions of US$[1]. However, the biggest cost is the loss of life due to smog that reaches in some places over 8 times the danger level. Majority of these fires occur in peatlands, as drying of peat leads to increased fire risk. With the burning peatlands, important ecological functions like carbon storage, water retention and protection to flooding are lost, as well as income for local communities and habitat for endangered biodiversity.

Peat is formed over thousands of years by the accumulation of organic material from peat swamp forest plants that have partially decayed in waterlogged condition with low oxygen and high acidity. Indonesia has the third largest peatland area in the world, mostly in the coastal lowland region of Sumatra, Borneo and Papua.

Over the past decades, peat swamp forests are being deforested, drained and converted to oil palm and pulp wood plantations[2]. This process was facilitated by favorable government policies, availability of peatlands, favorable economic conditions and weak law enforcement. Drainage causes carbon in the peat soil to continuously oxidize and turn into CO_2 emissions (modest emission factor: 15 t C ha^{-1} yr^{-1})[3], contributing to climate change. Dry peat is very prone to fires, which are difficult to put out, release a huge amount of additional carbon and forms thick haze due to the lack of oxygen. This carbon loss reduces the peat volume and thus causes the peat soil to subside at a rate of between 3 and 6 cm/yr. This process continues as long as drainage is continued and until the soil surface reaches sea or river levels constraining the outflow of water by gravity and thus, leading to flooding and loss of land productivity in millions of hectares of lowlands.

Wetlands International calls upon policy makers, industry, local communities and other practitioners in peatland land use management to:

- ✓ ***Restore and conserve all remaining peat swamp forests and undeveloped peatlands through a permanent and enforced Moratorium***
- ✓ ***Ensure the long-term productivity of peatlands through sustainable management that safeguards their services to the environment, economy and local communities.***

[1] http://www.cnnindonesia.com/nasional/20151001162312-20-82174/bnpb-kerugian-negara-akibat-kebakaran-hutan-melebihi-rp-20t/
[2] FAO (2014)Towards climate-responsible peatlands management, available at: http://www.fao.org/3/a-i4029e.pdf
[3] IPCC, 2013. 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands. Hiraishi, T., Krug, T., Tanabe, K., Srivastava, N., Baasansuren, J., Fukuda, M. and Troxler, T.G., eds. available at: http://www.ipcc-nggip.iges.or.jp/public/wetlands/pdf/Wetlands_Supplement_Entire_Report.pdf.

The transition towards peat swamp forest restoration and conservation

Wetlands International believes that the effective conservation of remaining peat swamp forests and peat areas can be achieved though:

1. A full moratorium on all new developments in peat swamp forest and undeveloped peatlands
2. Restoration of degraded peat swamp forest and undeveloped peatlands
3. The maximum and efficient utilization of non-forest and non-peat area.
4. The establishment of effective fire prevention measures.
5. The creation of sufficient buffer zones around conservation areas.
6. The implementation of the Free, Prior, and Informed Consent (FPIC) principle in all stages of planning and development involving natural resources and land use.

The transition towards sustainable peatland management

Wetlands International believes that drainage-based land-use on peatland undermines its viability for agricultural and forestry production in the longer term, increases the vulnerability of local communities and leads to fires, haze and floods. Therefore, we support:

1. The phasing-out of existing drainage-based plantations from peatlands and shift these where possible to non-forested, non HCV, non HCS and low social conflict mineral soils through land swaps.

2. The development and the implementation of after-use plans for the restoration and rewetting of degraded peatlands, in conjunction with local communities, private sector decision makers, peatland experts and other stakeholders.

3. The phasing-in of sustainable peatland management practices (paludiculture) which allows the cultivation of commercially attractive native peat swamp species on rewetted peat area. Examples of these species include: Sago, Tengkawang (Illipe nut), Jelutung (Asian rubber) and other species used for timber (including pulpwood) and rattan production. [4]

Paludiculture is the only economically sustainable land–use of peat areas, as it promotes the long-term development, restores the degraded functions of peatlands and enhances the resilience of local communities against flooding, fires and other calamities.

Wetlands International proposes the government to form a **National Advisory Board for Peatland Management**, with the main task to develop a **National Peatland Conservation and Restoration Strategy** involving both national and international experts using internationally accepted science as a basis for decision making and provided with adequate funding for implementation. The Board and Strategy will advise and coordinate measures that will minimize future fire in peatland areas, enable Indonesia to live up to its international climate change mitigation commitments, prevents future unproductivity due to subsidence and flooding and reduce threats to biodiversity. This includes stimulating bottom-up action, coordinated using local action plans that are integrated in the national strategy. In particular, it will be tasked with advising preventative measures for peatland fires and monitor the measures taken in the field by government and industry to prevent fires. It will also help the Indonesian government in the review and streamlining of peat related policies to ensure a coherent and strong regulatory framework that will facilitate sustainable development.

For further information please contact Wetlands International:

http://www.wetlands.org/

Marcel J. Silvius (marcel.silvius@wetlands.org)
Irwansyah Reza Lubis (rezalubis@wetlands.or.id)

[4] FAO (2012), Peatlands - guidance for climate change mitigation through conservation, rehabilitation and sustainable use, http://www.fao.org/3/a-an762e.pdf