

Extended abstract No. 439

PEATLAND MANAGEMENT IN SOUTHEAST ASIA – ISSUES AND CHALLENGES

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SUMMARY

Tropical peatlands are one of the most critical ecosystems in Southeast Asia, covering about 25 million ha. Peatlands are found in all ten ASEAN countries but the majority are concentrated in Indonesia and Malaysia. Tropical peatland forest in Southeast Asia was deforested at an approximate annual rate of 2.2% for the period 2000 to 2010. Most of this forest area has been cleared and drained especially for agriculture/plantations many of which may be unsustainable in the medium to long term due to problems of peat subsidence. A regional policy framework has been established to address the problem of peatland fire and degradation in the region through the Bali Concord II (2003), ASEAN Regional Haze Action Plan (1997), ASEAN Agreement on Transboundary Haze Pollution (2002) and ASEAN Peatland Management Strategy (APMS) 2006-2020. However, peatland management has not been provided clear policy direction at the national level and issues and challenges in the implementation of the APMS remains. Peatland management in Southeast Asia is a complicated issue that needs to be resolved in an integrated manner.

KEY WORDS: Tropical peatlands, ASEAN, APMS, peatland management

INTRODUCTION

Tropical peatlands are one of the most critical ecosystems in Southeast Asia, covering about 25 million ha, representing about 60% of the world's tropical peatlands. Naturally, this area was covered in dense tropical rain forest – comprising a broad range of species specially adapted for growth on peat. Peatlands are found in all ten ASEAN countries but the majority are concentrated in Indonesia, Malaysia, Brunei, Viet Nam, Thailand and the Philippines. The extent of peatland in North Mekong countries is still yet to be determined.

Apart from being the largest carbon stores on land, peatlands are also important for biodiversity conservation, climate regulation, natural water reservoirs and a resource for livelihood options of local communities – directly or indirectly. However, tropical peatland forest in Southeast Asia

was deforested at an approximate annual rate of 2.2% for the period 2000 to 2010 (Miettinen *et al.*, 2011). A high proportion of this forest area has been cleared and drained for agriculture/plantations and most of the balance has been logged (legally or illegally) or converted to other uses. As a result of drainage and poor land management practices, much of the peatland is degrading through subsidence and also fire. More than 4 million ha of peatland in SE Asia has been impacted by fire, which is the main cause of the trans-boundary smoke haze, a significant environmental problem in Southeast Asia.

## ASEAN FRAMEWORK ON PEATLAND MANAGEMENT

The threat and effect of annual fires in forest and peatland, with the associated haze leading to a serious impact upon the economy and health of the region, has become one of ASEAN's major concerns. Forest fires during the 1997/1998 drought affected an area of more than 1,500,000 ha of peatland in Indonesia (Bappenas, 1999; Page *et al.*, 2002). The total economic losses for the 1997/1998 fires episode was estimated between USD 8.7 billion to 9.6 billion in forestry, agriculture, health, tourism and other sectors for Indonesia and other countries (Applegate *et al.*, 2002; Cited in Herawati *et al.*, 2006). This has not taken into consideration the adverse effects on climate change and ecosystem services.

ASEAN Vision 2020 (adopted 1997): "...a clean and green ASEAN with fully established mechanisms for sustainable development to ensure the protection of the region's environment, the sustainability of its natural resources and the high quality of life of its people..." includes the environmental degradation and transboundary pollution.

Due to the recurring problems of fire and the associated haze which has blanketed much of Indonesia, Singapore and Malaysia, ASEAN recognised the need to urgently address this problem in a focused manner, by taking concerted preventive actions on fire prone areas such as peatlands. This has resulted in several agreements and policies which provide the framework to address the problem of peatland fire and degradation in the region.

The regional Policy framework has been established primarily through ASEAN. Nevertheless, the guiding policies are more related to the issue of fire and associated haze, which often arises from fire in peatlands. The relevant policies include the Bali Concord II (2003), ASEAN Regional Haze Action Plan (1997) and ASEAN Agreement on Transboundary Haze Pollution (2002). Subsequently, the ASEAN Member States (AMS) adopted the ASEAN Peatland Management Initiative (APMI) and the ASEAN Peatland Management Strategy (APMS) (2006-2020) to demonstrate and implement sustainable management and rehabilitation of peatlands in Southeast Asia. Associated with the implementation of the APMI and APMS, Indonesia, Malaysia, Viet Nam, Philippines, Thailand and Brunei have initiated the development of National Action Plans on Peatlands (NAP). Amongst these, the NAPs of Malaysia, Viet Nam and Philippines have been finalised and the NAP of Indonesia is under review.

## ISSUES AND CHALLENGES

Controlling and reversing peatland degradation and associated impacts requires addressing a number of root causes which are common across many countries in Southeast Asia. Although, the APMS provides the regional framework to promote the wise use of peatlands in the region, peatland management has not been provided clear policy direction at the national level and is usually hampered by limited/weak implementation of the APMS at country level. Some of the common issues and challenges include:-

### **Insufficient knowledge and awareness of the importance of peatlands**

Peatland has been regarded as “wasteland”, where the ecological, hydrological and socio-economic importance of the peatland ecosystem has not been clearly understood and often has been ignored. Its role, function and economic value to the region remain poorly studied and undervalued. Lack of knowledge (northern ASEAN countries) and understanding (southern ASEAN countries) about critical roles of tropical peatlands in the region has hindered measures for integrated management to reduce the negative impacts. Tropical peatland research is still in its infancy compared to temperate peatland. Ecosystem services, biodiversity and linkage of peatland to human beings/livelihood are still understudied or unknown. Hence, finding ways to stimulate an understanding of the value of peatland and promoting good management practices in peatlands requires innovation. Progress, however, has been made in the past few years in raising awareness and understanding of the role of peatlands in relation to their importance to prevent peatland fires and in regulating global climate change. Public support and involvement in peatland rehabilitation and protection measures has increased, especially in Malaysia.

### **Lack of capacity in peatland management**

Adequate institutional frameworks for the sustainable management of peatlands are lacking in the region. Government agencies have low capacity for peatland assessment and management, which results in inappropriate land use management in peatland and adjacent areas. Expertise in integrated management of peatland, peat fire management and rehabilitation is generally lacking or dormant. One of the major challenges is how to stimulate cooperation and strong linkages amongst the experts and peatland managers for collaboration and concerted action. Improvements have been made in northern ASEAN countries and the Philippines in enabling surveys and assessments of previously unrecognised peatlands to be undertaken.

### **Insufficient cross-sectoral collaboration and integration at the national and sub-national level**

Responsibility for peatland management is spread out among a wide range of sectoral agencies dealing with forests, agriculture and nature conservation. The Regional framework is in place but implementation at country level is still lacking as most countries practice “stand alone” actions due to a lack of cross sectoral integration, either at national or sub-national level (inter-agency), and information sharing. This creates overlaps, conflicts of land use and gaps in jurisdiction between agencies and becomes one of the key factors of unsustainable management of peatlands. To fulfil the APMS, efforts have been initiated in stimulating development of the country NAPs,

especially in the South ASEAN countries and progress has been made with the adoption of NAPs in three countries. However, ensuring implementation of the NAPs remains one of the biggest challenges.

### **Insufficient finance resources and political will to support priorities**

Specific national budget allocation for peatland management is often limited or non-existent. Frequently, resource allocation for peatland forest management is allocated by sector or project based and cross sector action often impossible. Hence it is difficult to sustain long-term peatland management while external support through global funds may not be available. Strong political will is required to realise the reallocation of national resources in support of the sustainable management of peatlands to avoid socio-economic loss due to subsidence and fire. Innovative incentive options and mechanisms that are practical and realistic should be explored and developed. Strong initial political support by the President of Indonesia to take action to reduce 'business as usual' GHG emissions from peatlands has been affected by problems of implementation.

### **Lack of enforcement**

Unsustainable use of peatlands is often a result of the limited capacity of agencies involved in enforcement of existing laws and regulations related to fire. "Zero burning" or "controlled burning" practices are often not implemented due to poor enforcement. The establishment of mechanisms to ensure conformity to the laws and regulations and meting out appropriate punishment to offenders is crucial. Also, enforcement efforts, in implementing the land use policy to protect intact peatland forests and to reduce further degradation of peatlands, need to be strengthened. Progress has been made in getting zero burning for large plantations both through enforcement as well as voluntary action. Best management practices for existing oil palm plantations on peat have been developed in the framework of the Round Table on Sustainable Palm Oil (RSPO).

### **Poverty**

Communities and farmers living at subsistence level usually are natural resource dependent. However, natural resources are either depleting fast or no longer accessible to these groups. Agricultural activities have become one of their main activities for livelihood. Usually, rural farmers lack the means to apply appropriate techniques in land preparation and crop production. Agricultural products are usually for self-subsistence or lack market access, hence restricting their socio-economic well-being. Traditional practices such as the use of fire for land clearing is one of the cheapest *modus operandi* and has become one of the major threats for peatland.

Developing a national sustainable livelihood programme, especially on degraded peatland, helps in poverty reduction. Support in crop selection, agricultural practices and micro credit schemes that promote best management practices amongst the local community should be promoted. Also, the engagement of local communities in the rehabilitation of peatland such as "seedling buy back system" or "Buying a Living Tree" can be an alternative source of income through substantive

commitment from the national government. However, to have effect at national level, much needs to be done to scale up action from successful sites.

### **Land tenure**

Pressure on land use for development due to increased populations has intensified the opening up of peatlands. Conflict due to unclear land tenure in most countries has resulted in the unsustainable use of land. Inequality of wealth leads to land ownership problems, where poor people usually have no access to land for a sustainable livelihood. This has to be positively addressed by the respective country through a specific policy direction. Without resolving land tenure, issues and conflicts will persist and the “tragedy of the commons” remains one of the root causes for land encroachment and peatland degradation.

### **CONCLUSION**

Peatland management in Southeast Asia is a complicated issue which needs to be resolved in an integrated manner, not only at the regional/national level but also at the sub-national/provincial level. Enhancing governance and development of specific policy directions at National Level are crucial ingredients for sustainable peatland management in Southeast Asia. There is no quick solution but it needs serious attention and political will. Regional and international agencies such as ASEAN can play their respective roles in supporting sustainable peatland management. Innovative programmes and mechanisms need to be developed and put in place for value-added action. Wise use and sustainable management of peatlands is crucial to enhance the socio-economic well-being of the local and global communities.

### **ACKNOWLEDGEMENTS**

The preparation of this paper was facilitated by the ASEAN Peatland Forest Project (APFP) (GEF-FSP-7-ASEAN) and SEApeat project (DCI-ENV/2010/221-659) which are funded by Global Environment Facility, International Fund for Agricultural Development and the European Union and supported by the ASEAN Secretariat and ASEAN Member States for the sustainable management of peatland forests in Southeast Asia ([www.aseanpeat.net](http://www.aseanpeat.net)).

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