



PROGRAMME ON SUSTAINABLE MANAGEMENT OF PEATLAND ECOSYSTEMS IN ASEAN (2014 -2020)

Technical Workshop on Sustainable Peatland Management

30 January 2014, Nay Pyi Taw, Myanmar



**9th Meeting of the Conference of the Parties (COP-9) to the
ASEAN Agreement on Transboundary Haze Pollution
25 September 2013, Surabaya, Indonesia**

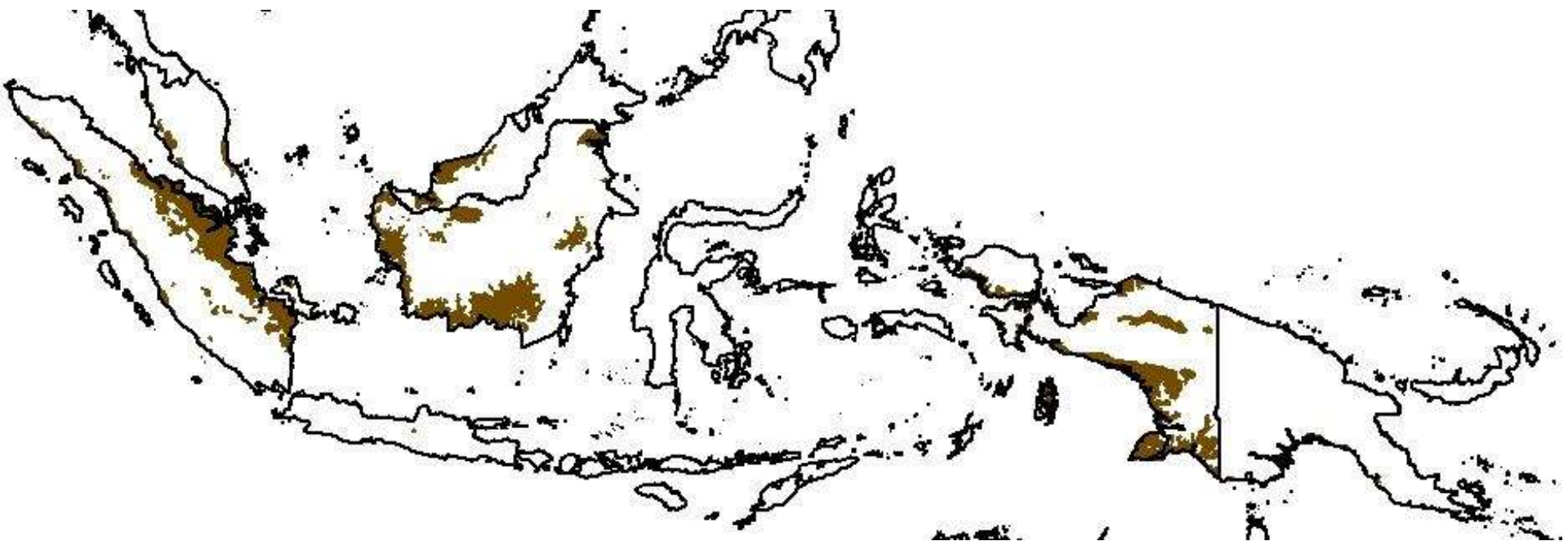
The Ministers noted the significant progress and achievements of the two projects on Rehabilitation and Sustainable Use of Peatland Forests in Southeast Asia (ASEAN Peatland Forests Project/APFP – (funded by Global Environment Facility) and the SEApeat Project (funded by European Union) which will conclude in 2014.

The Ministers supported the Programme on Sustainable Management of Peatland Ecosystem in ASEAN for the period 2014 to 2020 based on the lessons learned from these two projects in order to achieve the goals and objectives of the ASEAN Peatland Management Strategy by the year 2020.

9th Meeting of the Conference of the Parties (COP-9) to the ASEAN Agreement on Transboundary Haze Pollution 25 September 2013, Surabaya, Indonesia

The Ministers also supported the development of a similar longer term programmatic approach to address fires in the Mekong region which mostly originates from agricultural activities and forest areas.





ASEAN Peatlands cover 25 million ha
representing 60% of tropical peatlands in the world

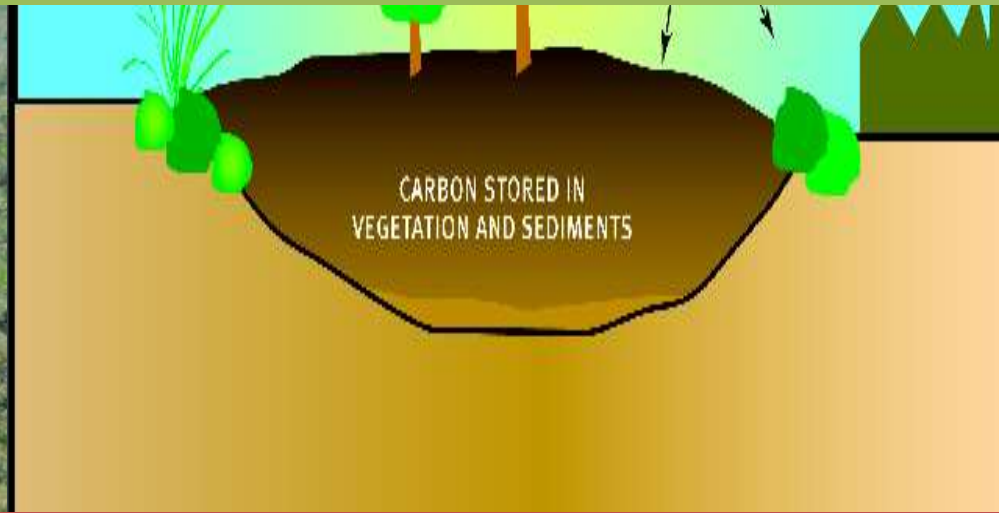
Source: Sarvision

90% of transboundary haze in southern ASEAN is from peatland fires



Ref: Max- Planck Institute ,2005

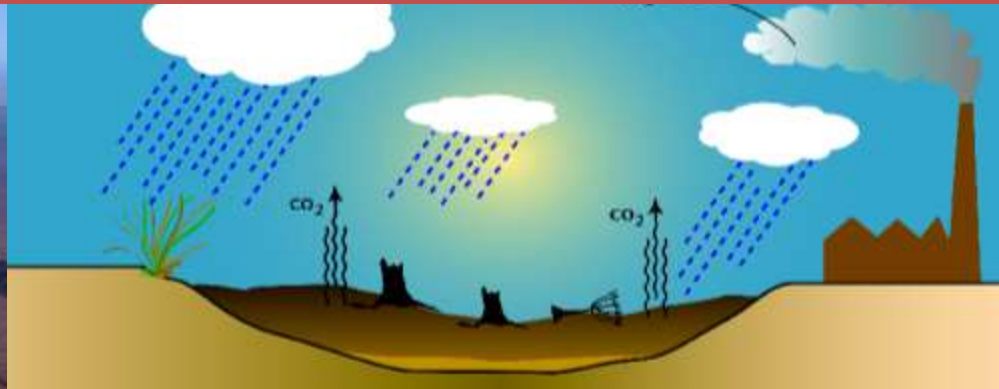
ASEAN Peatlands are important for carbon storage and reducing GHG emissions



Peatland carbon stores:

Global: 550 billion tonnes; ASEAN: 70 billion tonnes (13%)

Twice the carbon stored in all global forest biomass combined



But Peatland Emissions:

Global: 3-4 billion tonnes CO₂ / yr ASEAN: 1.5-2 billion tonnes/yr (50%)

Equivalent to 6-7% of global fossil fuel emissions

ASEAN Peatlands have high biodiversity



ASEAN Peatlands feed communities



Fishing, Pahang, Malaysia

Source: UNDP-GEF PSF Project

ASEAN Peatlands support community livelihood and create new economic opportunities



Jelutong - Chewing Gum Tree, Indonesia

ASEAN Peatlands : Key for water storage and flood prevention

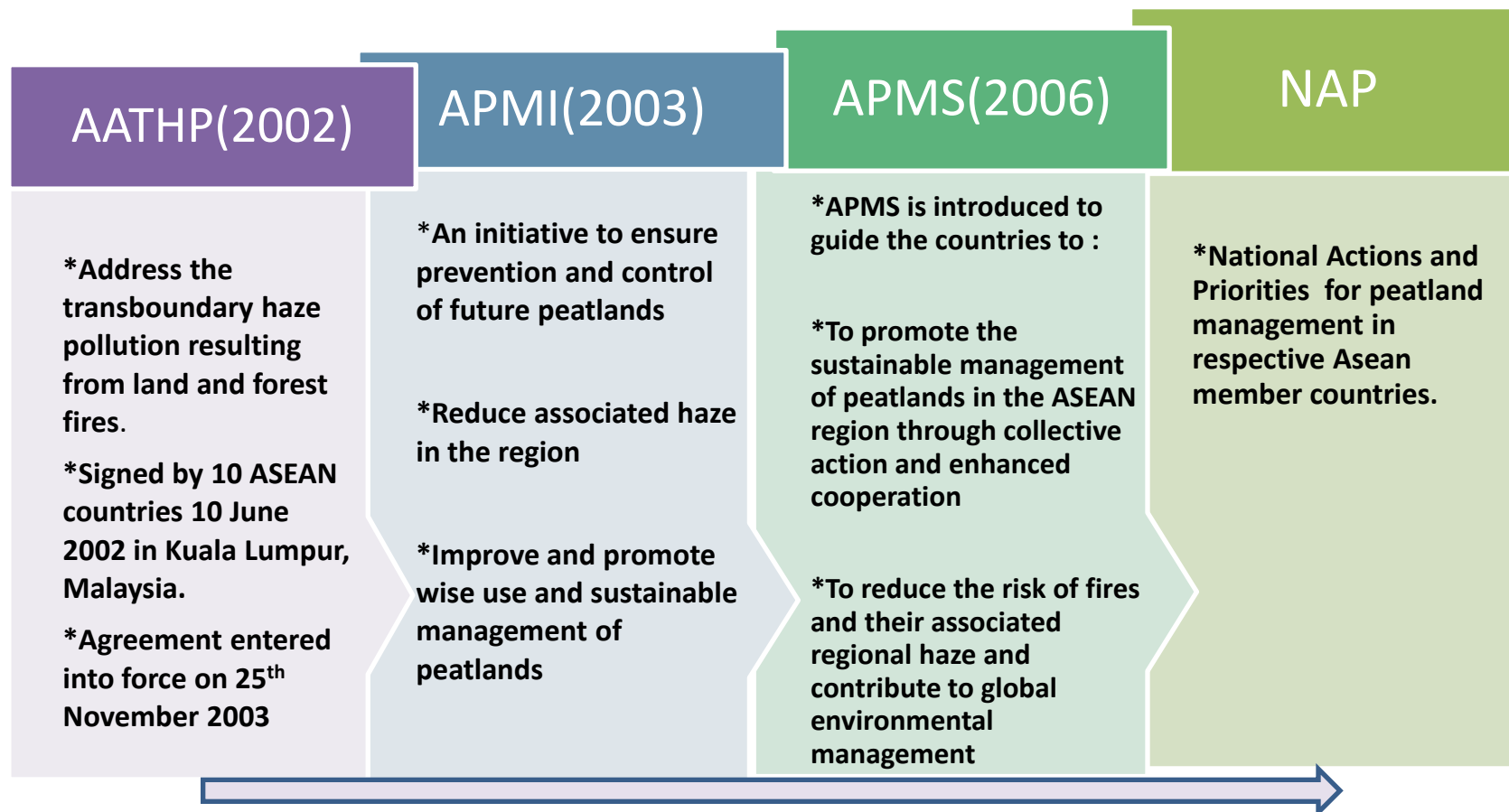


- **Peatlands: Key for water storage and regulation**
- **Provides Water - Prevents Floods**

Integrated management best way to stop fire and haze



AATHP, APMI, APMS and NAPs



PROGRAMME OUTLINE

PROGRAMME FOR SUSTAINABLE MANAGEMENT OF PEATLAND ECOSYSTEMS IN ASEAN (2014 -2020)

AIM:

**To realize fully the ultimate goals of the APMS 2006-2020, i.e.
To promote sustainable management of peatlands in the
ASEAN region;**

- through enhanced stakeholder collaboration to support and sustain local livelihoods;**
- Reduce the risk of fire and associated haze; and**
- Contribute to global environmental management.**

Proposed Key Approaches

- Coordinated Multi-country approach linking to ASEAN and other regional mechanisms
- led by national governments and investments;
- Involving all 10 ASEAN Member States
- Facilitating Integrated management of peatland sites
- Addressing poverty and community livelihood through scaling up sustainable peatland management
- Enhancing the engagement of the private sector through partnerships with plantation, forest management and other relevant sectors.
- Integrated approach to address global environmental challenges of climate change, biodiversity conservation and land degradation.



Anticipated Programme Targets by 2020

1. All peatland areas identified and inventorised;
2. Zero-burning uniformly practiced to prevent wildfires on peatlands eliminate widespread smoke haze;
3. Fire prone sites rehabilitated by focusing on root causes of fire,
4. Peatlands sustainably managed, sustainable livelihoods enhanced, and sustainable economic use mainstreamed;
5. Peatlands conserved to contribute to significantly reduced emissions of greenhouse gases and increased peatland biodiversity in the region;
6. APMS and NAPs implemented; national and regional capacity enhanced



1. Peatland assessment/inventory

***Target 2020:
Identify and inventorize all peatland areas***

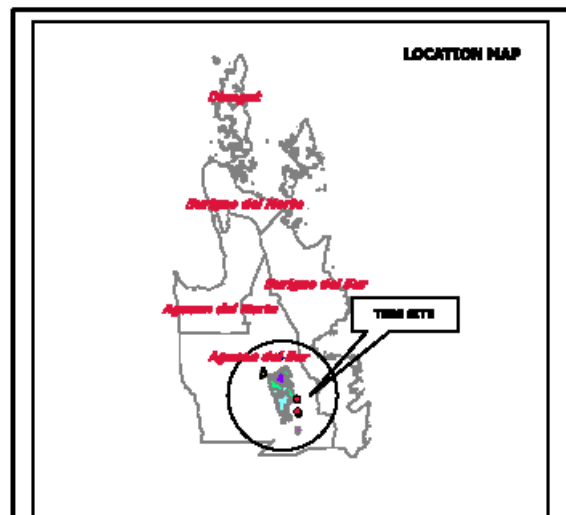
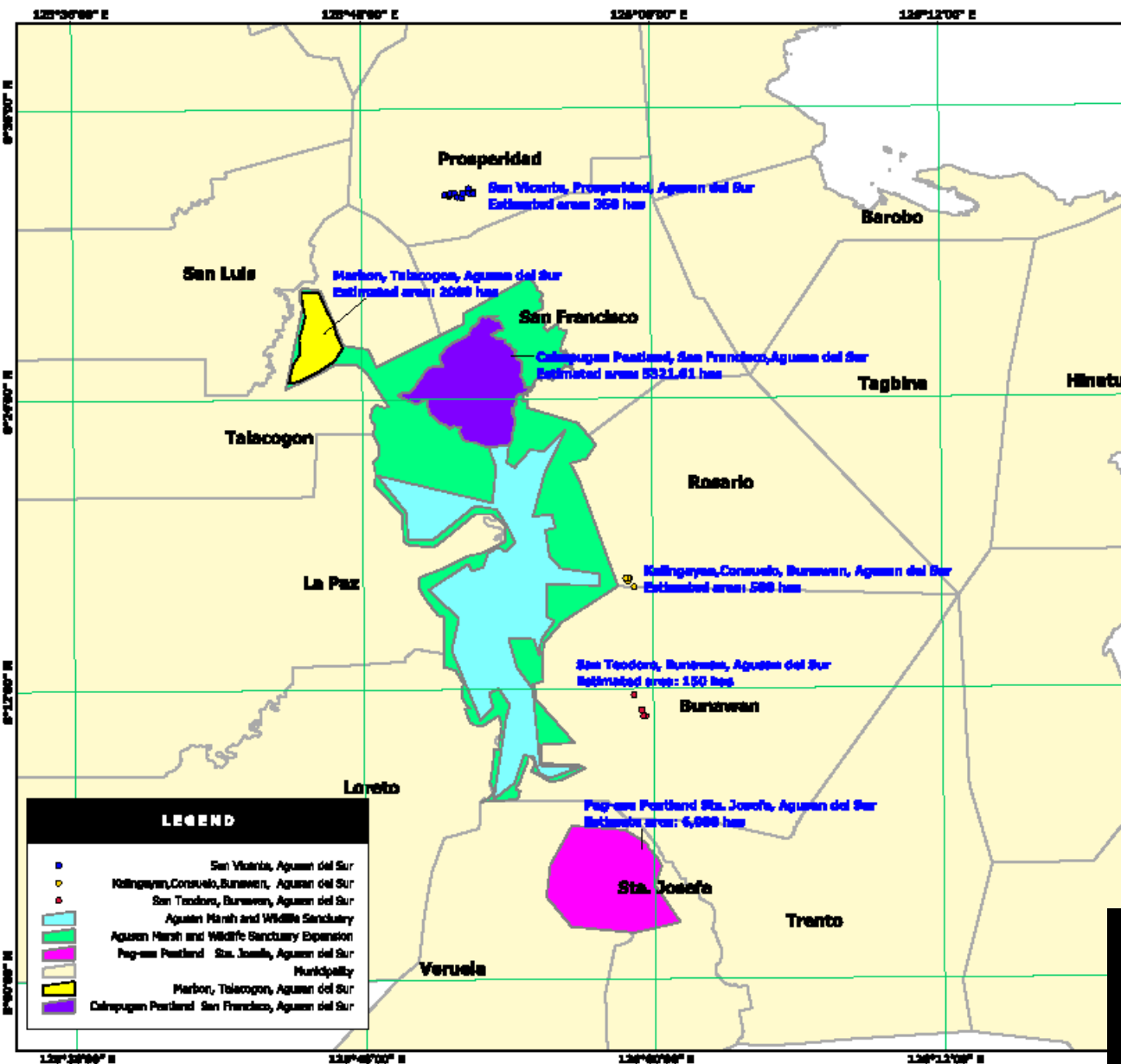


Peatland Surveys undertaken in five countries



Philippines

2010 - 5,000ha / 2013 - 20,000ha



SCALE: 1:300000

MAP
SHOWING THE VALIDATED AND ASSESSED
PEATLAND AREA OF CARAGA REGION SPECIFICALLY
IN THE PROVINCE OF AGUSAN DEL SUR

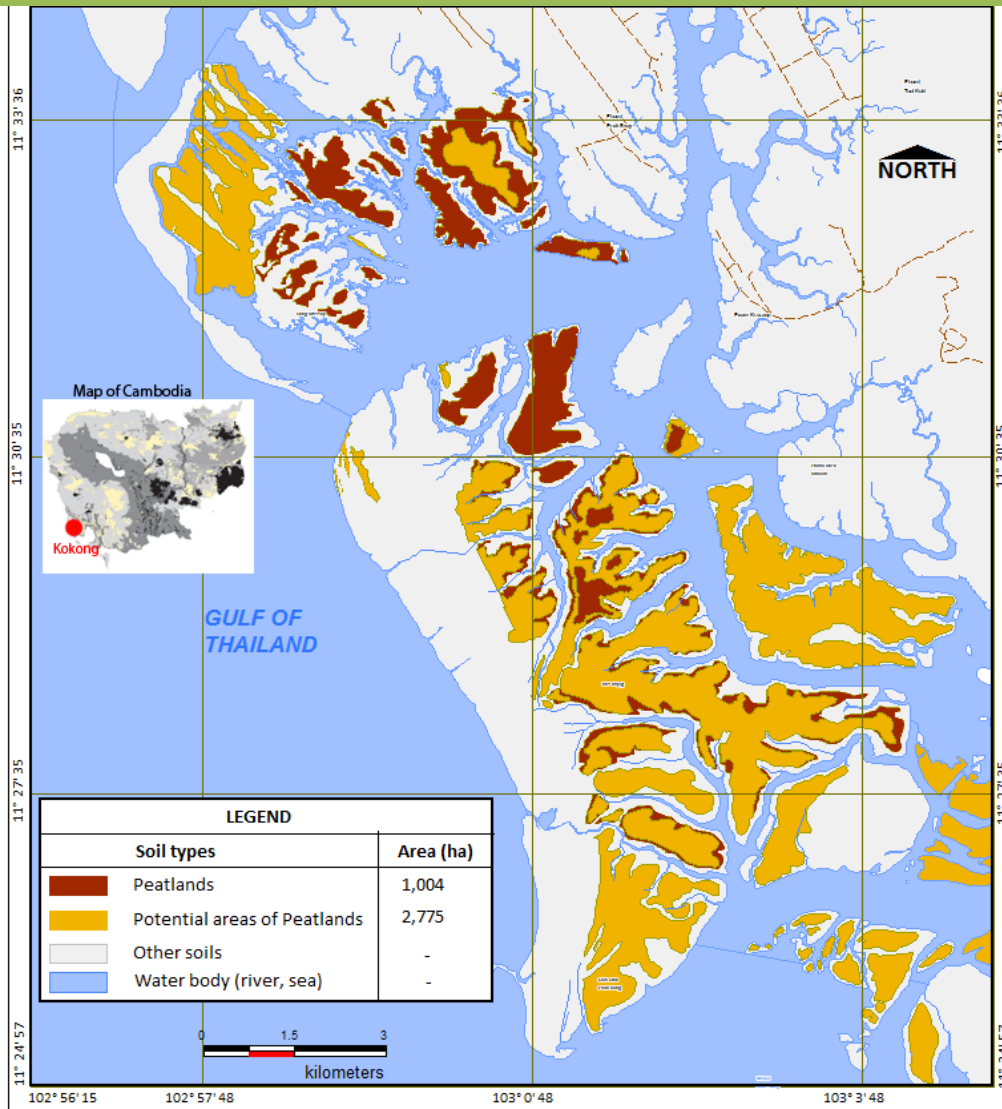
PREPARED BY
MARC KAROL M. ENQUETO
PAWD STAFF

NOTED BY:
JAIHE S. UBAROS
Chief PAWD

Map showing the
validated peatlands in
Agusan

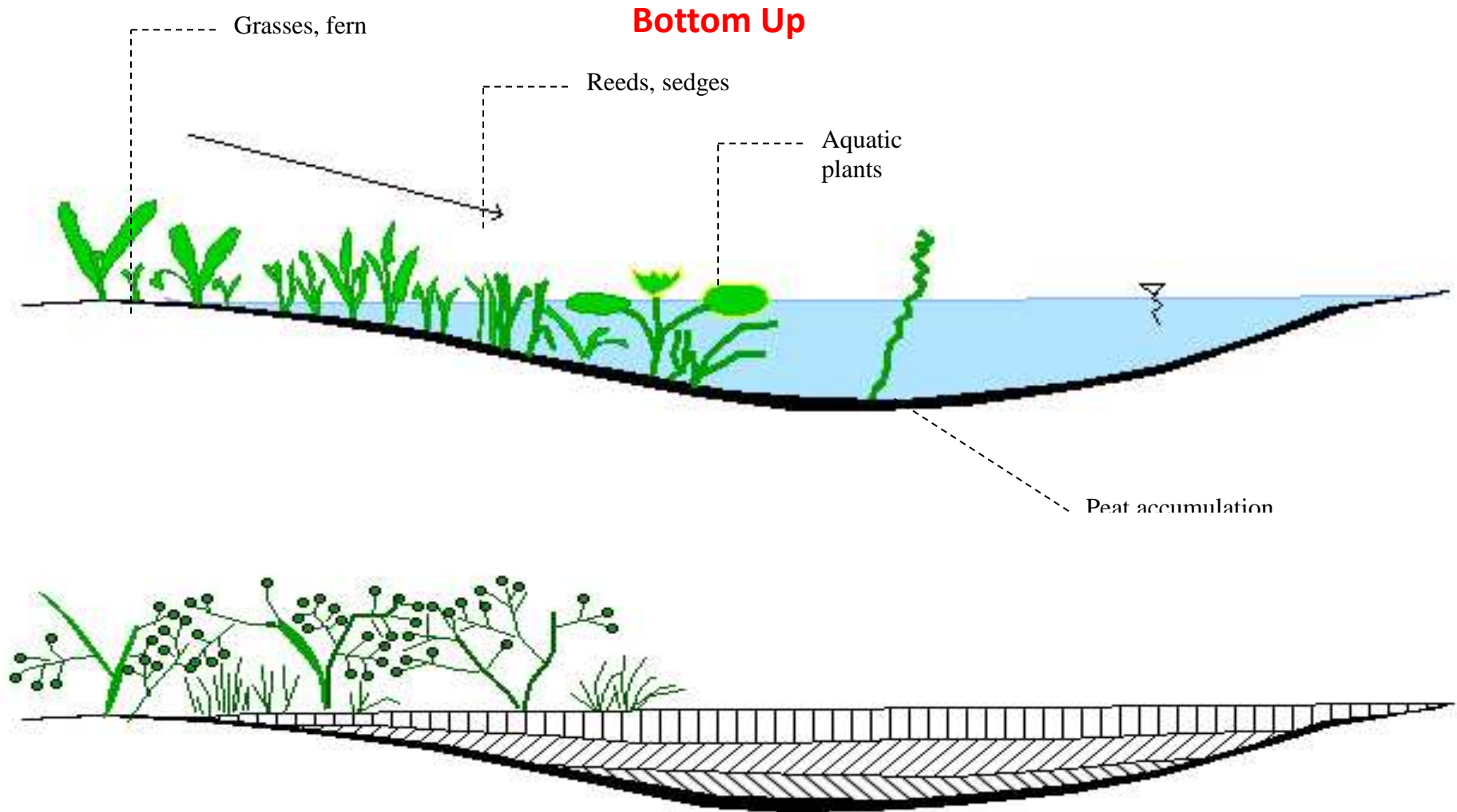
Cambodia – Unique Mangrove Peatland

2010 - unknown / 2013 – 7,300ha



7,306.61 ha of unique “**mangrove peatland**” was identified in one coastal province, Koh Kong Partly Protected in wildlife reserve. Potential Ecotourism development with community

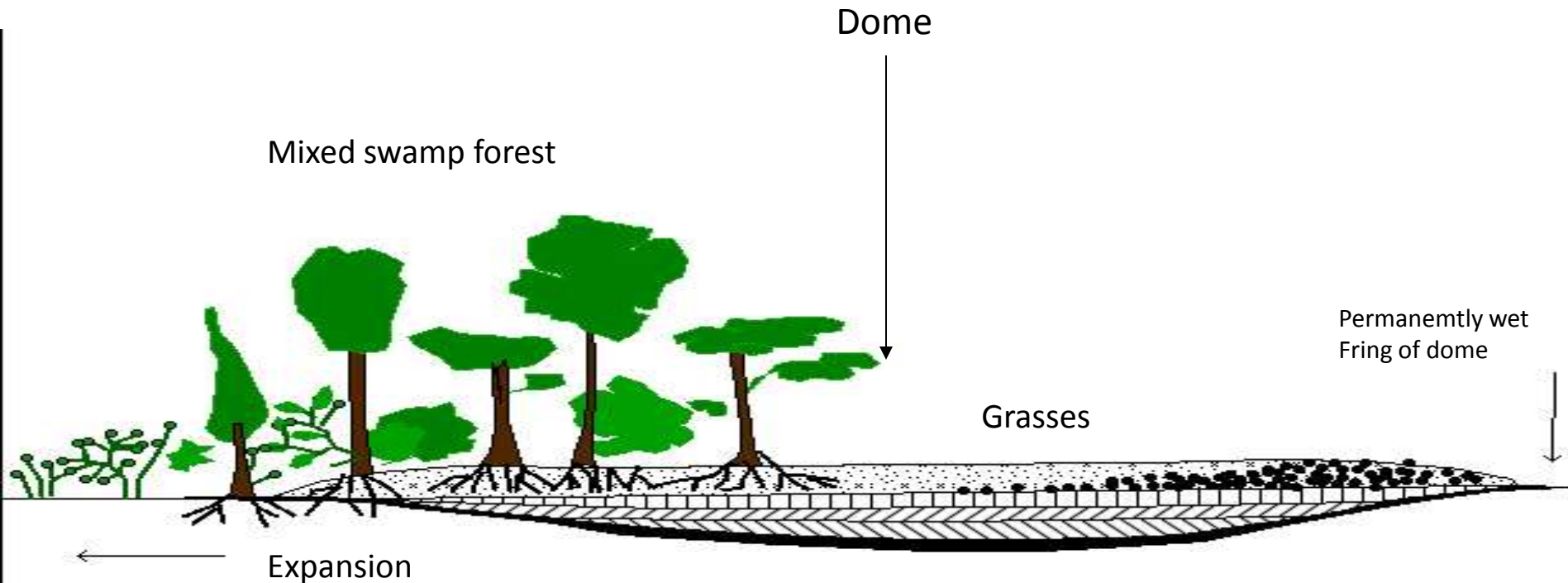
PEATLAND FORMATION



A depression is gradually filled in with topogenous peat, which is then overgrown by a laterally expanding ombrogenous peat mass. Note the changing composition of the vegetation

PEATLAND FORMATION

Bottom Up



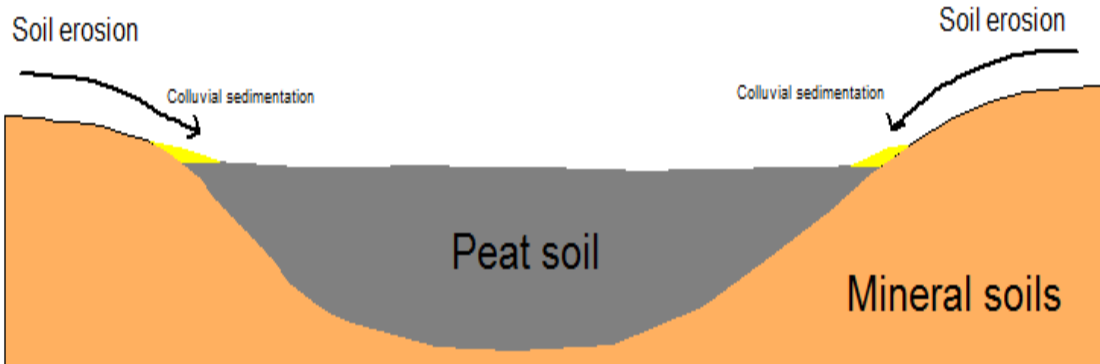
Bottom-up: Peatland was formed in Heho area

PEATLAND FORMATION

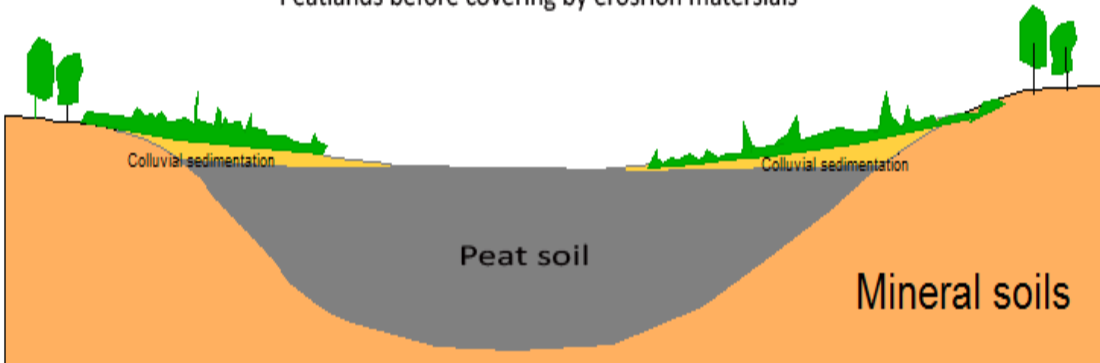
Peat soil was formed in depression in Heho area.

- **Peat soil affected by erosion materials.**
- **Peat soil is covered by colluvial soils resulting in soil erosion in higher surrounding area.**

Peatland in Heho area

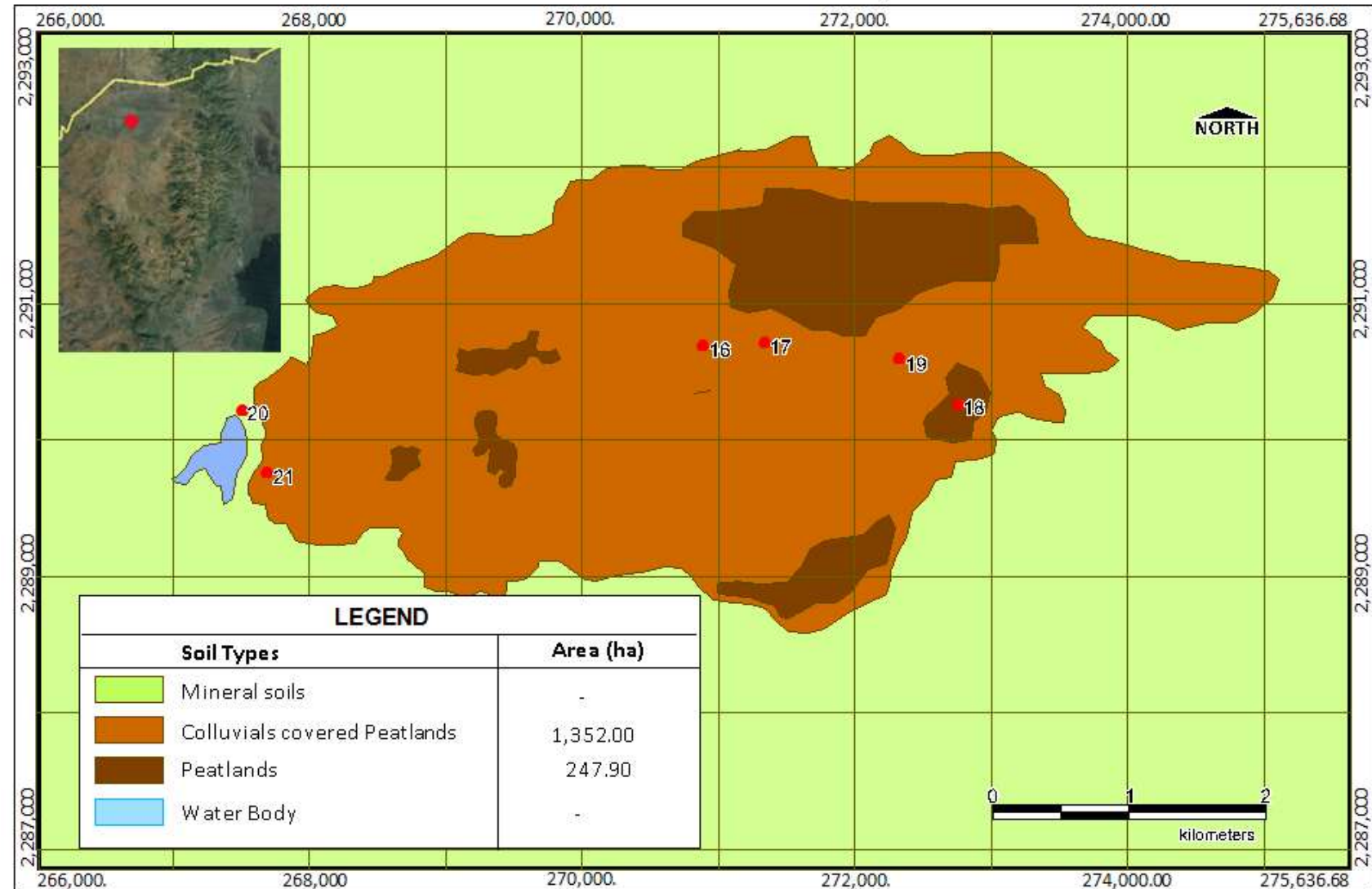


Peatlands before covering by erosion materials



Peatlands are covered by colluvial materials resulted in soil erosion in surrounding area

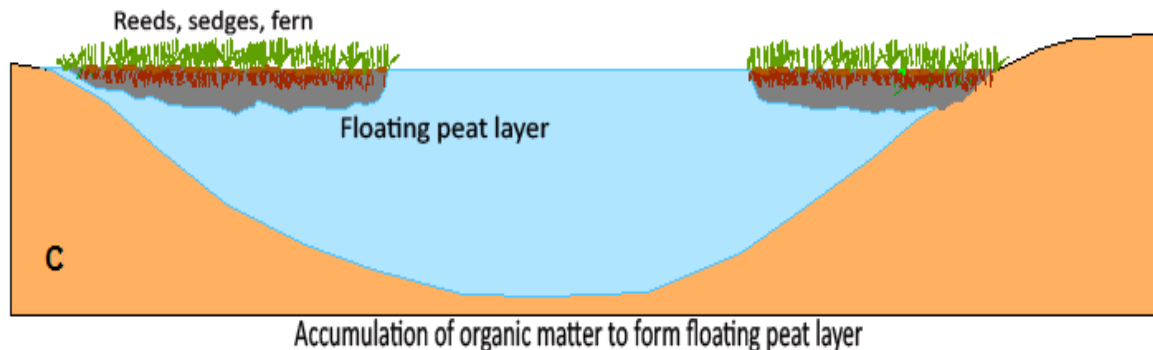
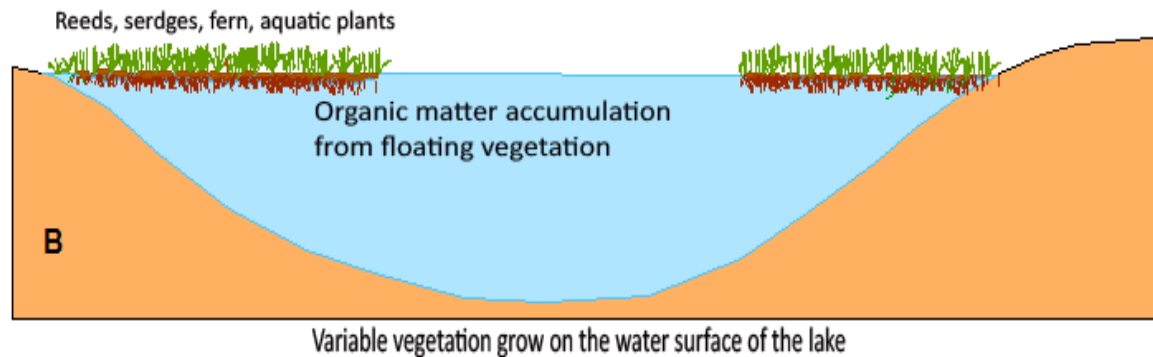
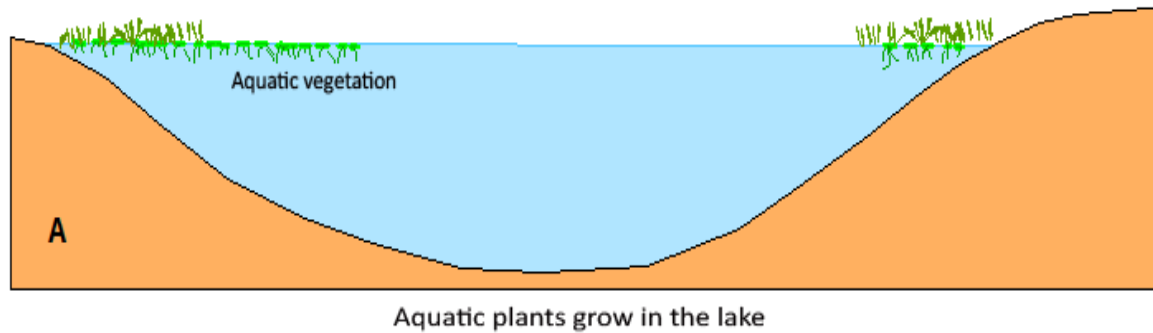
PEATLANDS IN HEHO AREA - SHAN STATE, MYANMAR



Peatlands in HeHo Lake area

PEATLAND FORMATION

Top down: Formation of peat soils in Inle Lake area



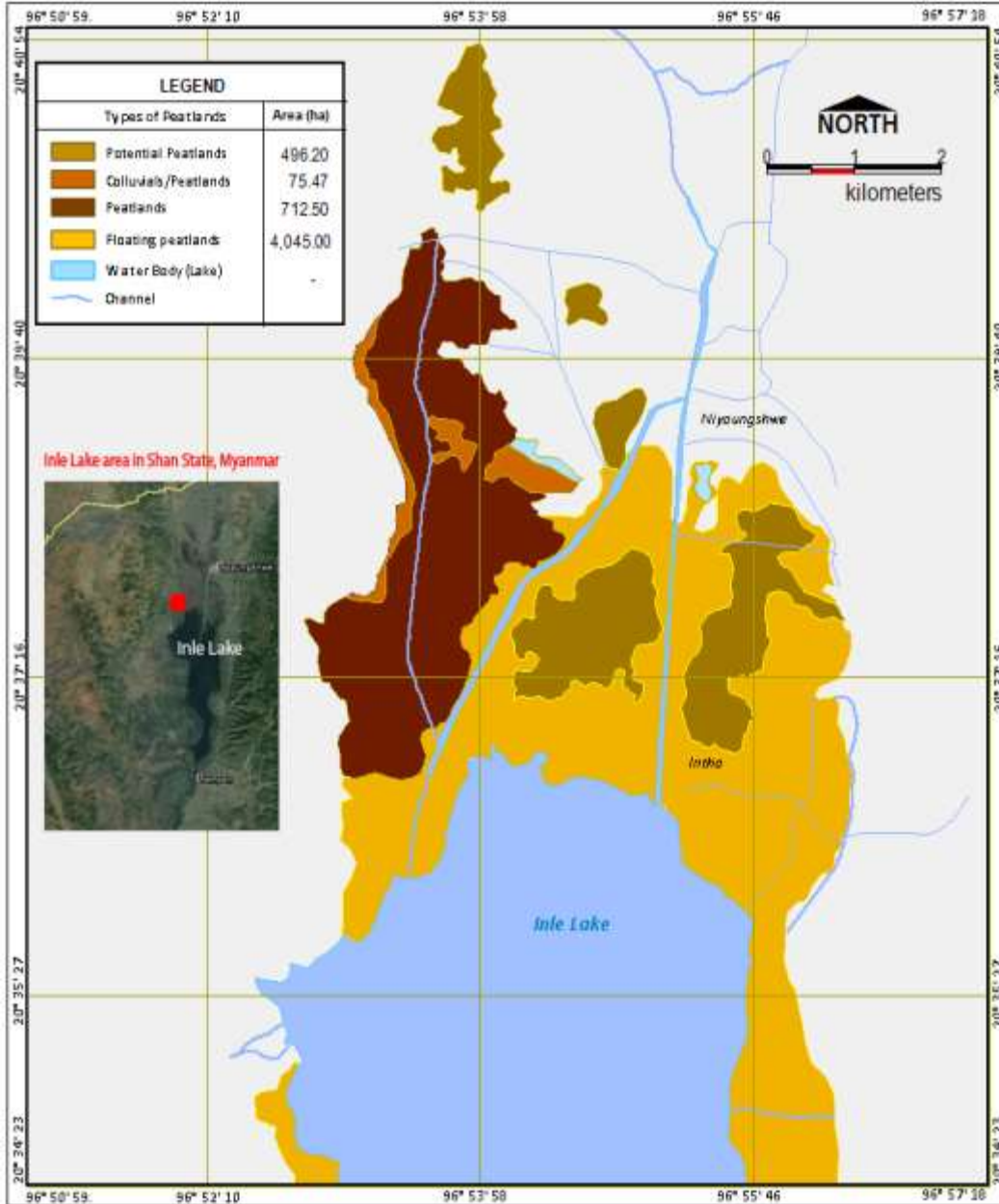
A. Aquatic plants on the water surface of lake.

B. Sequence of variable plants that are dominantly reeds, sedges, fern and grasses.

C. Floating vegetation remained and Peat is formed beneath the vegetation mat.

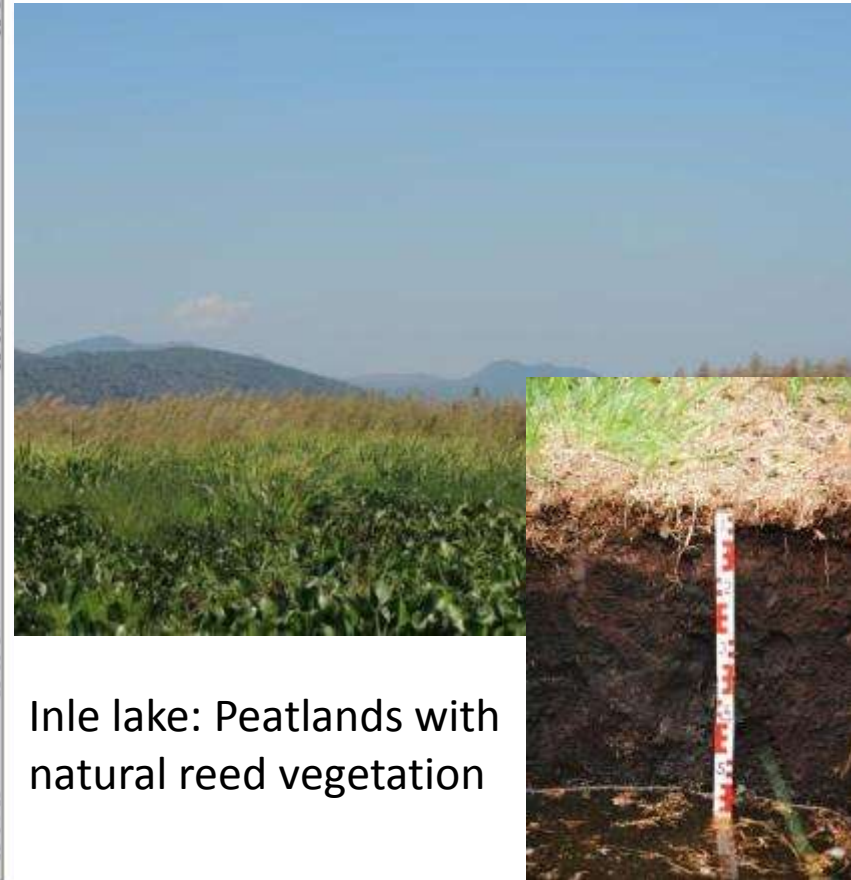
Myanmar - Newly described Peatland at Inle Lake

PEATLAND AREA IN SHAN STATE OF MYANMAR



10,338 ha of peatlands identified:

- **Peatland: 685 ha**
- **Mix Peat & Mineral : 75.47 ha**
- **Potential Peat : 5,496 ha**



Inle lake: Peatlands with natural reed vegetation

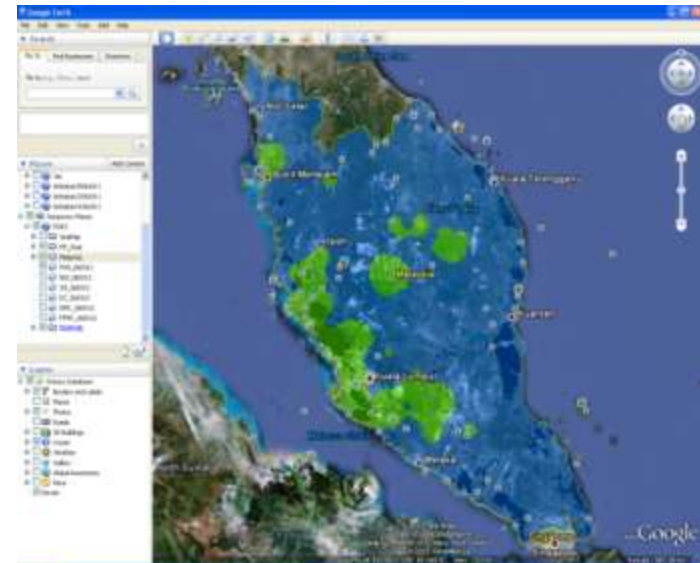
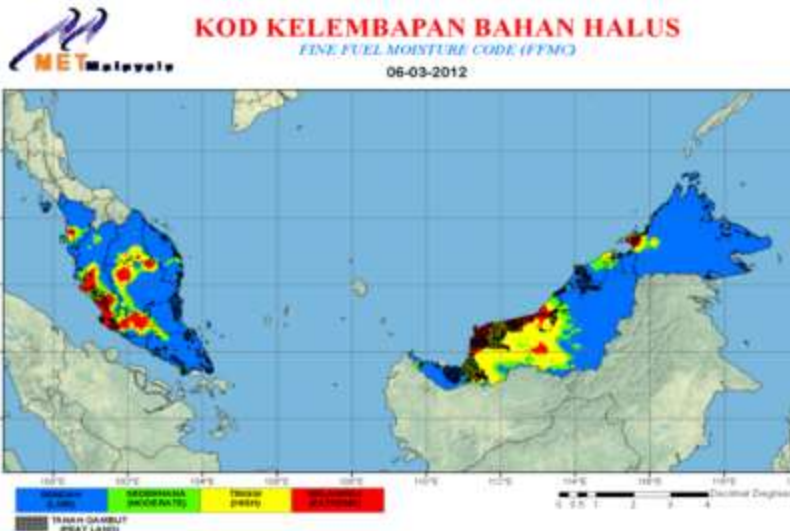


2. Fire Prediction, Prevention and Mitigation

Target 2020:

***Prevent any uncontrolled wildfires on peatlands, and
eliminate any widespread smoke haze***





- Zoom to Peninsular & East Malaysia
- Google Map
- Peatland area

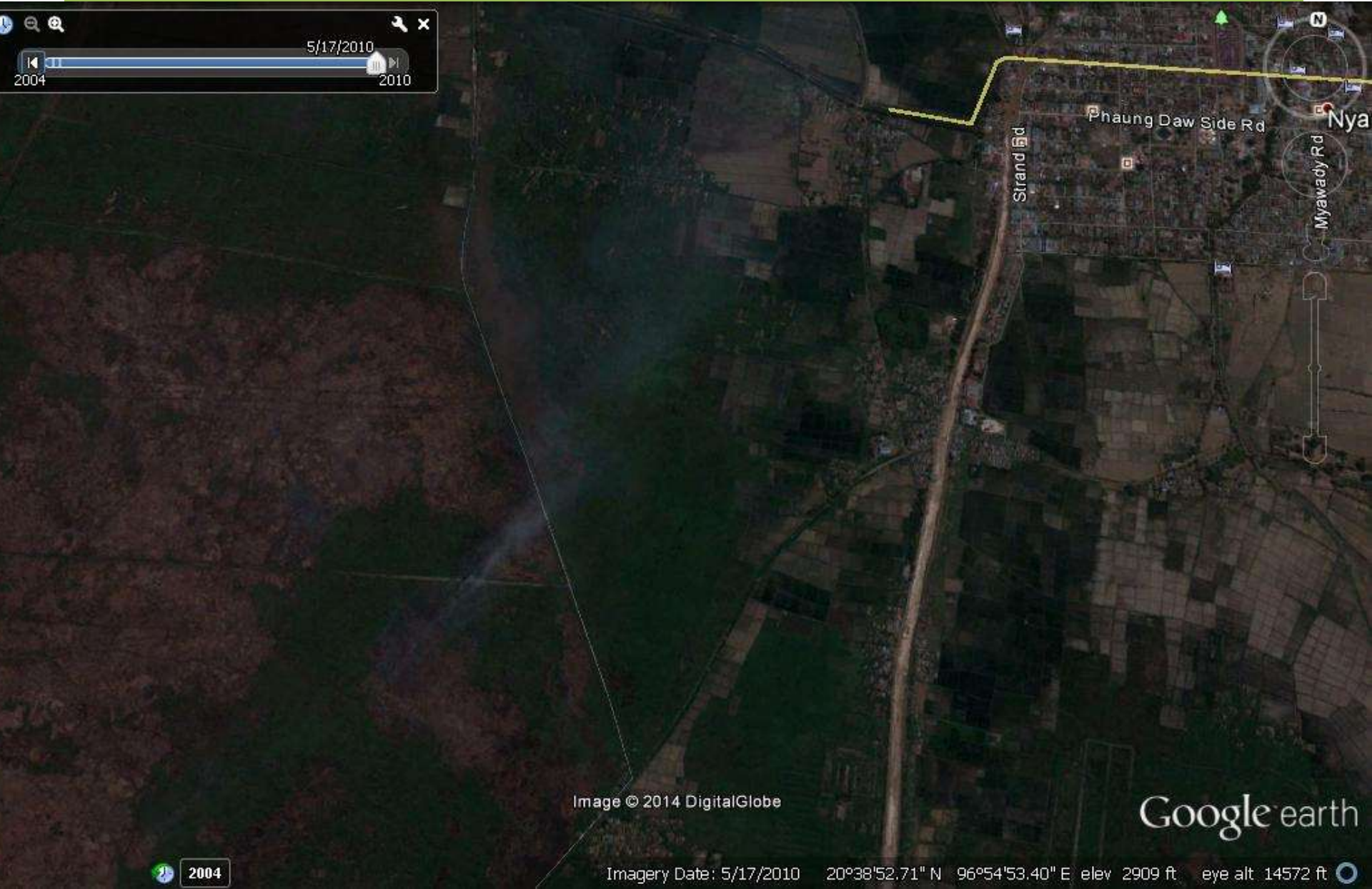
FDRS used to guide preventive measures and allocation of resources and facilitate patrolling and warning action



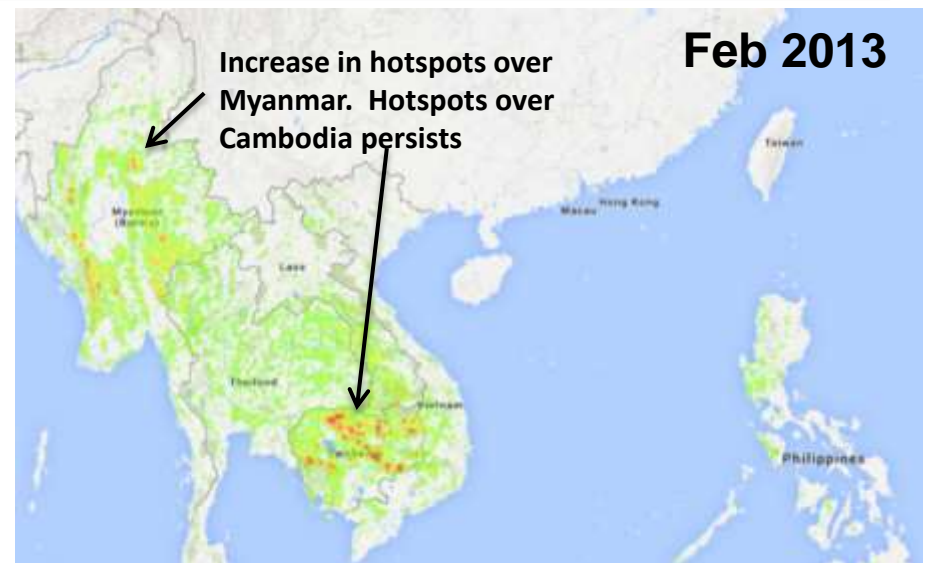
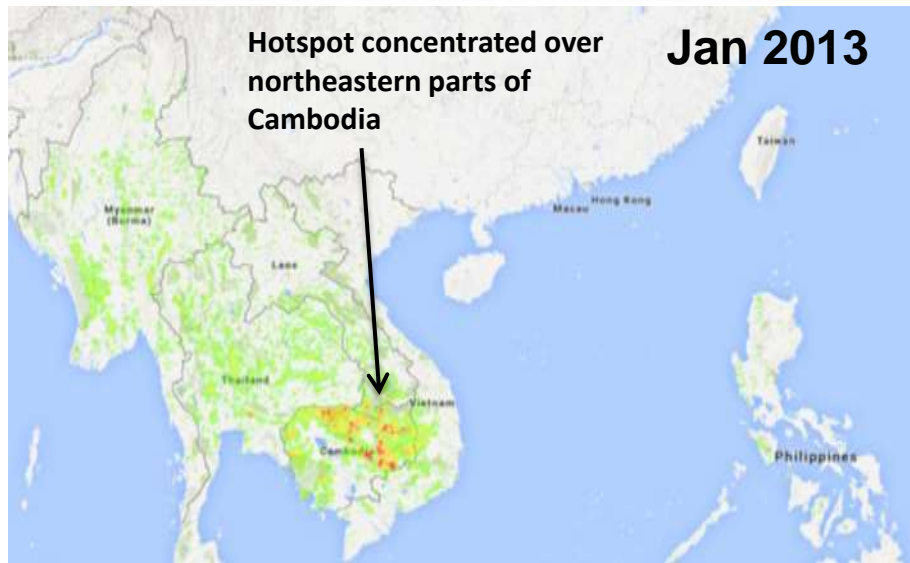
Fire suppression operation by local community groups



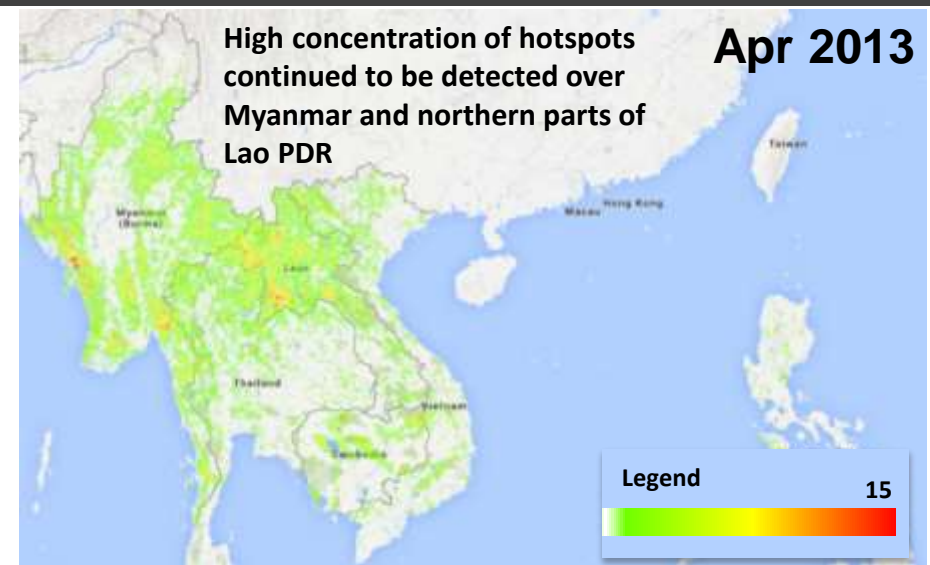
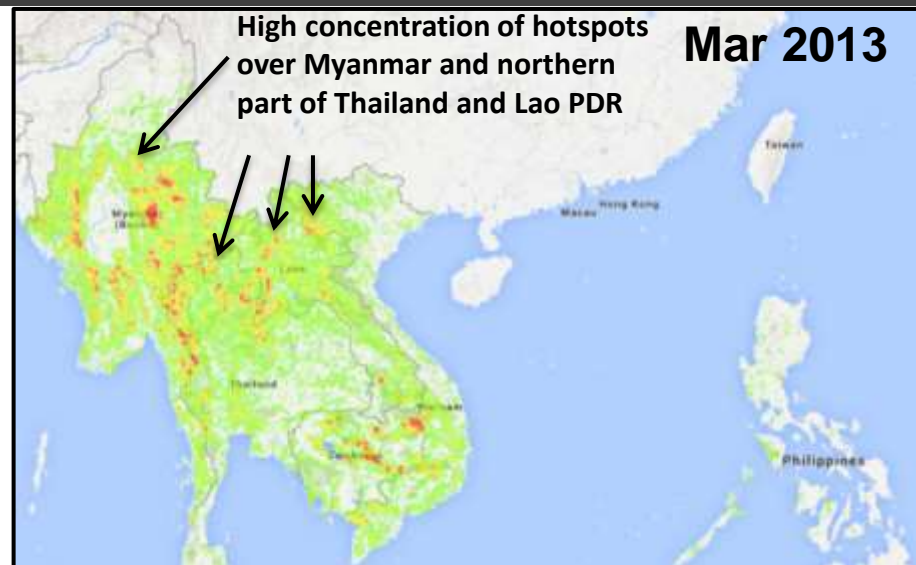
Fires in peatlands at inle lake - 2010



Review of Hotspot Situation - Northern ASEAN

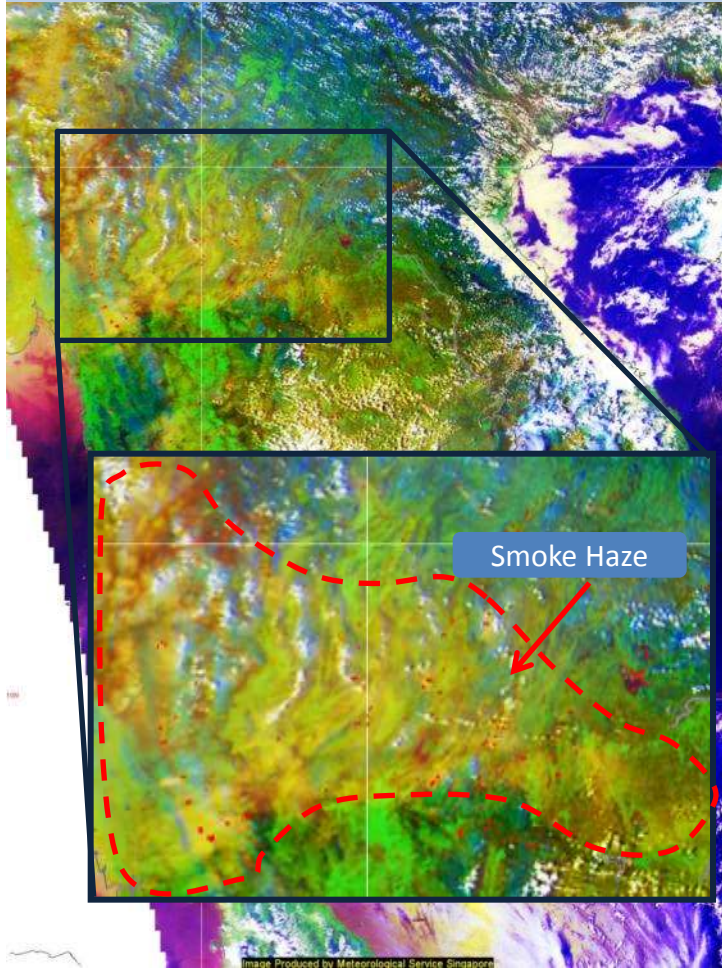


Monthly heat map of hotspots detected (based on NOAA18 satellite)

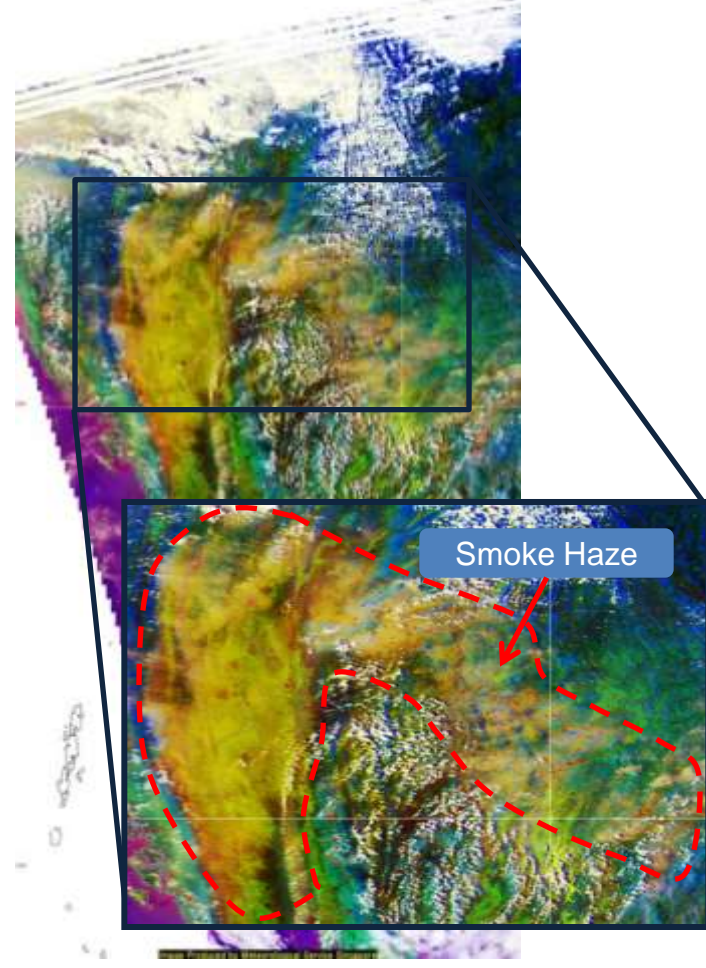


Review of Haze Situation - Northern ASEAN

NOAA-18 Satellite 13 Mar 2013 07:32 UTC



NOAA-18 Satellite 8 Apr 2013 07:46 UTC



Smoke plumes from hotspots in Myanmar and Thailand during March & April 2013



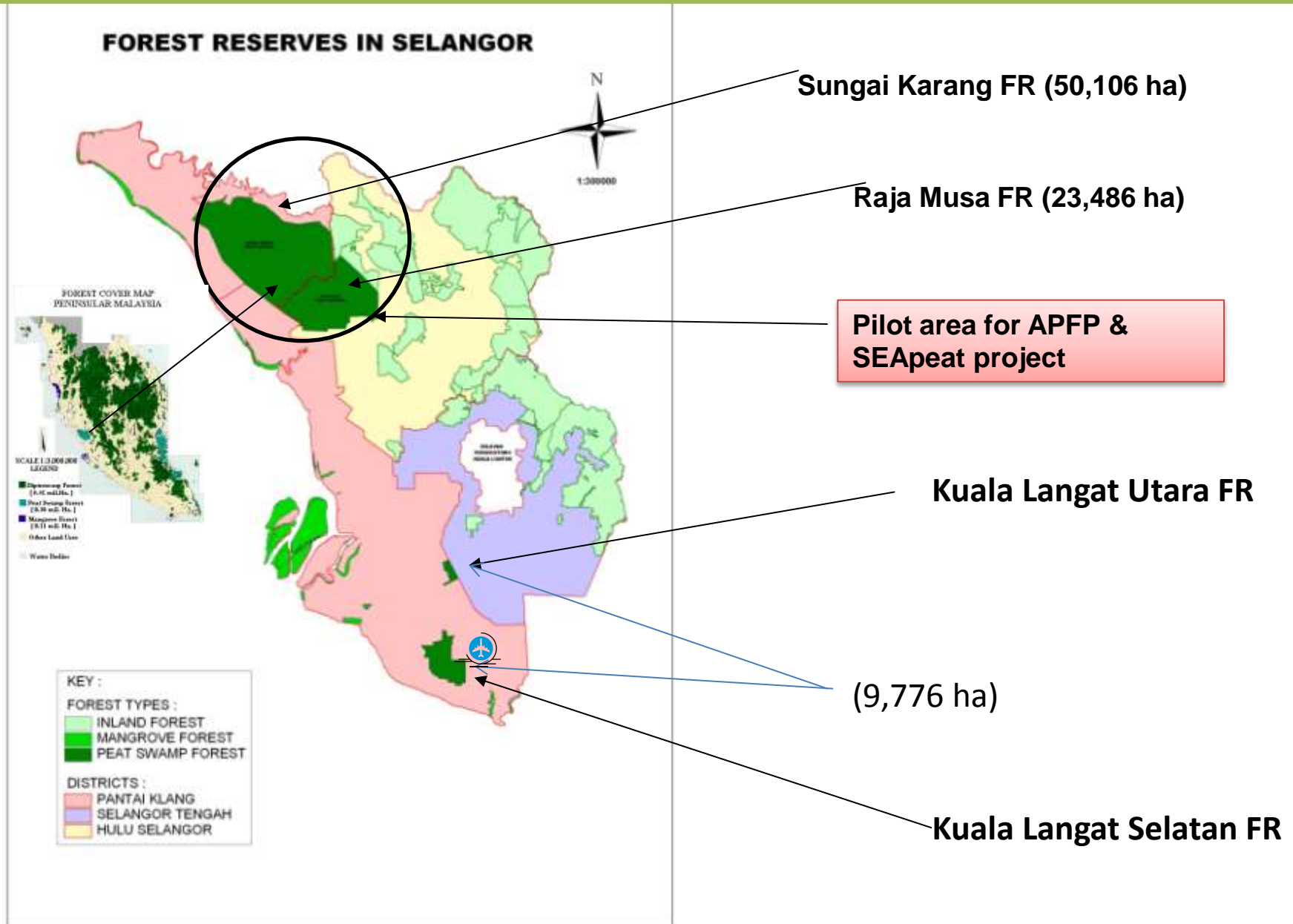
3. Rehabilitation of fire prone sites

Target 2020:

Rehabilitate fire prone sites focusing on root causes of fire



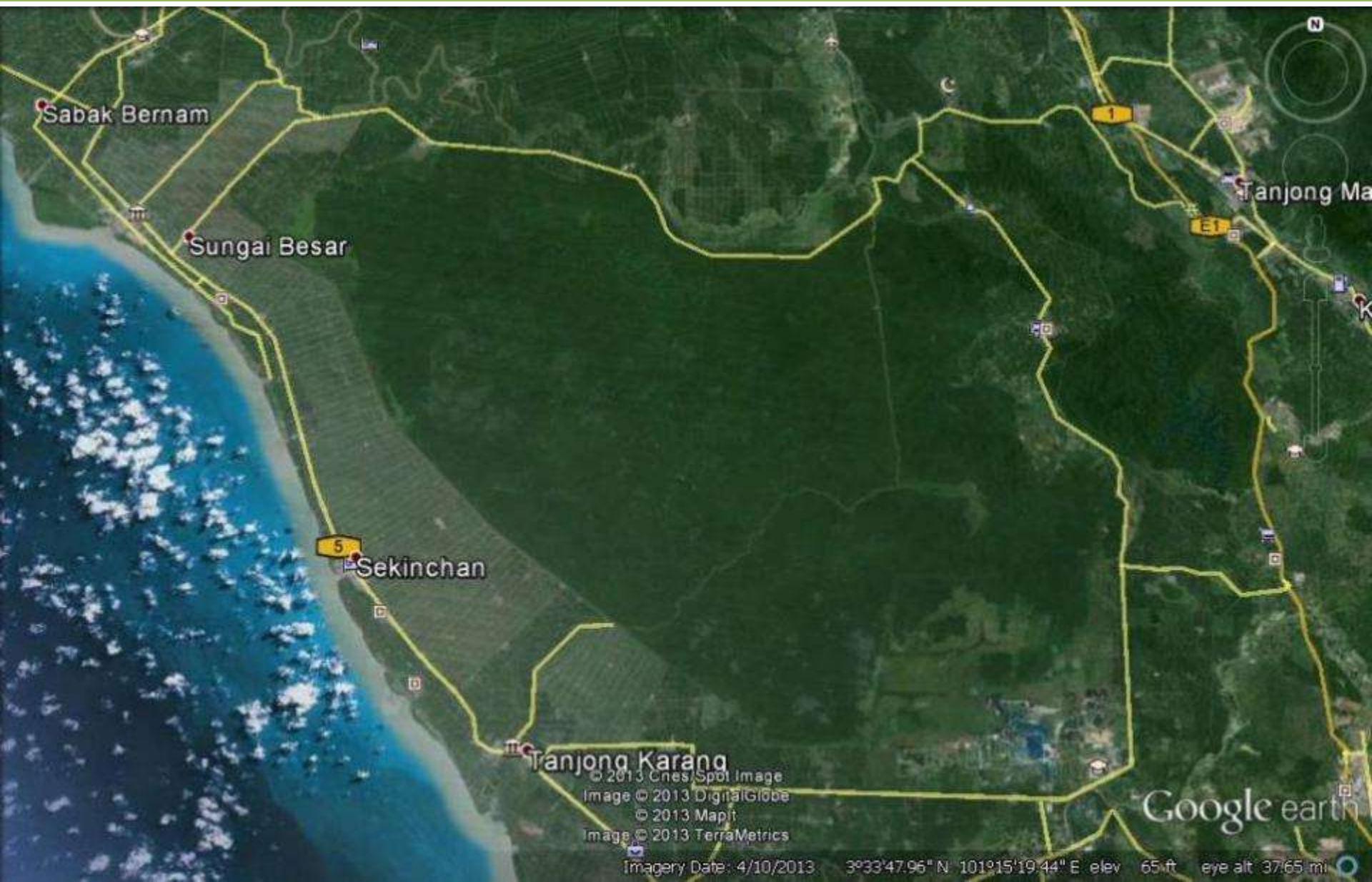
Selangor Malaysia - Identify fire prone areas



Peatland Forest contributes to provision of water supply to rice fields in Malaysia



North Selangor Peat Swamp Forest



Large scale fires still occur in recent years



Abandoned canals and drains being blocked in peatland areas to raise water levels for fire prevention and control



Clay bund constructed by private company to raise the water level at the fire prone areas



2012



2013



Rehabilitation activity participated by public and local community

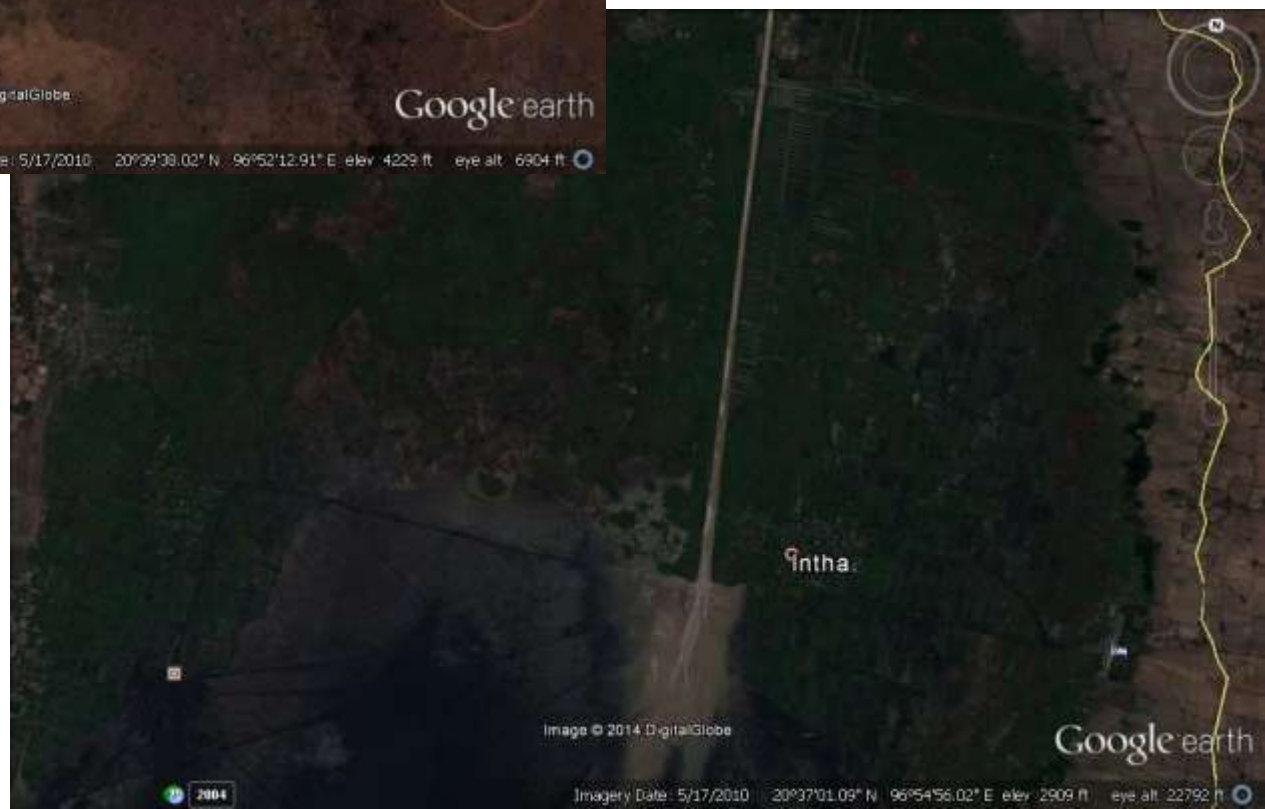


Degraded peatland area rehabilitated in Malaysia

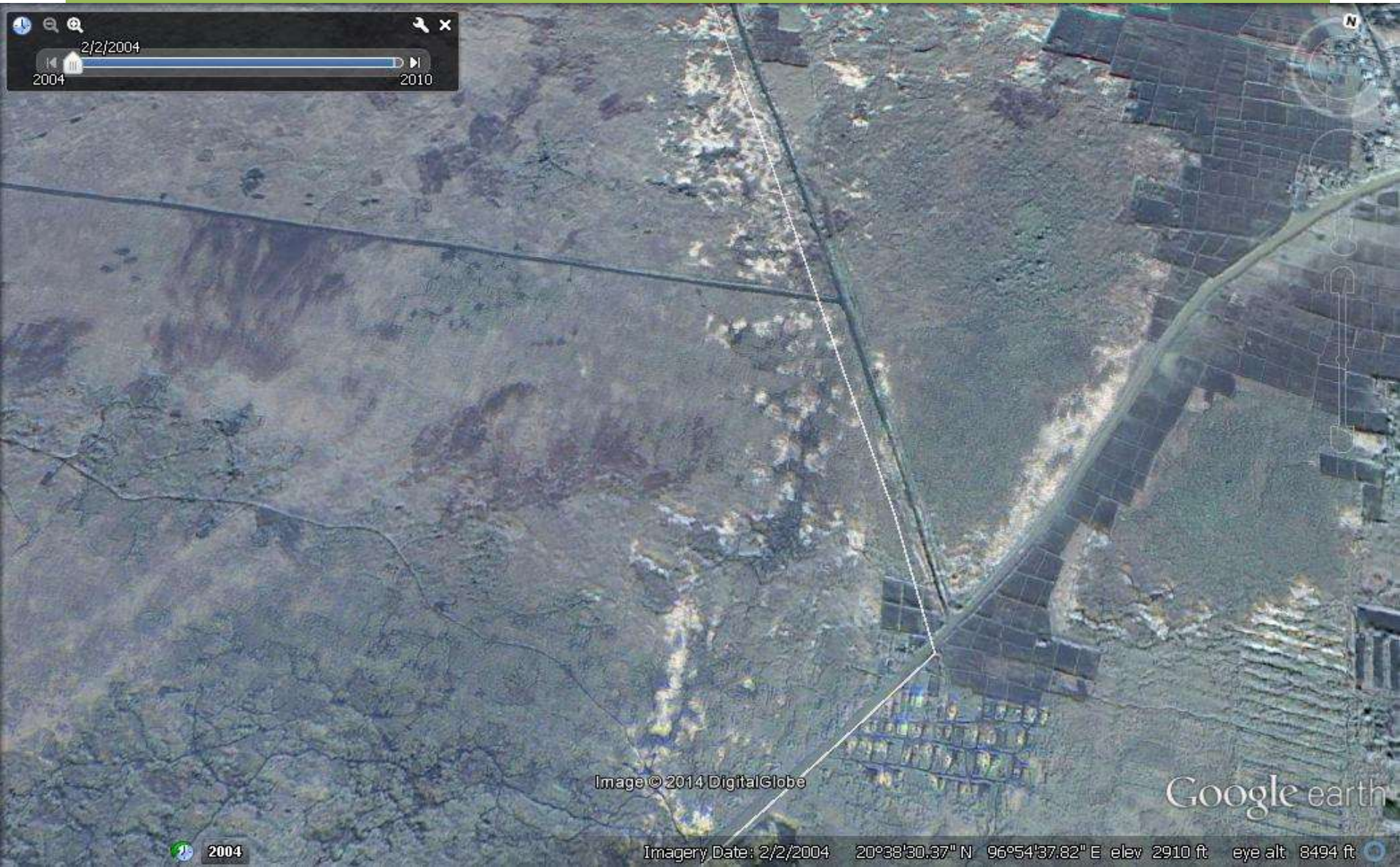




Land clearance in Inle catchment and siltation



Peatland drainage to north of Inle lake





4. Promote Sustainable Livelihood

Target 2020:

Sustainably manage peatlands for conservation, sustainable livelihoods, and sustainable economic use



Best practices on peatland agroforestry in Indonesia



Agroforestry system: with 'sorjan system: mixed jelutung and corn and vegetables, Central Kalimantan

Sorjan Farming system transferred to Agusan Marsh, Philippines

US10,000 for pilot sites in 10 villages 14 ha



Barren land



3-week old planted field



2.5 months old



Pechay



Okra



String beans



Corn



Eggplant



Watermelon



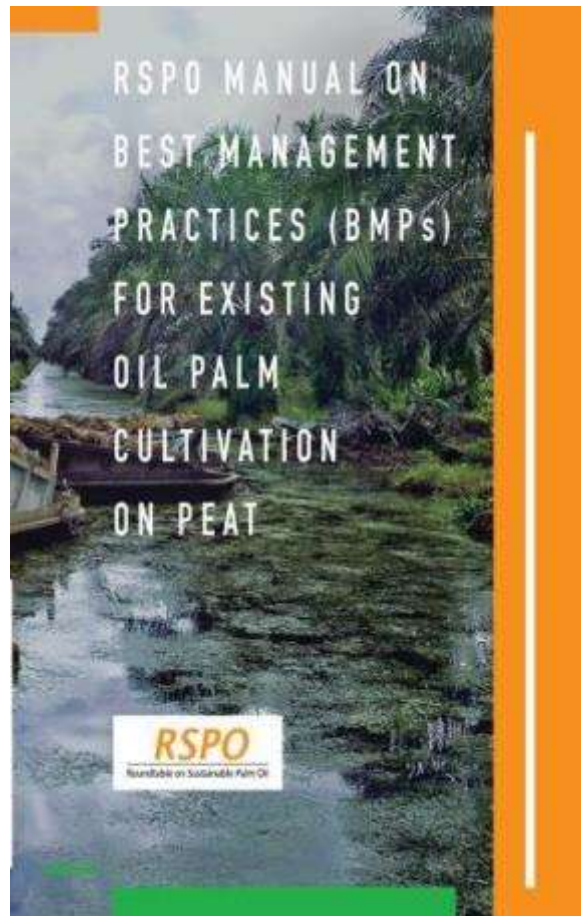
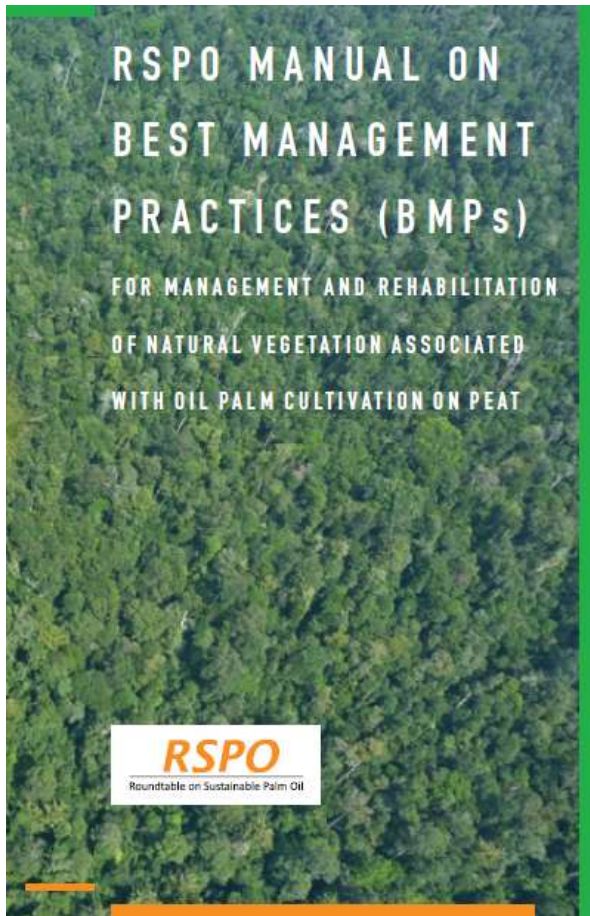
Cucumber

First Registered Community Based Organisation (CBO) on peatlands in Malaysia: **North Selangor Friends of Peatlands (NSFoP)**



NSFoP members involve in forest fire monitoring , fire suppression, awareness programme, tree planting and eo-tourism

RSPO BMP Manual Promotion



- RSPO Manual on Best Management Practices (BMP's) for existing oil palm cultivation on peat.
- RSPO Manual on Best Management Practises (BMPs) - for management and rehabilitation of natural vegetation associated with oil palm cultivation on peat

Cooperation with plantation sector to prevent fires

Floating Peat Island: Inle lake, Myanmar





5. Conservation

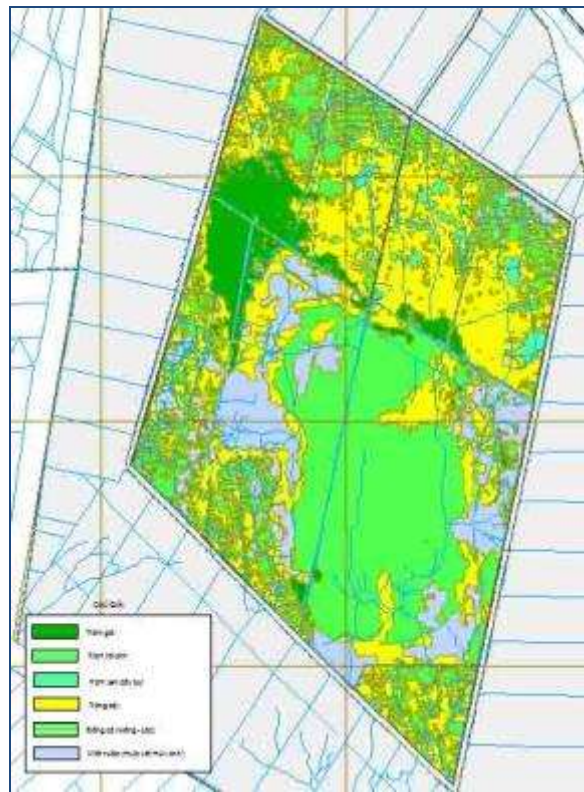
Target 2020:

Conserve peatlands to contribute to significantly reduced emissions of greenhouse gases and increased peatland biodiversity in the region



Revised land and water management for U Minh Thuong National Park

Strategy for Integrated management of water and fire on peatlands prevented forest fire and supported rehabilitation of ecosystem and biodiversity.



2006



2009



2012

Buffer Zone Management Green Contract System in Vietnam



- US\$ 40,000 Project funding has been used to support the community livelihoods development of 51 households in 400ha buffer zone of UMTNP (750 USD for each household).
- **Four models applied: *Fruit trees, Vegetables, livestock and crops***

Impact on peatland reduced, fires prevented







6. Governance and Capacity Building

Target 2020:

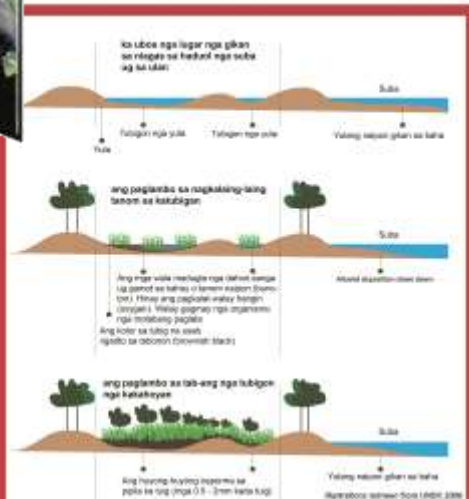
APMS and NAPs implemented; national and regional capacity enhanced



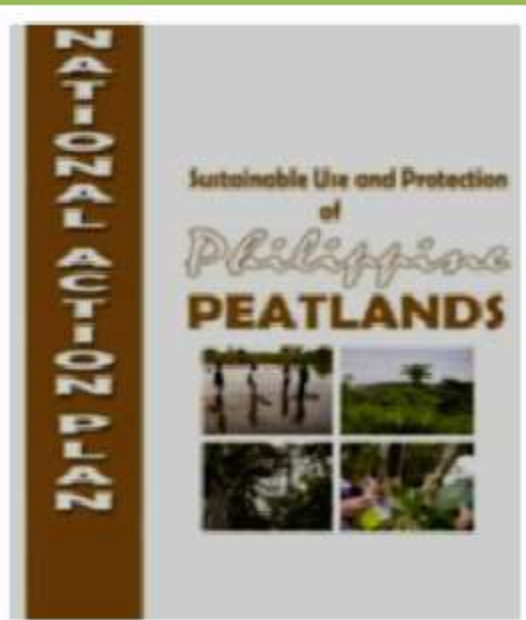
National Action Plans

Country	Status	Remarks
Indonesia	Completed in 2006 and revised in 2012	Revised strategy published in November 2012. Key issues to be included in Government Regulation on Peatland
Malaysia	Completed in 2010	Endorsed by Cabinet January 2011 and promoted.
Philippines	Completed in 2009	Incorporated into National Wetland Strategy and Action Plan; and the Philippine Development Plan (2011-2016)
Vietnam	Final Draft completed	Awaiting final stake-holders consultation and planned approval by Cabinet.
Brunei Darussalam	NAP finalised	NAP finalised. Further review with relevant stakeholders will be held to take into account recent developments
Cambodia	Peatland assessment underway	
Lao PDR	Peatland assessment underway	Consultation started in August 2012
Myanmar	Peatland assessment underway	NAP planned after assessment is complete
Singapore	Existing peatlands zoned within Natural Reserve	Focus on supporting issues at regional level
Thailand	Initial consultation initiated	Preparation on the initial draft underway

Awareness



Action plans and training materials



APFP-SEApeat

A collaborative effort to improve Sustainable Management of Peatland Ecosystems in Southeast Asia

Training Module on Peatland Assessment and Management



MASTERPLAN

PENGELOLAAN EKOSISTEM GAMBUT
PROVINSI RIAU



KEMENTERIAN NEGARA LINGKUNGAN HIDUP
MARET 2019



ព្រះរាជាណាចក្រកម្ពុជា



Anticipated Programme Targets by 2020

1. All peatland areas identified and inventorized;
2. Zero-burning uniformly practiced and controlled-burning only in exceptional cases to prevent any uncontrolled wildfires on peatlands, and eliminate any widespread smoke haze;
3. Fire prone sites rehabilitated by focusing on root causes of fire,
4. Peatlands sustainably managed, sustainable livelihoods enhanced, and sustainable economic use mainstreamed;
5. Peatlands conserved to contribute to significantly reduced emissions of greenhouse gases and increased peatland biodiversity in the region;
6. APMS and NAPs implemented; national and regional capacity enhanced

Indicative Budget

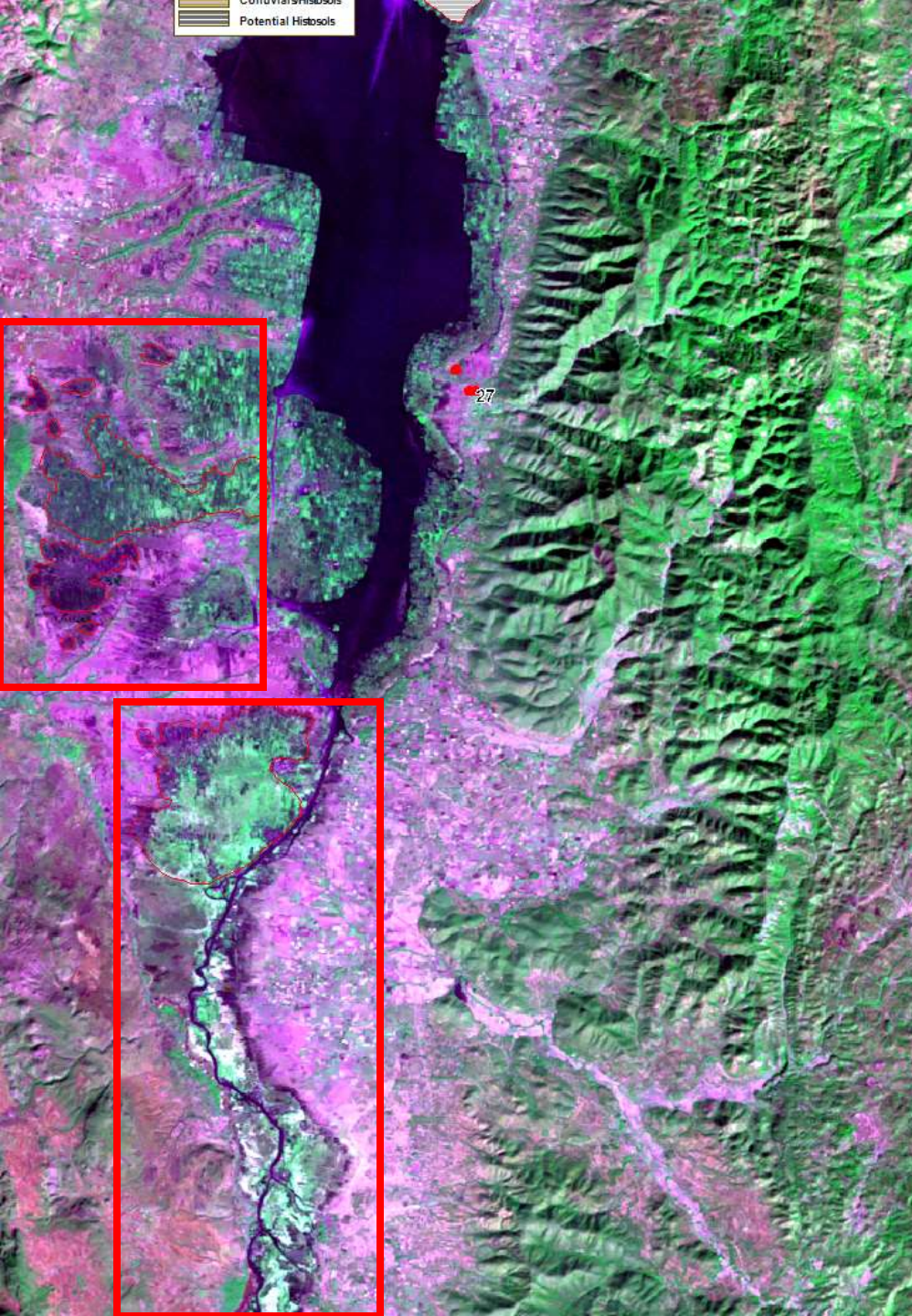
- Indicative budget for the programme (2014-2020) is:
 - USD 100 million from national budget allocations/ investments
 - USD 25-30 million from external partners.

Potential Funding Sources

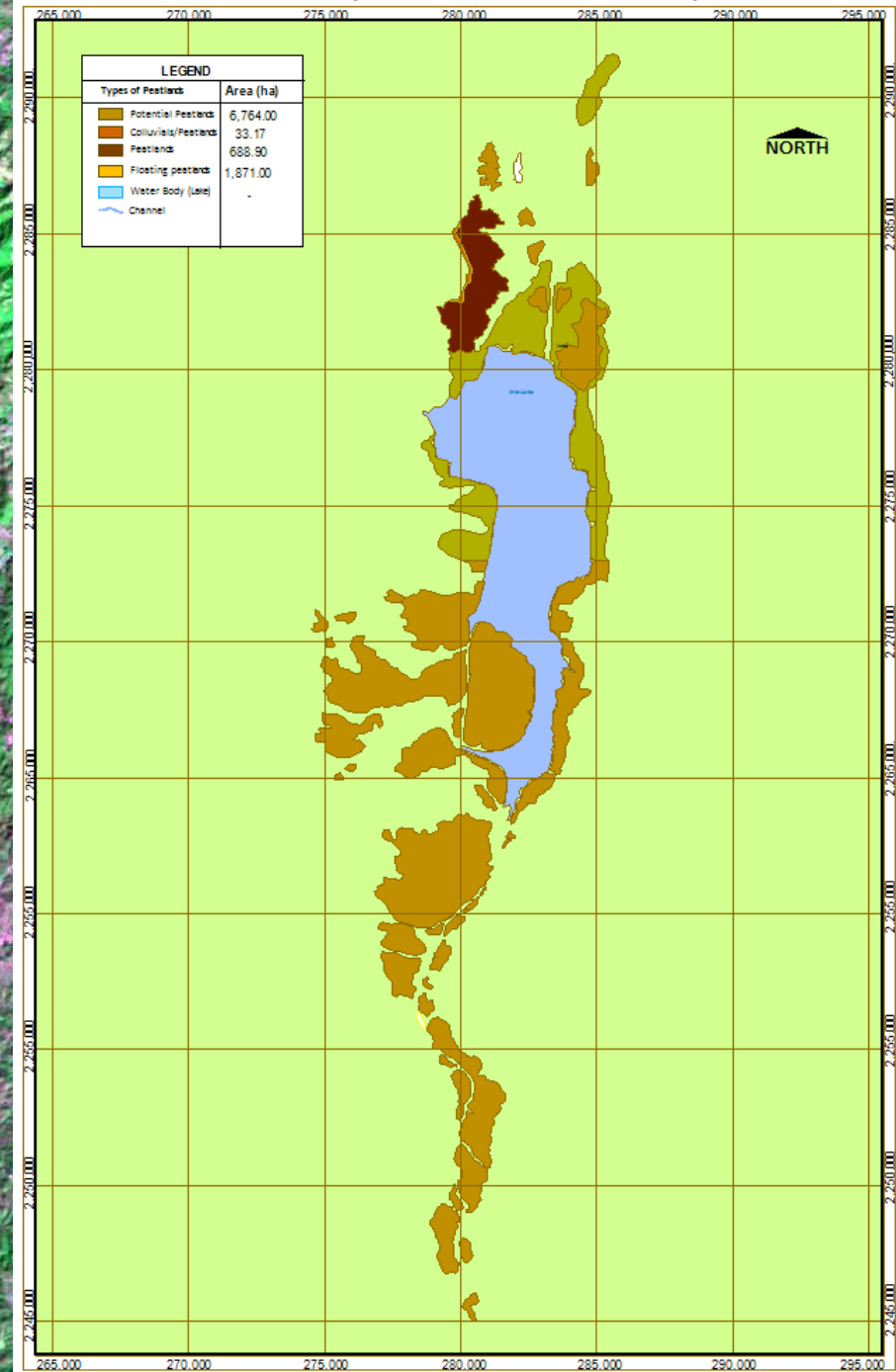
Sources	Types of Fund	Financing type	Remarks
National Governments	National budget for development & operation costs		
Bilaterals	Country Programmes	Grants	CIDA
Bilaterals	Regional Programmes		CIDA, DGIS, USAID, GIZ
GEF	GEF-6 allocation	Grants	According to GEF strategy
EU	EU Environmental Funds	Grants	According to EU strategy
EU	EU ASEAN Regional Funds	Grants	Priorities 2014-2018 under development
IFAD	adaptation fund for climate change	Grants	According to IFAD criteria
IFAD	Country Programmes		Micro-credit for community action
MDBs	National loans or regional/ national studies	Grants and loans	ADB, WB
Private Sector	Support for sustainable peatland management		companies in plantations, agriculture, ecotourism etc

Next steps - Myanmar

- Identification of priorities 2014-2020
 - Completion of national inventory
 - Initiation of management measures at key sites
 - Conservation of important areas
 - Policy and Regulations
 - Enhancement of capacity
- Development of concept proposal
- Identification of potential partners/funders
 - GEF; European Union; bilateral donors; national funds

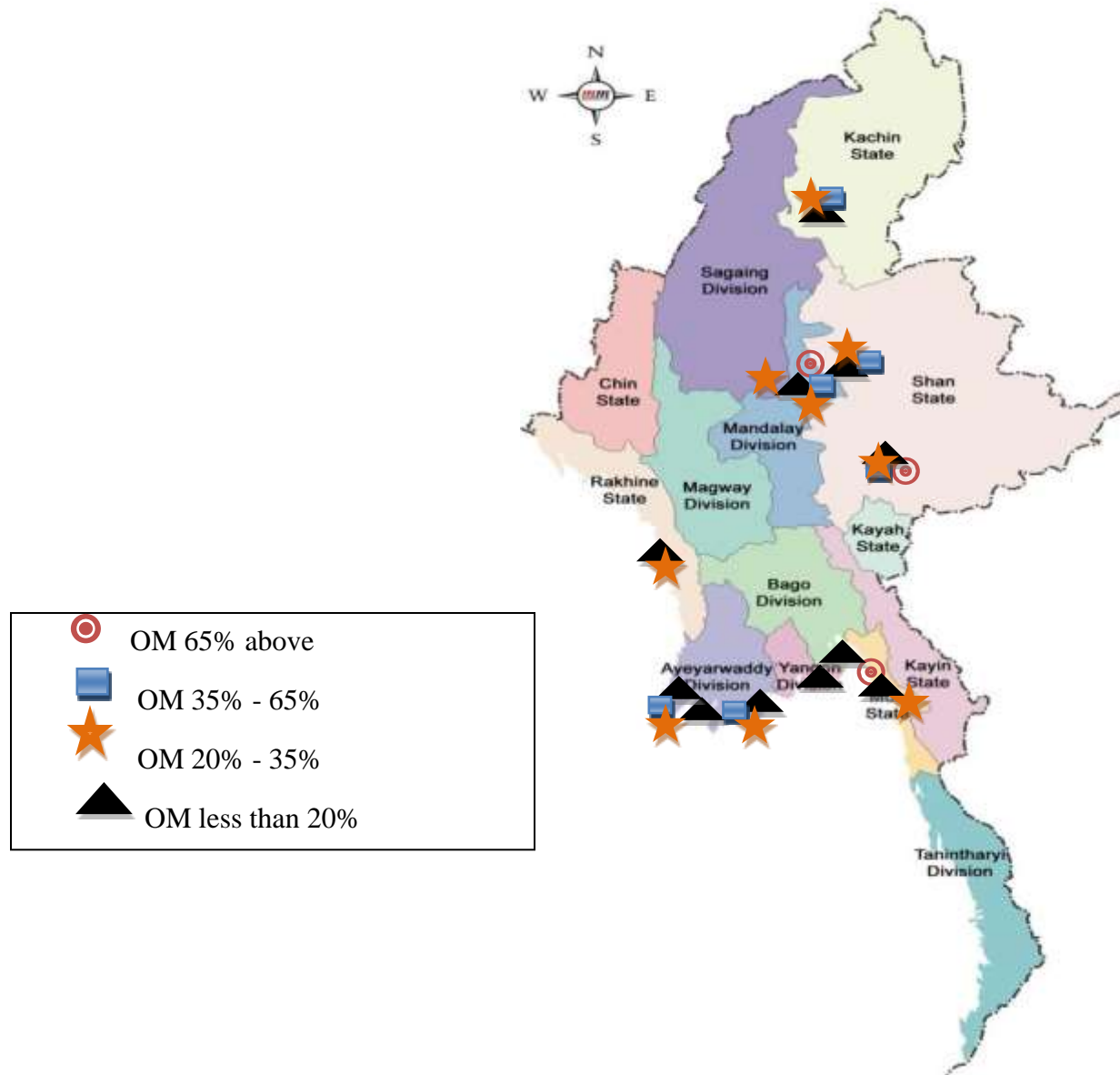


Potential area of peatlands in Inle Lake, Myanmar



Myanmar

Potential peatlands further assessment





Thank You