



# ASEAN Haze Framework

International experiences of agricultural open burning cases

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Environment Division, ASEAN Secretariat

EANET Seminar on Learning on Reducing Emission from Open Burning  
6 September 2022

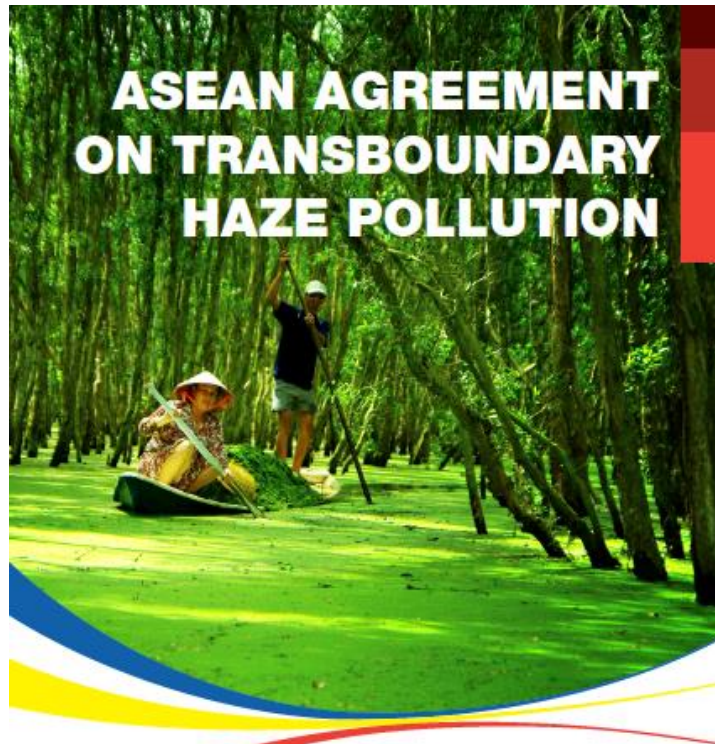
# Outline

ASEAN Agreement on Transboundary  
Haze Pollution

ASEAN Peatland Management Strategy

Challenges and Opportunities

# ASEAN Agreement on Transboundary Haze Pollution



- **Severe land and forest fires** in 1997-1998
- UNEP labeled the blaze among the **most damaging in recorded history**.
- **Profound impacts** on environmental, economic and social dimensions: agriculture production, health, transportation, tourism, and other economic activities
- **Agreement** signed in June 2002
- **Entered into force** on 25 November 2003
- **Ratified** by all AMS by 2015

## Objective:

prevent, monitor, and mitigate land and forest fires to control transboundary haze pollution through concerted national efforts, regional and international cooperation

# ASEAN Agreement on Transboundary Haze Pollution



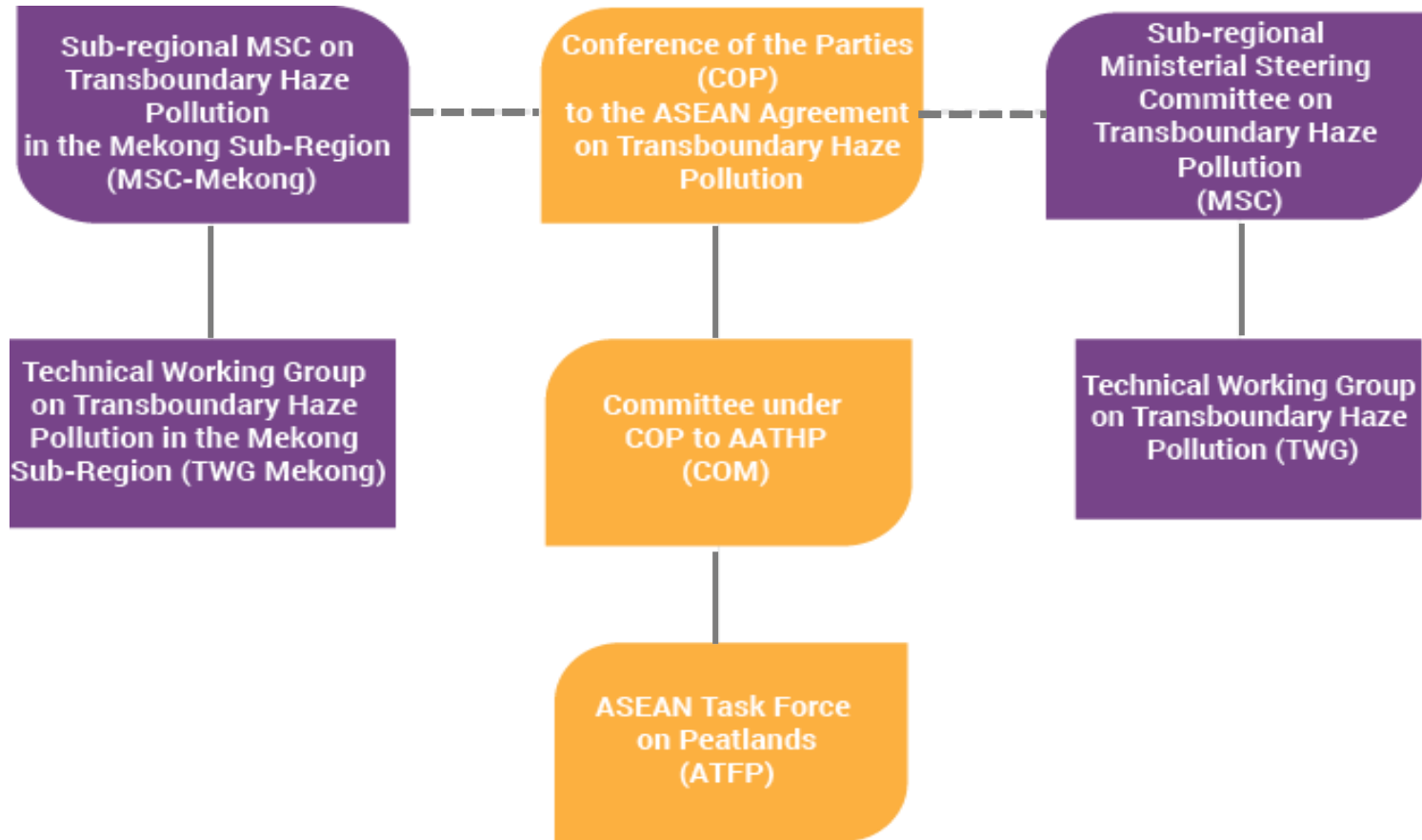
## General Obligations:

- Cooperate in developing and implementing measures to prevent, monitor, and mitigate transboundary haze pollution
- Respond promptly to a request for relevant information sought by a State or States that are or may be affected by the haze pollution
- Take legal, administrative and/or other measures to implement their obligations under the Agreement

## Areas of cooperation:

- Monitoring and assessment
- Prevention and preparedness
- Mitigation, emergency response, and assistance
- Technical cooperation and scientific research

# Institutional Framework of the ASEAN Agreement on Transboundary Haze Pollution



*COP: Conference of the Parties*

*TWG: Technical Working Group on Transboundary Haze Pollution (Bru, Ind, Mal, Sin, Tha)*

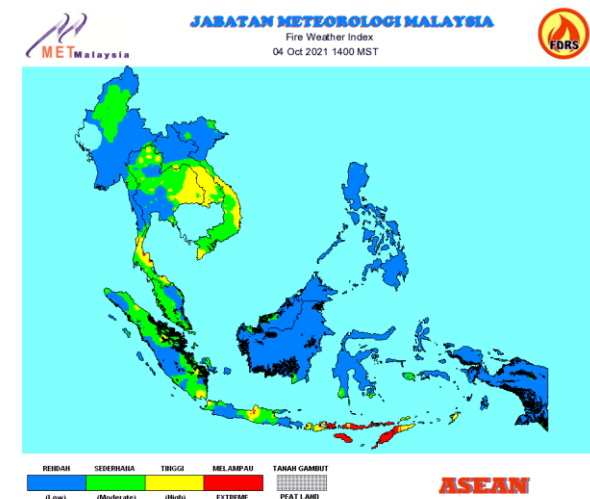
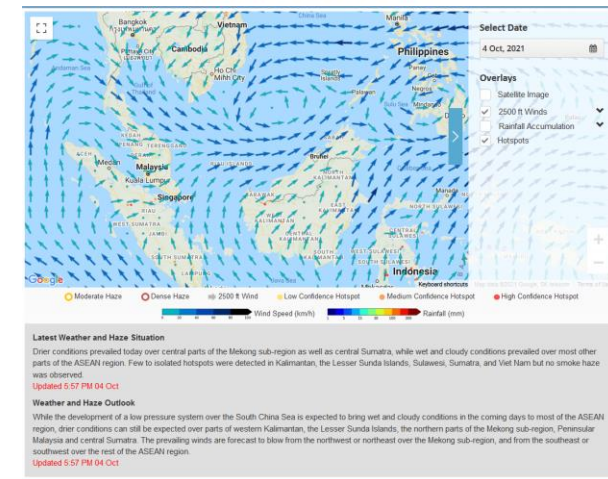
*TWG Mekong: TWG in the Mekong Sub-region (Cam, Lao, Mya, Tha, Vnm)*

*MSC: Sub-Regional Ministerial Steering Committee on Transboundary Haze Pollution*

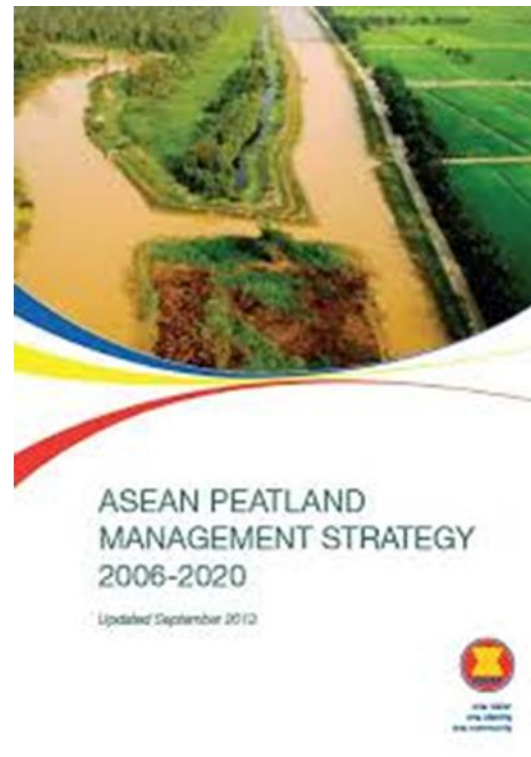
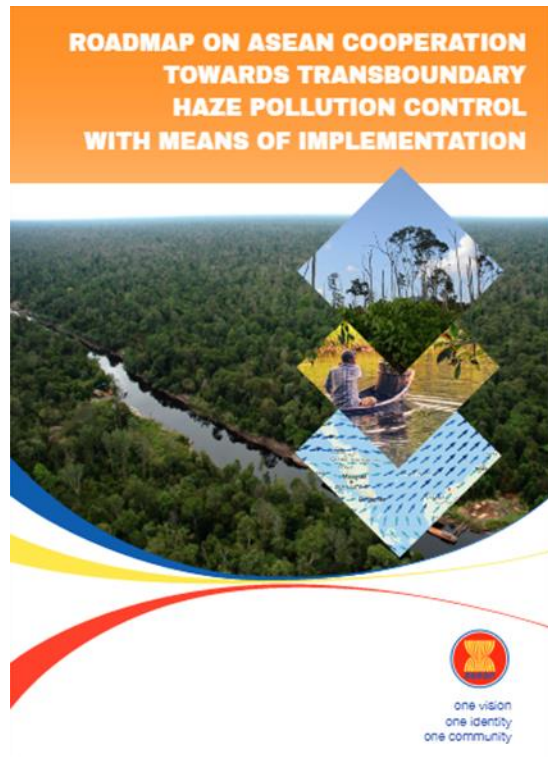
*MSC Mekong: MSC for Mekong Sub-Region*

# Institutional Framework of the ASEAN Agreement on Transboundary Haze Pollution

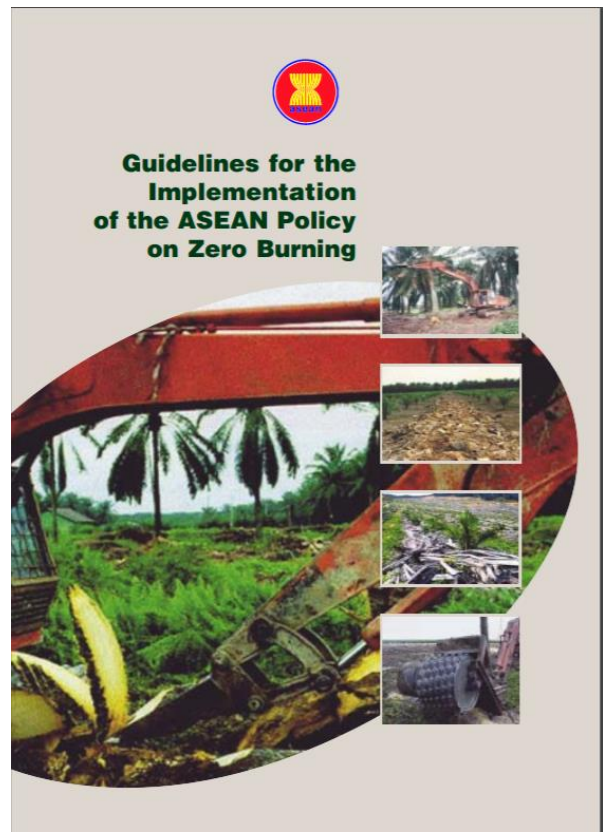
- **ASEAN Coordinating Centre for Transboundary Haze Pollution Control:** During the interim period, ASEAN Secretariat coordinates joint emergency response, donor funding and assistance, development of the SOP, and development and maintenance of database.
- **ASEAN Specialised Meteorological Centre (ASMC)** based in Singapore - provision of hotspot and smoke haze maps, satellite imageries, monthly weather & haze outlook, haze modelling.
- **Fire Danger Rating System** ASEAN-wide FDRS currently hosted by Malaysian Meteorological Department (MetMalaysia).
- In coordination with **National Monitoring Centres (NMCs)**, regular situation report, which contains specific data such as fire occurrence and impact, air quality and visibility, rainfall, actions taken, as well as resources are shared.



# Key Documents on Transboundary Haze Pollution Management



# Key Documents on Transboundary Haze Pollution Management



# Roadmap on ASEAN Cooperation towards Transboundary Haze Pollution Control with Means of Implementation

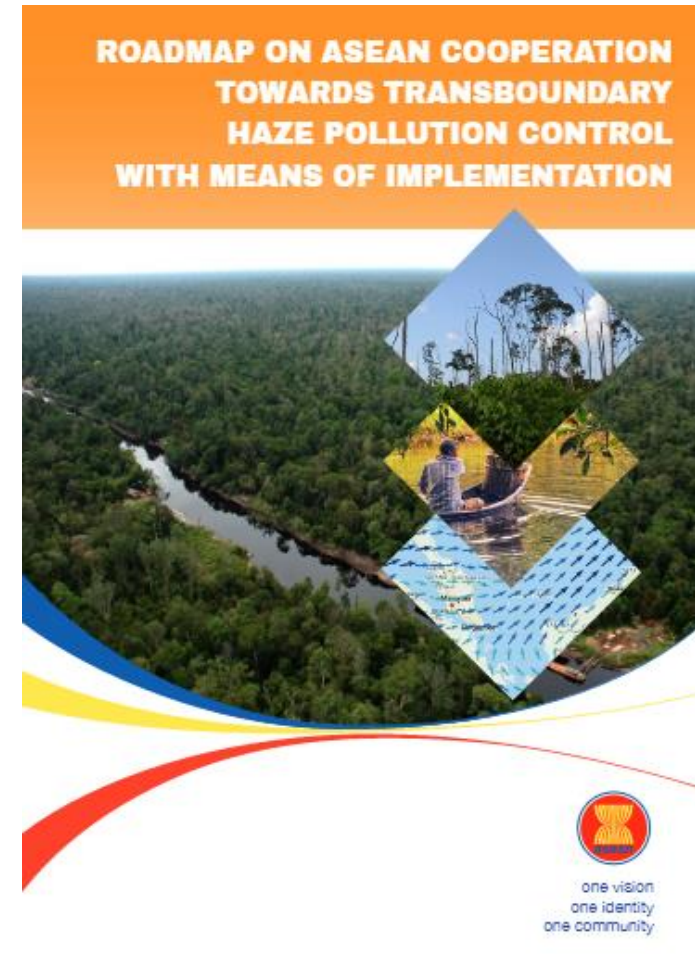
*Serves as a strategic framework for the implementation of collaborative actions to control transboundary haze pollution in the ASEAN region.*

**Vision:**

“Transboundary Haze-Free ASEAN by 2020”

**Goal:**

“Regional transboundary haze pollution is eliminated through intensifying collective actions to prevent and control forest and/or land fires”





## Roadmap on ASEAN Cooperation towards Transboundary Haze Pollution Control with Means of Implementation

<b>Strategy 1</b>	Implementation of the ASEAN Agreement on Transboundary Haze Pollution (AATHP)
<b>Strategy 2</b>	Sustainable Management of Peatlands for Peatland Fires Prevention
<b>Strategy 3</b>	Sustainable Management of Agricultural Land and Forest for Large Scale Forest and/or Land Fires Prevention
<b>Strategy 4</b>	Strengthening Policies, Laws, Regulations and their Implementations, including to facilitate exchange of experience and relevant information among enforcement authorities of the Parties in accordance with the AATHP Article 16 (f)
<b>Strategy 5</b>	Enhancing Cooperation, Exchange of Information and Technology, and Strengthening of Capacity of Institutions at All Levels
<b>Strategy 6</b>	Enhancing Public Awareness and Cross-Sectoral and Stakeholders Participation
<b>Strategy 7</b>	Securing Adequate Resources from Multi-Stakeholders for Transboundary Haze Prevention
<b>Strategy 8</b>	Reducing Health and Environmental Risks and Protection of Global Environment





# Severity of Forest and Land/Peatland Fires

Affecting millions of people across the ASEAN region and leading to significant health, social and economic problems.



# ASEAN Peatland Management Strategy

# ASEAN Peatland Management Strategy (APMS)

- 60% of world's tropical peatlands are found in Southeast Asia covering an estimated area of between 21 to 23 million hectares.
- Peatlands natural values and benefits including: water supply and storage, flood control, carbon sequestration and storage, ecotourism and biodiversity conservation, timber and non-timber forest products.
- Over 70% of total peatland areas in Southeast Asia are in Indonesia. Other major peatland areas are found in Brunei Darussalam, Malaysia, Philippines, Thailand, and Viet Nam.
- Drainage and unsustainable management practices have made the peatlands vulnerable to fire.

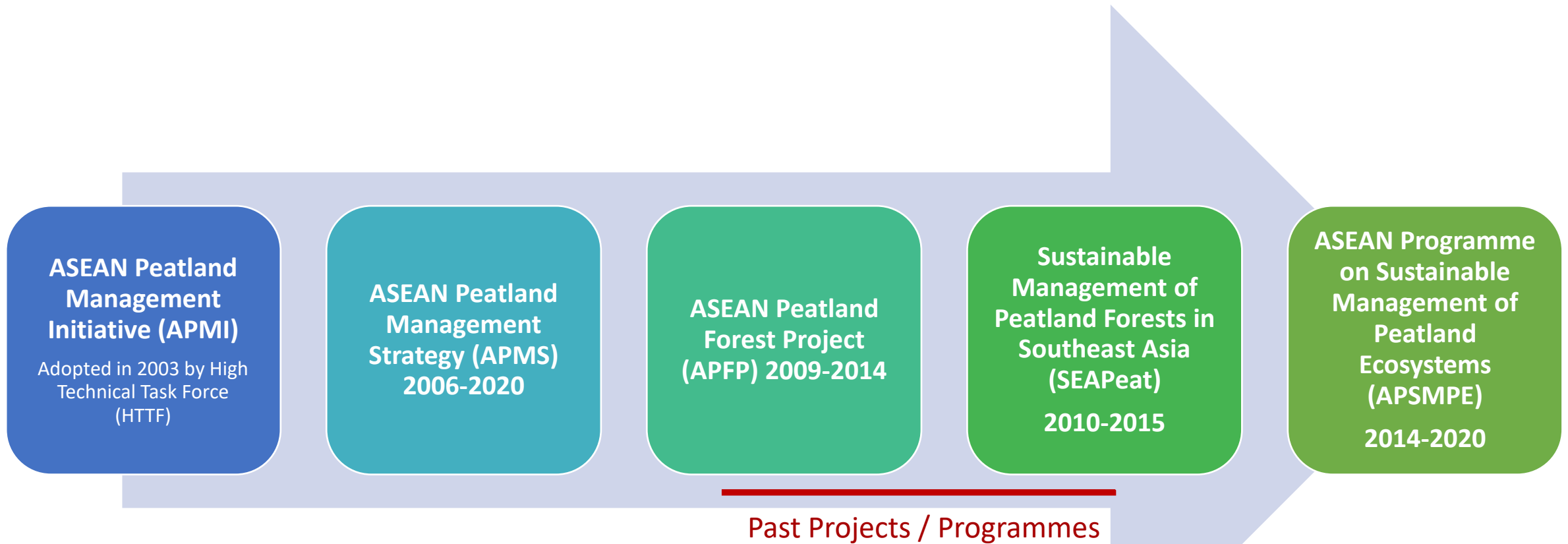


ASEAN PEATLAND  
MANAGEMENT STRATEGY  
2006-2020

Updated September 2012

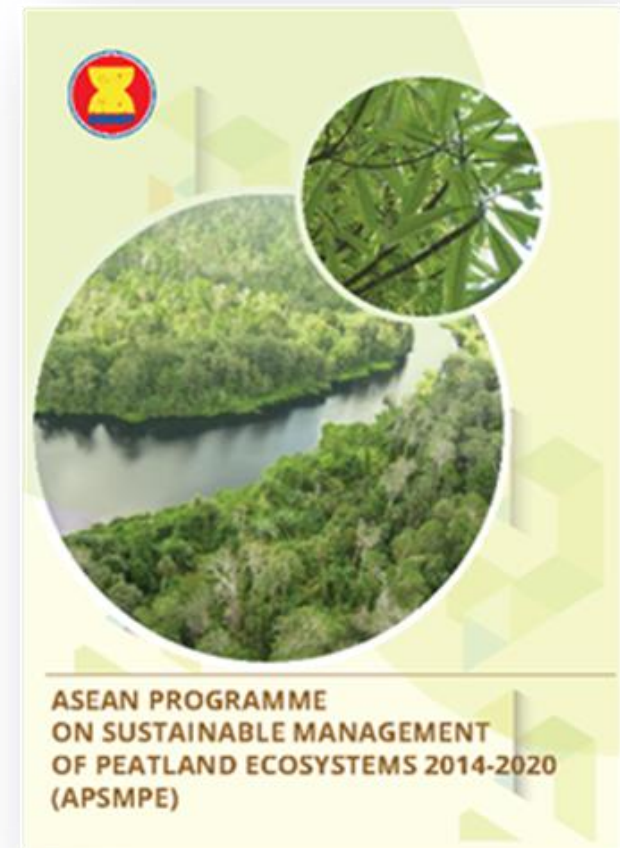


# Key Initiatives and Programmes / Projects on Peatlands



## ASEAN Programme on Sustainable Management of Peatland Ecosystems (APSMPE)

1. Identification and inventory of all ASEAN peatland areas;
2. Zero-burning and controlled-burning to prevent uncontrolled wildfires on peatlands and eliminate widespread smoke haze;
3. Rehabilitation of fire prone peatland sites;
4. Sustainable management of peatlands;
5. Conservation of peatlands to reduce emissions of greenhouse gases and increase peatland biodiversity; and
6. Implementation of National Action Plans on peatlands and enhancement of national and regional capacity.



# ASEAN Task Force on Peatlands (ATFP)



- Established by the 9<sup>th</sup> Meeting of the Conference of the Parties (COP) to AATHP (COP-9) in 2013 in Surabaya, Indonesia
- Oversight of the design, implementation, and monitoring of the ASEAN Programme on Sustainable Management of Peatland Ecosystems (2014-2020) (APSMPE) and other relevant programs/projects and facilitate cooperation with relevant partners.



# Sustainable Use of Peatland and Haze Mitigation in ASEAN (SUPA)

## Overall Objective

To promote sustainable management of peatlands in ASEAN through collective actions and enhanced cooperation to support and sustain local livelihoods, reduce risk of fire and associated haze, and contribute to global environmental management.

## Specific Objective

To improve sustainable peatland management, mitigate the adverse impacts of climate change, manage risk of wildfires, and reduce transboundary smoke haze in ASEAN.

### Component 1

**Peatland Governance**

Capacity building  
Institutional strengthening  
Demonstration activities

### Component 2

**Non-state Actor Participation**

Community participation  
Community capacity building





## Measurable Action for Haze Free Sustainable Land Management in Southeast Asia (MAHFSA)



- Objective 1: to **build capacity and enhance data, information and results management systems** for sustainable peatland management and haze control
- Objective 2: to **enhance the availability and usage of knowledge products** on sustainable peatland and haze management
- Objective 3: to **enhance ASEAN regional coordination mechanisms** for advancing sustainable land management, and haze prevention policies, programmes, and projects



# Measurable Action for Haze Free Sustainable Land Management in Southeast Asia (MAHFSA)

## **Component 1:**

Enhancement of data, information, and results management system and operational capacity

**Facilitated by GEC**

**Output 1.1:** Capacity building package for data and information collection/sharing and regional results management developed

**Output 1.2:** Capacity building undertaken at country and regional levels for improved data and information gathering and results management

## **Component 2:**

Data, information and results analysis for strategic knowledge product development

**Facilitated by CIFOR**

## **Output 2.1:**

Collation and development of knowledge products for informing different stakeholder groups

**Component 3: Enhancement of regional coordination mechanisms**

**Led by ASEC**

**Output 3.1.** Multi-stakeholder platform strengthened and broadened for regional coordination and partnership

## GEF-6 Project on Sustainable Management of Peatland Ecosystems in Mekong Countries (Cambodia, Lao PDR and Myanmar)

The objective of the project is to sustainably manage peatland ecosystems in targeted countries and to conserve biodiversity and reduce greenhouse gas (GHG) emissions, by:

- assessing and documenting peatland ecosystems in the three countries;
- strengthening institutional capacity and enabling policy and legal frameworks for sustainable peatland management at local, national and sub-regional levels;
- demonstrating sustainable peatland management practices that conserve biodiversity, reduce GHG emissions and strengthen sustainable livelihoods for local communities.



# Final Review of Implementation of the APMS 2006-2020

## General Objective 1: Enhance Awareness and Capacity on Peatlands

- All AMS have designated respective focal point agency related to peatland management;
- Incorporated peatlands into the regulations, policies and/or plans;

## General Objective 2: Address Transboundary Haze Pollution and Environmental Degradation

- Significant action has been taken by AMS to minimise transboundary haze pollution and environmental degradation related to peatlands;
- Paradigm shift from fire-fighting to fire prevention;

## General Objective 3: Promote Sustainable Management of Peatlands

- AMS have recognised the importance of peatlands;
- promotion of Best Management Practices (BMPs);

## General Objective 4: Promote Regional Cooperation

- Regional cooperation and exchange has significantly increased;
- Growing number of bilateral and regional cooperation initiatives have been supported



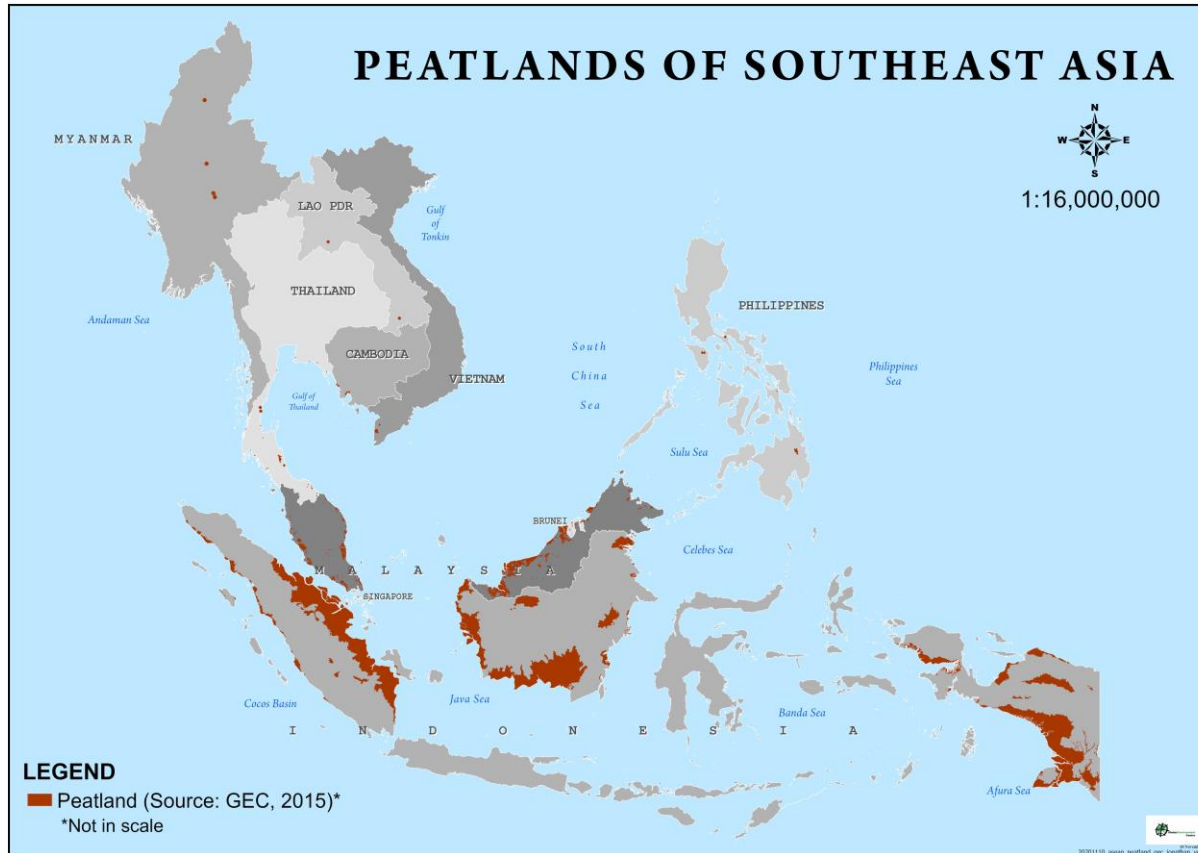
### REPORT OF THE FINAL REVIEW OF THE ASEAN PEATLAND MANAGEMENT STRATEGY (APMS) 2006-2020



one vision  
one identity  
one community



# Peatlands and Open Burning in Southeast Asia



Source: Final Review of APMS (2006-2020)

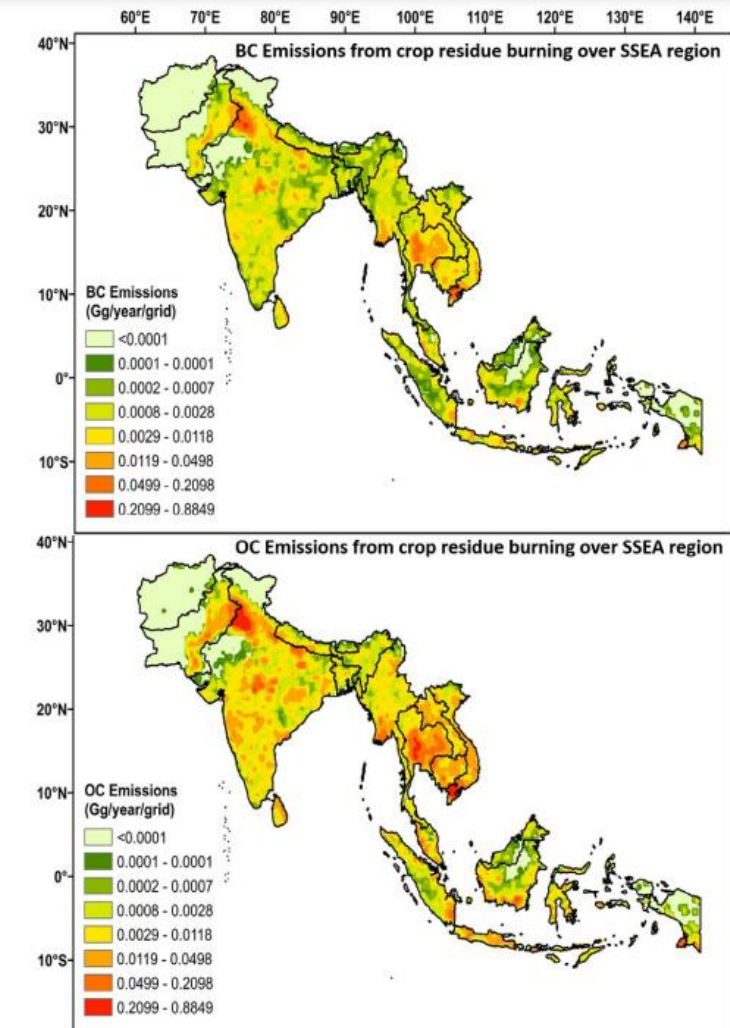
AMS	Peatland area (ha)
Indonesia	20,200,000
Malaysia	2,560,341
Brunei Darussalam	90,900
Thailand	64,555
Viet Nam	24,000
Philippines	20,188
Myanmar	11,233
Cambodia	9,850
Lao PDR	1,000
<b>TOTAL</b>	<b>22,982,067</b>

# Peatlands and Open Burning in Southeast Asia

ASEAN Guidelines on Zero Burning were adopted in 1999 and Controlled Burning in 2003

Final Review of APMS findings

- Zero burning is strictly restricted by law for peatlands in Indonesia (2024), Malaysia (2003) and Thailand.
- Mandatory for RSPO certification since 2007



Source: Atmospheric aerosols from open burning in South and Southeast Asia, in book: Asian Atmospheric Pollution (pp.75-96), Elsevier, 2022



# Challenges and Opportunities

# Regional Challenges



- Expansion and clearing of land (peatland and forested area) for agricultural and other purposes, including drainage.



- Climate change and extreme droughts: lead to higher temperature, worsen dry season with El Niño increased frequent fires, the fires contribute more to green house gas emission, loss of biodiversity, and transboundary haze



- Limited information on peatland condition/characteristic (depth, border delineation, soil moisture, etc.) lead to misunderstanding in the direction of peatland management implementation



- Low understanding on and/or poor practices in sustainable peatland management
- Peatland is not put as a priority and investment when it comes to national development, amidst the importance of economic needs

# Opportunities: Improving Peatland Policy and Management



- Development of new ASEAN Haze-Free Roadmap (2022-2030) and new APMS (2022-2030)

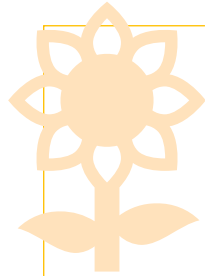


- Development of an Investment Framework for Haze-Free, Sustainable Land Management in Southeast Asia, supported by MAHFSA Programme

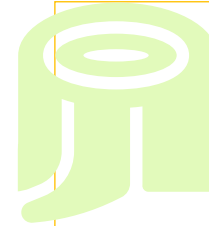


- Cooperation with ASEAN Peatlands Partners as well as opportunities for cooperation with ASEAN Dialogue and Development Partners

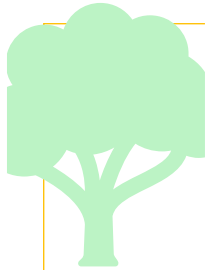
# Conclusion



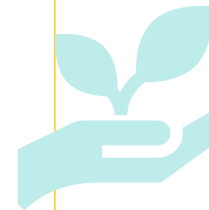
Tropical peatland cover about **10-12%** of the world total peatland area, but stores about **190 billion tons** of Carbon or more than a third of the total carbon storage.



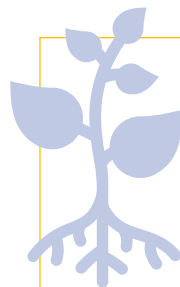
Degradation is releasing an estimated 800 million tons of carbon dioxide (CO<sub>2</sub>) per annum, i.e. equivalent to **2.5%** of global emissions from fossil fuel, and also leading to transboundary smoke haze pollution which affects the economy and health of more than 50 million people in the region.



The APMS is very relevant to the UNFCCC as peatland globally are the most important terrestrial carbon store on the earth, storing **25%** of soil carbon and **50%** more carbon than the biomass of all the world's forests combined.



In ASEAN, peatlands are also the largest terrestrial carbon store. Management of peatlands is also critical to reducing GHG emissions as well as adaptation to climate change.



All the AMS are parties to the UNFCCC. Peatlands have been recognised in national reports and strategies related to the UNFCCC in Malaysia and Indonesia.



# Way Forward: Priorities for the period 2022 to 2030

Further action to determine the exact extent and current status of peatlands at national level

Public and stakeholder awareness and participation

Peatland fire prevention

Development of policies and regulations for peatland management

Biodiversity conservation

Integrated management of peatlands

Peatland restoration

Regional cooperation

Best management practices

Financing the action



# ASEAN Haze Portal

[hazeportal.asean.org](http://hazeportal.asean.org)

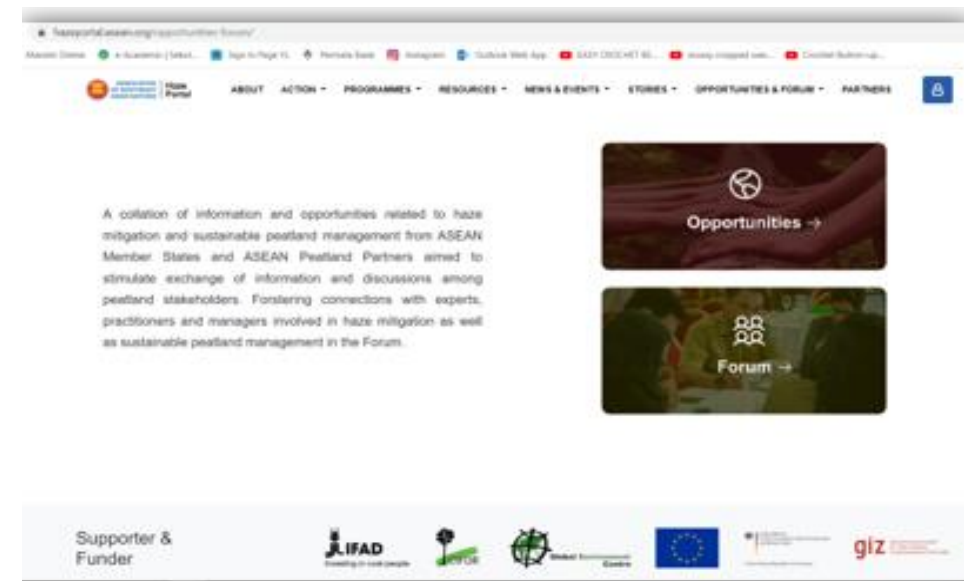
Established to be the ASEAN knowledge management platform on sustainable peatland and haze management and facilitate networking and knowledge-sharing among policy makers and other relevant practitioners in Southeast Asia.

## Knowledge repository



**Publication page** provides knowledge products of peatland, fire and haze in Southeast Asia by ASEAN Secretariat, ASEAN Peatland Partners, and others. The knowledge products are available in multiple languages

## Collaborative tool



**Promote dialogue and partnership** between policymakers, private sectors and civil society in ASEAN. Build a diverse community of practice on sustainable peatland and haze management.



# Thank You



ASEAN Secretariat



<http://environment.asean.org>  
<http://haze.asean.org/>



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