



The Enforcement of International Law in Malaysia – Indonesia Haze Issue

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Topics for Presentation:



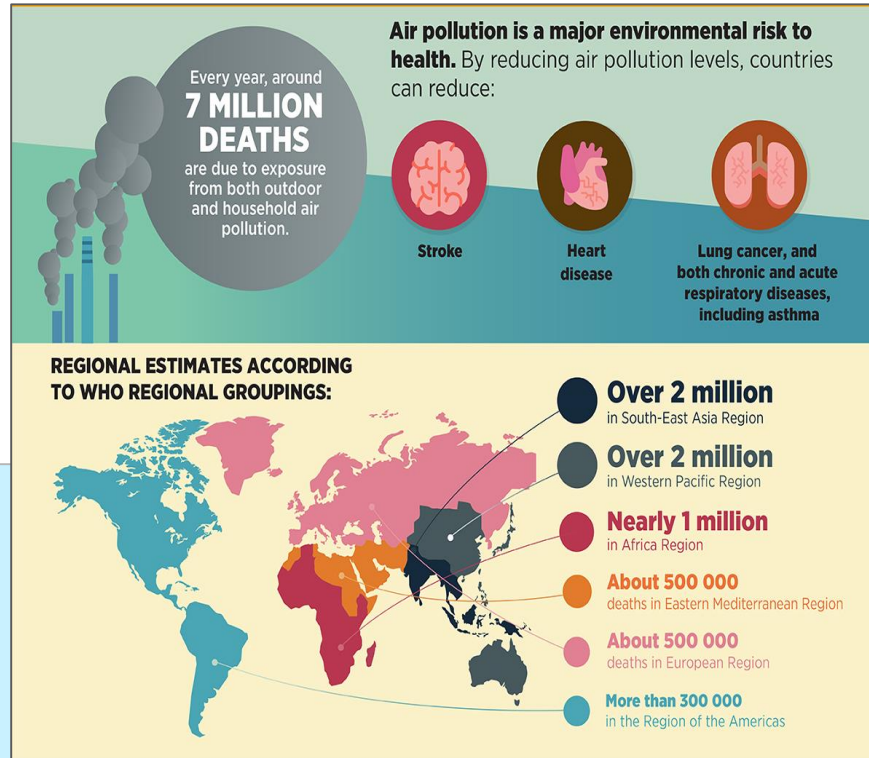
- Domestic Source of haze.
- Transboundary Source.
- Strategies within Environmental Law in Malaysia.
- International Law on Transboundary Haze Pollution.

Pollution Issue

- Malaysia is situated outside the Pacific Ring of Fire.
- Free from certain severe disaster found in neighbouring countries such as earthquake or volcanic eruption.
- However, Malaysia is vulnerable disasters due to man-made activities that contribute towards air pollution including that of haze.

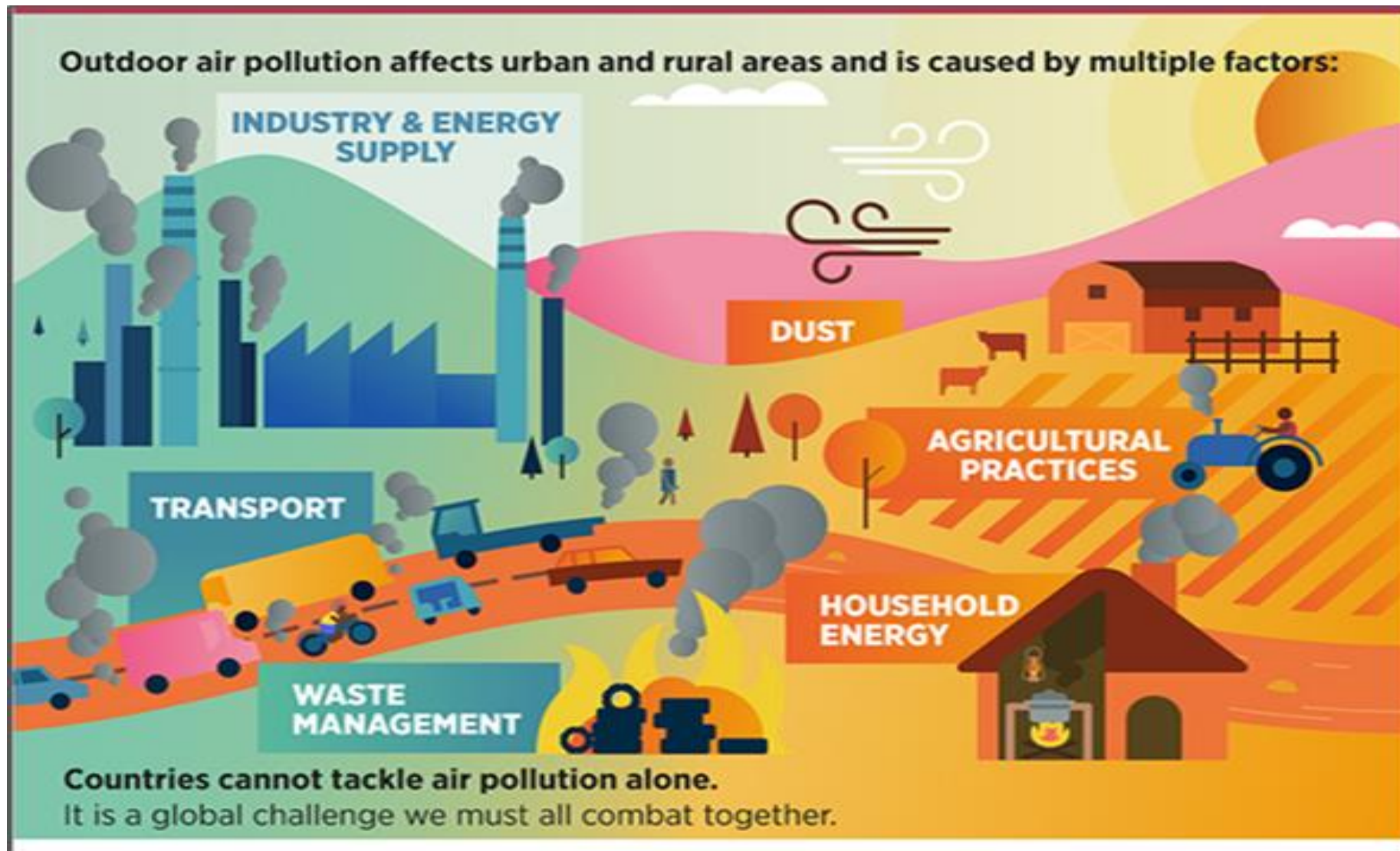


What is Air Pollution?



- World Health Organisation WHO:
- Air pollution is “contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere”.
- It is one of the leading causes of disease and death globally.
- WHO estimates that around 7 million people die every year from exposure to fine particles in polluted air that lead to diseases such as stroke, heart disease, lung cancer, chronic obstructive pulmonary diseases and respiratory infections, including pneumonia.

Sources of Air Pollution Malaysia



Sources of Air Pollution: Mobile Sources

- 2014, 25 million total number of vehicles on the roads.
- 2017, 28 million units of registered road vehicles.
- 2019 January to May: 119 397 unit of cars registered.
- Passengers cars and motorcycles made up the highest number (90 %), with the remaining vehicles consisted of good vehicles, taxis and buses.
- Pollutants; Particulate matter, sulphur dioxide, oxides of nitrogen, carbon monoxide, volatile organic compounds, lead.



Sources of Air Pollution: Stationary Sources

- A stationary source of air pollution refers to an emission source that does not move, also known as a point source.
- Industries, power plants.
- Pollutants: Particulate matter, sulphur dioxide, oxides of nitrogen, carbon monoxide, volatile organic compounds, sulphur trioxide, lead.



Sources of Air Pollution: Open burning activities.

- Pollutants: particulate matter, carbon monoxide, volatile organic compounds.
- Over 6000 open burning cases were detected on the ground in 2014.
- They consisted of burning of garbage in residential areas or roadside, and burning of articles for religious purposes, burning of bushes, forests and agriculture areas.

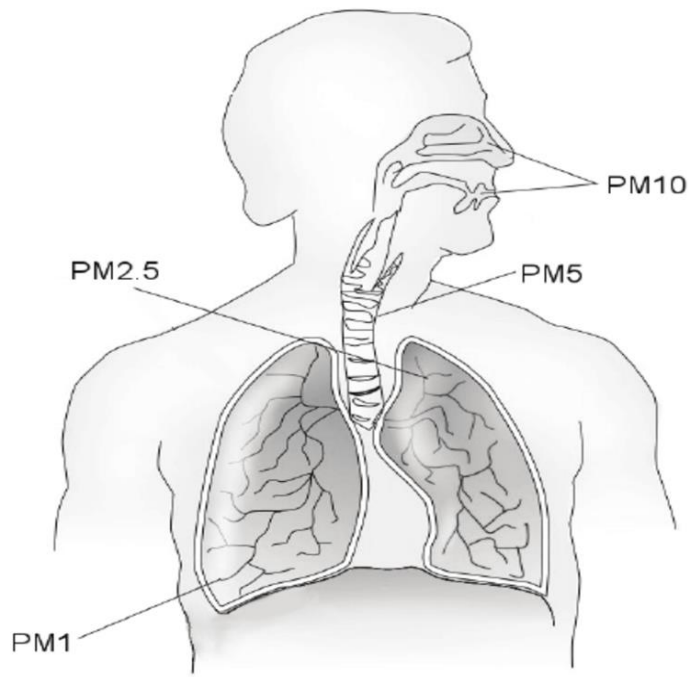


Haze as a Form of Air Pollution

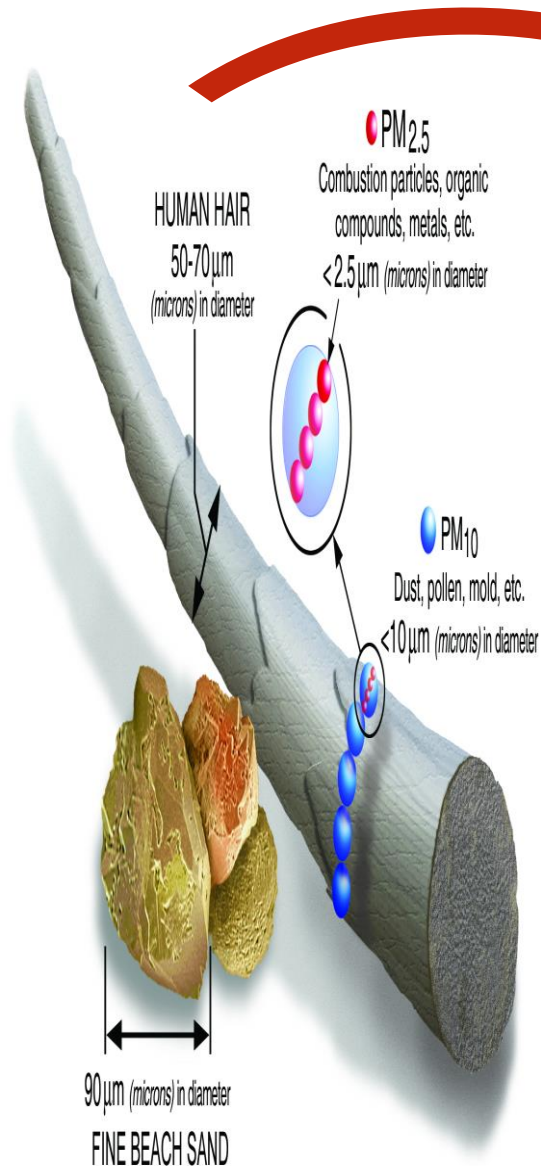
- HAZE is caused by particulate matter (PM) from many sources including smoke, road dust, gases and other particles emitted into the air.
- Haze forms when weather conditions remain stagnant for a considerable length of time. This enables the PM to loiter between the sky and ground in a small area.
- Haze reduces visibility due to the high presence of PM in the air.



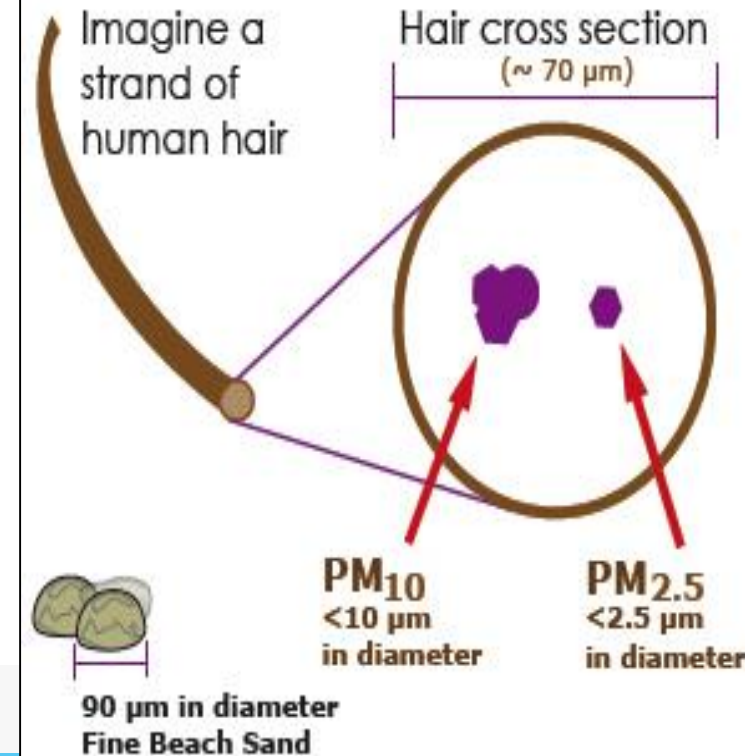
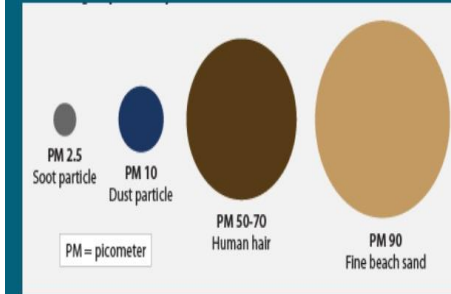
How Small is 2.5 μm ?



- Haze is made of very fine particles with a diameter of less than 10 μm .
- At sizes larger than 2.5 microns, the respiratory tract can quite effectively trap and filter away particles.
- However, at sizes lesser than 2.5 microns, particles breach these defenses and penetrate deeply into the alveoli of the lungs and may even enter the blood stream.



Size comparison of particles



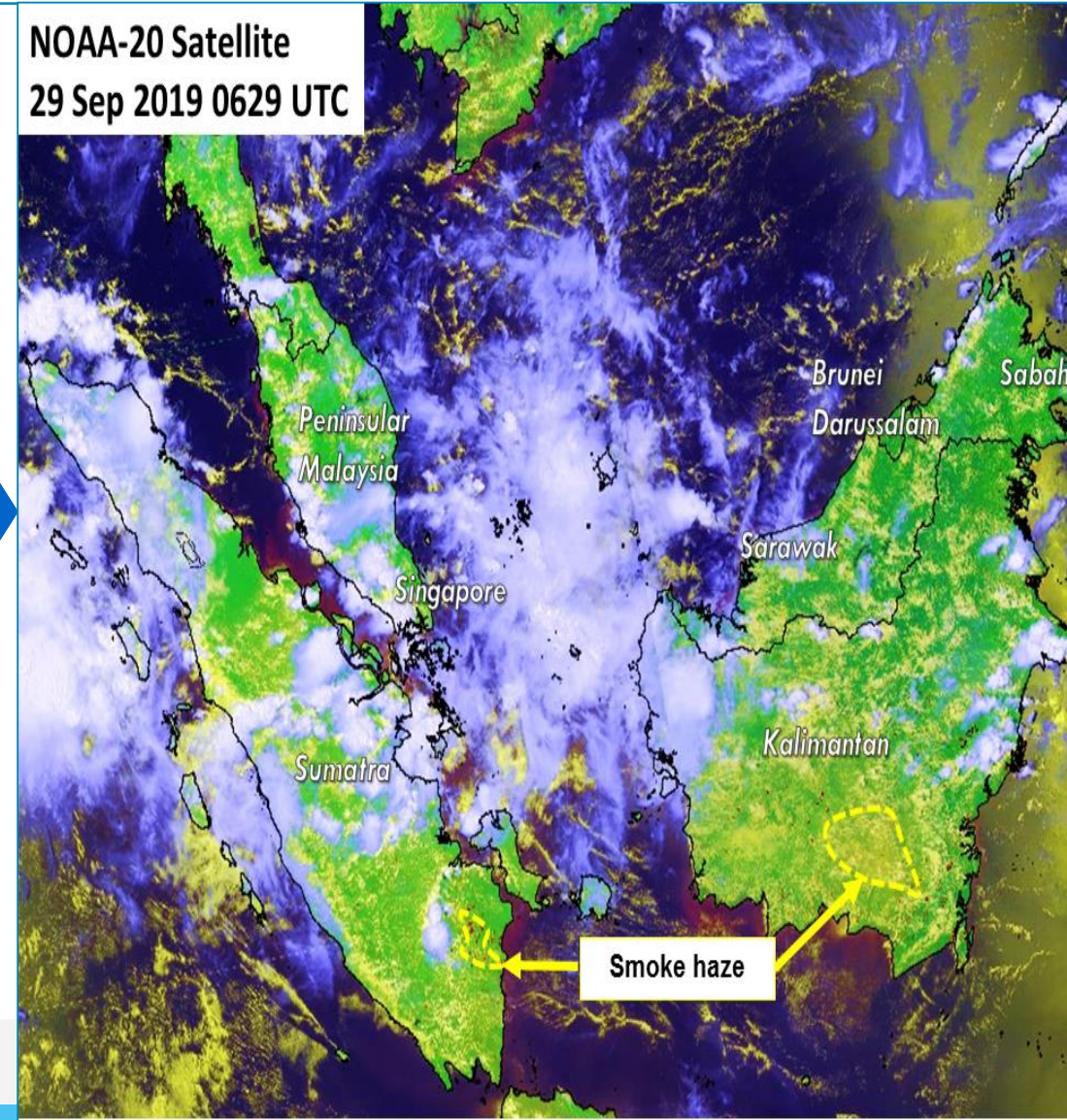
TRANSBOUNDARY HAZE POLLUTION

Transboundary pollution is the pollution that originates in one country but can cause damage in another country's environment by crossing borders through pathways like water or air

Transboundary pollution is more complex and problematic to be managed

NOAA-20 Satellite

29 Sep 2019 0629 UTC

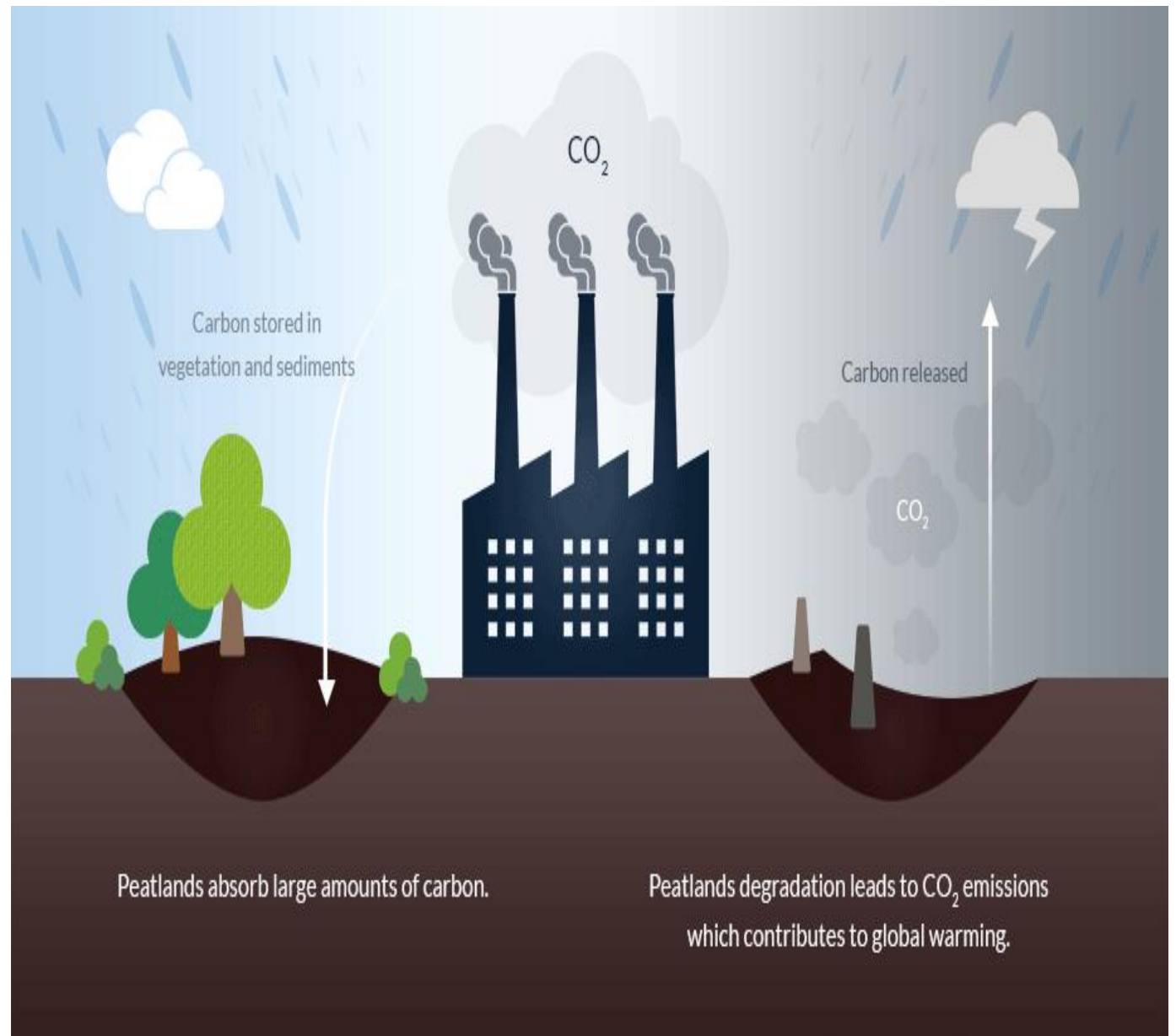


CAUSES OF TRANSBOUNDARY HAZE POLLUTION

- Palm-oil as a major agro-industry in Indonesia.
- In 2015, estimated area of forest fires in Indonesia was over 2 million hectares.
- Most fires were set to clear land for plantings.
- Slash and burn are preferred due to cost-effectiveness.
- burning is the cheapest and fastest way as compared to the other methods. Burned soil is very fertile for agriculture.
- Burning take place on peat soil, which is highly flammable, causing localised fires to spread and making them difficult to stop.



- Peat land contains thick layer of wet soil made up of dead and partially decaying organic matter (peat).
- Peatland is a natural storehouse for carbon.
- Any disturbance to peatland, such as draining and burning, will lead to the escape of a significant amount of carbon from the soil into the atmosphere as carbon dioxide, which contributes to climate change.
- In its natural state, water-logged peatland is not prone to fire. But after it is drained in preparation for agriculture, the dried, carbon-rich peat soil catches fire easily.
- Peatland can continue to smoulder underground even after vegetation has been completely burnt in an oil palm.



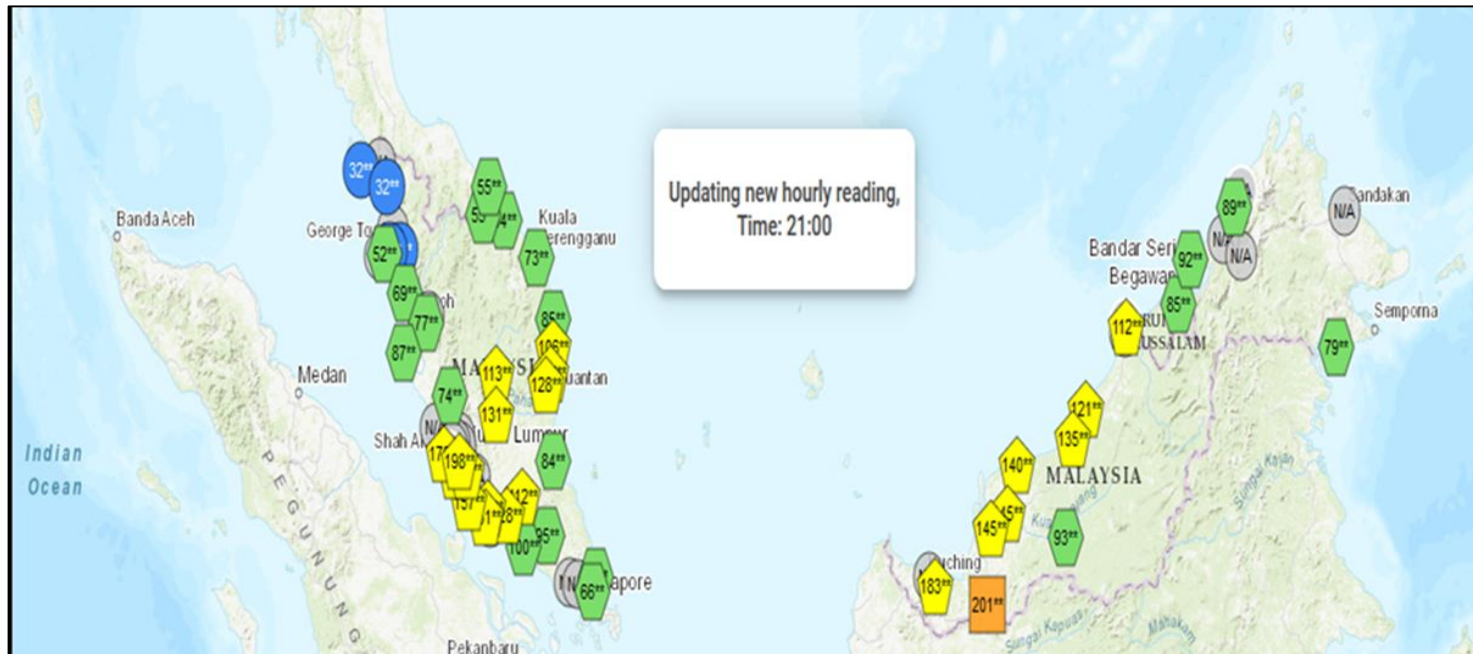
Haze pollution

- Haze is measured using the Air Pollution Index (API).
- API includes five major pollutant components which are carbon monoxide, ozone, nitrogen dioxide, sulphur dioxide and suspended particulate matter.
- In the event of haze, API plays the important role to determine the level of air pollutants together with its associated health effect.

| API | Status |
|---------|----------------|
| 0-50 | Good |
| 51-100 | Moderate |
| 101-200 | Unhealthy |
| 201-300 | Very Unhealthy |
| >301 | Hazardous |

Air Pollutant Index (API)

- Annually, transboundary haze problem has caused the API to reach the hazardous level.
- Most recently on 14th September 2019 a total of 211 schools had to be closed affecting 64000 students.
- Haze related diseases and economic loss.



| Region: Malaysia 16 Sept 2019 Time: 20:00 | |
|---|-------------------------|
| Total Stations: 68 | |
| GOOD 0-50 | 6 Station(s) |
| MODERATE 51-100 | 29 Station(s) |
| UNHEALTHY 101-200 | 29 Station(s) |
| VERY UNHEALTHY 201-300 | 4 Station(s) |
| HAZARDOUS Above 300 | 0 Station(s) |
| API Not Available | 0 Station(s) |

ALERT ON HAZE SITUATION IN THE CAMPUS

Assalammu'alaikum Wrt. Wbt.,

Dear IIUM Community,


Based on the Air Pollutant Index (API) issued by the Department of Environment (DoE) at 11:00 a.m. this morning (17th September 2019), the API reading has reached the level of 157 (nearest API station at Batu Muda, Sentul).

Please kindly take the necessary precautions from now on as the API trend will be expected to reach higher for the next couple of days.

The University through the IIUM Emergency Response Committee held a meeting on 22nd October 2015 and has outlined **Standard Operating Procedures (SOP)** on measures to be taken during haze in IIUM campuses as in attachment.


As secretariat of the Committee, the Occupational Safety, Health and Built Environment Department (OSHBE) would appreciate that the above SOP to be disseminated to all staff and students of the University.





INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
OCCUPATIONAL SAFETY, HEALTH AND BUILT ENVIRONMENT
DEPARTMENT

STANDARD OPERATING PROCEDURE (SOP) FOR
THE PROTECTION OF EMPLOYEES AGAINST THE EFFECTS OF
HAZE



IIUM, OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT DEPARTMENT (OSHBE)


Measures to be taken during Haze in IIUM Campuses

| API Reading | Measures to be taken by Staff and Students |
|-------------|--|
| >100 | • Outdoor work which involves strenuous physical activity should be minimised . |
| >200 | • Outdoor work which involves strenuous physical activity should be avoided . • All sport and recreational facilities to be closed. |
| >300 | • All students and class activities to be postponed • All offices are closed except for (Office of Security Management OSeM), Health and Wellness Centre (HWC) and Occupational Safety, Health and Built Environment Department (OSHBE) |

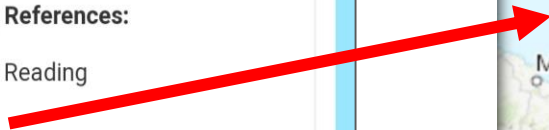
(The announcement of postponement of classes and closure of offices will be made based on the API reading at 9p.m. issued by the Office of the Rector)

**The API is based on the website of the Department of Environment (DOE) as recorded at the nearest station to the respective campus.*

API – Air Pollutant Index

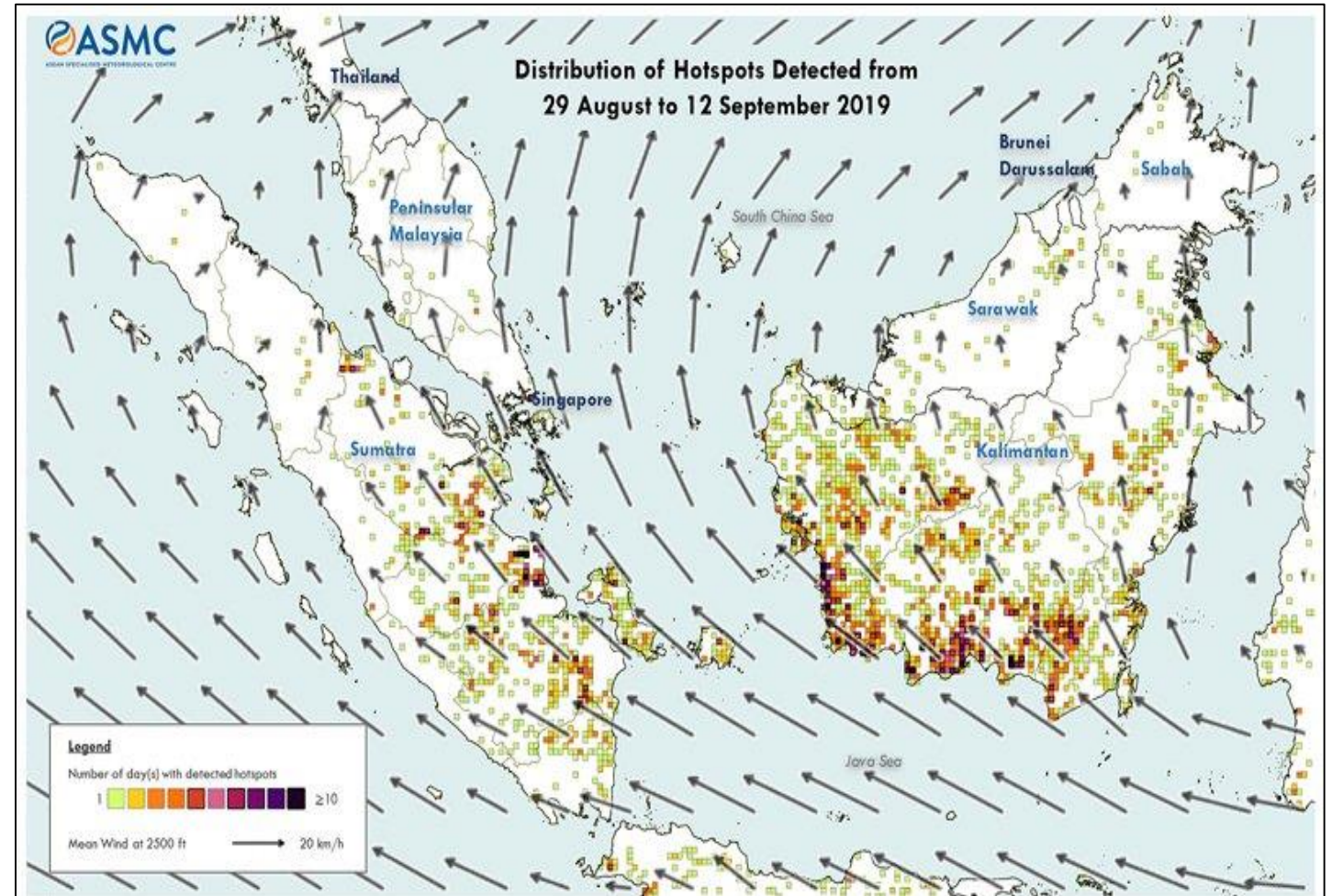


IIUM, OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT DEPARTMENT (OSHBE)



Transboundary Haze Pollution

- Malaysia is facing serious transboundary haze pollution when hotspots were registered across Indonesia indicating massive open burning activities.



Law on Air Pollution Control

○ The Environmental Quality Act 1074

- Section 22 on Restrictions on Pollution of the Atmosphere.-

(1) No person shall, unless licensed, emit or discharge any environmentally hazardous substances, pollutants or wastes into the atmosphere in contravention of the acceptable conditions specified under section.

(2) A person is deemed to emit or discharge wastes into the atmosphere if—

(a) he places any matter in a place where it may be released into the atmosphere;

(b) he causes or permits the discharge of odours which by virtue of their nature, concentration, volume or extent are obnoxious or offensive;

(c) he burns any wastes of the trade, process or industry; or

(d) he uses any fuel burning equipment not equipped with any device required.

(3) Penalty - a fine not exceeding RM100 000 or jail not exceeding five years or to both.

Law on Forest Fire and Open Burning

- Section 29A strictly prohibits open burning on any premises, and land.
- “Open burning” is defined as “any fire, combustion or smouldering that occurs in the open air and which is not directed there through a chimney or stack”.
- Main impacts of section 29A: total prohibition of open burning and forest fire on large plantations.
- The penalty imposed by section 29: fine of up to RM500 000, and a jail term for five years, or both.
- Section 29AA: exceptions to certain open burning activities in the form of “Declared Activities”
- Declared activities include certain farming activities, religious rites, and activities involving health and safety measures as required by certain laws.
- However, in the event that the API reading has reached an unhealthy level, the exemption will be withdrawn. Thus, during that situation, open burning activities would not be allowed to be occurred.

| Activities | Conditions |
|---|---|
| <p>The burning of plant from a land clearing for the cultivation of food crops or cash crops for the purposes of shifting cultivation.</p> | <ul style="list-style-type: none"> (i) which shall be felled and is dry prior to burning; (ii) during dry weather between the hours of 8.00 a.m. and 6.00 p.m.; (iii) which is closely monitored and controlled until completely burned; (iv) of which the Penghulu or Village Headman of the village in which the burning is to be carried out has been informed prior to the burning; and (v) which is not carried out at any peat soil area. |
| <p>The burning of plants for land clearing for the purpose of planting or replanting of any plant crops by smallholders in an area that does not exceed 2 hectares per day.</p> | <ul style="list-style-type: none"> i) which shall be felled and is dry prior to burning; (ii) during dry weather between the hours of 8.00 a.m. and 6.00 p.m.; (iii) that does not use material that emit black smoke as tinder material to ignite the fire; (iv) which is carried out away from the roads and other major routes; (v) that does not cause a nuisance to nearby residents nor interfere with normal visibility; (vi) which is closely monitored and controlled and which shall be stopped after the felled plant and the biomass are completely burned; and (vii) which is not carried out at any peat soil area. |

Haze: limits of the law

- Annually, transboundary haze problem has caused the API to reach the hazardous level of 500.
- International disputes happened over damage that occurred when one State's pollutants crossed into another State's territory.
- However it is difficult to litigate on an international scale.
- Transboundary pollution law poses the challenge of addressing environmental problems in an international legal system that values territorial sovereignty of individual States.
- Taking a legal action against another sovereign country is not a straight forward process, no matter how serious the damage one country has caused to another.
- The voluntary nature of international law means that it is not possible for Malaysia to infringe on the sovereignty of another country unless that country waives her sovereign immunity willingly.
- Moreover, any action deemed to be jeopardising the sovereignty of the haze-causing country can bring about negative implications, both at the domestic and international levels.

Possible Solutions to Haze Problem?

- The ASEAN Agreement on Transboundary Haze Pollution 2002 as the only international agreement available.
- Objective of the Agreement is to prevent and monitor transboundary haze pollution through national efforts and regional and international cooperation.
- Content of this Agreement is non-imposing in nature, reflecting ASEAN's adoption of the "non-interference" principle.
- The Agreement does not forbid certain types of conduct that cause open burning, nor does it include obligations for compensation.

Possible Solutions to Haze Problem?



- Global solutions to transboundary pollution can only be successful if:
- All nations agree to implement controls to reduce known pollutants, and
- To take responsibility for accidents that damage the environmental quality of other nations.
- Legal and Non Legal Strategies.



Thank you for listening

From:

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