



## What is Planetary Health?

Planetary health is an interdisciplinary field of study that focuses on the interconnections between human health and the health of the Earth's natural systems.

It recognizes that the health and well-being of both people and the planet are intimately linked and that changes in the environment can have profound effects on human well-being. This field emphasizes the complex interactions between environmental factors, such as climate change, biodiversity loss, pollution, and other ecological disturbances, and their impact on human health.



## Why Malaysia needs an integrated Planetary Health Action Plan



The **economic** impact pillar has shown **progress** over the period of 2000 –2019.



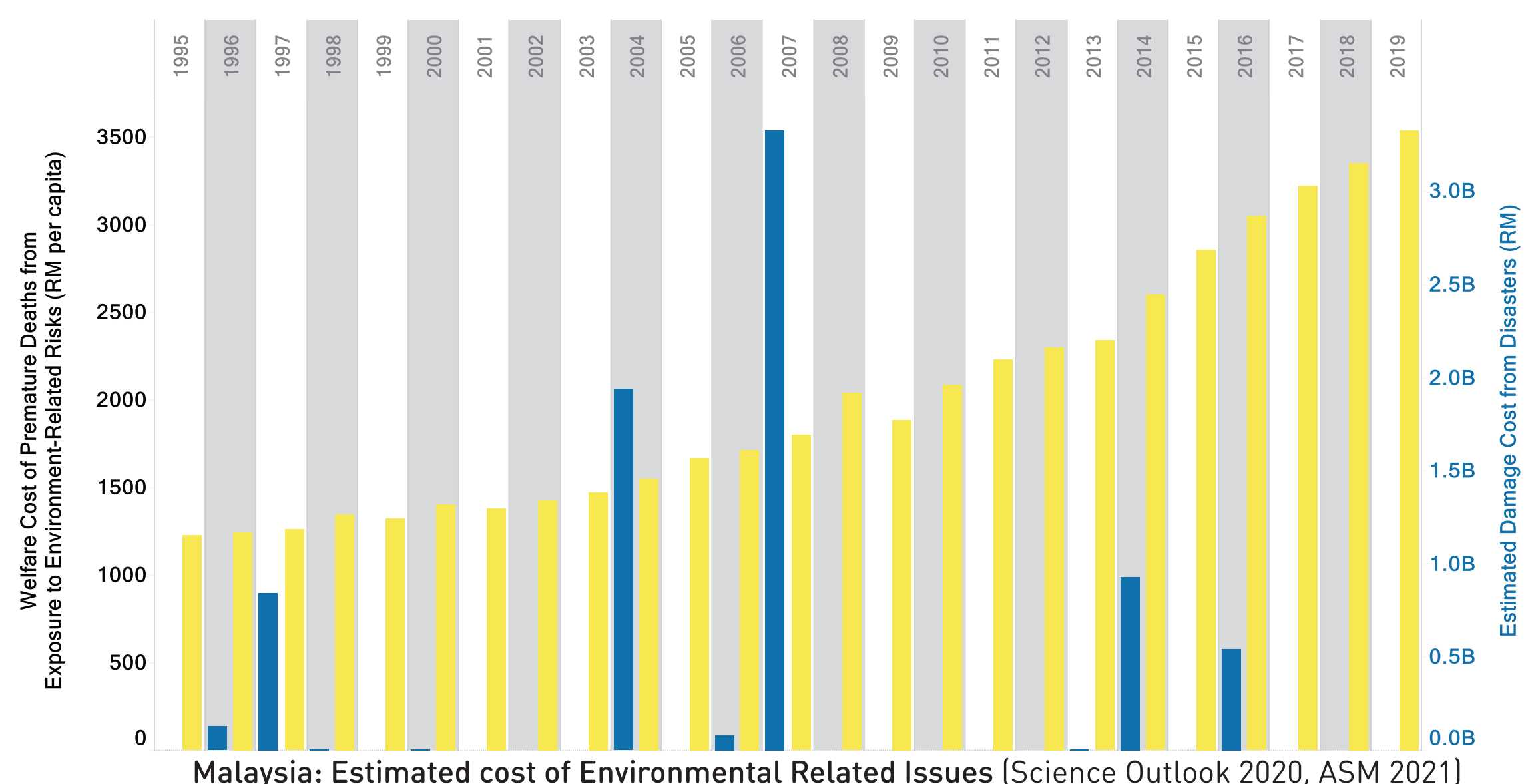
The **science, technology and innovation** (STI) ecosystem pillar system has shown progress from 2000 –2010 but remained **stagnant** from 2010-2019.



The **social** and **environmental** aspects **regressed** over the years.

Over the last 24 years, Malaysia has cumulatively lost an estimated **RM7.8 billion** to environment-related disasters, and about **RM 947.2 billion** to welfare cost of environment-related premature deaths. That is an average loss of **RM39.8 billion** per year due to environment-related causes. This equals to about **3% GDP loss** in 2019 and 2020.

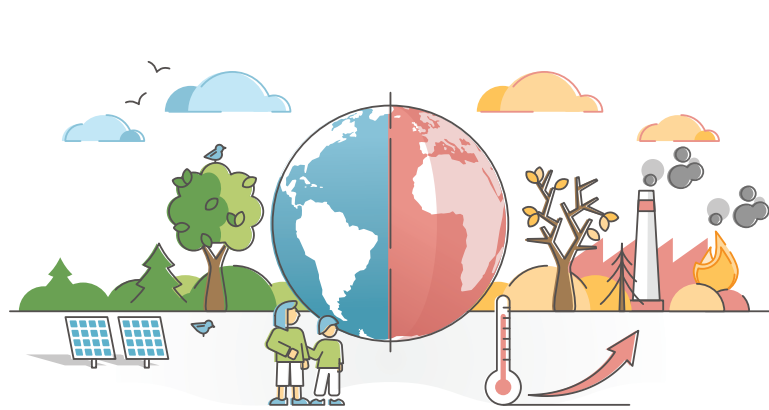
Scan the QR code to read and download the Science Outlook 2020 report.



### Biodiversity loss

Malaysia was one of the top 10 countries for primary forest loss as of 2022 with over 210 species of plants in Malaysia categorised as critically endangered, 365 species categorised as endangered, and 756 as vulnerable by the IUCN Red List.

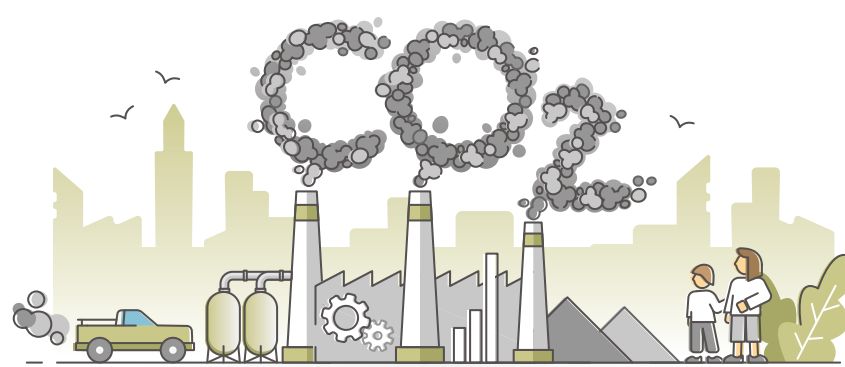
Source: Global Forest Watch, 2022



### Climate change

In 2020, Malaysia emitted 367.76 million tonnes of CO<sub>2</sub> equivalent representing 0.77% of global emissions with 78% of the emission coming from the energy sector.

Source: Malaysia Biennial update report (BUR4), 2020



### Air pollution in Malaysia

Air pollution in Malaysia costs approximately MYR 303 billion (US\$ 73 billion) annually, equivalent to 20% of the country's 2019 GDP. An estimated 32,000 avoidable deaths occur in Malaysia every year because of air pollution.

Source: Center for research on energy and clean air, 2022



### Plastic pollution in Malaysia

Malaysia ranked 8<sup>th</sup> among the top ten countries in the world with an estimated 0.94 million tons of mismanaged plastic waste produced, of which 0.14 to 0.37 million tons may have been washed into the oceans.

Source: Estimation of mismanaged plastic waste in Malaysia in 2010 (Jenna R. Jambeck et al. 2015)



### Water supply/management in Malaysia

Malaysia has reached 97% urban water supply access and aims to cover 98% of rural areas with clean water by 2025. Abundant rainfall and water resources offer each person over 5,000 m<sup>3</sup> of renewable water annually.

Source: NRES & WWF-Malaysia



## The call for action

For Malaysia and its people to flourish, it is vital for us to properly **conserve, preserve** and **manage** our ecosystems, biodiversity, human and animal health as well as address climate change in an integrated manner. As such, the Academy of Sciences Malaysia has highlighted the need for an all of Malaysia and society approach.





# National Planetary Health Action Plan



## The mandate

The National Science Council chaired by the Prime Minister of Malaysia at its meeting held on 8 April 2022 agreed for MOSTI through ASM in collaboration with central agencies, and relevant ministries to develop an **integrated** National Planetary Health Action Plan (NPHAP) that is **humanity-centric, STI enabled, nature-based and values driven**.

The development of the NPHAP is a **mission-oriented** plan that takes an **all-of-Malaysia** approach to ensure the health of our people, biodiversity (flora & fauna) and planet.

The NPHAP will also serve to provide a framework for the development of an **impact tracking system** in due course to monitor outcomes from the implementation of the plan. It is work in progress, and the plan is expected to be completed by May 2024.



## National Planetary Health Action Plan (NPHAP) Committee Structure

### NATIONAL LEVEL

**National Science Council**  
Chairperson: Right Honourable Prime Minister

**National Development Planning Committee (NDPC)**  
Chairperson: Chief Secretary  
Members: Current members of NDPC

### MINISTERIAL LEVEL

**Ministerial-level Advisory Committee for NPHAP**  
Chair: Secretary General of MOSTI  
Members: Representatives from relevant Ministries, State Governments and related Experts from the Quadruple helix

Expert-driven initiative involving members of the Quadruple helix:  
Government  
Industries  
Academia  
Communities (CSO/NGO)  
to realise the **whole-of-society** and **whole-of-government** approach

### The expectation

The plan will translate into significant shifts in how government agencies work in collaboration with the quadruple helix, **breaking silos and linking policies** so that they protect humanity and the planetary ecosystem that we depend upon for our survival.

We hope to integrate nature-based solutions that can be scientific knowledge, indigenous knowledge and local knowledge into various aspects like policy, infrastructure and society.

We will also highlight several low-hanging fruits.



## Pillars of NPHAP

### NPHAP COMMON FRAMEWORK AND INTEGRATION

### NATIONAL PLANETARY HEALTH ACTION PLAN

#### GOVERNANCE

#### ENVIRONMENT & HEALTH

#### SUSTAINABLE FOOD

#### ENERGY TRANSITION

#### RESEARCH & EDUCATION

#### COMMUNICATION, BEHAVIOURAL CHANGE & CULTURAL SHIFT OF SOCIETY



## NPHAP Value Proposition



### SURVEYS

Perception Survey with the **common public** and community  
Impact Analysis Survey with **industry players**  
Planetary Health communication strategies



### SUSTAINABLE LEADERSHIP MODULE

Tailored to cater for schools, institutions of higher learning and government training centres



### KNOWLEDGE SYSTEMS

Indigenous and traditional knowledges  
Example: Tagal System



Scan the QR code to watch a video about the Tagal System.



### STI-DRIVEN FRAMEWORK

Impact tracking system framework  
Environmental genomics database - framework

## Humanity-centric, STI Enabled, Nature-based And Values Driven



Akademi Sains Malaysia



Scan the QR code to access the digital version of this factsheet.



For any feedback and input,  
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