

Summary Report: Achieving SDG, Improving Livability Conference

YBhg. Prof. Emeritus Dato' Ibrahim Komoo, Chair, Environment & Sustainability Cluster, Academy Professor Malaysia (APM)

Keynote 1: Debris Flood Disaster – Experiences from recent events in Sungai Bentong, Pahang and Sungai Kupang, Kedah

Issues

- Debris flow - fast-moving landslides triggered by intense rainfall, causing significant damage to life and property.
- The impacts of the disaster were worsened by land conversion, deforestation, and improper land use practices, which increased erosion rates and siltation in rivers.

Solution

Change public perception through public awareness and public education

short term actions:

- Detailed geo-hazard mapping
- Early warning system
- Adaptation & Mitigating
- measures for Disaster Risk Reduction (DRR)
- Capacity building & Public forum

long term actions:

- Establishment of National Center for Geological Hazards
- Sub-basin Mapping Programmes in high risk areas
- Network of Early Warning Systems in mountainous areas
- Geological disaster mitigation measures based on integrated approach

Policy Intervention

- Policy to recognise debris flow as major geological phenomenon related disasters in national Disaster Risk Reduction (DRR) programmes.
- Enhance the initiative on Integrated River Basin Management (IRBM), taking into consideration geo hazards as major contributing factors in disaster management.
- Improve - Policies on natural hazards, systematic “research and management” on Disaster Risk Reduction (DRR), enhance land use approach based on Integrated River Basin Management (IRBM).

2. Prof. Dato' Dr Aileen Tan Shau Hwai, Director, Centre for Marine and Coastal Studies (CEMACS), Universiti Sains Malaysia

Keynote 2: Living with microplastic pollution

Issues

- Malaysia ranks 8th among countries contributing to the plastic waste pollution crisis, with 0.9 million tons of illegally dumped plastic waste in its waters.
- Failure to address the plastic waste pollution crisis may result in more plastic than fish in the ocean by 2050.
- Microplastic pollution is a global issue and requires urgent attention to support sustainable development and life below water (SDG 14).
- Health risks - obesity, reproductive damage, developmental delays, and defects in children.

Damage caused by marine plastic debris

- Biological and Ecological Effects
- Aesthetical effects and socioeconomic impact
- Effects on fisheries
- Navigation Hazard

To ensure progress towards SDG 14 and mitigate the impacts of microplastic pollution, the following actions are necessary:

- Reduce plastic consumption
- Improve waste management
- Enhance international cooperation
- Promote awareness and education
- Collective efforts from all levels
- Support research and innovation
- Encourage corporate responsibility
- Strengthen monitoring and enforcement

Recommendation: Help Penang Build a Sustainable Future

- Teach people to 'Go Green,' selecting one aspect of the 5R and gradually building up from there.
- Refuse - reject environmentally harmful items like disposable cutlery and buy natural products that do not contain microplastics.
- Reduce - to use less or reduce your consumption. Look for eco-friendly alternatives.
- Reuse - to continuously use an item, purchase a reusable water bottle.

- Repurposed - to make use of an item once used for another purpose. For example, repurpose a 'single use' plastic container as a flower pot
- Recycle – transform material into another usable material.

3. Prof. Emeritus Dato' ChM. Dr Mazlin Mokhtar, Deputy Head (Research), United Nations Sustainable Development Solutions Network – Asia Headquarters (UN SDSN-Asia), Sunway University

Keynote 3: Integrated Water Resources Management within the context of Water Sector Transformation 2040 and SDGs 2030

Issues

The inter-monsoonal shift in Penang brings more rain and the improperly disposed rubbish and waste into drains and river channels negatively impacts Ulu Muda's water resources.

Solution

Empowering people

Strengthening governance at all levels

Enhancing capability in data-driven decision making - data obtained must be of good quality, useful, and can be accessed from the database.

Developing sustainable infrastructure with cost-effective technology

The financial resources may be in short supply so taking the first small steps is important to creatively utilise the available resources.

Issues and Challenges

- Individuals: A lack of respect or ownership of the water resources and insufficient participatory platforms has resulted in deteriorating water quality and wastewater.
- Infrastructure: Inadequate and unsustainable ageing water infrastructure, with insufficient resilience to support growth.
- Governance: Water sector governance is fragmented at the federal, state, and local government levels which leads to the marginal implementation of IWRM framework.
- Information: Difficulty accessing data may result in a lack of data-driven decision-making hampered by outdated Acts.

4. Prof. Dato' Dr Zulfigar Yasin, Head, Heritage & Urban Studies Programme, Penang Institute

Keynote 4: Intertidal and coastal readiness for climate adaptation and resilience in Malaysia

Sea level rise, one of the most concerning consequences of climate change, has significant impacts on the sustainable development of coastal zones like Penang. The additional effects are:

1. Coastal Inundation or rising sea levels

2. Erosion and Coastal Retreat: Higher sea levels contribute to increased coastal erosion
3. Saltwater Intrusion: Rising sea levels can cause saltwater intrusion, contaminates freshwater supplies
4. Disruption of Coastal Ecosystems
5. Threat to Species and Biodiversity

Penang's solution

- take preventative measures to improve coastal resilience.
- implement a coastal resilience strategy - coastal protection
- middle bank marine sanctuary as an education hub and a feeding ground for various marine creatures.
- State and local governments can collaborate with national and international organisations to better understand the impact of climate change at the local level
- Coastal engineering practises in Penang must consider protecting mangrove forests

5. Prof. Datin Paduka Dr Fatimah Binti Mohamed Arshad, Senior Fellow Institute for Democracy and Economic Affairs (IDEAS)

Keynote 5: Food Security and Safety: Sustainability and Resiliency

Global Issues

- Food security is a major concern globally, affecting both developed and developing countries.
- The Russia-Ukraine conflict, the Covid-19 pandemic, and climate change (3C-shock) have led to calamities, stresses, and shortages across multiple commodities.

National Issues

- Food security is a pressing national concern.
- Malaysia has been unable to produce enough food to mitigate the impact of the 3C-shock.

Implications to Penang

- Hi-tech agriculture and food production: vertical farming, regenerative agriculture, high value food commodities, community farming, caged culture
- Developed climate smart agriculture industry
- Developed technology smart agriculture industry
- Collaboration with advanced countries Thailand, Vietnam, China, Holland
- Digitalisation, big data, IOT, robotic, AI
- 0 food waste

- Reward regenerative agriculture
- Reward farmers that practices sustainable agriculture
- Change demand
- behaviour towards sustainable consumption
- Incentivise to consumers

6. Mr. Jared Loo, Managing Director, Terasek E Hydra Sdn. Bhd

Keynote 6: Water Management

Issues

- Malaysia grapples with water issues, including river pollution, compromised drinking water safety, and frequent water disruptions.
- To address the water shortage, direct potable reuse is required as an immediate solution.

Challenges

Public initiative or private initiative (Crowding out)

- Regulation Policy (Tight or Loose)
- Technology (Research on Reclaim Water Technology are different from every source)
- Environment Impact (Awareness in Water Foot Print)
- Social Stigma (Cultural Acceptance)
- Water Services Industry Act 2006

Solution

- Look for ways to reuse its treated water instead of just discharging it into rivers.
- Create a holistic and viable water services industry with the proficiency to deliver an efficient and excellent portable water
- Make realise the national water vision in accordance with The Green Technology Master Plan, which advocates for 100% sludge recycling and 33% treated effluent recycling by 2030.