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Circular Economy in Driving Sustainability
Implementation and Monitoring

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1. OUTLINE

The Plenary Session aims to discuss the future of the Circular Economy in Asia, focusing on the implementation of policies

1. INTRODUCTION

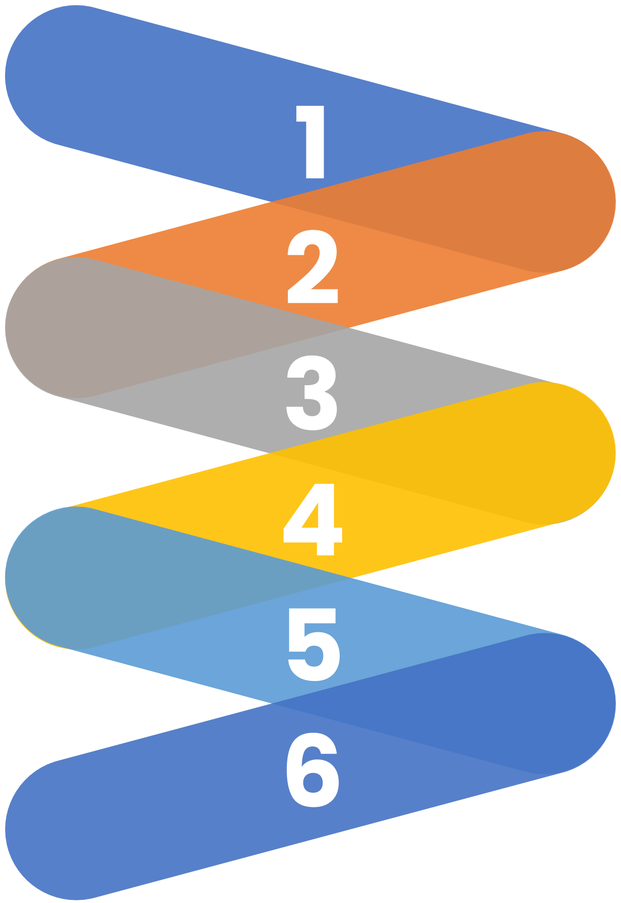
The economic, R&D and societal benefits of circular economy to sustainability

2. POLICY FRAMEWORK

Malaysia's policy and institutional framework for the mainstreaming of circular economy

3. GREENING PHASES

Malaysia has undergone different phases of greening of its economy – circularity is the latest policy 'fashion'



4. IMPLEMENTATION

Barriers to circular practices in Malaysia and the preconditions for mainstreaming of circular economy

5. PLASTICS & WATER

Malaysia venturing into new plastics economy and the creation of water recycling company

6. M&E

Monitoring and evaluation of circularity

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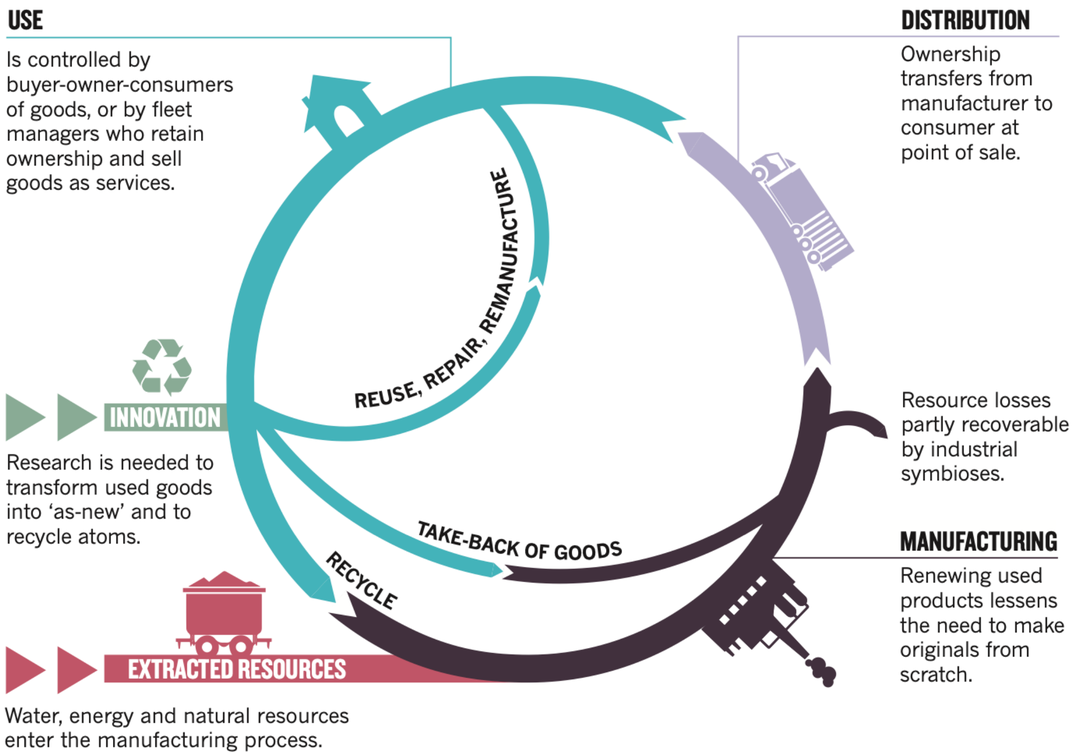
Circular economy offers new ways to sustainable growth

A shift from protecting the environment to promoting business models that are based on full ownership and liability that are unlimited in time. A new focus for policy and business development, it could transform a nation's competitiveness



Source: Stahel 2016

1. Economic benefits

Circularity could cut nations' emissions by up to 70%, increase workforces by 4% and greatly lessen waste. From 'brake on growth' to 'a growth engine'.

2. R&D needs

Excellence in metallurgical and chemical sciences is a precondition for a circular economy to succeed. E.g. is finding ways to disassemble material blends at the atomic level.

3. Citizens

The circular economy will provide high-quality, functional and safe products or services, which are efficient and affordable, last longer and are designed for reuse, repair, and high-quality recycling.

Our consume and throwaway models of consumption have had devastating impacts on our planet. The IRP found that the use of natural resources has more than tripled from 1970, and continues to grow. Moving toward a regenerative growth model, business innovation, regulatory reforms, and lifestyle changes need to go hand-in-hand

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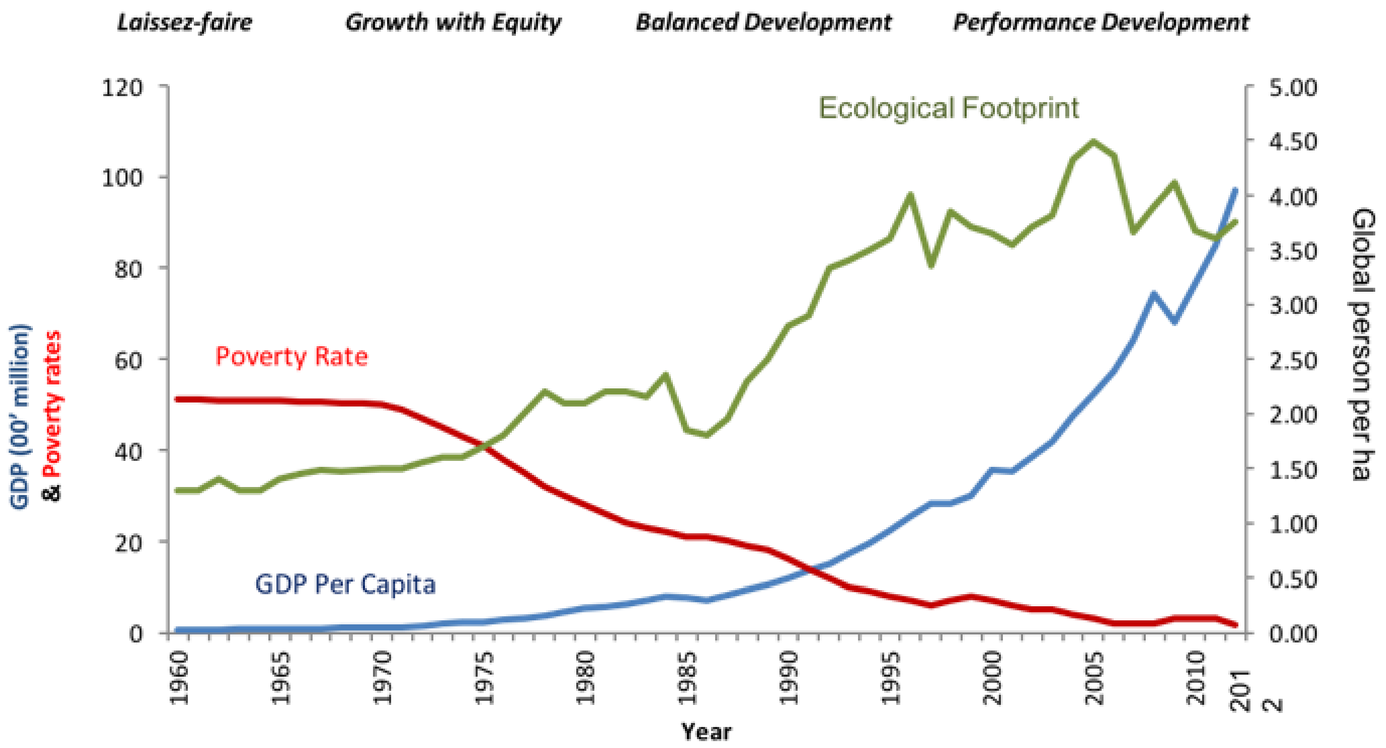
Malaysia's development profile



Source: Hezri 2016, 2021

MALAYSIA

Population of 31 mil (2015)

Natural resources under state jurisdiction

Area of 330,396 km^2

Upper middle income with GNI per capita of USD10,196

- The central idea of sustainability revolves around the convergence of three main pillars of development namely economic, social and environmental.
- The said convergence is yet to take place in Malaysia. Decoupling necessary

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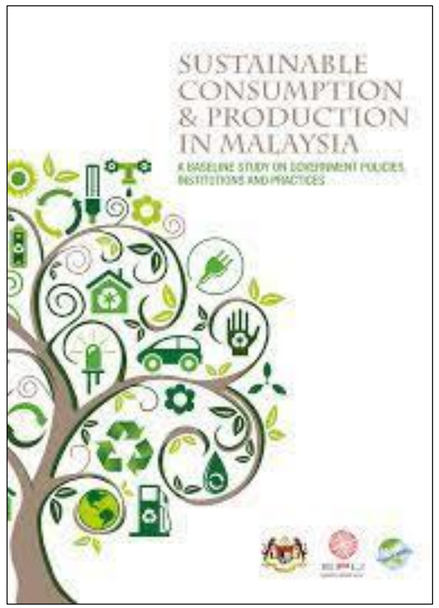
Circular economy is increasingly recognised

1. Sectorial roadmap

The SCP Blueprint was completed in 2016 with the support of the European Union



Lack of clear-cut mandate, responsibilities and monitoring in the SCP implementation

2. The 5-year plan

Gamechanger VIII – Embracing Circular Economy. Strategy A2

"The use of recycled materials and recycling of production waste will be increased, while the responsibility of producers in managing their end-of-life products will be extended
All these initiatives will expand the green economy and facilitate the attainment of a low-carbon future"

3. Investment

Circular Bioeconomy Unit established in the Malaysian Investment Development Authority (MIDA)

Currently facilitating the BioHub Port Project in Sarawak to demonstrate how circular economy and ESG as an engine of growth

However, the circular economy interventions are still at formulation stage in the policy cycle.

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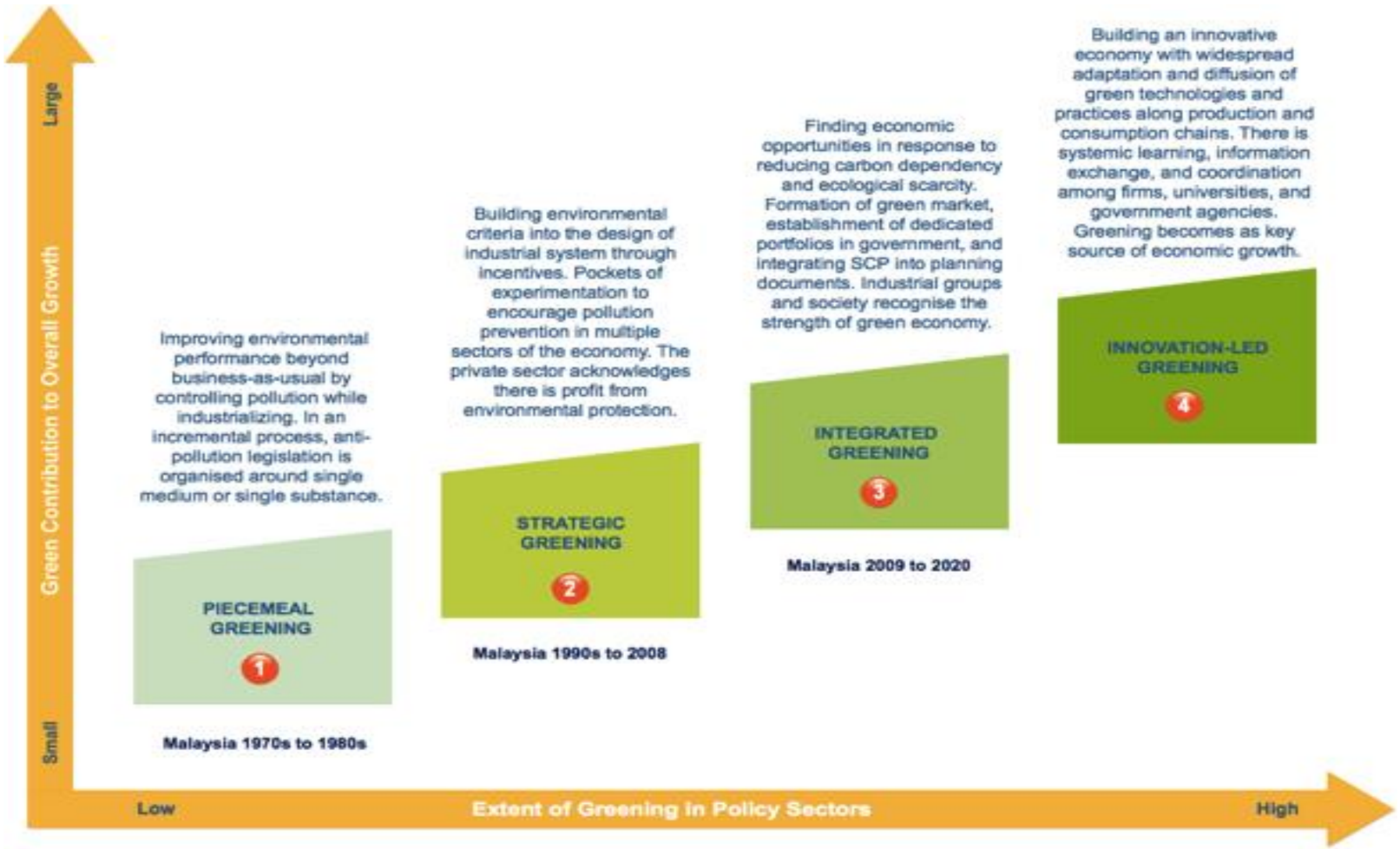
Phases of greening Malaysia

The shift to sustainability requires policy mixes

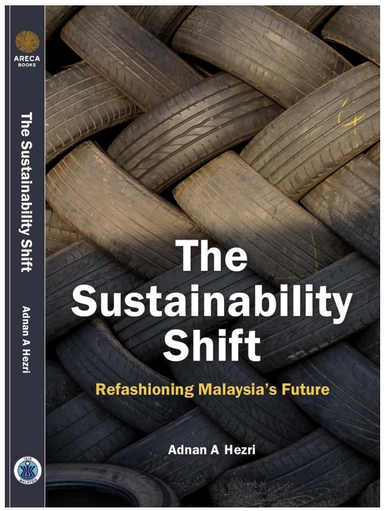


Source: Hezri 2016, 2021

Malaysia finds opportunities in response to reducing carbon dependency by making greening more attractive

HOWEVER

... Not introducing stringent law for degradation of environmental assets



There are certain sections and regulations in *Environmental Quality Act 1974*, *Solid Waste and Public Cleansing Management Act 2007* and in *Environmental Quality (Scheduled Waste) Regulation 2005*, respectively, that promote resource circulation The success of the circular economy strategy is contingent on a combination of policy actions.

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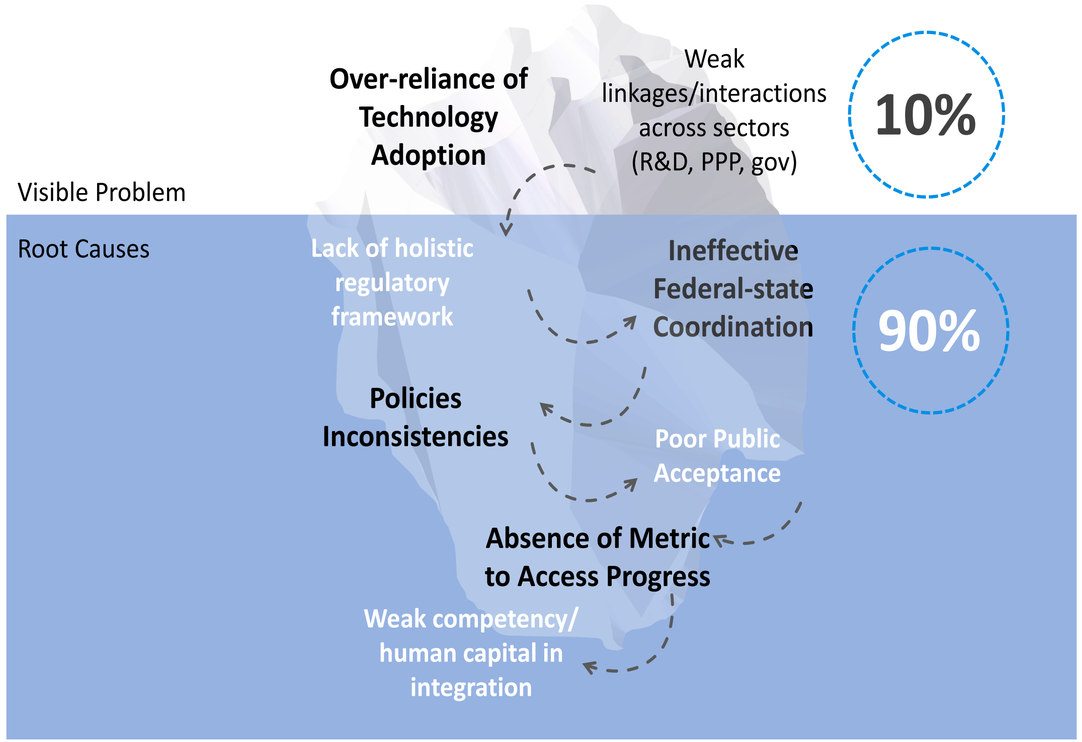
Considerable barriers to circular practices

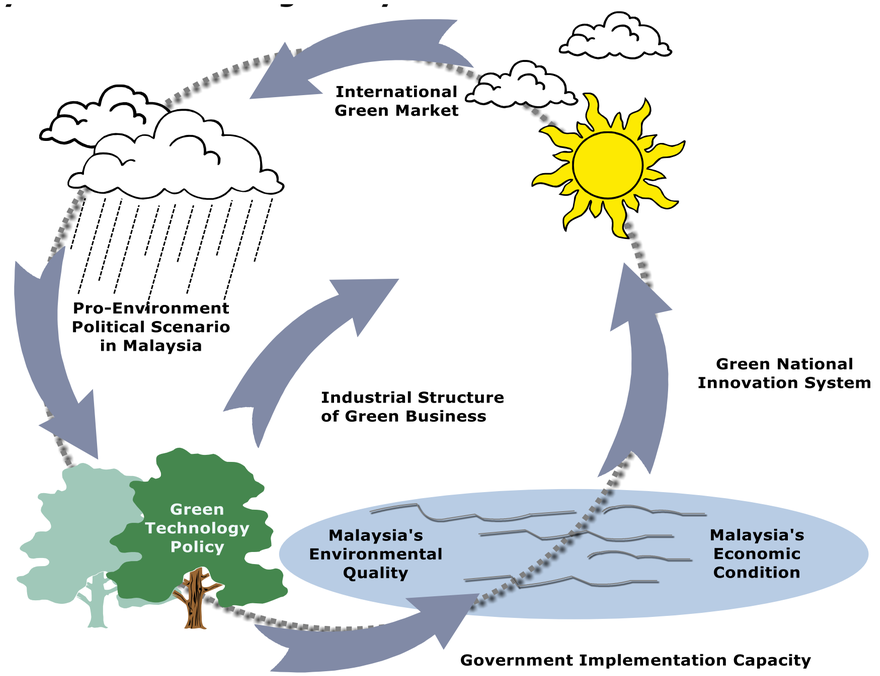
1. Implementation challenges



Source: ISIS 2014

Address problems and root causes in implementation

2. Preconditions for greening Malaysia



Source: Hezri 2016, 2021

Limited focus on innovation than market development

Considerable barriers still exist preventing widespread adoption of more circular practices in Malaysia, including economic incentives, accounting rules, and regulation that often favor conventional linear solutions and business models.

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Mainstreaming circular economy beyond firm-level

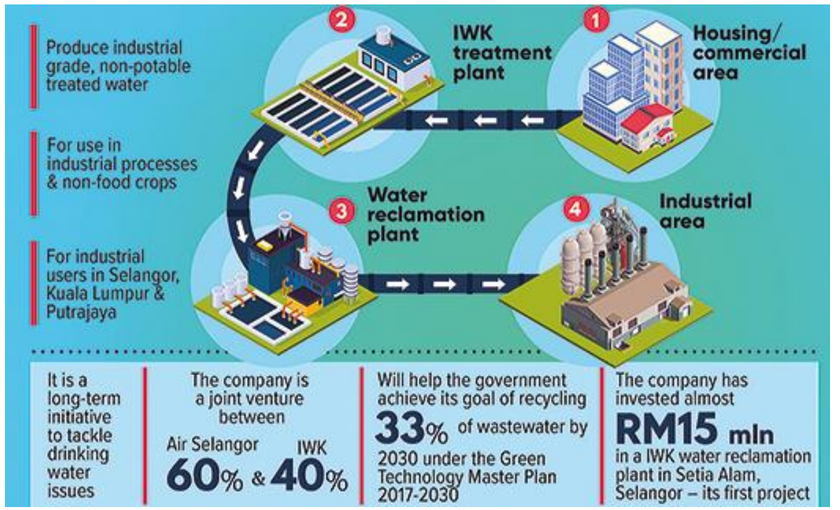
1. Plastics circularity

Malaysia's total value of recyclable material that could be unlocked is USD 1.3 billion per year. However, only 19% of these materials are recycled, resulting in around USD 1 to 1.1 billion income loss annually.

Malaysia's Roadmap towards Zero Single-Use Plastics, 2018 – 2030 aims to provide policy direction to all stakeholders

2. Water circularity

Central Water Reclamation Sdn Bhd (Central Water) has been established to oversee the reclaimed water venture.



Central Water will produce non-potable water from bio-effluents treated by IWK to be used as an alternative water source for the industrial and non-food crop agricultural sectors

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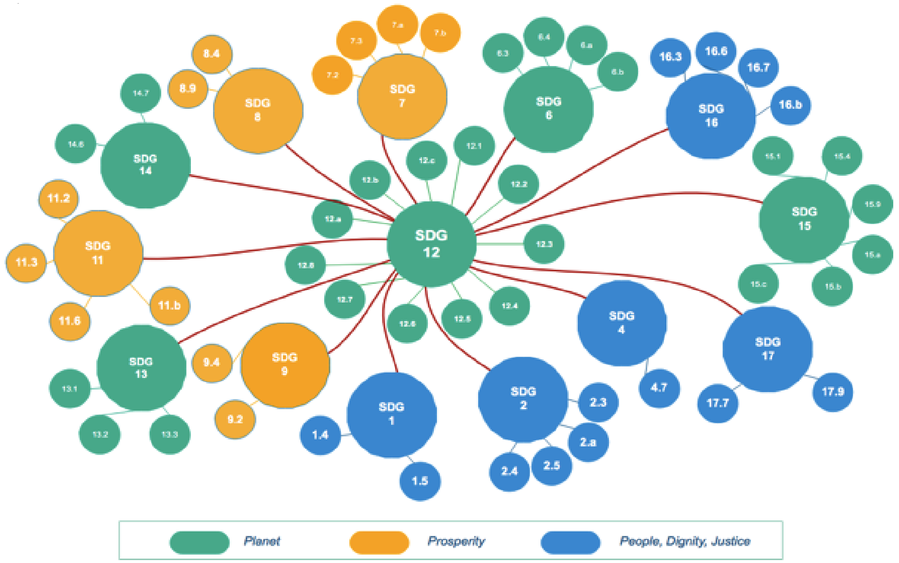
Many monitoring frameworks, but evaluation is key

SDG 12

Eleven targets for responsible consumption and production.



SDG 12 resonates with 14 SDGs and 52 targets

Source: Hezri 2017

Eurostat

Circular economy indicators – ten altogether under production and consumption, waste management, secondary raw materials, & competitiveness and innovation

Material flow analysis

Please refer to the work of the International Resource Panel of the United Nations Environment Programme

Process, outcome, and impact evaluations

Not a strong forte of the Malaysian policy system

Currently two very different types of indicator areas are under development: monitoring frameworks based on macro indicators that summarize the progress at (supra)national level; and micro indicators tailored towards assessing circularity at the level of products and services.

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