Environmental Sustainability: Towards Net Zero for Sarawak

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Environmental Sustainability



Green Economy



Net Zero Strategy

Ci

Carbon Trading



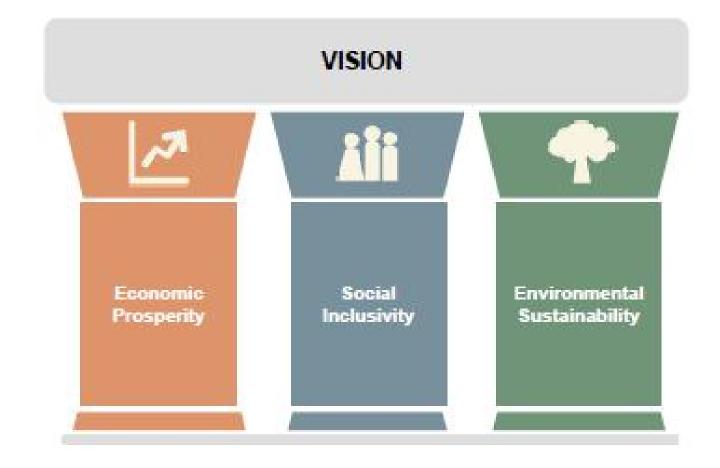
Moving forward with Sarawak Government



Conclusion

Today's Talk

By 2030, Sarawak envisions a prosperous society led by data and innovation, ensuring economic prosperity, social inclusivity, and environmental sustainability for all.



What is Environmental Sustainability

- Responsible and balanced use of natural resources and ecosystems to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.
- Making choices and taking actions that minimize negative impacts on the environment, promote conservation of resources, and ensure long-term ecological health.

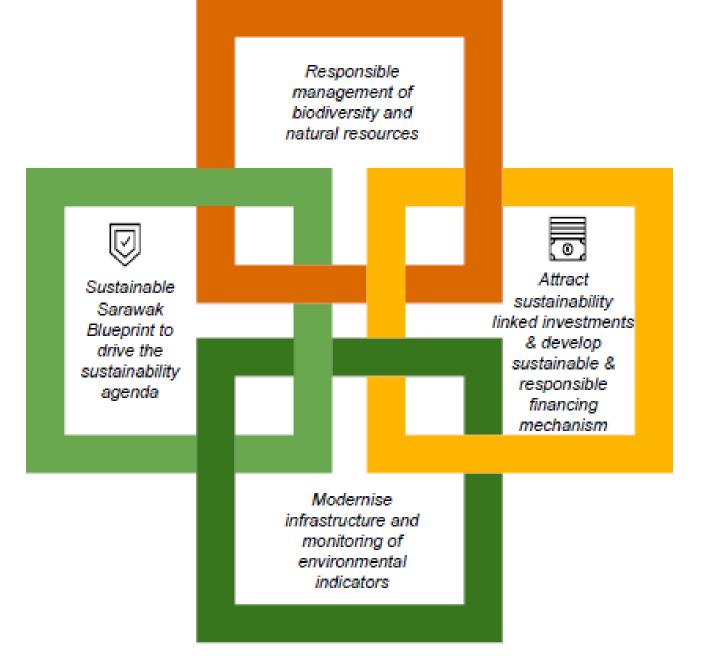


Environmental Sustainability – The Vision

- Ensure a clean and healthy environment for current and future generations
- Sustainable forest management
- Adoption of new technologies and innovation
- Support Malaysia's commitment to reduce greenhouse gas (GHG) emissions intensity of GDP by 45.0% by 2030.



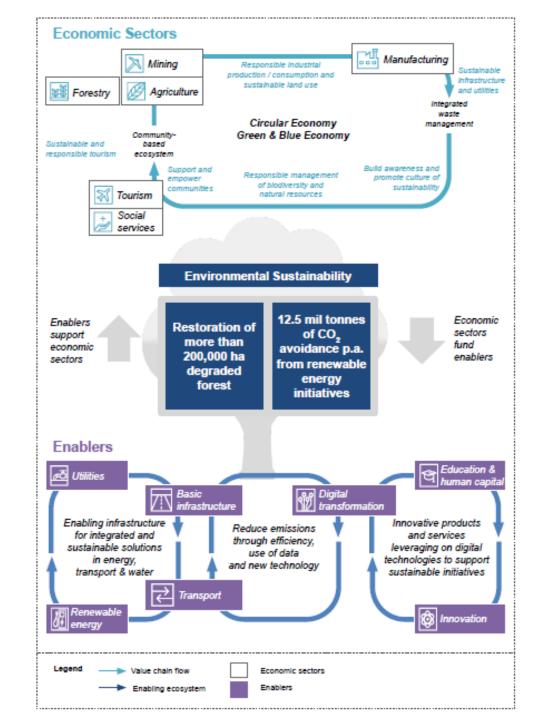
Strategic Focus of Environmental Sustainability



PCDS 2030 anchors on 6 economic sectors and 7 enablers



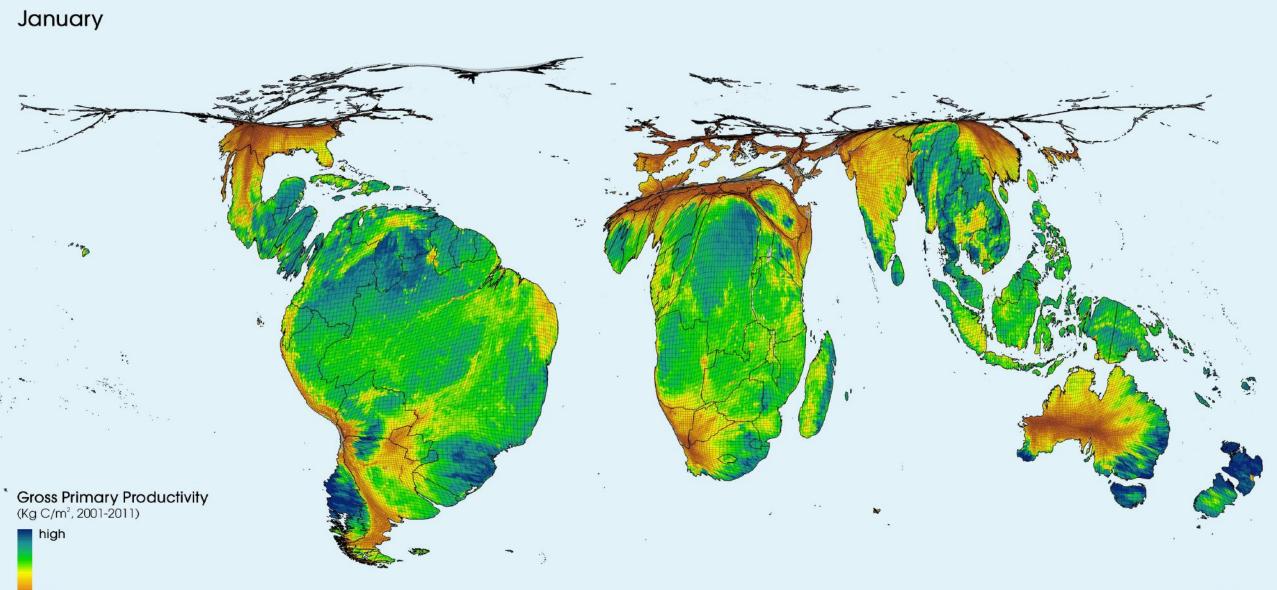
Ecosystem of Interdependence between Economic Sectors and Enablers







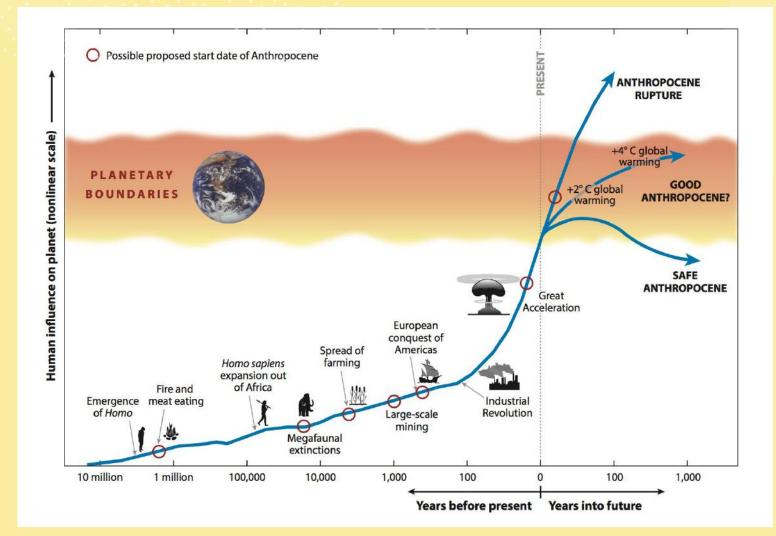
The metabolism of the terrestrial biosphere





Total human social metabolism

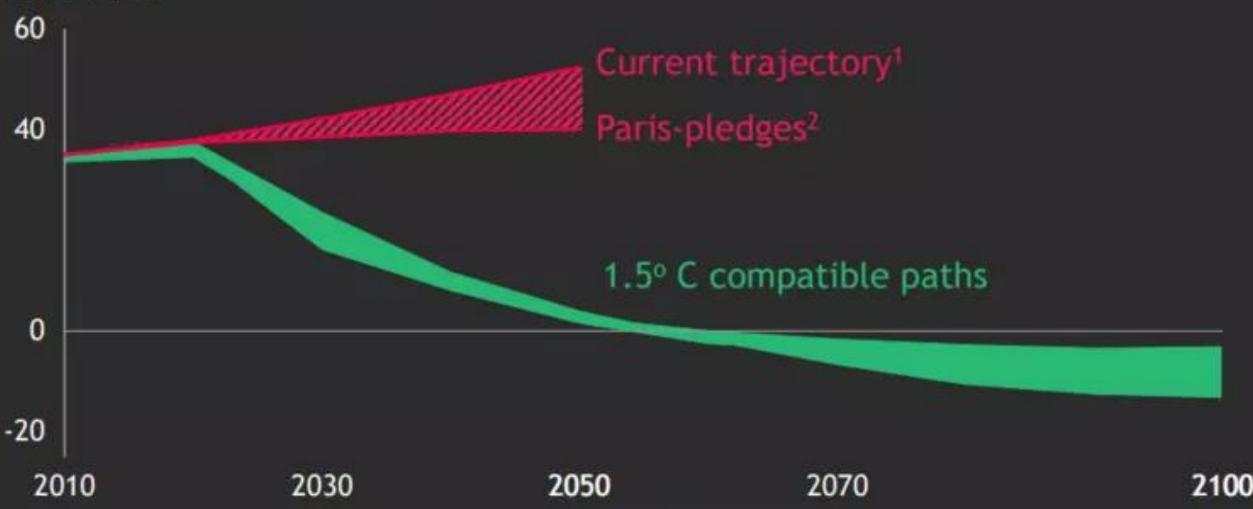
Malhi (2017) The Concept of the Anthropocene. Annual Reviews in Environment and Resources



The Net Zero Challenge Report – World Economic Forum and BCG

The world needs to move to "Net Zero"

Global net CO₂ emissions pathways Gt per year



The industrial metabolism of humanity



Adverse impacts from human-caused change will intensify

Water scarcity and food production







Health and wellbeing









Cities, settlements and infrastructure









Y



Ecosystem structure, species range shifts and changes in timing





Business Action for 1.5⁰ Celsius

 First corporation in Malaysia to commit to the "Business Action for 1.5° Celsius" under United Nations Global Compact. BUSINESS 1.5°C

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energy

sarawak



Industry Processes and Product Use Waste Agriculture Land use change and Forestry

Communication & Action

- Reporting on Climate Change
 - First National Communication (NC1) in 2007
 - NC2 and Biennial Update Report (BUR1) in 2011
 - NC3 and BUR2 in 2018
 - BUR3 in 2020
- GHG Carbon Inventory covers:
 - Emissions from Energy
 - Emissions from Industrial Processes and Product Use
 - Emissions from Land Use, Land-Use Change and Forestry (LULUCF)
 - Emissions from Agriculture
 - Emissions from Waste Sector

Malaysia

Initial National Communication



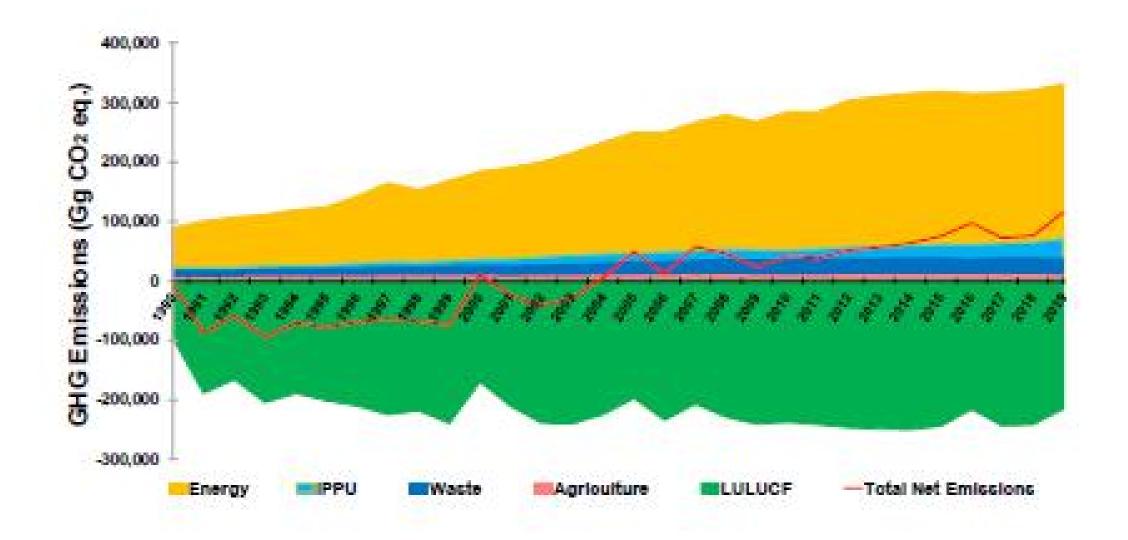
submitted to the Inited Nations Framework Convention on Climate Change

MINISTRY OF SCIENCE, TECHNOLOGY AND THE ENVIRONMENT

July 2000

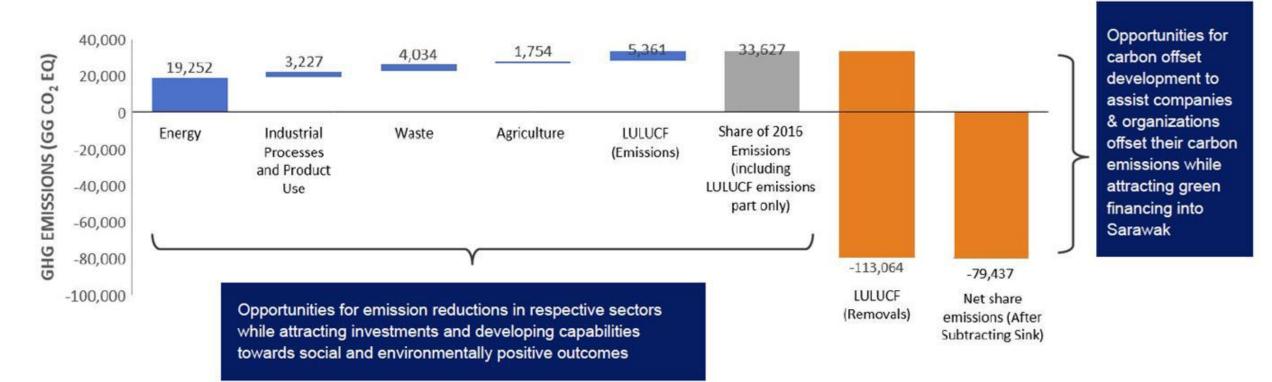


Biennial Update Report 4: Malaysia GHG Inventory - 2019



Sarawak's GHG emission

Sarawak's GHG emissions, 2016 (estimated share based on National GHG Inventory, baseline year 2016)



DEVELOPING THE NET ZERO STRATEGY FOR SARAWAK



Maintain at least 60% renewable energy capacity mix by 2030.



600k tons annual reduction to CO2 emissions via electrification of mobility fleet.



Conserve natural resources and intensify sustainable forest management practices



Accelerate green growth transition



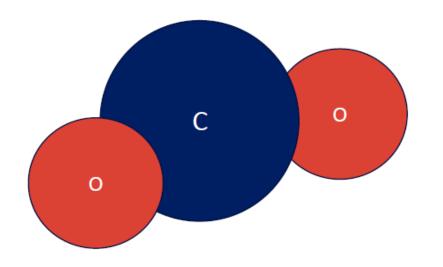
Global player in hydrogen



Accelerate low carbon urban development

What is carbon trading?

Greenhouse gas equivalent measure



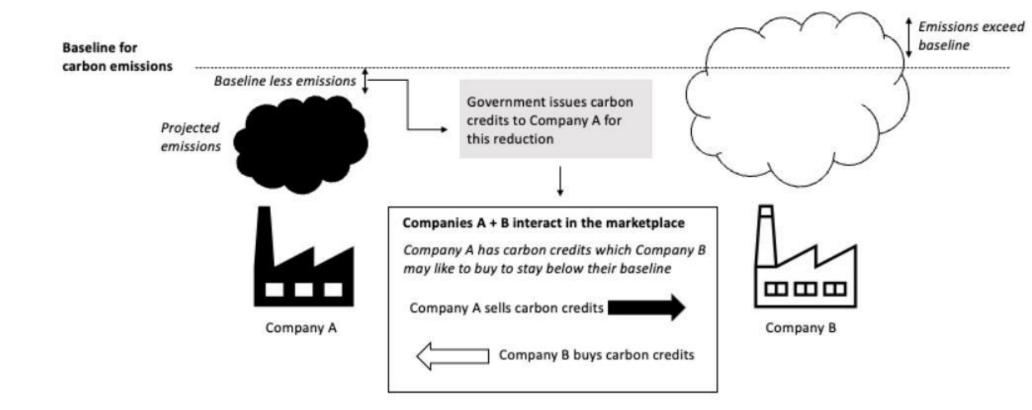
equivalent (CO2-e)

- Accounting and representation of greenhouse gas measure (tonne CO2-e)
- Science and accounting
- Credits / units / allowances representing measure of CO2-e abatement or sequestration (storage)
- Energy efficiency and other metrics to be aware of (Paris Agreement)

Accounting frameworks, common metrics, exchanges / transfers / cancellations

Emissions trading schemes (examples)

Baseline and credit emissions trading scheme



Low Carbon Cities for Green Growth

Low Carbon Cities

- Develop Sarawak's urban areas with infill development and create more green lungs within urban areas
- Adopt nature-based solutions when building or redeveloping infrastructure.
- Introduce low carbon public transportation and encourage more cycling and walking
- Implement sustainable construction practices in future buildings

Urban environment	Urban infrastructure	Urban mobility	Buildings
C1: Accelerate sustainable urban development in Sarawak's urban erwironment	C2: Implement technology and best practices to decarbonise the urban infrastructure and reduce emissions in Sarawak	C3: Promote low carbon mobility infrastructure in Sarawak's cities	C4: Implement sustainable construction practices that are environmentally responsible and resource efficient

Developing Carbon Ecosystem



QUANTIFY

A platform that quantifies

the CO2 you didn't produce



VALUE

Values your CO2 savings

EXCHANGE

And enables you to exchange your savings



Creating Carbon Neutral Cities

- Sustainability platform rewards carbon neutral mobility behavior towards a new way of living in cities
- Rewarding people and communities for not emitting CO2
- Exchange credits for other services and companies can offset them to compensate their local carbon footprint
- Accelerating global transition towards carbon neutral cities



AYR, a platform that rewards carbon neutral mobility behavior

Green Economy or Green Growth

- Low carbon, resource efficient and socially inclusive
- Growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services.



The role of Green Economy, Sustainable Consumption and Production and Resource Efficiency for Sustainable Development

Resource efficiency Achieving greater wellbeing whilst reducing resource use and emissions

Green economy A macro-economic approach Focus on investing in green economic activities, infrastructure and skills SCP Policies, tools and practices that support a green economy approach Focus on capacity building and mainstreaming of eco-efficient production and responsible consumption behaviours

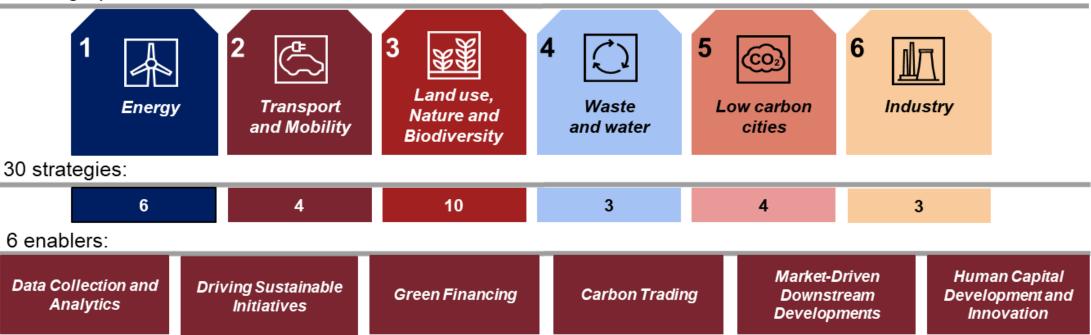
Partnerships



Regulatory Framework, Institutional Setup, Tariff Designing, Subsidies & Guarantees **Business** Citizens Sustainable Financial Share, Community Consumption Technical Innovation, Willingness to Pay, Managerial Role, and Production Increased Awareness, **Backward & Forward Environmental Friendly** Linkages Life Styles

	Vision	Sarawak to be a low carbon and inclusive green economy by 2030			
Objectives					
To protect Sarawak's biodiversity and natural resources		To improve the liveability of Sarawakians including preserving indigenous values and cultures of the locals	To foster inclusive economic growth through responsible and sustainable use of natural resources		

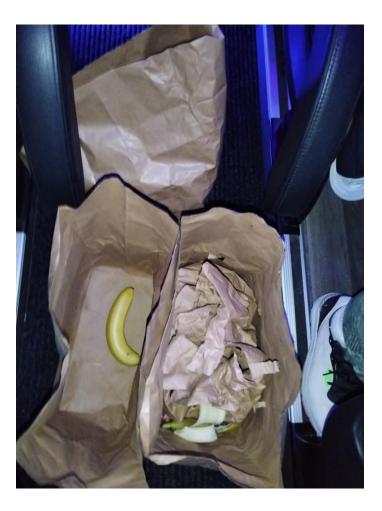
6 strategic pillars:

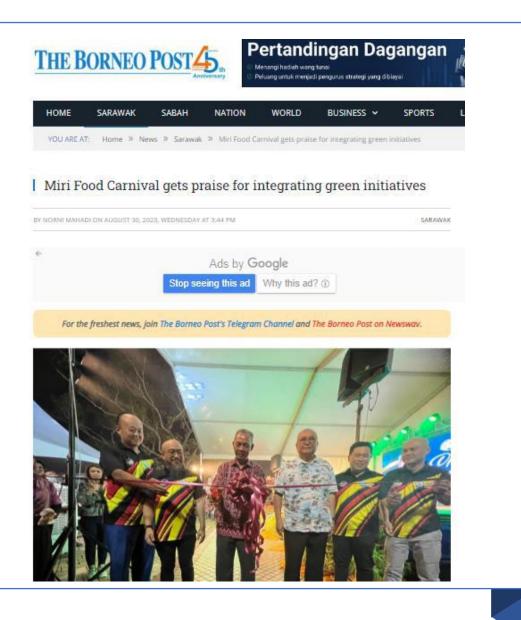


Sarawak's Green Economy Policy sets out the vision to achieve 3 policy objectives, supported by 6 strategic pillars and 6 enablers

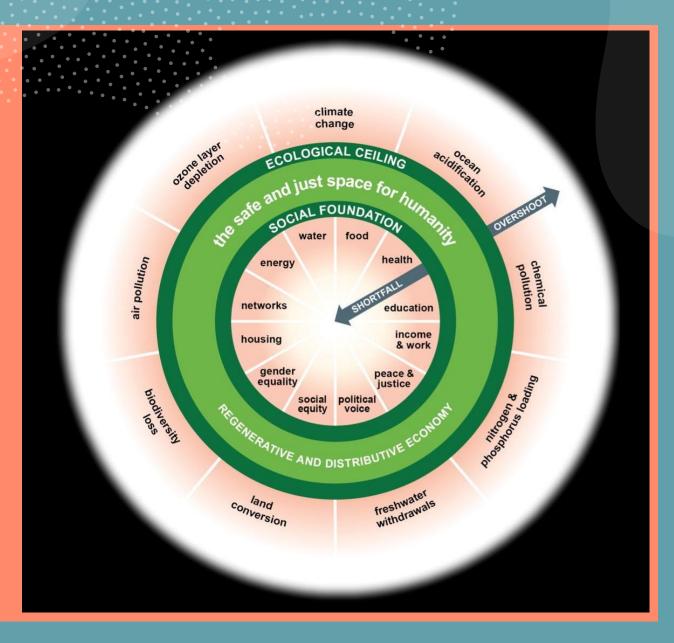
There are several "quick-wins" that will kick start the transition towards a green economy

1 Energy	2 Transport and Mobility	3 Land use, Nature and Biodiversity	4 Waste and water	5 Low carbon cities	6 Industry
E1: Enhance off-grid green electrification systems in rural areas I1: Conduct monthly/quarterly training workshops with local	T3: Enhance the quality, safety and environmental sustainability of road infrastructure	L6: Adopt the concept of Other Effective Area-based Conservation Measures ("OECM")	W3: Increase Sarawak's sanitised water supply coverage, particularly in rural areas, through means of partnership	C4: Implement sustainable construction practices that are environmentally responsible and resource efficient	I2: Integrate circular economy approaches in the life cycle flow in heavy industries
E2: Enhance the environmental and social sustainability of hydroelectric plants	 I4: Conduct consultation meetings with people residing in the community I5: Enhance coordination between different levels of stakeholders, especially between the federal, state and local communities 	 I7: Prepare a detailed program for gazetting all catchments required for the plan L3: Improve the management of peatlands in Sarawak to accelerate the shift towards sustainable peatland 	 19: Source for opportunities to access market financing. This is to finance infrastructure and maintenance of water supply systems 110: Deliver a series of 	I11: Build awareness and education for those involved in green building construction, such as contractors and engineers	I13: Develop a Circular Economy framework that is applicable to heavy industries, to guide Sarawak to achieve its long-term goals in the circular economy
I3: Provide all employees and staff with adequate resources on sustainability principles	I6: Create and implement a capacity building plan for the development and maintenance aspect of roads	management I8: To strengthen the peatland management framework in Sarawak. Without an overarching framework, progress will be hindered	110: Deliver a series of consultations workshops on topics such as Personal Hygiene and Sanitation; Water Conservation; Composting of kitchen waste and organic farming	I12: Offer training initiatives and apprenticeship programs to those involved in green buildings	I14: Step up efforts, in cooperation with national authorities, on enforcement of applicable sustainability requirements for products placed in Sarawak





Doughtnut Economics: Seven Ways to Think Like a 21st-Century Economist by Kate Raworth



Highlights

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Adopting green economy strategies and policies including carbon offset strategies will help Sarawak achieve its long term development goals as increasingly global investors and markets demand and reward low carbon economies.



Increase and deepen the usage of data-driven tools in decision-making, tracking and monitoring in key sectors e.g. transportation, waste management, and Sarawak's carbon offset projects



Monetise nature based assets by developing carbon offset projects via forest preservation and land restoration activities.

Desired outcomes

- Strong signal by the State Government's commitment on green agenda
- Effectiveness and efficiency in driving growth of green economy of the State
- Sarawak as global player in green agenda

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Moving Forward

The challenge

- Cut emissions quickly, sharply to create a safer, sustainable world
- Scale up practices and infrastructure to enhance resilience
- Cut global GHG emissions by nearly half by 2030
- Action required along numerous dimensions



Terima Kasih