

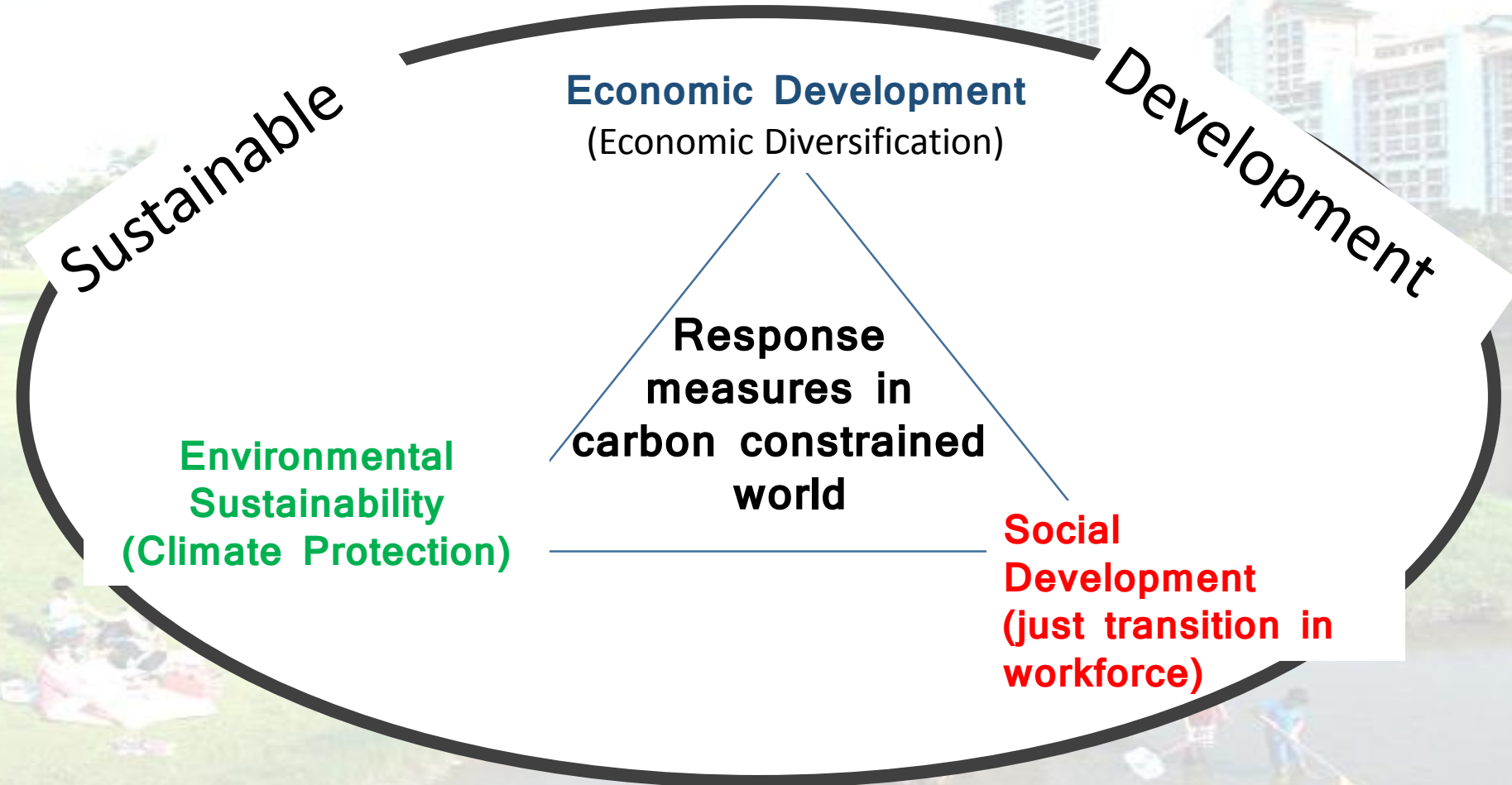
Elaborating on Economic Diversification in Sustainable development

Part I – National Experience

Peter Govindasamy, Singapore



Economic diversification necessary for sustainable development



Economic diversification: integral part of development experience, taking account of national circumstances

Singapore, 1965



...unemployment of ~14%

... population of 2 million, out of which 300,000 people lived in squatter settlements in the suburbs and 250,000 lived in squalid shop-houses...

...life expectancy of 65...



GOVERNOR OPENS AIRPORT
Thousands See Ceremony In Perfect Weather
SINGAPORE AS PORT
SAID OF THE
SKYWAYS
Finest Facilities In
The World
"WE HAVE CREATED FOR
THE FUTURE"
His Excellency
"WHAT Port Said is to shipping, so I believe will Singapore be to the air," declared H.E. the Governor, Sir Shenlan Thomas, opening the new 35,000,000 Singapore Airport at Kallang yesterday afternoon.



Singapore's national circumstances



Same size as Lake Geneva



Physical Geography

- Small size (750km²)
- Densely populated (7540 persons/km²)
- Flat (Highest point of 165m)
- No natural resources

Constraints

- Land
- Manpower
- Energy
- Water
- Food



Singapore's national circumstances

Energy Constraint








- No energy resources
- All fuels (natural gas) imported to meet energy needs
- Exposed to volatility of global energy markets and supply risks.



Energy Efficiency is main mitigation strategy

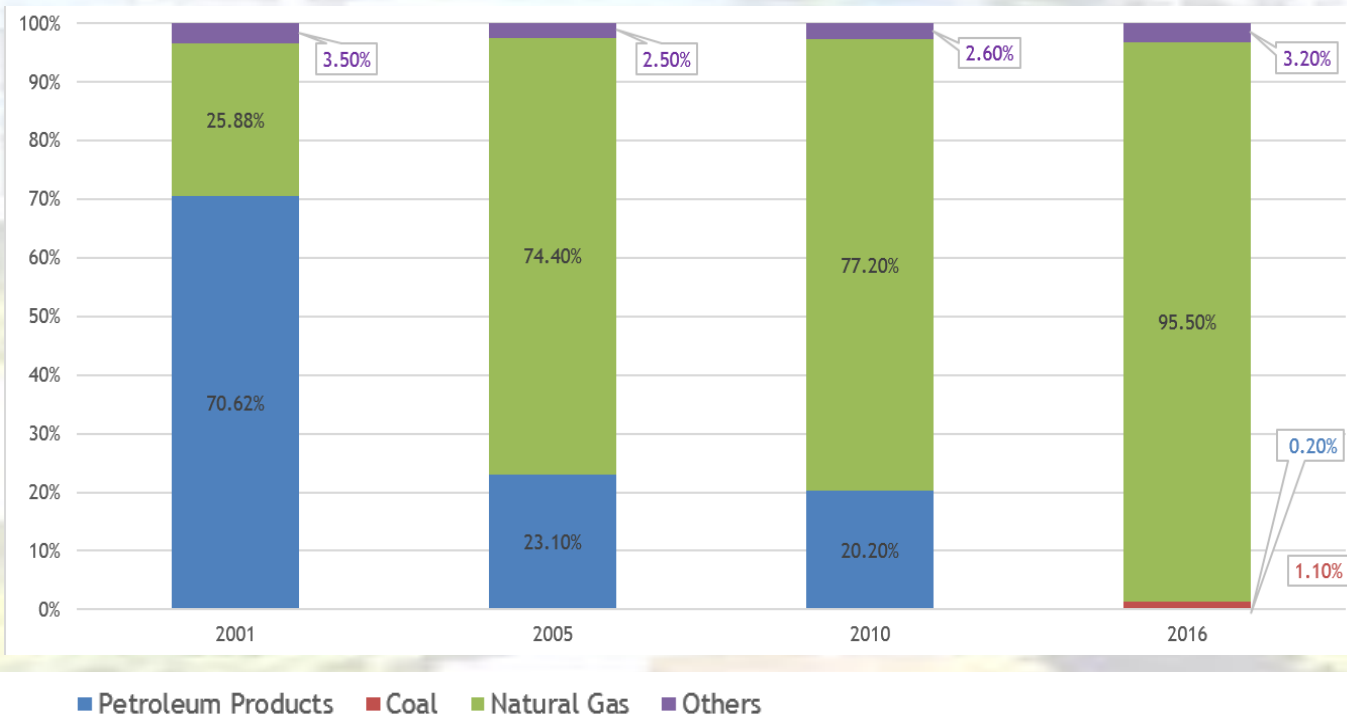
Singapore is Alternative-Energy Disadvantaged:

Small island city state with huge population density - very limited renewable options

Solar		<ul style="list-style-type: none">• Limited land area for deployment.
Micro Wind Turbines		<ul style="list-style-type: none">• Low wind speeds (<3.3m/s) in Singapore with insufficient land.
Offshore Wind Turbines		<ul style="list-style-type: none">• Not possible due to heavy marine traffic.
Tidal Energy		<ul style="list-style-type: none">• Mean tidal range (1.7m) is too low.
Geothermal		<ul style="list-style-type: none">• No geothermal potential for power generation
Nuclear		<ul style="list-style-type: none">• Stringent land requirements. Safety and disposal of nuclear waste are issues.
Electricity Imports		<ul style="list-style-type: none">• Frees up land but there are energy security concerns.

Energy Diversification

- ❑ To reduce carbon emissions, increased share of natural gas (the cleanest fossil fuel) in energy mix at higher cost
- ❑ To reduce dependency on piped natural gas, we import LNG
- ❑ Explore solar energy, although limited option due to small size, dense population



52 years of sustainable economic transition

- ❑ People, only resource - investment in education, skills development
- ❑ Prudent political governance
- ❑ Business friendly policies
- ❑ Open market
- ❑ Transition of workforce, social inclusion



60s: Labour Intensive



70s: Skills Intensive



80s: Capital Intensive



90s: Technology & Services Intensive



2000s - : Knowledge & Innovation Intensive

Constraints:

Land

Manpower

Energy

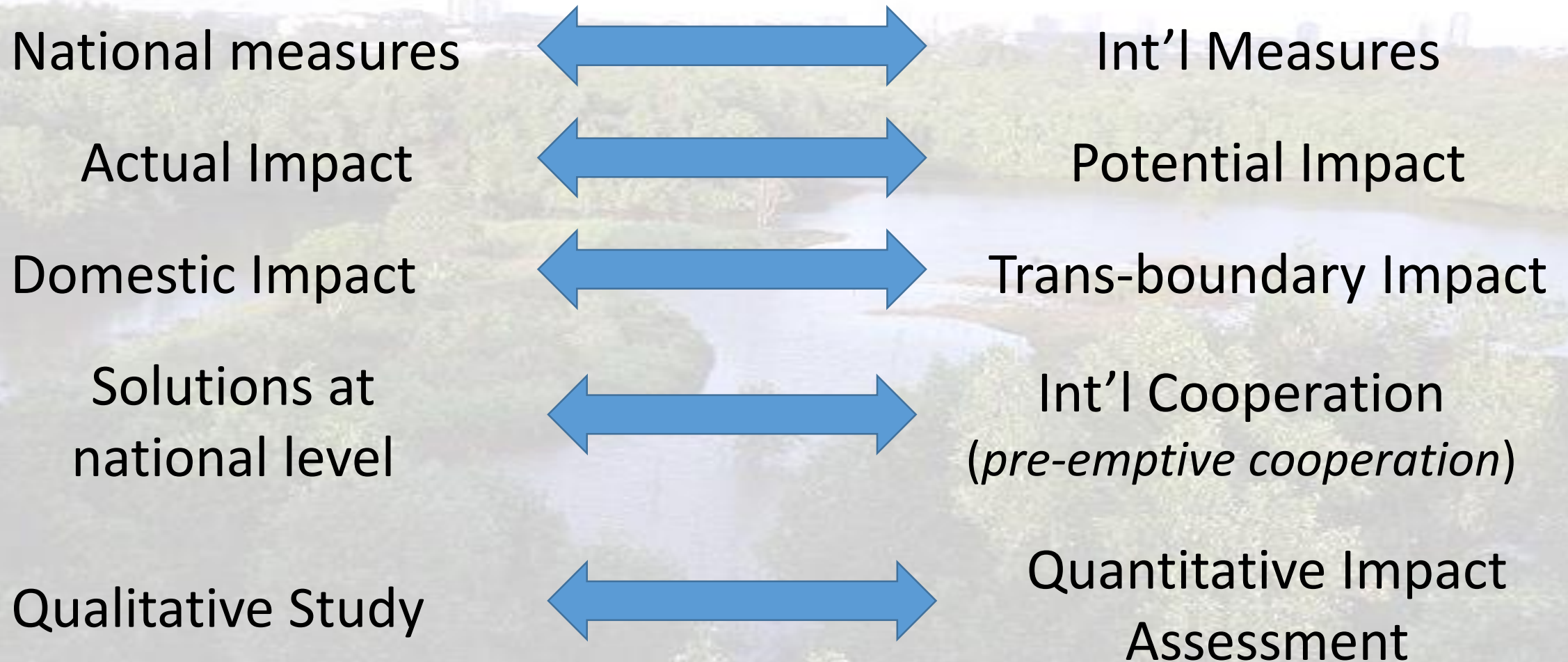
Water

Food

Carbon Constraint
World



Mitigation Actions



IPCC AR5 requires *pre-emptive cooperation* for coherence of response measures with trade and economic objectives

“There are numerous and diverse explored opportunities for greater international cooperation in trade-climate interactions. While mutually destructive conflicts between the two systems have thus far been largely avoided, pre-emptive cooperation could protect against such developments in the future.”

INTERGOVERNMENTAL PANEL ON
climate change

Pre-emptive cooperation at three levels:

National

- Between economic, environment and energy ministries

Multi-lateral

- At the WTO; UNFCCC-Forum; ISO

Forum

- Between international organizations

Pre-emptive cooperation - some parameters

1. Respecting multilateralism, response measures adopted within the multilateral framework

- Risks of unilateral actions high without a robust multilateral system.

2. No protectionist restrictions

- Undermines Convention requirement to maintain open and supportive international economic system; counter-productive to economic development and climate objectives.

3. Right to determine national policies in accordance with national circumstances.

- Convention obligation to meet the national circumstances of developing countries identified in Articles 4-10, eg., least developed, alternative energy dis-advantaged, small island developing countries

Pre-emptive cooperation - some parameters

4. Cooperation is not to impose new commitments

- The forum is an avenue for discussions; not to serve as a basis for the interpretation or enforcement of Convention provisions or to impose new commitments on parties

5. Respect competencies of IOs

- Response measures involving sectors with distinct multilateral rules should respect the mandate and longstanding competence of relevant international organisations dealing with such sectors, and be consistent with relevant and applicable international law.

Transparency:

A key aspect of *pre-emptive cooperation*

Ex-ante notification:

Providing opportunities for parties to comment on response measures before they are implemented

Ex-post assessment:

Checking and evaluating the actual impact of responses measures

Addressing impacts of response measures in sustainable development

Paris Agreement

Parties “may be affected not only by climate change, but also by impacts of measures taken in response to it”.

Convention

requirement for parties to address adverse impacts of response measures

Open Markets

requires

enables

support

Implementation in the context of
Sustainable Development

support

requires

funds

support

Economic development

Pre-emptive coherence

Nationally, within IOs, between Forum and IOs

Guides

Parameters for pre-emptive cooperation

An aerial photograph of a park area. In the foreground, a large green lawn is visible with several people sitting on a blanket, possibly having a picnic. To the right, a winding pond or stream flows through the park, with some people standing near the water's edge. In the background, there are several multi-story residential buildings under a clear sky. The overall scene depicts a well-maintained urban park.

Part II.

Elaborating on Economic Diversification

in Sustainable Development

– Looking Ahead

L. Statements of fact on economic diversification

No two country are alike. National circumstances differ.

All parties will be affected in the carbon constrained world.

Response measures are not limited to national boundaries.

Economic diversification is necessary to build resilience, need to be tailored to the unique national circumstances.

Programmes for economic diversification has to be undertaken at the national level. International cooperation has an important facilitative role in economic diversification initiatives.

2. Some aspects of international cooperation relating to economic diversification

Sharing of best practices and experiences.

Identifying non-domestic barriers to economic diversification with a view to mitigating their adverse impacts.

How can foreign investment be facilitated in non-traditional sectors?

The role of technology, technical assistance and capacity building support.

Leveraging on intergovernmental organizations with relevant expertise.

3. Next Steps – elements for further work

Draw up an inventory of response measures.

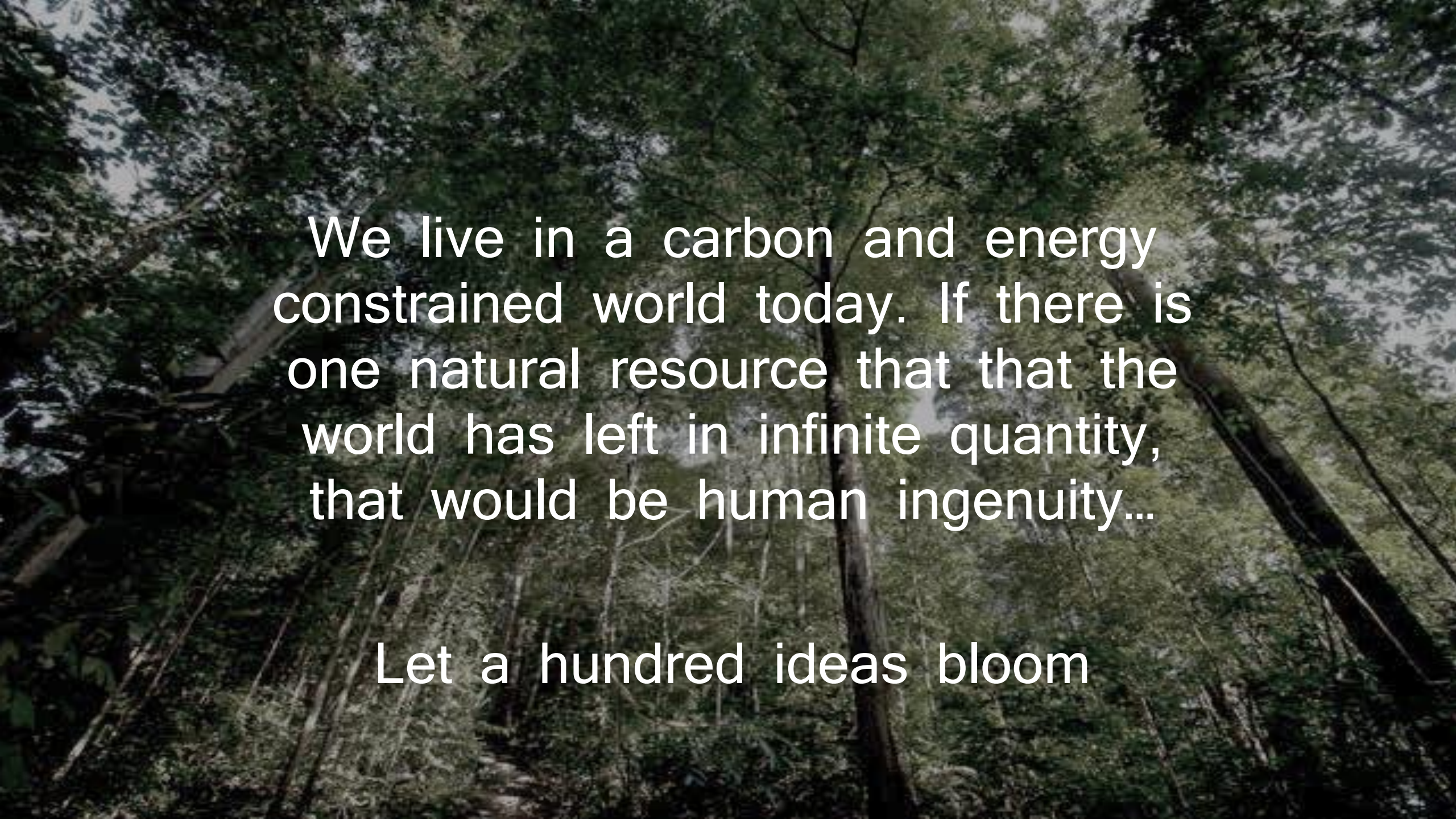
What are the potential economic and social consequences of these response measures?

What are lessons learned on successful diversification strategies?

Draw up detailed guidelines for economic diversification initiatives.

What could be the elements of pre-emptive cooperation?

What could be the elements of enhanced transparency provisions?

A low-angle shot of a dense forest. Sunlight filters through the thick canopy of green leaves, creating a dappled light effect. Several tree trunks are visible, some leaning at angles. The overall atmosphere is serene and natural.

We live in a carbon and energy
constrained world today. If there is
one natural resource that that the
world has left in infinite quantity,
that would be human ingenuity...

Let a hundred ideas bloom