



Sustainable Development Needs in the Caribbean

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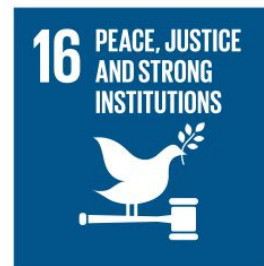
Issues for Caribbean Countries

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- Dependence on imported energy
 - Small markets & narrow economies
 - Access to regional markets (Caribbean and mainland)
 - Movement of people, goods and services
 - Distance and transport costs
 - Borders
 - Language
 - IT
 - Crime

Caribbean Issues

- Vulnerability
 - Natural Hazards
 - Small size
 - Small populations
 - Connectivity with mainland and other islands
- Capacity
 - Small populations,
 - Low numbers of technically trained persons

SUSTAINABLE DEVELOPMENT GOALS

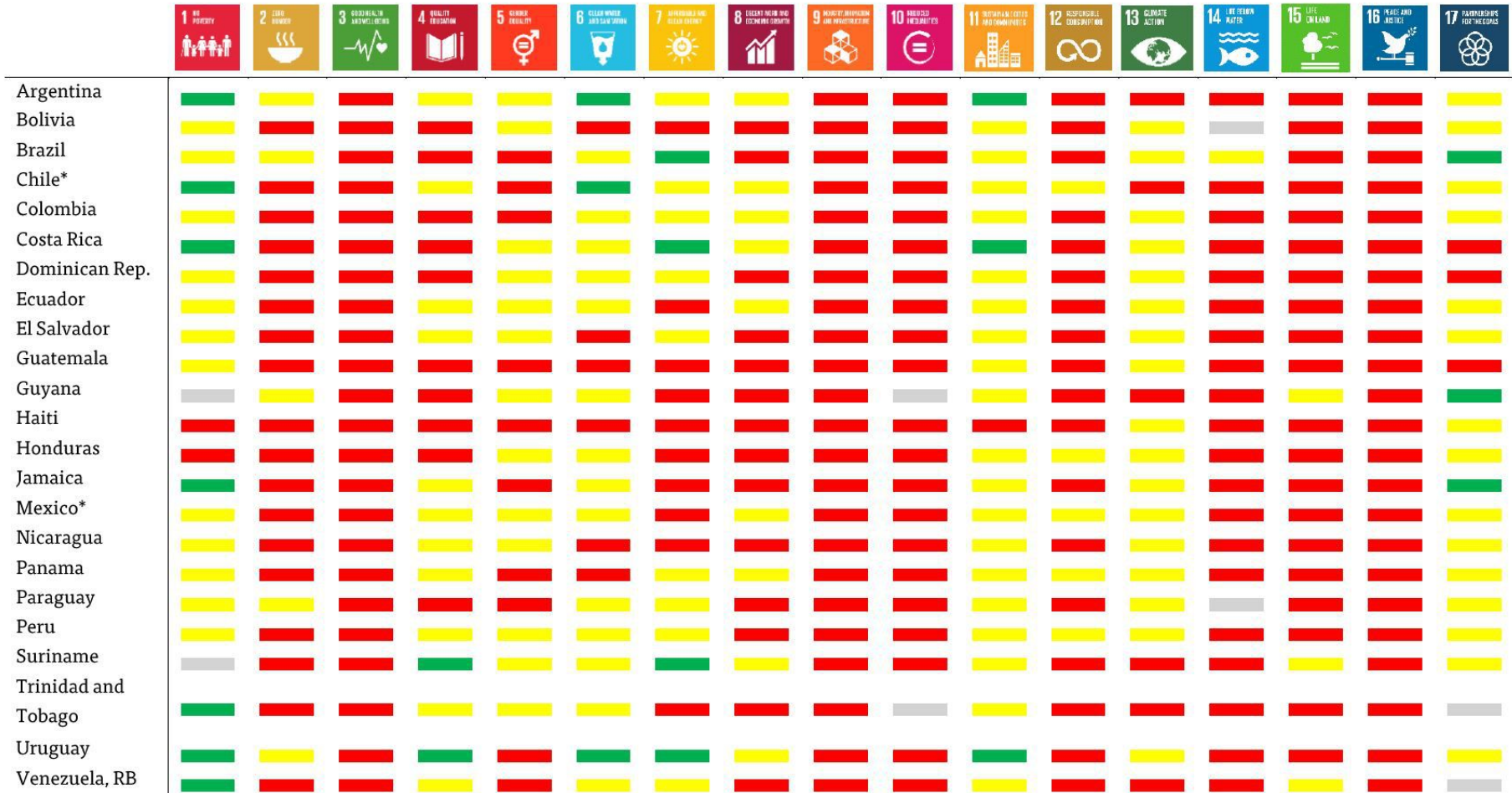


Caribbean situation with the Goals

- Islands in the SDSN
SDG dashboard
 - Haiti
 - Jamaica
 - Trinidad and Tobago
- Goals Lagging in LAC
 - 2 Hunger
 - 3 Health
 - 8 Jobs
 - 9 industry
 - 10 Inequality
 - 12 Consumption
 - 14 Life
 - 15 Life
 - 16 Justice

SDSN Dashboard for SDGs

SDG Dashboard for countries in Latin America and the Caribbean



Source: Author's calculations. Based on Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Delacre, D. and Teksoz, K. (2016): An SDG Index and Dashboards – Global Report. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).

Goals relevant to SAMOA

- Sustainable Transportation. 7, 11
- Toxic waste, Sustainable consumption and production Goal 12
- Gender equality
- Social Development
- Biodiversity
- Health and non communicable diseases

Goals relevant to SAMOA

- Green Economy also means decent jobs: Goal 8 will require equity as do 5 & 10
- Sustainable Tourism
- Disaster Risk Reduction
- Oceans and Seas Goal 14 Life below water
- Food Security and Nutrition Goal 2
- Water and Sanitation Goal 6

Transportation

■ *Shipping*

- Need for Fresh Water (especially for Cruise Ships), could this be affected by Climate Change?
- Danger of oil spills (25% of world tanker traffic) passes through the Caribbean Sea.

■ *High cost of inter-regional transport*

- Reduces the capacity for regional cooperation
- Borders! & Immigration

■ *Airports at low elevation and by the sea*

- 50% of airports below 5m (data from <http://worldaerodata.com>)

Sustainability

■ Nature

- Natural resources
- Ecosystem Services
- Seismicity
- Water
- Climate

■ Society

- Governance
- Social Services and safety nets
- Security
- Schools

■ Economics

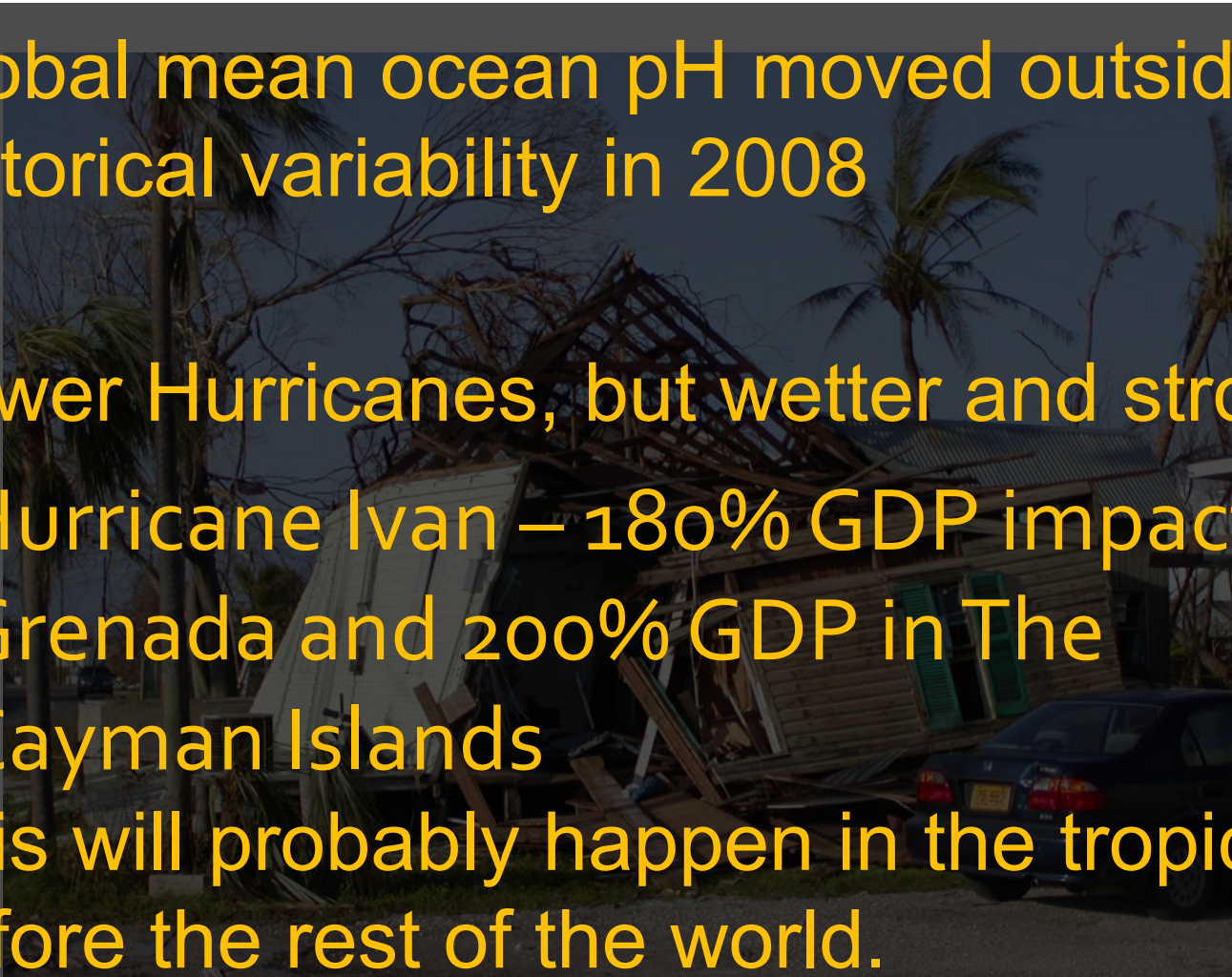
- Financial Services
- Trade
- Industry
- Infrastructure
- Transport

■ Wellbeing

- Quality of Life
- Life expectancy
- Education
- Health
- Personal Security

One Key risk; Climate

- Global mean ocean pH moved outside its historical variability in 2008
- Fewer Hurricanes, but wetter and stronger
 - Hurricane Ivan – 180% GDP impact in Grenada and 200% GDP in The Cayman Islands
- This will probably happen in the tropics before the rest of the world.



Main Caribbean Hazards

- ***Meteorological***

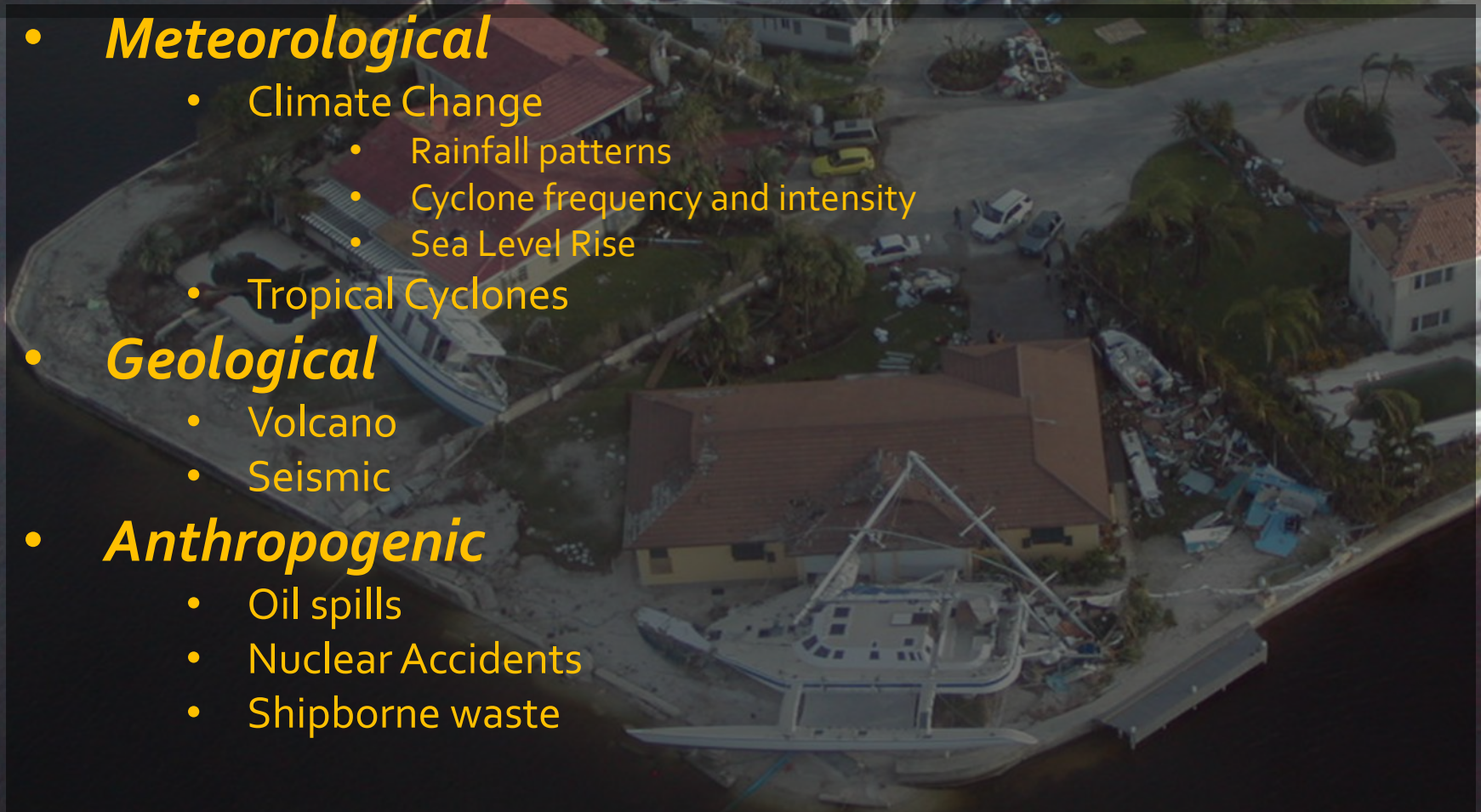
- Climate Change
 - Rainfall patterns
 - Cyclone frequency and intensity
 - Sea Level Rise
- Tropical Cyclones

- ***Geological***

- Volcano
- Seismic

- ***Anthropogenic***

- Oil spills
- Nuclear Accidents
- Shipborne waste



Challenges for SIDS striving for the SDGs & the SAMOA Pathway

- Climate Effects for the Caribbean cannot be avoided; adaptation is key
- Climate will affect Goal 2 (Food).
- Economic transformation to a Green Economy with the need for increased markets for goods services and labour; regionality.
- Human and financial capacity for problem solving

Dependence of the economy on natural resources

- If beach erosion rates remain as they were in 2011, then by 2021, beaches in Negril, Montego Bay & Ocho Rios will lose value of US\$19 million **annually**.
- If reefs degrade further, the additional beach erosion will increase this loss to US\$33 million *per annum*.
- The erosion could reduce tourist visitation by 9,000 to 18,000 stopover visitors annually; costing the industry between US\$9 & US\$19 million annually and costing the entire economy between US\$11 to US\$23 million annually.
- Kushner, B., P., Edwards, L. Burke, and E. Cooper. 2011. *Coastal Capital: Jamaica. Coral Reefs, Beach Erosion and Impacts to Tourism in Jamaica. Working Paper. Washington, DC: World Resources Institute.*



The “Green” Economy

- Education

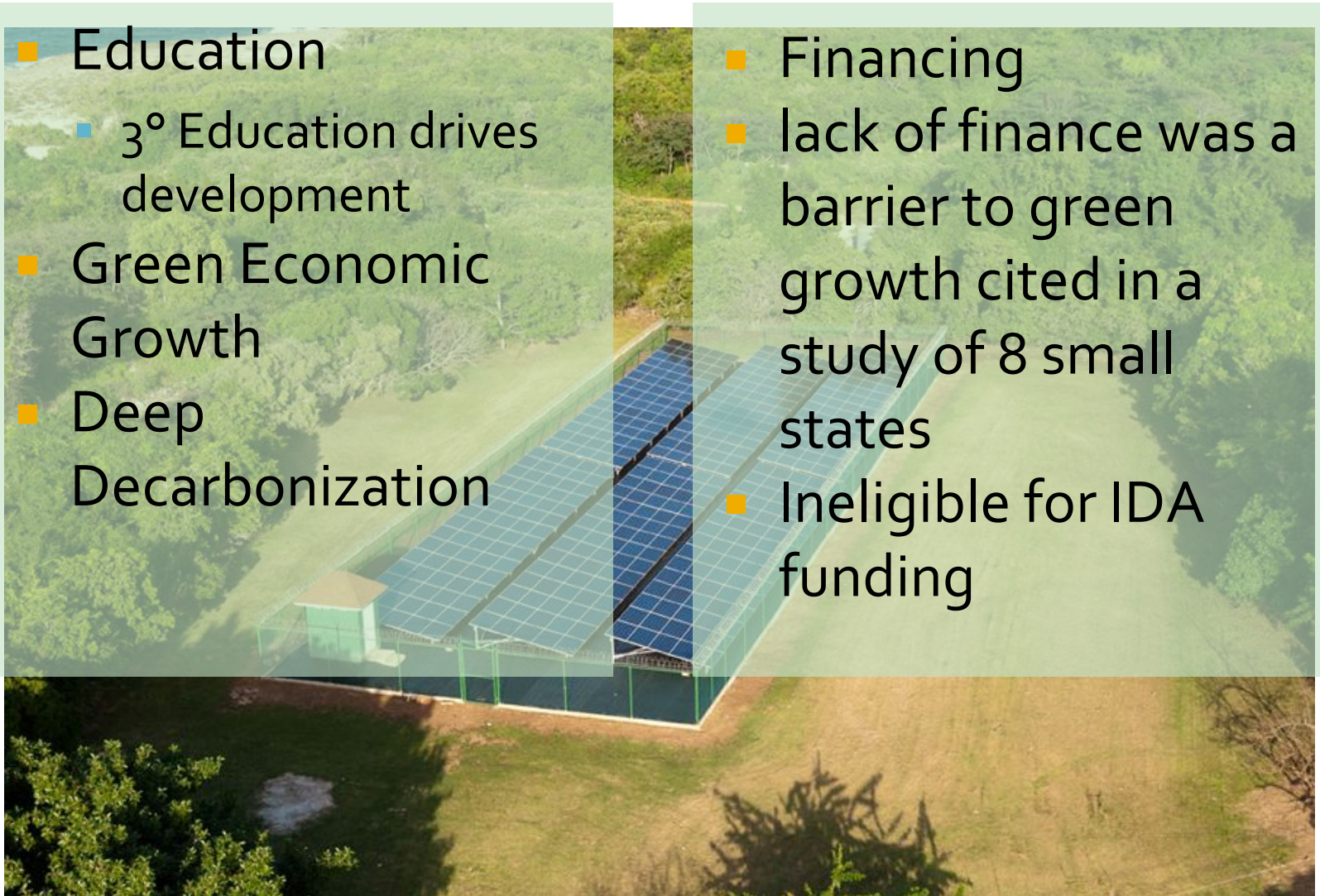
- 3° Education drives development

- Green Economic Growth

- Deep Decarbonization

- Financing

- lack of finance was a barrier to green growth cited in a study of 8 small states
- Ineligible for IDA funding



- **How can national institutions and means of implementation be strengthened in SIDS to deliver the 2030 Agenda while ensuring that no one is left behind?**
- Private Sector involvement along with Civil Society
- Building Human Capital through education & training
- Mainstream Science and Technology into policy

Regional Governance

- ACS
 - Trade
 - Tourism
 - Transport
 - Disasters
 - Caribbean Sea Commission
- CARIFORUM
- CARICOM

Health and Climate

- Ensure healthy lives and promote well-being for all at all ages
- Take urgent action to combat Climate change and its impacts
 - NCDs
 - Vector-Borne diseases
 - Increase health financing training etc in SIDS and LDCs

Vulnerable environmental factors

- **Small populations and habitats**
- **High Endemism**
- **Poor regulation of natural resource use**
- **Large Marine Ecosystem**
 - High Value stocks of migratory fishes
 - Spiny Lobster, Queen Conch, Marlin, Wahoo, Tuna
 - Fishing fleets from Caribbean and distant countries
 - Little capacity to regulate fishers
 - Few efforts to cooperate in fishery management

Factors decreasing resilience

- High cost of imported energy
- Increased buildings on the shoreline
- Most important civil infrastructure within 500m of coast
- Deforestation
- Overfishing
- Lack of funding to manage the environment

Some Caribbean Constraints to SD

- Issue of scale, Island factors vs. continents
- Vulnerability and lack of control
- Understanding of the systems
 - Functions
 - Relationships
 - Details
- Intellectual property
- Data based policy making and implementation
- Growth vs. development: more vs. better





Possible Areas for action: Environment

- Improve Regional Governance of the Caribbean Sea.
- Ensure that suitable fees are charged for the use of sensitive ecosystems such as beaches, the coastal zone and fisheries in the EEZ.
- Support payment for ecosystem services, focussing on climate change adaptation e.g. watershed protection & reducing coastal erosion.



Possible Areas for action: Financial

- (short to medium term)
 - Review existing sources of development finance & retool existing loans; renegotiate loans for CC adaptation
 - Investigate new uses of debt to address vulnerabilities and increase sustainability including debt reduction, debt swaps or reassigning debt repayments to Climate Funds or to programmes that build resilient infrastructure or livelihoods.

Possible Areas for action: Financial

- Medium term
 - Lobby to allow Small States to access World Bank financing in the blend (IDA & IBRD) category until their HDI reaches 0.800, rather than using the current *per capita* GNI criterion could assist in providing financial resources for a green economy

Possible Areas for action: Human

- Short to medium term
- Measure well-being in addition to other economic measures.
- Increase tertiary training and education opportunities
- Increase investment in primary and secondary education
- Decrease student: teacher ratios across the board.

Possible Areas for action: Energy

- Reduce dependence on high-carbon and imported energy (medium to long term)
 - Increase the use of public transport
 - Improve energy efficiency in the public sector
 - Adjust taxes & incentives to maximize use of local and renewable energy
 - As generating plants become old, replace them with plants that use cleaner fuel, are more efficient and have less emissions

Conclusions: cross-cutting

- Increase Regional Cooperation and pay more attention to the ACS
- Spend more on Education
- Spend money on R&D
 - Understanding systems generating specific data on which to base policy and create solutions
- Improve Governance
 - Data-based policy making and implementation
 - Increase accountability and openness
 - Strengthen Local Government & devolve responsibility

How can Science help development

- Communicating the actual and potential problems so people can understand and relate to them
- Developing solutions with a multi disciplinary approach
- Creating data on which to base policy
- Monitoring
- Science needs knowledge brokers and champions