Going Blue to build Comprehensive Resilience

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Agenda

1. Challenges

2. Blue Economy Opportunities for Resilience including Marine Renewable Energy for building resilience

3. How do we finance Blue resilience
Our challenge is Vulnerability
In one chart: The Cost/Frequency Distribution “Bell Curve” is negative - skewed to the right
How important is the Blue Economy?

40% of the world’s population lives at or near the coast.

By 2030, ocean-based industries will provide:

- **40 million** direct full-time equivalent jobs, up from 31 million in 2010.
- **US$3 trillion** value added to global economy, doubling from 2010.
- **880 million** people depend on the fisheries and aquaculture for their livelihoods, many from developing and coastal states.

Coral reefs reduce 97% of wave energy, acting as a barrier from storms.

In the Caribbean...

- **18%** of the region’s economy was generated in the ocean in 2012.

Some countries have an EEZ that is **75x larger** than the land area.

Source: OECD, Sustainable Blue Economy Conference, World Bank.
What do we mean by “Blue Economy”?

Blue Economy:
A sustainable ocean economy, where economic activity is in balance with the long-term capacity of ocean ecosystems to support this activity and remain resilient and healthy.”

Economist Intelligence Unit 2015
Key Blue Economy Opportunities

- Fisheries and Aquaculture: Marine shellfish aquaculture
- Coastal and Marine Tourism: Marine Protected Areas; Cruises
- Marine Renewable Energy: Offshore wind, ocean and, wind action
- Marine Transport or Shipping: Passenger transport; Freight transport

Needed inputs:

- Institutions
  - Awareness
  - Seed Investment
  - Supportive Policies
- Institutions
  - Awareness
  - Infrastructure
  - Supportive Policies
- Institutions
  - Seed Investment
- Institutions
  - Infrastructure
### Technically Exploitable Resource for each technology MW

<table>
<thead>
<tr>
<th>Country</th>
<th>Fixed OSW</th>
<th>Floating OSW - Conventional</th>
<th>Floating OSW - Deep</th>
<th>OTEC</th>
<th>Total</th>
<th>Average electrical demand (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antigua &amp; Barbuda</td>
<td>4,935</td>
<td>1,477</td>
<td>11,718</td>
<td>100</td>
<td>18,230</td>
<td>38</td>
</tr>
<tr>
<td>The Bahamas</td>
<td>10,955</td>
<td>6,321</td>
<td>16,723</td>
<td>220</td>
<td>34,219</td>
<td>220</td>
</tr>
<tr>
<td>Barbados</td>
<td>0</td>
<td>112</td>
<td>7,063</td>
<td>140</td>
<td>7,315</td>
<td>104</td>
</tr>
<tr>
<td>Grenada</td>
<td>2,618</td>
<td>476</td>
<td>7,196</td>
<td>110</td>
<td>10,400</td>
<td>25</td>
</tr>
<tr>
<td>Jamaica</td>
<td>1,211</td>
<td>1,848</td>
<td>9,709</td>
<td>180</td>
<td>12,948</td>
<td>498</td>
</tr>
<tr>
<td>Saint Kitts &amp; Nevis</td>
<td>399</td>
<td>196</td>
<td>9,135</td>
<td>40</td>
<td>9,770</td>
<td>24</td>
</tr>
<tr>
<td>Saint Lucia</td>
<td>105</td>
<td>224</td>
<td>4,025</td>
<td>90</td>
<td>4,444</td>
<td>46</td>
</tr>
<tr>
<td>Saint Vincent &amp; the</td>
<td>3,227</td>
<td>385</td>
<td>3,017</td>
<td>70</td>
<td>6,699</td>
<td>17</td>
</tr>
<tr>
<td>Grenadines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>16,597</td>
<td>12,460</td>
<td>4,963</td>
<td>50</td>
<td>34,070</td>
<td>1,064</td>
</tr>
<tr>
<td>Total</td>
<td>40,047</td>
<td>23,499</td>
<td>73,549</td>
<td>1,000</td>
<td>138,095</td>
<td>2,036</td>
</tr>
</tbody>
</table>
Some new(er) financial strategies and instruments include:

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BLENDED FINANCE</strong></td>
<td>Strategic combination of public or development finance with private capital to enhance resources for investment</td>
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<tr>
<td><strong>BLUE BONDS</strong></td>
<td>Multilateral Financial Institutions and governments can issue “blue bonds” to fund investments in sustainable ocean and coastal activities</td>
</tr>
<tr>
<td><strong>RECOVERABLE GRANTS</strong></td>
<td>Grants that reduce the risk and upfront costs of exploratory phases of projects. Often converted to a loan if certain conditions are met</td>
</tr>
<tr>
<td><strong>DEBT-FOR-NATURE SWAPS</strong></td>
<td>Sovereign debt is exchanged (at a discount) for in-kind investments in conservation interventions</td>
</tr>
</tbody>
</table>

We need to explore new financial instruments and strategies.
EXCLUSIVE ECONOMIC ZONES