Blue Finance toward Sustainable Ocean Governance

APEC Roundtable Meeting on Sustainability of the Marine Environment
December 4 2019 @ Taipei, Taiwan

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Research Fellow, OPRI-SPF
OPRI’s Vision

To serve as a **Leading Institute on Ocean Policy Studies** and be recognized as a world class **THINK TANK** with an impact globally.
OPRI’s Aims

To increase prosperity for all mankind — Ocean sustainability for the next 200 years

1) Identify and analyze ocean issues in a comprehensive manner utilizing approaches from the natural sciences, social sciences, and the humanities

2) Make feasible and tangible policy proposals based on discussions among international stakeholders

3) Work towards policy implementation in collaboration with The Nippon Foundation on local, national, regional, and global scales

OPRI will utilize policy research and a variety of approaches to contribute to solving ocean issues on a global scale.
OPRI’s Mission: Contribute to “Ocean Governance”

Promoting Ocean Policy Research & Education
Making Policy Proposals on a Global Scale
Ocean Information Dissemination

Being a premier Ocean THINK TANK, OPRI will continue its research efforts to contribute to our mission of establishing “ocean governance” through strengthening our advocacy in the international community.
White Paper on the Oceans and Ocean Policy

Playing a leading role in the advocacy of ocean policy making, OPRI issued its first *White Paper on the Oceans and Ocean Policy* in 2004 to contribute to holistic and inter-disciplinary initiatives on Japan's ocean problems.

The *White Paper* is published annually, and adopts a "comprehensive ocean management perspective" in analyzing information on developments and activities in the ocean and coastal zones.
Since 2000, The Ocean Newsletter (previously known as the Ship & Ocean Newsletter) is published fortnightly, introducing cutting-edge observations by experts to facilitate a wide range of discussion and exchange in order to raise awareness on the importance of the world's oceans and their resources.

After every 50 editions of the Ocean Newsletter, the Opinion sections are edited and compiled into 13 categories and published as a single volume, entitled Towards Coexistence with the Ocean: 150 Opinions. The series is now highly valued as a resource for ocean studies.
UN High-Level Conferences, Multi-nation Ocean Governance

- **Advocate the inclusion of Ocean Issues into COP agenda**

**Bilateral Dialogues:**

<table>
<thead>
<tr>
<th>Country Pair</th>
<th>Dialogue Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>US-Japan</td>
<td>Ocean Dialogue – Maritime security &amp; blue economy</td>
</tr>
<tr>
<td>China-Japan</td>
<td>Maritime Dialogue – Ocean issues in East Asia</td>
</tr>
<tr>
<td>France-Japan</td>
<td>Maritime Dialogue – Project development &amp; research</td>
</tr>
<tr>
<td>Palau-Japan</td>
<td>Ocean Collaboration – Ocean conservation policy &amp; research</td>
</tr>
</tbody>
</table>
Series of UN conferences towards sustainable use of earth and ocean

BLUE ECONOMY
“Sustainable ocean based economy”

GREEN ECONOMY
“The future we want”

- Sustainable use of marine resources in harmony with societal development (inclusive development, poverty eradication)

- “Agenda 21”
- Rio summit (1992)
- Johannesburg Summit (2002)
- Rio +20 (2012)
- Sustainable development summit (2015)
- “SDGs”
- UN Ocean conference (2017)
- “SDGs”
- “Agenda 21”
- Rio summit (1992)
- Johannesburg Summit (2002)
- Rio +20 (2012)
- Sustainable development summit (2015)
- “SDGs”
- UN Ocean conference (2017)
Ocean Governance associated with SDGs

- Preservation of ocean resource and sustainability
- Blue Economy
  - Blue carbon circulate society
- Comprehensive Ocean Policy
  - MSP 沿岸域管理
  - 底層資源開発
  - EIA
- Support to SIDS
- Ocean education & HR development
- Ocean Renewable energy
- Blue carbon circulation society
- Preservation of ocean resource and sustainability
- MPA 漁業補助金認証制度
- Ocean education & HR development
Greening the Ocean $\Rightarrow$ Blue Economy

**Industry sustainability & Environment**
- External costs of marine industries
- Dependence on healthy environment (e.g., Tourism in SIDS)

**Growth in existing marine industries**
- Stronger rates of growth than land based industries
- “Blue growth”

**New Marine Industries and Innovation**
- Potential for new jobs and competitive advantage
The Blue Economy is sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health. The Blue Economy encompasses many activities...

**Renewable Energy**
Sustainable marine energy can play a vital role in social and economic development.

**Tourism**
Ocean and coastal tourism can bring jobs and economic growth. Coastal Least Developed Countries and Small Island Developing States receive more than 41 million visitors per year.

**Climate Change**
The impacts of climate change on oceans—rising sea-levels, coastal erosion, changing ocean current patterns, and acidification—are staggering. At the same time, oceans are an important carbon sink and help mitigate climate change.

**Fisheries**
Marine fisheries contribute more than US$230 billion annually to global GDP. More sustainable fisheries can generate more revenue, more fish and help restore fish stocks.

**Maritime Transport**
Over 80% of international goods traded are transported by sea, and the volume of seaborne trade is expected to double by 2030 and quadruple by 2050.

**Waste Management**
80% of litter in the ocean is from land-based sources. Better waste management on land can help oceans recover.

To learn about other aspects of the blue economy, visit www.worldbank.org/oceans
Side event of ADB Annual Meeting in Fiji (1 May 2019)

Regional Workshop on Blue Economy, Ocean Infrastructure and Risk Financing

- About 70 participants ranged from Academia, government officials and NGOs.

Focal points:
- Economic effect of ocean infrastructure investment
- Funding accessibility of coast area community
- Innovative financing instrument for coral reef

OPRI Perspectives:
- The importance and vulnerability of tourism sector in Fiji
- Possibilities of blue bond application on Pacific SIDS (Cf. first blue bond issued in Seychelles in 2018)
The 52nd ADB Annual Conference in Fiji (2-5 May 2019)

- First time Pacific island chosen for venue.

- **ADB Ocean Financing Initiative**
  
  - Actions for Healthy Ocean and sustainable blue economies
  
  > 2019-2024 5 billion USD for support ocean related activities
  
  - Ocean Financing Initiative
    
    > Facilitate financing activities of private sector for ocean sectors
On launching a research partnership between OPRI and the Stimson Center on "Climate Change and Ocean Risk Vulnerability Index" in July 2019.
How to mobilize the money for ocean preservation and sustainable development?
Scope of **Blue Finance**

- **Blue Economy Enhancing**
  - Fishery, Tourism, Sea transportation

- **Ocean Risk Resilience**
  - Cyclone, Sea-level Rise
  - Water Shortage

- **Ocean Resource Protection**
  - Fish, Coral Reef, Blue Carbon
## Financing Instrument for **Blue finance**

<table>
<thead>
<tr>
<th></th>
<th>Aid/Grant</th>
<th>Fund</th>
<th>Insurance</th>
<th>Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>×</td>
<td>×</td>
<td>✗ (Premium)</td>
<td>✗ (Coupon)</td>
</tr>
<tr>
<td>Effect</td>
<td>Ex-post</td>
<td>Ex-ante</td>
<td>Ex-post</td>
<td>Ex-ante</td>
</tr>
<tr>
<td>Sustainability</td>
<td>△</td>
<td>△</td>
<td>✗</td>
<td>◎</td>
</tr>
<tr>
<td>Source</td>
<td>International</td>
<td>International /Public</td>
<td>Public/Private</td>
<td>Public/Private</td>
</tr>
</tbody>
</table>
Seychelles Government

“Blue Bond” for 15 million USD (2018)

Utilize the financial resource from blue bond to support fishery by improving the vassal and assist government strengthen commitment for environment by reinforcement of IUU regulation, private sector and international cooperation toward sustainable ocean governance.

• Understand financial needs & market condition,
• Identify the need for a guarantee
• Donation to cover transaction costs
• Find investment banks and trustee to collaborate with Global Environment Facility
Seychelles

Population: 96,762
GDP: 1.59 bil. USD
GNI/capita: 15,600 USD
Economic growth: 3.6% (2018)

Source: World Bank
## Blue & Green Bond

<table>
<thead>
<tr>
<th></th>
<th>Seychelles Blue Bond</th>
<th>Fiji Green Bond</th>
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</thead>
<tbody>
<tr>
<td>Issued Year</td>
<td>2018</td>
<td>2017</td>
</tr>
<tr>
<td>Issuer</td>
<td>Government (+WB, GEF)</td>
<td>Government</td>
</tr>
<tr>
<td>Total Amount</td>
<td>15 million USD</td>
<td>40 million FJD (18.8 million USD)</td>
</tr>
<tr>
<td>Maturity</td>
<td>10 Years</td>
<td>5 years/ 13 years</td>
</tr>
<tr>
<td>Coupon Rate</td>
<td>6.5%</td>
<td>4.0% / 6.3%</td>
</tr>
<tr>
<td>Purpose</td>
<td>expansion of marine protected areas, improved governance of priority fisheries, and development of blue economy</td>
<td>renewable energy, waste management, resource conservation, and disaster resilience etc…</td>
</tr>
</tbody>
</table>
The Structure of **Blue Bond**

- **Government**
- **BOND**
- **INVESTMENT**
- **Investor**
- **Investor**
- **Investor**
- Development Bank
- Guarantee

Ocean Protection Project
Disaster Risk Management in Tourism.

- Fundraising
- Risk pooling
- Resilience investment
- Global collaboration
Circulating through Blue Finance

Mobilizing Blue Finance

- Fiscal Stability
- Resilience to Disasters
- Economic Growth
- Prosper Ocean Industry
NYK Green Finance

• 10 billion JPY Blue Bond (approx. 91.7 mil USD)
• Maturity: 5 years
• Coupon: 0.290%
• Invest in "Roadmap for Environmentally Friendly Vessel Technologies"

Source: https://www.nyk.com/english/csr/envi/greenbond/
Not a joke, Not a toy, Not only a dream-

Source: https://www.nyk.com/english/csr/envi/ecoship/
<table>
<thead>
<tr>
<th>Year</th>
<th>Issuance</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>EURO 600 million</td>
<td>European Investment bank issues a Climate Awareness Bond targeting energy sectors</td>
</tr>
<tr>
<td>2008</td>
<td>USD 440 million (equivalent – issuance in Swedish krona)</td>
<td>First green labeled green bond, issued by the World Bank</td>
</tr>
<tr>
<td>2012</td>
<td>USD 2.6 billion</td>
<td>Green bond issuance picks off</td>
</tr>
<tr>
<td>2014</td>
<td>USD 36.6 billion</td>
<td>Green bond principles – voluntary guidelines formed</td>
</tr>
<tr>
<td>2017</td>
<td>USD 155 billion</td>
<td>Green bond issuances – predominantly energy sector</td>
</tr>
<tr>
<td>2018*</td>
<td>USD 167.6 billion</td>
<td></td>
</tr>
</tbody>
</table>

### From Green to Blue

<table>
<thead>
<tr>
<th>Bond</th>
<th>Objective</th>
<th>Size/ Duration</th>
<th>Investors</th>
<th>Key Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seychelles Blue Bond</td>
<td>Transition support to sustainable fisheries</td>
<td>USD 15mn; 10 years</td>
<td>World Bank; Private Placement; Calvert Impact Capital; Nuveen, and Prudential</td>
<td>GEF provided by reduced interest rate for government from 6.5% to 2.8%</td>
</tr>
<tr>
<td>Nordic-Baltic Blue Bond</td>
<td>Bond issuance focus on investments within water resource management and protection</td>
<td>USD 213mn; 5yrs</td>
<td>Capital Market</td>
<td>0.375% coupon</td>
</tr>
</tbody>
</table>

Source: Climate Bond Initiative, Dr Raghu Dharmapuri Tirumala, University of Melbourne
The Oceans Financing Initiative supports ADB developing member countries to catalyze financing for projects that will help protect and restore marine ecosystems and promote sustainable blue economies. The initiative will leverage public sector funds to create investment opportunities able to attract financing from a range of sources, including the private sector. Technical assistance and funds from ADB and donors, along with innovative financing instruments such as revenue guarantees and credit-enhanced blue bonds, will be used to reduce project risks and make them “bankable”. ADB will work with development and financing partners from around the world to accelerate the investment needed to meet the Sustainable Development Goals, including SDG 14: Life Below Water.
OUR APPROACH  Supporting countries to develop bankable investment opportunities in ocean health and the blue economy.

Blue finance frameworks
Developing detailed principles, criteria, and indicators for selecting projects and measuring impacts.

Bankable projects
Working with governments and other partners to develop innovative and bankable projects.

Innovative instruments
Supporting the development of financing mechanisms that reduce investment risks, such as blue bonds, blue credits for avoided cost, and first loss guarantees.

Access to funds
Increasing access to funds from ADB, development partners, donors, and the private sector.

FOCUS AREAS  The Oceans Financing Initiative is aligned with ADB’s Action Plan for Healthy Oceans and Sustainable Blue Economies, which aims to expand ADB investments and technical assistance to $5 billion between 2019 and 2024 to promote ocean health and the blue economy.

Blue Economy
Creating inclusive livelihood and business opportunities in sustainable tourism and fisheries.

Ecosystem Management
Protecting and restoring coastal and marine ecosystems and key rivers.

Pollution Control
Reducing land-based sources of marine pollution including plastics, wastewater, and agricultural runoff.

Sustainable Infrastructure
Improving sustainability in port and coastal infrastructure development.
Sustainability
Environmental Sustainability

Economic Sustainability

Social Sustainability
Developing states:

• Self-dependent for economic growth
• Invest in disaster reduction and resilience
• Require fund for better infrastructure Investments
• Commitment on environmental preservation for support (Coral reef, IUU fishery elimination, coastal management)

Not to be profitable in the short run…
NGOs, think tanks and IGOs

• Call for global partnership
• Demand for commitments from all states
• Advocate for environmental preservation project
• Review and evaluate on commitments and support program
• Evidence-base research
Development banks & global funds:

• Reduce poverty and support development projects
• Provide incentive for developing states to make commitment
• Encourage global collaboration
Private sectors & industries:

• Invest in potential profitable development project
• Provide better equity to shareholders
• Contribute social responsibility to environment compensation
Blue Bond Market Structure

Private Sector • Investor • Industry

Profitable projects (e.g. Offshore-wind)

Issuer Sovereign States or NPOs

Obligation
Double profits
CSR
PR effect

Stimulate Economic Development

Motivated to collaborate with neighbor countries
Environmentally and financially sustainable

Development Banks + Global Fund (Transaction cost)

Other actors: NGOs
Government Agencies
Public-Private Partnership, etc...

Commitment & Implementation

Not profitable projects in short run (e.g. Ocean Preservation)

✓ IUU
✓ Plastic debris
✓ Ocean livings
✓ Resilience
✓ Blue carbon

Source: OPRI-SPF
Potential Partnership initiated by OPRI

Asian-Pacific Blue Bond Market

Private Sector
- Investor
- Industry

Issuer
- Sovereign States
- or NPOs

Development Banks + Global Fund
(Transaction cost)

Other actors:
- NGOs
- Government Agencies
- Public-Private Partnership, etc...

Commitment & Implementation

Not profitable projects in short run
(e.g. Ocean Preservation)

Profitable projects
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Obligation
- Double profits
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Stimulate Economic Development

Motivated to collaborate with
neighbor countries

Environmentally and financially
sustainable

Guarantee

Return

Evidence-Based Research
- OPRI

Research Partners
- IIASA
- Stimson
- UN-ESCAP
- ADBI
- ERIA

Platform
- APEC
- Our Ocean
- UN Conferences

Evaluator
- AMRO
- IMF

World Bank

Global Environment Facility

Our Ocean

UN Conferences

Asian- Pacific Blue Bond Platform

Evidence-Based Research

Research Partners

Platform

Evaluator

Evidence-Based Research

Research Partners

Platform

Evaluator
Pacific Ocean Finance Conference (11-15 Nov 2019)

Fiji delegate Apisalome Movono
• Missing link to our conservation efforts and efforts to protect the oceans for future generations.

Tuvalu delegate Fa'auì-Ekapale Telii
• There's very little that's been provided for effective management of ocean health and governance.

Palau’s delegate Fleming Umiich Sengebau
• Great opportunity for SIDS to share lessons learned in our own respective countries.
• More importantly, how we can bring those resources to bear and really help our countries move forward.
Commitment & Regulation

Ocean Partnership for BLUE GROWTH
Sustainable Ocean Governance

Function of Policy Research Institute-OPRI, etc:
- Knowledge
- Awareness
- Practice
- Policy-making
- Evaluation

Ocean resource development and utilization
Ocean resource preservation
Thank You

https://www.spf.org/opri-intl/