# The Pacific Islands, the UNFCCC, and the Ocean: Addressing Silos in International Environmental Law for Ocean Conservation

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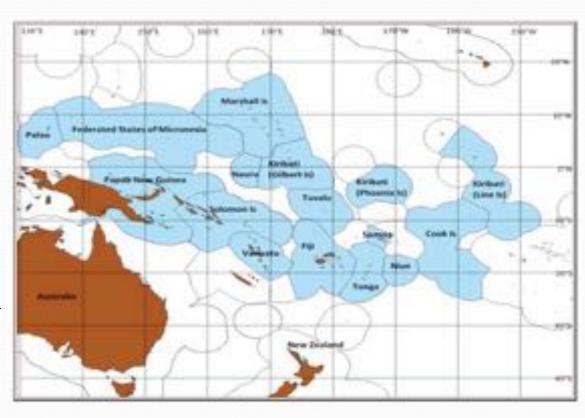
#### Outline

- PSIDS Climate Change Projections
- Ocean in the UNFCCC
- Addressing Ocean conservation through the UNFCCC

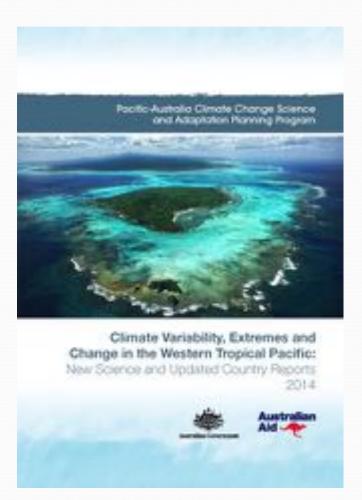
# Pacific Small Island Developing States (PSIDS)



- Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu
- Nearly 20 million sq km of EEZs, w/ several ABNJ pockets



#### **PSIDS Climate Change Projections**



- Publication covers all PSIDS (including Cook Islands and Niue) plus East Timor/Timor-Leste
- Based on global climate models, scaled regionally, applied to each country covered by the report, and in alignment with projections under the Fifth Assessment Report of the Intergovernmental Panel on Climate Change
- Substantively echoed later by IPCC 1.5 Report and SROCC

## **PSIDS Climate Change Projections**



- Major regional climate change projections by PCCSPP 2014
  - Sea-surface temperature
    - 2.5- to 3-degree Celsius increase by 2090 under very high emissions scenario
    - Impacts on highly migratory fish stocks, moving to cooler waters
  - Sea-level rise
    - **90 cm rise by 2090** under very high emissions scenario (conservative); **faster in western Pacific**
  - Ocean acidification
    - Aragonite saturation state at 3.5 around 2030, barely adequate for healthy coral reef development; potentially below 3 by 2100
  - Coral bleaching
    - More frequent and longer-lasting
    - On average, with 2-degree Celsius Ocean warming, bleaching every six months and lasting about six to eight months by end of this century

## **PSIDS Climate Change Projections**





- Major regional climate change projections by PCCSPP 2014
  - Cyclone/typhoon events
    - Less frequent but more severe
    - Cyclones Pam (2015) and Winston (2016) in the South Pacific and Supertyphoon Maysak (2015) in the North Pacific combined for 70 deaths and nearly US\$2 billion in damage, including marine life; record-setting intensities
  - Altered wave height, periodicity, and directionality
    - Due to changes in wind patterns
    - Impacts for traditional instrument-free navigation in the Pacific

#### Ocean Text in the UNFCCC



- Language in the Convention
  - Art. 4(d): Parties shall "[p]romote sustainable management, and promote and cooperate in the **conservation and enhancement**, as appropriate, of **sinks** and **reservoirs** . . . including biomass, forests and **oceans** as well as other terrestrial, **coast and marine ecosystems**."
- Language in the Paris Agreement
  - Preamble: "importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity"
  - Art. 5(1): "Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases"

#### 2017 UN Ocean Conference





"We are particularly alarmed by the adverse impacts of climate change on the ocean, including the rise in ocean temperatures, ocean and coastal acidification, deoxygenation, sea-level rise, the decrease in polar ice coverage, coastal erosion and extreme weather events. We acknowledge the need to address the adverse impacts that impair the crucial ability of the ocean to act as climate regulator, source of marine biodiversity, and as key provider of food and nutrition, tourism and ecosystem services, and as an engine for sustainable economic development and growth. We recognise, in this regard, the particular importance of the Paris Agreement adopted under the UN Framework Convention on Climate Change."

-- Para. 4, Call to Action

# Ocean Pathway in UNFCCC

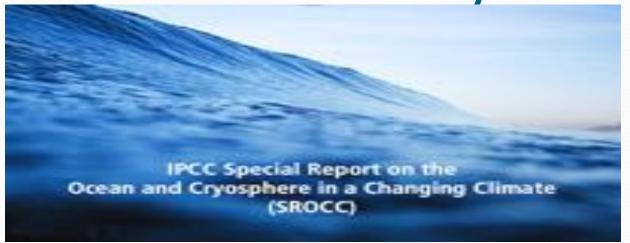




#### A STRATEGY FOR THE OCEAN INTO COP<sub>23</sub> – TOWARDS AN OCEAN INCLUSIVE UNFCCC PROCESS

- A COP23 Presidency ocean initiative, the Ocean Pathway embodies the important relationship between the Ocean and Climate Change. The Pathway:
  - Affirms the **Call for Action** from the UN Ocean Conference,
  - Flags the possibility of a **UNFCCC agenda item** (or, a series of consultations led by steering committee, with final decision by 2nd UN Ocean Conference) and ensures the insertion of the **Ocean into NDCs**,
  - Enhances the opportunity to **support ocean health and maintain critical ocean ecosystems** from current and emerging climate change funding under the UNFCCC,
  - Supports existing priorities that affect and are impacted by ocean and climate including: sustainable transport, cities and human settlements, population displacement and migration, coastal infrastructure, marine ecosystem services, ocean food security and ocean energy,
  - Strengthens mobilization and cooperation of the Parties for the **conservation and enhancement of the resilience of ocean under the UNFCCC**, and links existing ocean activities and partnerships through the introduction of the Oceans Pathway Partnership.

## Ocean Pathway in UNFCCC





#### 2019 IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Some elements

- •Role of **ocean and cryosphere in the climate system**, including characteristics, ocean heat content in Earth's energy budget, key feedbacks and time scales
- •Implications of climate-related ocean and cryosphere change for **resources**, **natural systems** (e.g., change and loss of habitat, extinctions), **human systems** (e.g., psychological, social, political, cultural and economic aspects), and **vulnerability assessments**, **adaptation limits**, **and residual risks**
- •Solutions, including policy options and governance, and **linkages of this report to relevant institutional and policy contexts** (e.g., UNFCCC, Paris Agreement and SDGs, Sendai Framework)
- •Sea level rise and implications for low lying islands, coasts and communities

# Ocean Pathway in UNFCCC

# The Because the Ocean Initiative



#### UNFCCC Decision 1/CP.25: Chile Madrid Time for Action

- Para. 30: Commends the efforts of the President of the Conference of the Parties at its twenty-fifth session to highlight the **importance of the ocean**, including as an integral part of the Earth's climate system, and of ensuring the **integrity of ocean and coastal ecosystems in the context of climate change**
- Para 31: Requests the Chair of the Subsidiary Body for Scientific and Technological Advice to convene at its fifty-second session (June 2020) a dialogue on the ocean and climate change to consider how to strengthen mitigation and adaptation action in this context
  - Para 34: SBSTA Chair will prepare **informal report** on the dialogue

#### Ocean Conservation in the UNFCCC







#### **Options for the Pacific Islands**

- Protection/enhancement/regeneration of **mangroves**, **tidal marshes**, **seagrass meadows**, and other "**blue carbon**" **ecosystems**, aiding both emissions reduction and biodiversity
  - IPCC: Account for removal of **o.5% of current total emissions**
  - Through REDD+? How to assess mitigation value of such ecosystems?
  - Pacific has three percent of world's mangrove coverage

#### Whale protection

- Carbon sinks, storing carbon throughout lifetimes and conveying them to seafloor upon death
- How to assess carbon-capture potential of whales?
- Whale-watching industry in the Pacific, including in Tonga

#### Reduction in deepwater/bottom fishing

• **High seas** / **ABNJ biodiversity absorbs up to 500 million tons of carbon per year**, and much of it is by fish that feed on the surface and move the prey to deeper waters. Deepwater/bottom fishing will likely disrupt this carbon cycle. **Pacific S/RFMOs** = conservation and management measures?

#### Ocean Conservation in the UNFCCC





#### **Options for the Pacific Islands**

- "Climate smart" marine protected areas and similar area-based management tools
  - Climate refugia for marine species threatened by Ocean warming and Ocean acidification
  - Protection of Ocean areas **key to food cycle** (**and carbon uptake**) of certain marine species
  - PSIDS advocacy in BBNJ negotiations for more robust language on climate change and Ocean acidification
- Ocean-based renewable energy projects
  - Offshore wind, tidal energy, wave energy
  - More uncertainty about methodology for assessing emissions reduction compared to "blue carbon" ecosystems
  - Environmental impact assessments key

#### Ocean Conservation in the UNFCCC





**Options for the Pacific Islands** 

- Green shipping
  - Shipping predicted to contribute to nearly 20 percent of GHG emissions by 2050
  - Draft/initial comprehensive **IMO strategy on reduction of GHG emissions from ships** adopted by MEPC in 2018, with final version slated for 2023, after strong prodding from **High Ambition Coalition for Shipping** (including RMI, Tuvalu, and Kiribati, as well as Germany, France, the Netherlands, and others)
  - **Slower ship speeds** = GHG emission reduction (approximate 1:1) + fewer collisions with whales and other marine life + less underwater noise
  - Regular IMO reporting to UNFCCC SBs and COPs, but no explicit reference to shipping in the Paris Agreement

