Transitioning Pacific Islands Maritime Transport
“We sweat and cry saltwater, so we know that the ocean is really in our blood” Teresia Teaiwa

Over 25,000 islands spread over 33,000,000 km² of Ocean where land makes up 0.3% of EEZs
"Science has spoken"

The IPPC Special Report claims it’s possible to meet no more than 1.5°C warming, provided nations together take “rapid and far reaching” transitions over next 10 yrs ...
Why the Pacific is decarbonising domestic shipping

Comparison of likely global emissions pathways to achieve 1.5°C and 2°C (all GHGs)

Transport - largest fuel user for Pacific SIDS

- Transport uses most imported fuel – ~75% of regional totals.
- Sea then air are higher priority than land transport – shipping moves most goods.
- Long routes, minute narrow economies, imbalance in inward and outward loadings, financing barriers, high risks and high infrastructure costs.
- Pacific countries struggle to find long-term, sustainable, and cost-viable solutions for transport, even in periods of relatively low energy costs.
- Small boats of under 15m (outboard driven) are one of the single largest sub-sectors in terms of both fuel use and emissions.
Challenges & Opportunities

• The sea is our highway. Maritime transport is cross cutting.

• All maritime infrastructure is at sea level.

• Our shipping costs are already some of the highest in the world.

• A paradigm shift is required. But a paradigm shift requires enormous investment in capacity development across the sector.

• Decarbonisation offers numerous challenges but also positive opportunities.

• It has not received the same priority in policy, research or financing as other energy sub-sectors.

Average Cost per Nautical Mile

Cost in USD

- $0.00
- $1.00
- $2.00
- $3.00
- $4.00
- $5.00
- $6.00

20' container
40' container

The school bus
Typical interisland vessel
Fiji’s maritime transport emissions

- Total emissions are estimated at 174 Kilotonnes CO\(_2\) in 2016.
Towing kite 180m²

- Ship speed = 6 m/s
- Ship speed = 10 m/s
- Wind Speed = 5 m/s
- Wind Speed = 7.5 m/s
- Wind Speed = 10 m/s
- Wind Speed = 12.5 m/s
- Wind Speed = 15 m/s

Flettner rotor

Propulsive power provided by Flettner rotor and towing kite for each route (Out & Return) averaged over 10 dates

Average propulsive power provided (kW)

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<th>Route</th>
<th>Out</th>
<th>Return</th>
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You can’t have Green Growth in the Pacific without a transition to zero carbon shipping.
Research Collaboration with China Navigation Co.
Transitioning to Low Carbon Shipping Module – Sustainable Sea Transport Solutions for SIDS: Pacific Island Countries Case Studies

This module has been prepared to provide background and lessons learnt from the reef of experience for decision and policy makers developing strategies for Small Island Developing States (SIDS), seeking to transition their sea transport to low carbon options. We have focused on the situation as it exists for Pacific Island Countries but the information in this module has direct relevance to all SIDS and many Less Developed Countries (LDCs).

This module contains eight chapters, each covering a separate theme. There are additional resource materials including PowerPoint presentations for each section, fact sheets which summarize key information and provide case examples, a glossary and list of acronyms, a reference list and bibliography, and links to useful websites.

You can access all chapters including additional resource materials by clicking on the chapters below. Alternatively, you can download the full module and the full appendix further down.

https://unctadsftportal.org/sftftoolkit/transitioningtolowcarbonshippingmodule/
https://www.irena.org/publications/2015/Feb/Renewable-Energy-Options-for-Shipping
• Opportunity for Pacific Islands transport sector to talanoa and set a regional vision for 2030 and 2050
• Covered all transport sub-sectors focussing on land and sea
• Expo and Research Fair

Outcomes:
• Laucala Declaration
• Blended Financing Concept working group
Vinaka Vaka Levu

Links and Contacts:
MCST webpage: https://mcst-rmiusp.org
Transport Forum: https://research.usp.ac.fj/pacific-islands-transport-forum-expo/
Maritime Webinar: https://research.usp.ac.fj/pacific-islands-transport-forum-expo/webinar/
Dr Michael Traut, Director, MCST email: michael.traut@usp.ac.fj
Dr Peter Nuttall, Scientific & Technical Advisor, MCST email: peter.nuttall@usp.ac.fj