





10 million people and over 25,000 islands scattered across more than 3 million square miles of the world's largest ocean, represents arguably the most dependent on sea transport



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LOMAIVITI PRINCESS

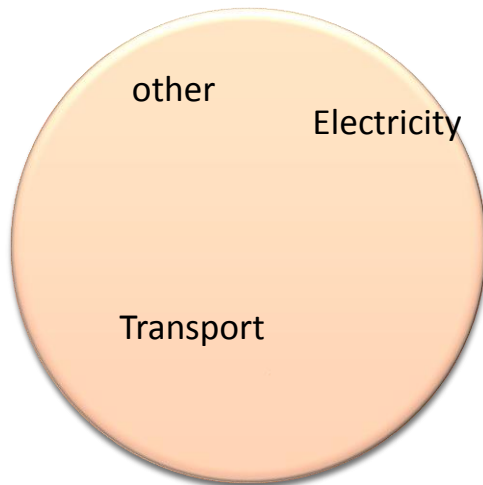


Fact Sheet

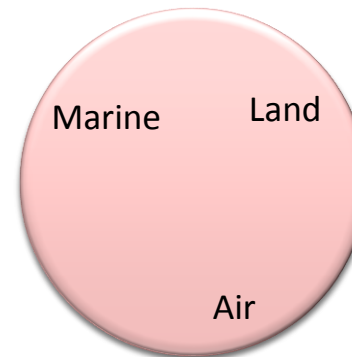
The World burns about 17% of its fossil fuel on transport (the fastest growing GHG emitter sector)

The Pacific imports all its fossil fuel (except PNG) and burns 70%+ on transport. Fuel bill in 2013 was \$6.4 billion

Imported Regional Fuel by Sector



Transport Fuel by Sector (Fiji)



The World divides its energy thinking into Electricity and Transport. Electricity is its priority. When it thinks about transport as energy it mainly thinks about land transport.

This thinking is then transferred to the Pacific.

\$1billion+ for RE electricity.

\$0 for low carbon sea transport

Sustainable Sea Transport Research Programme – Oceania Centre for Sustainable Sea Transport



Research Programme:

- Started in 2012

Regional Research & Education Strategy

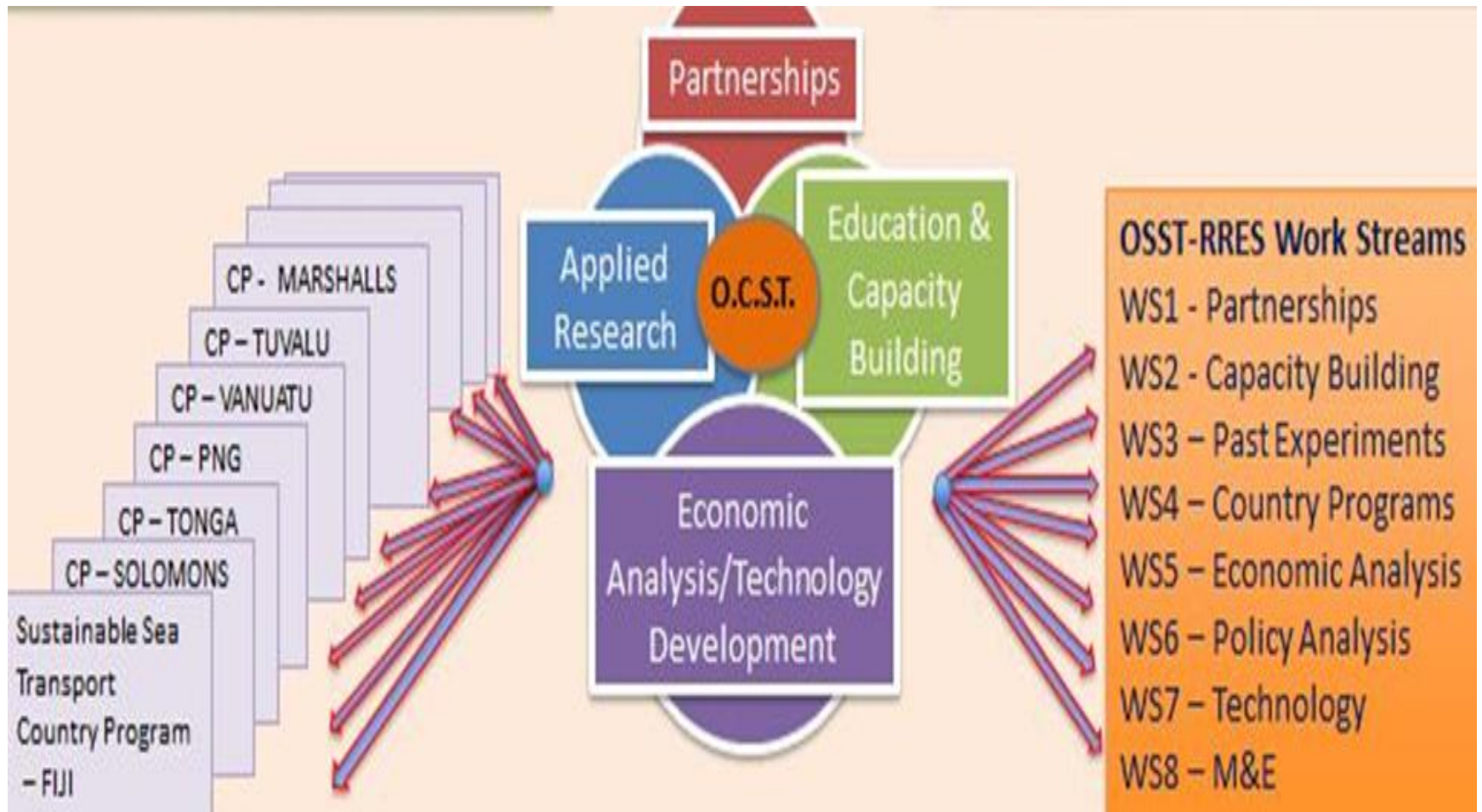
- transition to low carbon sea transport through long-term programme of research, training and practical trials

International Research partnerships:

- with Centres of Excellence – UCL, Tyndall, MARIN, Emden, Columbia
- Post graduate and expert exchange – build long term PIC capacity



Oceania Centre for Sustainable Sea Transport



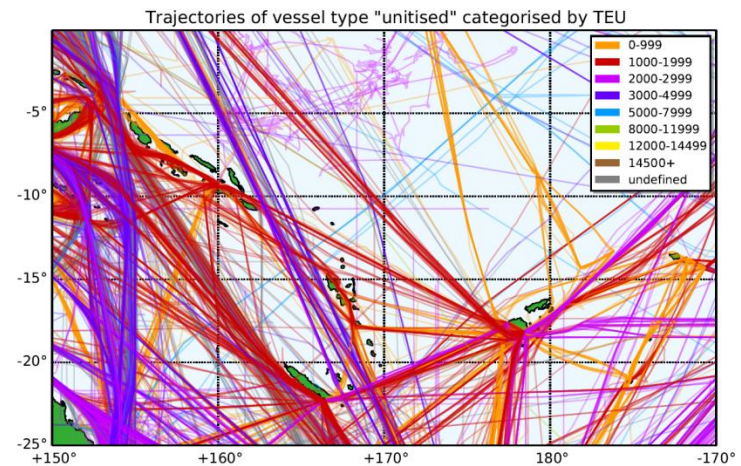
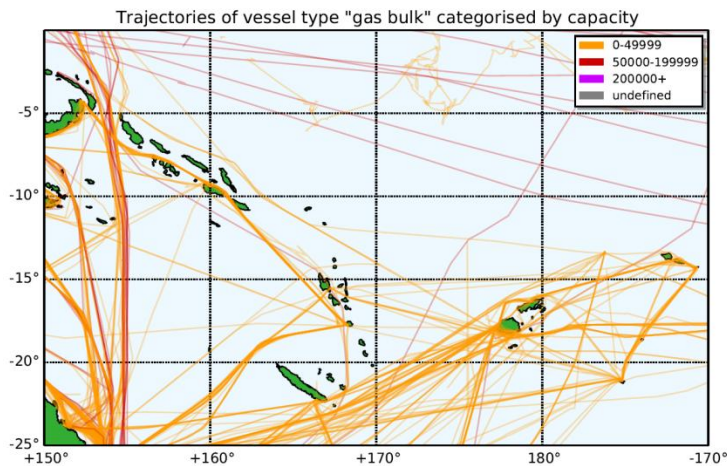
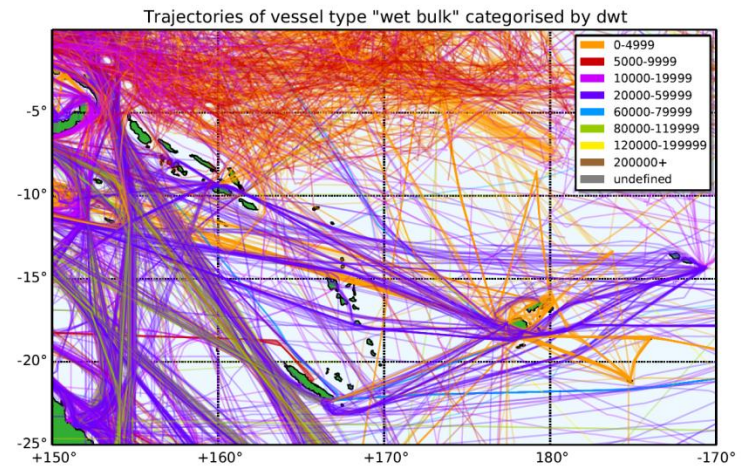
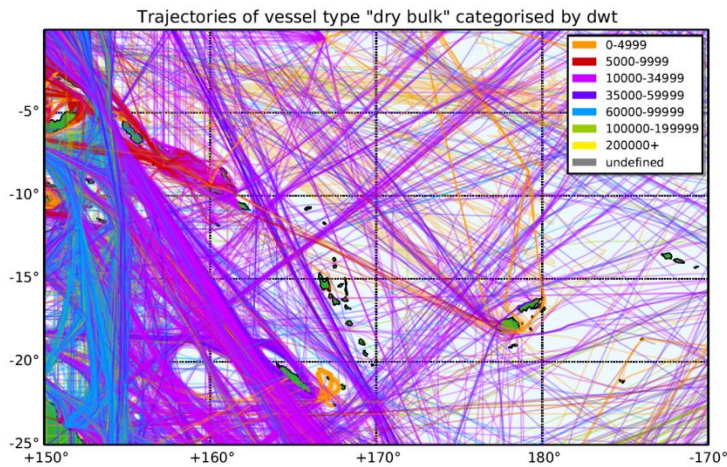


PROJECT	Description	Outputs	Agencies	Comments
Fiji soft sail retrofit	Auxiliary rig retrofitted to two government vessels of ~300t. Rigs built and installed in-country	Fuel savings 23-30%, but also 30% engine/prop wear reduction, greater stability, incr passage times. IRR on best route = 127%, average route = 33%	ADB, Southampton University, McAllister Elliot	Southampton University collated historical wind data for all Fiji routes and produced fuel saving ratios for all routes.
Lau Passenger / cargo	50 ton primary sail powered trading vessel, designed and built on Kabara by local builders (1984-87). First of 3 planned vessels to service Lau and Lomaiviti Groups.	<i>Tai Kabara</i> became the main vessel operating on the Sth Lau route until she was scuttled in 2006. Used local materials wherever possible.	European Union	Construction of the other two ships was cancelled when the oil crisis abated.
Ha'apai Freighter	Needs assessment and design analysis led to commissioning of build plans for a 100 ton energy efficient freighter	Needs assessment, transport census and full build plans for a 100 ton energy efficient freighter.	UNESCAP, UNCTAD, UNDP, ADB	Vessel never constructed due to end of crisis. Similar needs assumed today.
SCF/Jim Brown	Save the Children Fund Tuvalu employed catamaran designer Brown to develop locally built boats for Tuvalu/Kiribati	A range of designs and processes for locally built/operated catamarans for artisanal and commercial fishing and local and inter-island transport. Training of local shipwrights. Local materials favoured	SCF	This project closely associated with the FAO/UNDP project. Local build/materials used wherever possible. Fuel savings of up to 60%.
FAO/UNDP	A multi-county fisheries programme to develop RE artisanal and small-scale commercial vessels for local community benefit.	A portfolio of 10 designs from single dugouts to 11m trimarans. 350 vessels built in 8 countries. Demonstrated need for vessels to be affordable and locally appropriate.	FAO UNDP	Uptake ceased with end of project and falling fuel prices. Communities with 'living tradition' of sail had greatest uptake.

Research Collaboration



Attachment: area type + category



Challenges & Opportunities

- Challenge – all levels from village to global
- Barriers - include policy, financing and perception
- Opportunity - for multi-partner programme