



GMN | The Global
MTCC Network
A global network for energy-efficient shipping



MTCC PACIFIC
Maritime Technology Cooperation Centre

MARITIME TECHNOLOGY COOPERATION CENTRE – PACIFIC (MTCC-PACIFIC)

**CAPACITY BUILDING FOR CLIMATE MITIGATION IN THE
MARITIME SHIPPING INDUSTRY**
THE GLOBAL MTCC NETWORK (GMN) PROJECT

Low carbon, safe, accessible, and affordable maritime transport

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EUROPEAN UNION



INTERNATIONAL
MARITIME
ORGANIZATION



Pacific
Community
Communauté
du Pacifique

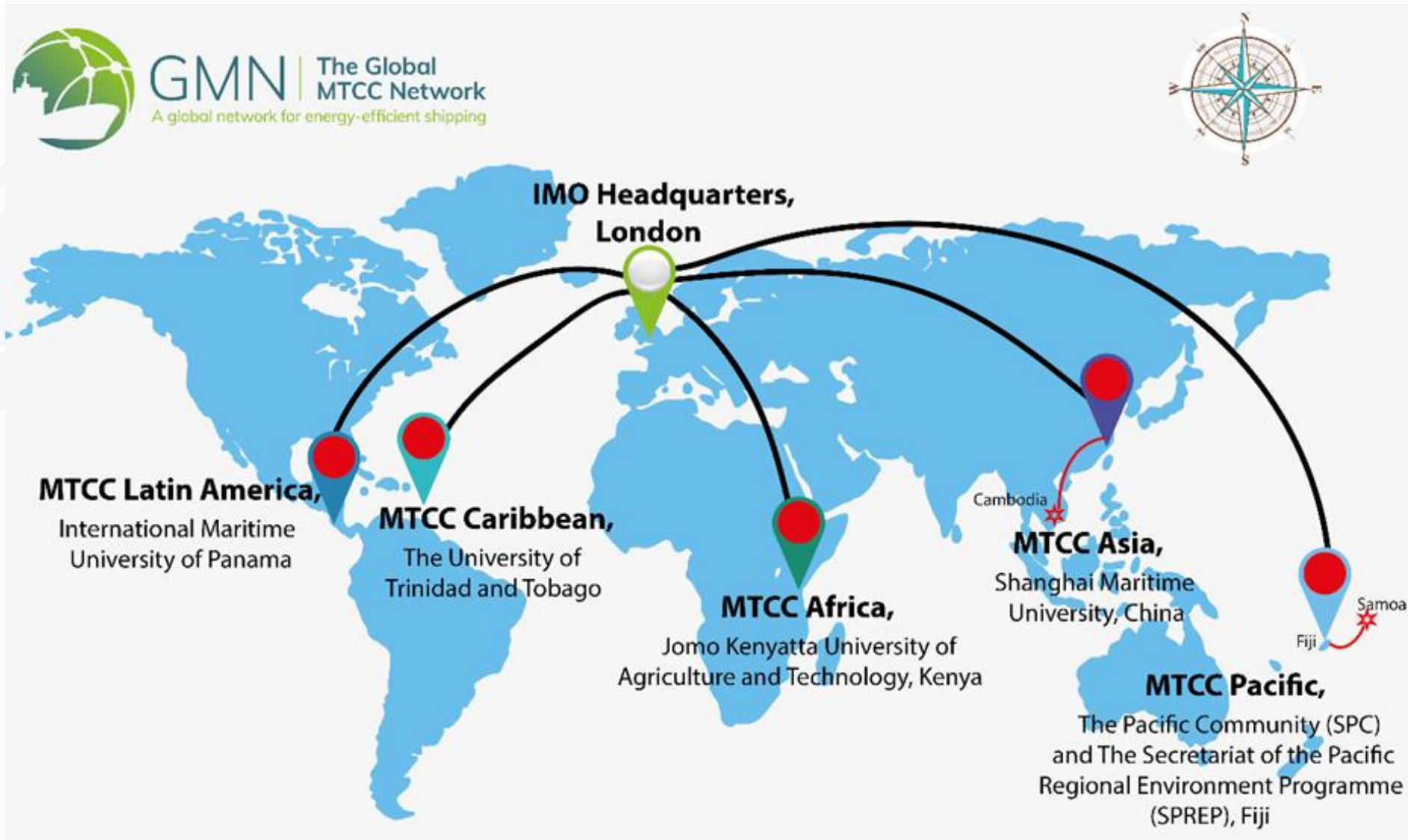
HOST INSTITUTIONS
OF MTCC-PACIFIC



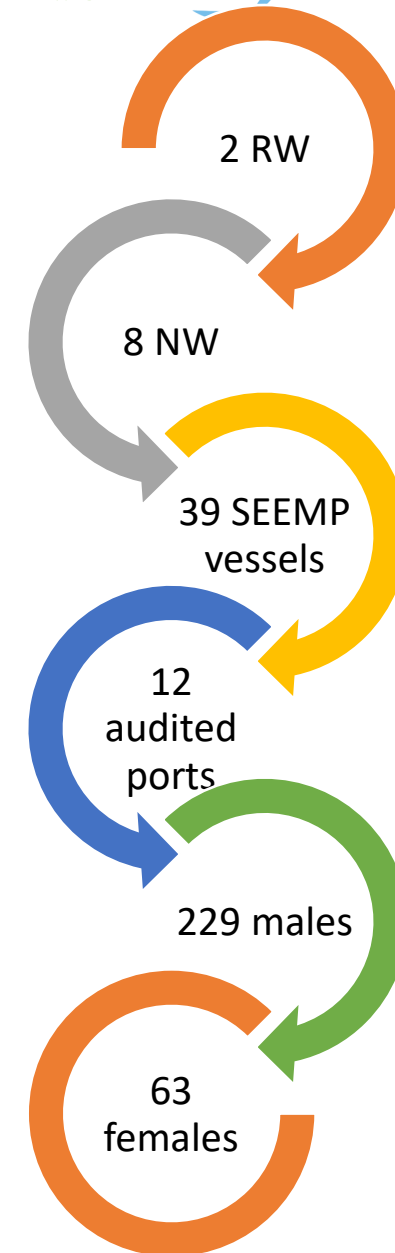
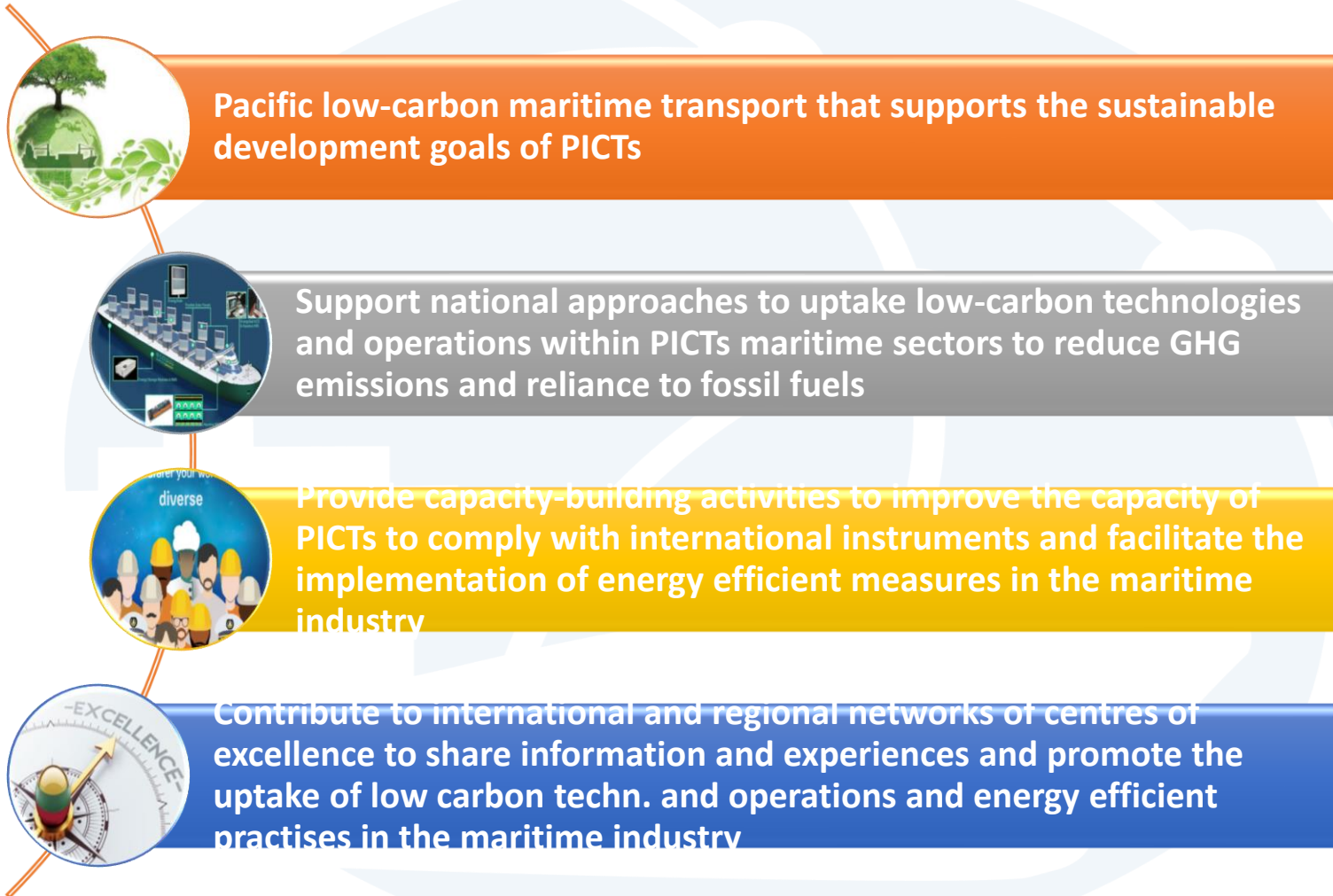
SPREP
Secretariat of the Pacific Regional
Environment Programme

The Global MTCC Network (GMN) project is funded by the European Union and implemented by the IMO.

THE Global MTCC Network



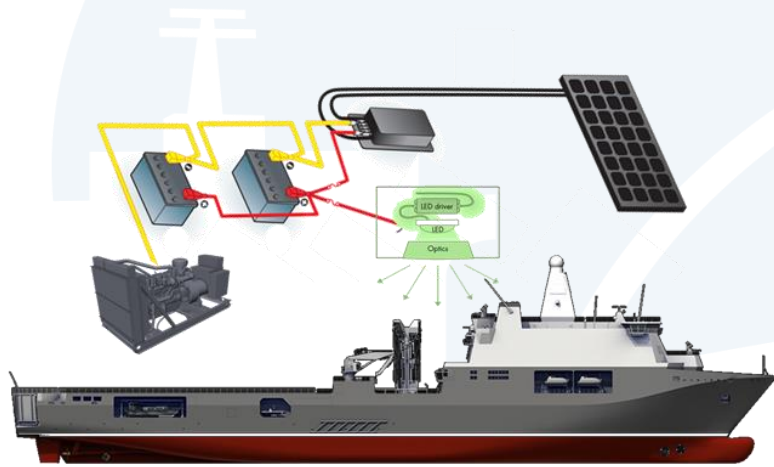
MTCC-Pacific Activities



MTCC Capacity Building

MTCC-PACIFIC Pilot Projects

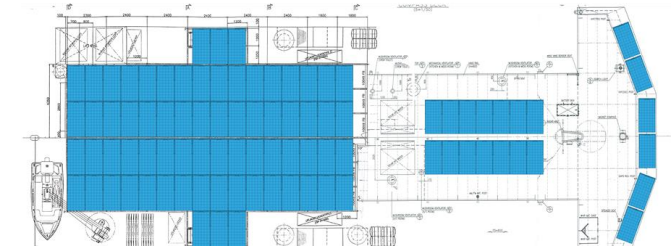
The projects demonstrate the application of maritime solar energy in PICTs vessels with the view of reducing greenhouse gas emissions and progress low-carbon development in the Pacific maritime transport



VANUATU



SAMOA



Identified Savings

Estimated annual cost savings

Greenhouse gas emissions reduction

Payback Period

32%

60,000 AUD

101 tonnes

1 year 5 months

10%

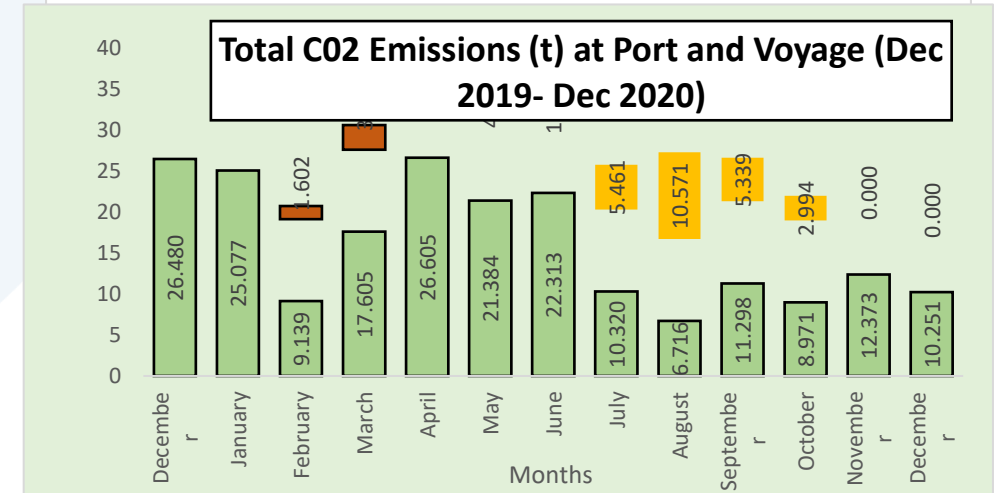
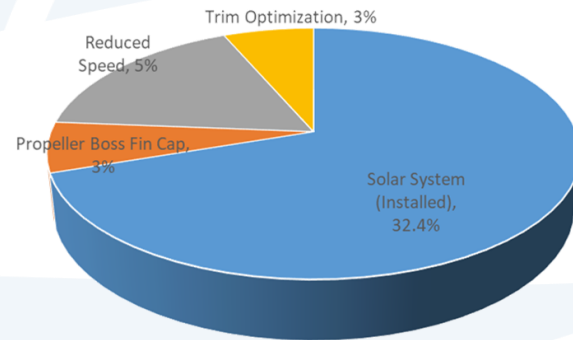
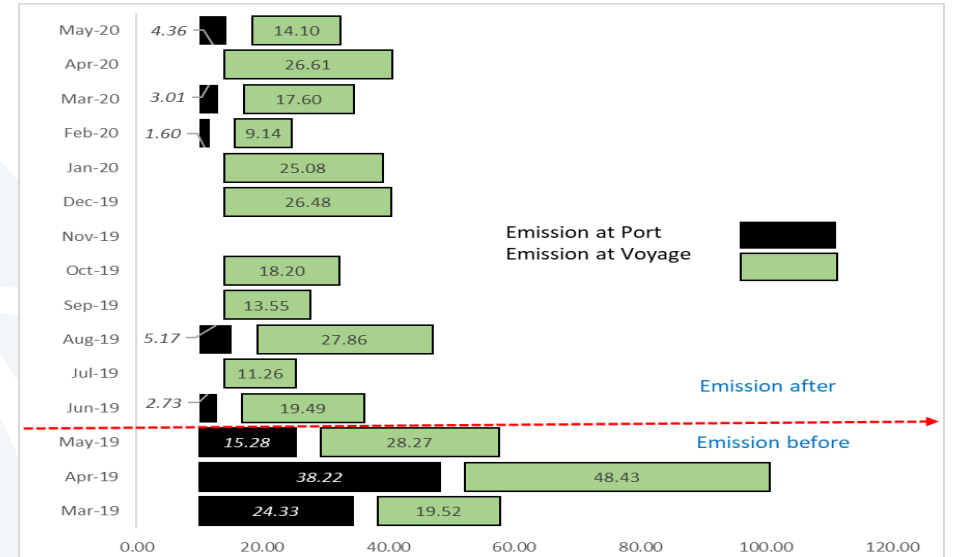
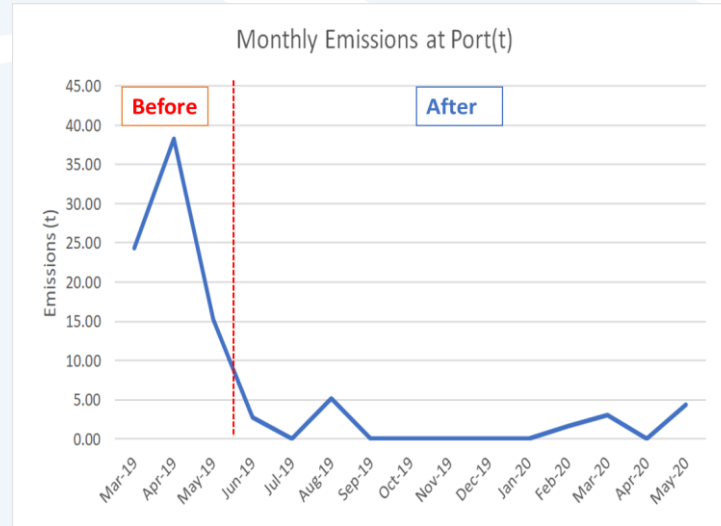
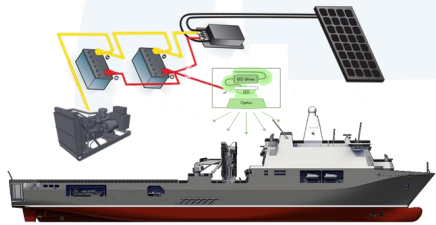
64,000 AUD

135 tonnes annually

7 years

PILOT PROJECT - VANUATU

The projects demonstrate the application of maritime solar energy in PICTs vessels with the view of reducing greenhouse gas emissions and progress low-carbon development in the Pacific maritime transport

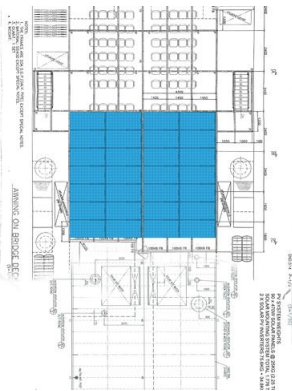


PILOT PROJECT - SAMOA

The projects demonstrate the application of maritime solar energy in PICTs vessels with the view of reducing greenhouse gas emissions and progress low-carbon development in the Pacific maritime transport



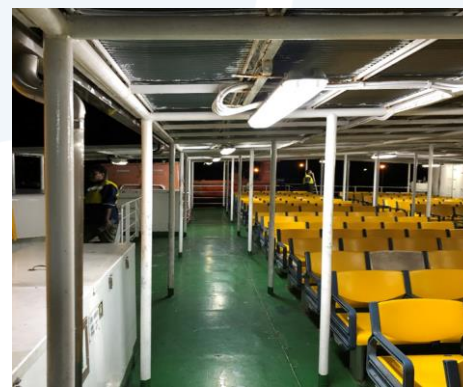
Solar panel



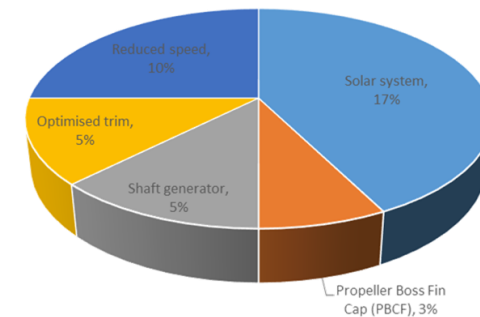
Inverter



LED Lights



Vessel Name	Lady Samoa III
Vessel Type	Ro-Ro Passenger Ferry
Year Built	1998
Overall Length	46.7m
Gross Tonnage	1045



Identified Savings for solar system	17%
Estimated annual cost savings	25,000 AUD
Greenhouse gas emissions reduction	135 tonnes annually
Payback period	7 years
Additional measures	
+ Propeller Boss Fin Cap (PBCF)	3%
+ shaft generator	5%
+ operational measure (Optimised trim & speed)	5% & 10%
Total projected savings	40%

Green Pacific Ports

Green Pacific Ports

Flexibility,
Innovation,
Adaptation

Operations
Improving port operations efficiency

Quality Management

Legal Framework

Climate Resilience

Energy
Reducing port carbon footprint

Energy Management

Energy audits

Energy Conservation

Environment
Preventing port marine pollution

Environmental Management

Waste Management

Pollution Response

Solomon Islands Ports Authority

- 8 months Savings
 - 27% electricity emissions
 - 13% electricity and fuels.

Fiji Ports Corporation Limited

- 21% of office electricity usage.
- 19,000 FJD reduced as a result of the power factor correction.

Port of Tonga

- 6 months
- 17% electricity emissions
- 11% electricity and fuels.

Demonstration project on hybrid outboard electric motor



Demonstrate a solar powered outboard motor on an outboard or a fibre glass boat belonging to a rural maritime community in Fiji.

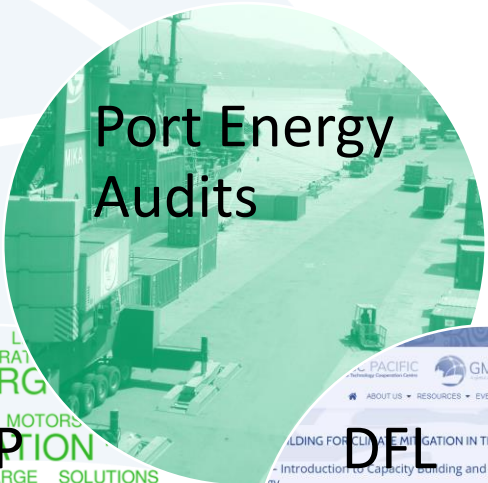
20HP hybrid outboard electric motor and battery power bank with marine accessories.

Encourage behavioural change to buying fossil fuel powered crafts.

Opportunities and Learning

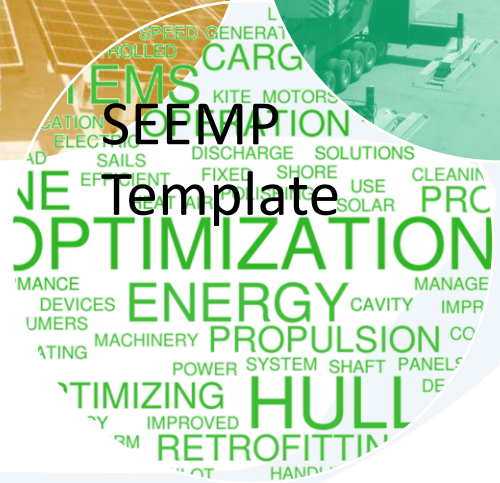


- Review energy efficient technologies for PIC vessel types
- Practical demonstration
- Data collection training



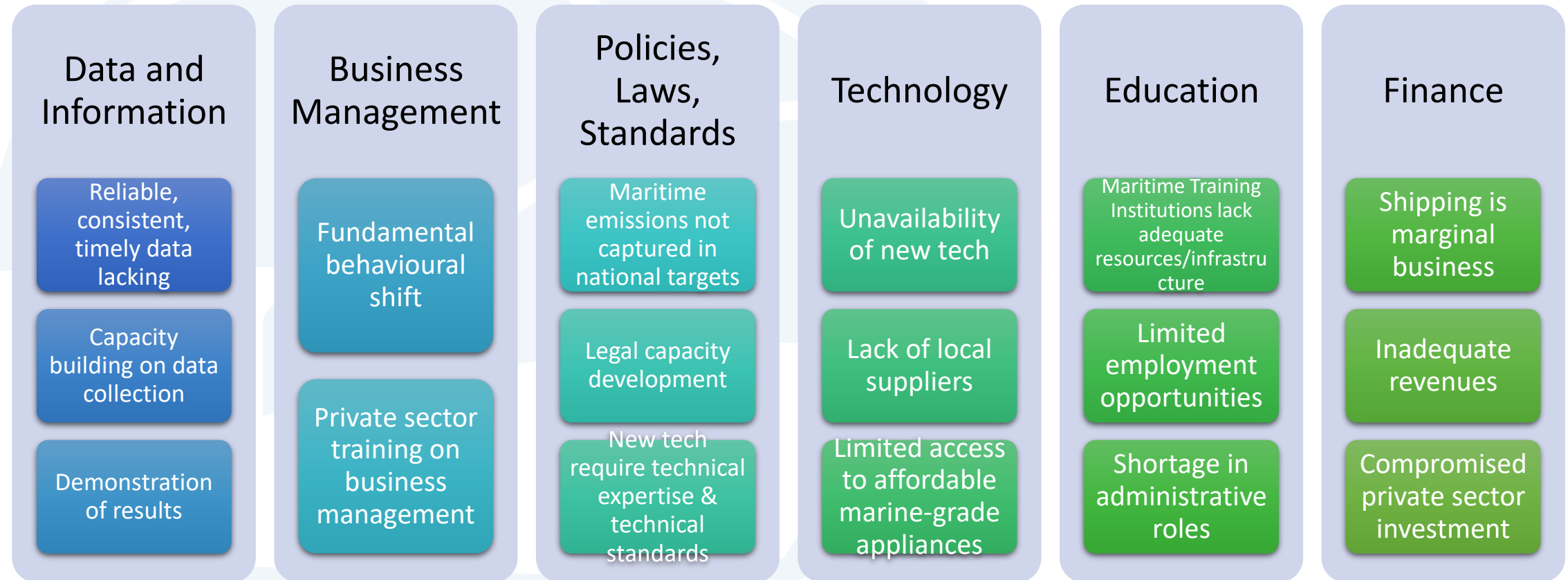
- Lighting upgrade to LED
- “Switch the light” new policy
- Green Pacific Ports

- Template developed through national and regional participation
- Conducted together with PIDSS (SOP)
- extensive involvement from ship owners, operators, DPA and maritime administration

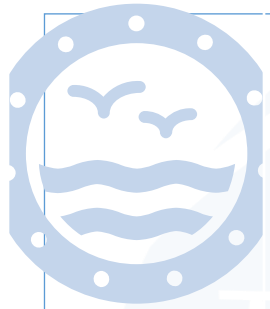


- Capacity building for climate mitigation in shipping industry
- Range of topics
- complete in own time/own pace

Need and Barriers



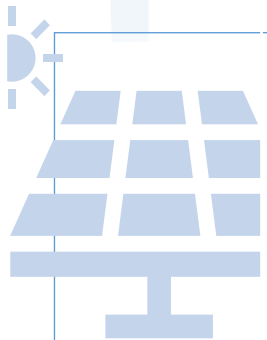
In Summary,



A lot of lessons learned have been gained from the pilot-project that will guide MTCC-Pacific in the future.



Pilot project challenges have been heightened by the COVID19 pandemic. With limited budget and timeframe, MTCC-Pacific engaged primarily with countries that have shown commitment by the operators to implement some ship energy efficiency activities which meant scaling its scope and reach in the region.



Solar systems are applicable to all ages of vessels trading in the Pacific islands areas and is one of the potential immediate technical measure that could be adopted by the aging fleet in the region and significantly contribute to explore targets of 40% GHG emissions reduction by 2030 as discussed in the last events in the region.



The MTCC-Pacific pilot project is also a way of promoting renewable energy on board ships but the crucial need to collect reliable data and information on fuel consumption to ensure informed decision-making by ship operators.

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THANK YOU