

Resourcing Pacific maritime  
decarbonisation transition

Investment history 1982-2019

The PBSP is an outcome of an analytical and action research agenda commenced in 2012 that recommends the Pacific embark on a sustained program of decarbonisation of domestic shipping at speed and scale determined by ambitious national targets, with an initial blended finance investment of at least \$500m required across 6-8 countries in the next decade.

Investment, both internal and external, in maritime decarbonisation has lagged significantly behind other sectors.

The next slides place the PBSP call for an initial \$500m in context of other investments

# Pacific Blue Shipping Partnership

Catalyzing change for 2000 vessels

\$US500 million

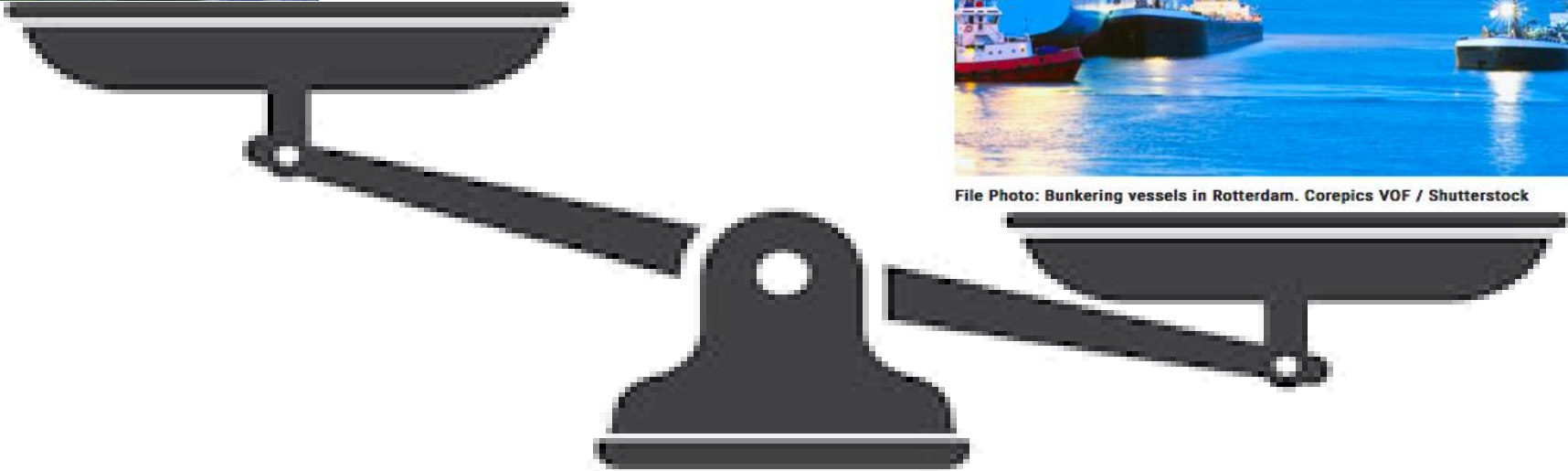


## Shell Traders Post \$1 Billion Profit in Fuel Oil Market Ahead of IMO 2020

November 15, 2019 by Bloomberg



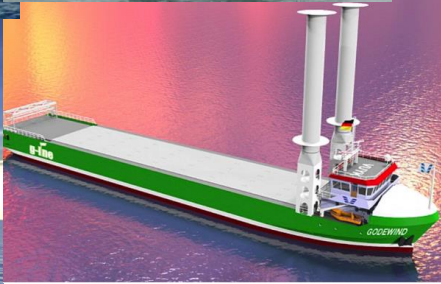
File Photo: Bunkering vessels in Rotterdam. Corepics VOF / Shutterstock



## Pacific Blue Shipping Partnership

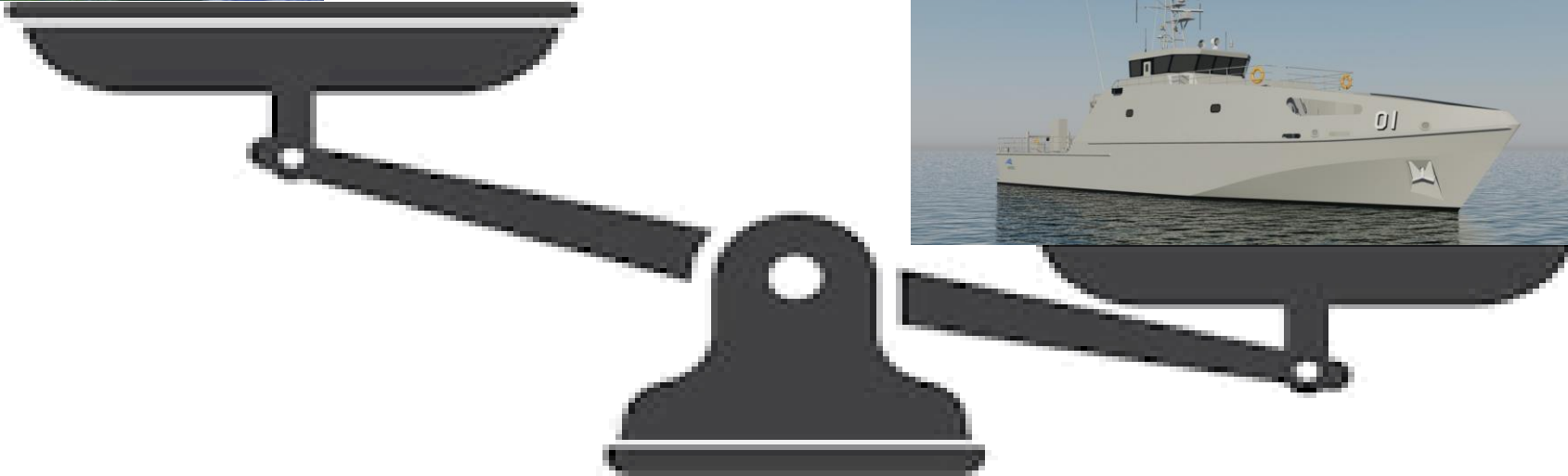
Catalyzing change for 2000 vessels

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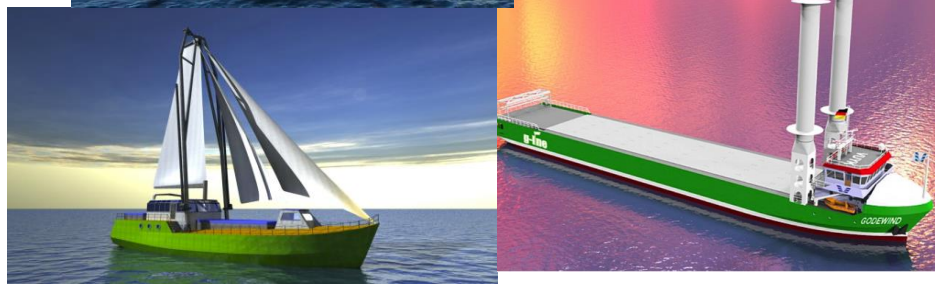


## Pacific Guardian Class Patrol vessels

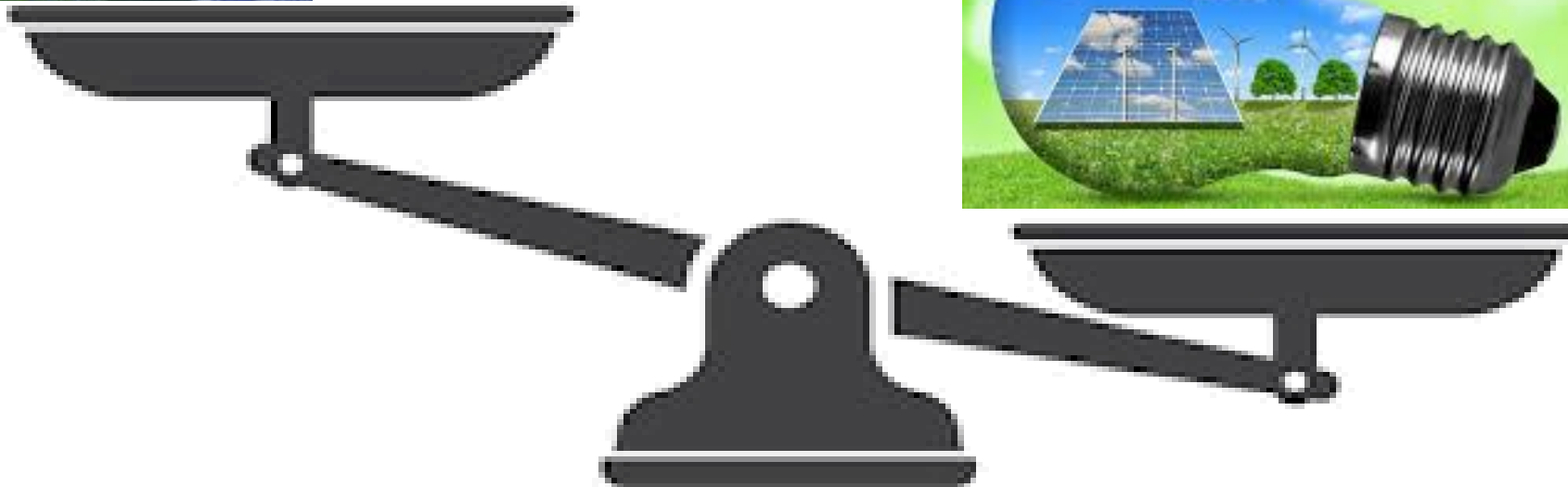
- 21 vessels
- \$A2 billion – Australian Govt
- (A\$700m CapEx + \$A1.3billion for fuel and lifetime support)



**Pacific Blue Shipping Partnership**  
Catalyzing change for 2000 vessels  
\$US500 million



**Regional Investment in RE**  
\$US 2billion+ (2013 -2017)



# Regional Investment in RE USD 2billion+ (2013 -17)



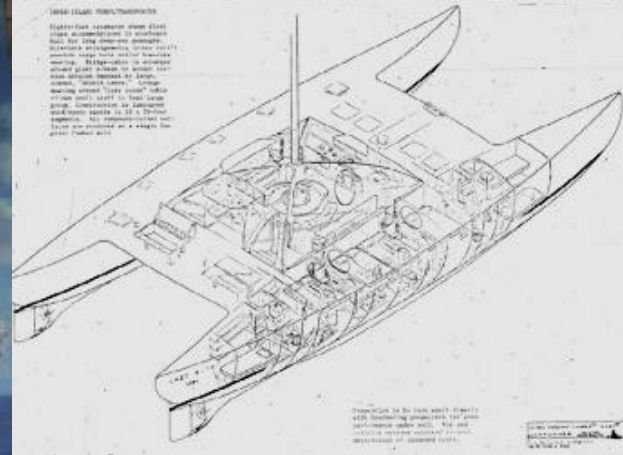
**Regional investment in  
ship decarbonisation  
2012-19 < USD20m**



# Investment History – 1980s oil crisis

We have identified 7 separate low carbon shipping projects from the 1980's, ranging from construction of a newbuild 50-ton sail cargo vessel for Kabara/Lau (EC – cost unknown), Fiji government ferry wind retrofits (ADB- \$40k), design of 30m cargo/Pax sail/diesel ferry Tonga (UNDAT – cost unknown)), artisanal fishing vessels – 11 designs, 6 countries (FAO – cost unknown).

ADB funded a large regional workshop and proceedings in Manilla in 1985.



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.

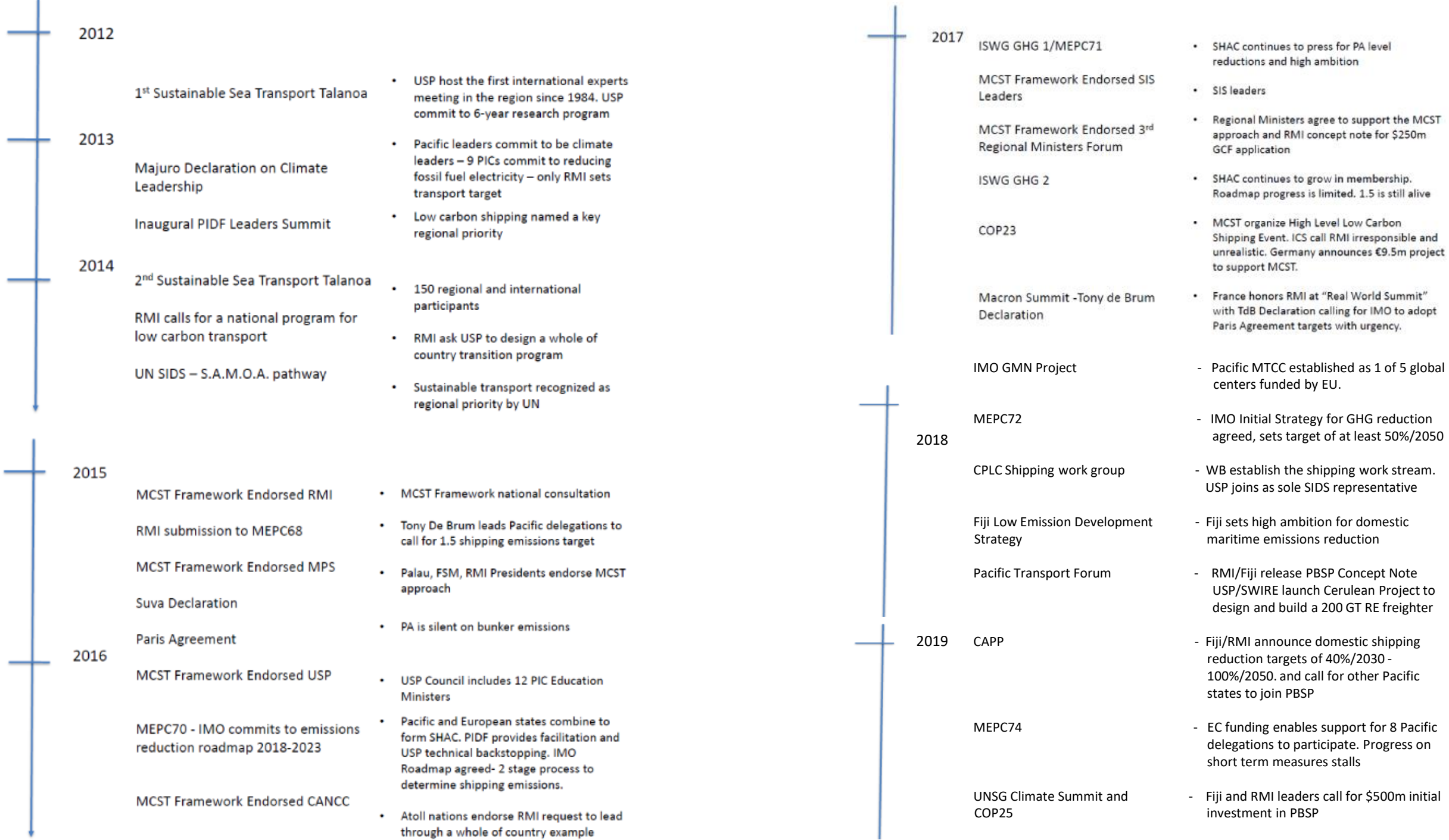
# Investment History – 2012 -2019

No further investments were made until 2012 when USP, at the request of its member states, hosted the Sustainable Sea Transport Talanoa and invested in a 6-year Sustainable Sea Transport Research Programme.

Since then an increasing number of events and initiatives have been made in this agenda. In preparatory work that lead up to the PBSP announcement in 2018, since 2012 USP, PIDF, Fiji and RMI governments (supported by considerable pro bono support from academies in UK, Europe, US and Australia) have all made significant cash and in-kind investments, including preparation/negotiation of a growing number of connected projects with external agencies both public and private, notably Swire, ECF, BMUB-IKI, EU, EC, UK and MFAT. In addition to our work programme, the Pacific-MTCC has been established by SPC/SPREP in 2017 with a ~€1million investment by EU under the IMO GMN programme.

Work has been interdisciplinary and covered both international advocacy and domestic transition applied research.

Key milestones 2012-19 are summarized in the next slide followed by a summary of known financial investments for this period



## Known Investment Commitments by donor – Pacific 2012-19

	2012	2013	2014	2015	2016	2017	2018	2019	2020	TOTAL
Asian Development Bank						30,000	91,000			121,000
Australia (AusAID)	5,000									5,000
Belgium							unknown			unknown
Germany						10,550,000				10,550,000
European Commission/European Union						1,130,000	28,000	587,500		1,745,500
European Climate Foundation				10,000			35,500			45,500
Fiji Development Bank			7,000							7,000
Fiji										unknown
France			5,000				128,000			133,000
Global Green Growth Institute							38,300	28,000		66,300
International Renewable Energy Agency			10,000							10,000
International Social Sustainability Council			35,500							33,500
International Union for Conservation of Nature							10,000			10,000
Maritime Technology Cooperation Centre (Pacific)							10,000			10,000
Netherlands							unknown			unknown
New Zealand							46,000		600,000	646,000
Pacific Islands Development Forum						20,000				20,000
RMI							450,000			450,000
Swire/China Navigation Company							3,000,000			3,000,000
UK							13,000	13,000		26,000
UN Conference on Trade and Development			10,000							10,000
USA (USAID)		20,000								20,000
University of the South Pacific	15,000	100,000	7,000	150,000			468,500	20,000		760,500
World Wide Fund for Nature			1,000							1,000
<b>TOTAL</b>	<b>20,000</b>	<b>120,000</b>	<b>75,500</b>	<b>160,000</b>	<b>0</b>	<b>11,730,000</b>	<b>4,318,300</b>	<b>648,500</b>	<b>600,000</b>	<b>17,670,300</b>

## Known Investment Commitments – Pacific 2012-19

- Since 2012, over \$17m has been committed to various low carbon maritime projects in the Pacific, domestic and international.
- Between 2012-2016, most funding was provided internally by USP.
- More than 90% is focused on domestic emission reduction.
  - The German funded TLCSeaT €9.5m project in RMI (2017-2022) is focused on inter- and intra- atoll shipping and includes GIZ, USP, WAM and Hochschule Emden Leer as partners
  - The Cerulean project is a \$3m project (2018-2022) funded by Swire Shipping to design, build and operate a demonstration 200 ton wind/diesel freighter. This is the first PPP project for low carbon shipping in the Pacific.
  - The Micronesian Center for Sustainable Transport is supported by core funding of \$900k from USP and RMI.
  - The Pacific MTCC is funded by the EU with an initial ~ €1m project.
- The majority of international advocacy funding has been for Pacific delegations travel. Up to 8 Pacific delegations are being supported to participate in IMO GHG reduction negotiations.
- These figures do not include the substantive in-kind and pro-bono contributions invested by both local and international actors including Pacific governments, PIDF, USP, UCL, UNSW, Columbia, HEL, EDF, ISSC. The early and ongoing commitment of these actors is what has driven the agenda to date.

Date		Project/Event	Funder	USD (Approximate Financial Contribution)			In Kind Contributions	Notes
From	To			domestic	international	total		
2012	2012	SSTT 2012	USP	\$ 7,500.00	\$ 7,500.00	\$ 15,000.00	plus venues, PR, organisation and staff time	
2012	2012	SSTT 2012	AusAid	\$ 2,500.00	\$ 2,500.00	\$ 5,000.00		
2013	2015	Sustainable Sea Transport Research Programme	USP	\$ 50,000.00	\$ 50,000.00	\$ 100,000.00		
2014	2014	SSTT 2014	USP	\$ 3,500.00	\$ 3,500.00	\$ 7,000.00	plus venues, PR, organisation and staff time	
2014	2014	SSTT 2014	WWF	\$ 500.00	\$ 500.00	\$ 1,000.00		
2014	2014	SSTT 2014	FDB	\$ 3,500.00	\$ 3,500.00	\$ 7,000.00		
2014	2014	SSTT 2014	US Embassy	\$ 10,000.00	\$ 10,000.00	\$ 20,000.00		
2014	2014	SSTT 2014	French Embassy	\$ 2,500.00	\$ 2,500.00	\$ 5,000.00		
2014	2015	Low Carbon Shipping seed research grant	ISSC	\$ 33,500.00		\$ 33,500.00		
2015	2017	MCST and Framework establishment	USP	\$ 75,000.00	\$ 75,000.00	\$ 150,000.00		
2015	2015	MEPC 68	ECF		\$ 10,000.00	\$ 10,000.00	plus USP, UCL, PIDF staff time/technical support	
2014	2015	RE international Shipping Technology Brief	IRENA		\$ 10,000.00	\$ 10,000.00		
2015	2015	SIDS Shipping decarbonisation toolkit	UNCTAD	\$ 10,000.00		\$ 10,000.00		
2016	2016	MEPC 69 & 70	USP/UCL		\$ 20,000.00	\$ 20,000.00	plus USP, UCL staff time/technical support	
2017	2017	Regional Transport Ministers Forum side event	PIDF		\$ 20,000.00	\$ 20,000.00	plus USP, UCL, PIDF staff time/technical support	
2017	2017	ISWG GHG 1 & MEPC 71 & ISWG GHG 2	EC (PIFS - SPRAO)		\$ 130,000.00	\$ 130,000.00		Guestimate
2017	2018	Fiji Maritime GHG mitigation plan	ADB (Fiji Govt)	\$ 30,000.00		\$ 30,000.00		
2017	2022	TLCSeaT	BMUB (IKI)	\$ 10,000,000.00	\$ 550,000.00	\$ 10,550,000.00		
2017	2019	MTCC	EC (IMO)	\$ 1,000,000.00		\$ 1,000,000.00		Guestimate
2018	2020	MCST core budget	USP	\$ 225,000.00	\$ 225,000.00	\$ 450,000.00		For all transport sectors
2018	2020	MCST core budget	RMI	\$ 225,000.00	\$ 225,000.00	\$ 450,000.00		For all transport sectors
2018	2019	Fiji Govt bilateral	France		\$ 128,000.00	\$ 128,000.00		
2018	2019	Tonga Govt bilateral	Netherlands			\$ -		
2018	2019	Solomon Islands bilateral	Belgium			\$ -		
2018	2018	ISWG GHG 3 & MEPC 72	ECF		\$ 22,000.00	\$ 22,000.00		
2018	2018	ISWG GHG 3 & MEPC 72	EC (PIFS - SPRAO)		\$ 14,000.00	\$ 14,000.00		Guestimate
2018	2018	ISWG GHG 3 & MEPC 72	MFAT		\$ 22,666.00	\$ 22,666.00		
2018	2018	ISWG GHG 4 & MEPC 73	ECF		\$ 13,500.00	\$ 13,500.00	plus USP, UCL, PIDF, GoFiji/GoRMI staff support time	
2018	2018	ISWG GHG 4 & MEPC 73	MFAT (Picticipate)		\$ 24,000.00	\$ 24,000.00		
2018	2018	ISWG GHG 4 & MEPC 73	UK High Commission		\$ 13,391.00	\$ 13,391.00		
2018	2018	ISWG GHG 4 & MEPC 73	EC (PIFS - SPRAO)		\$ 14,000.00	\$ 14,000.00		Guestimate
2018	2018	Fiji LEDS (maritime chapter only)	GGGI	\$ 30,000.00		\$ 30,000.00		
2018	2018	PI Transport Forum & Expo	USP			\$ 18,500.00		
2018	2018	PI Transport Forum & Expo	MTCC			\$ 10,000.00	plus GoFiji/GoRMI, USP, IUCN, GGGI, PIDF staff time, USP venues, services, ITC	
2018	2018	PI Transport Forum & Expo	GGGI			\$ 8,300.00		
2018	2018	PI Transport Forum & Expo	IUCN			\$ 10,000.00		
2018	2018	PI Transport Forum & Expo	ADB (Fiji Govt)			\$ 23,000.00		
2018	2018	RMI Shipping Emissions profile	ADB (PRIF)	\$ 68,000.00		\$ 68,000.00		
2018	2022	Cerulean	Swire/CNCo	\$ 3,000,000.00		\$ 3,000,000.00	includes USP in-kind 20% project staff support	
2019	2019	ISWG GHG 5 & MEPC 74	EC (PIFS - TECCBUF)		\$ 16,000.00	\$ 16,000.00		Guestimate
2019	2019	ISWG GHG 5 & MEPC 74	UK Dept of Transport		\$ 13,391.00	\$ 13,391.00		
2019	2020	ISWG GHG 5 & MEPC 74 - ISWG GHG 7 & MEPC 76	EC (IBF - PSF)		\$ 556,500.00	\$ 556,500.00		
2019	2019	ISWG GHG 6	EC (PIFS - TECCBUF)		\$ 15,000.00	\$ 15,000.00		
2019	2020	Project pipelines FIJ, KIR, TUV	GGGI	\$ 48,000.00		\$ 48,000.00		
2020	2021	RMI Transport Roadmap	MFAT	\$ 600,000.00		\$ 600,000.00	USP	Guestimate. For all transport sectors
2018	2019	PBSP	Fiji Govt			\$ -	plus staff time, venues, technical support RMI, Fiji, USP, UCL, UNSW, PIDF	
TOTALS				\$ 15,424,500.00	\$ 2,197,448.00	\$ 17,691,748.00		