SECRETARIAT OF THE PACIFIC COMMUNITY
SECRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE

Economic Development Division / La Division développement économique

MAPPING OF ENERGY POLICIES FOR ENERGY TRANSITION IN PACIFIC ISLANDS: *role of renewable energy in energy mix*

ENERGY TRANSITION:

A Challenging Perspective for the Pacific Islands and Coastal Areas

November 26-28, 2014 Nouméa, New Caledonia

Makereta Lomaloma, SPC

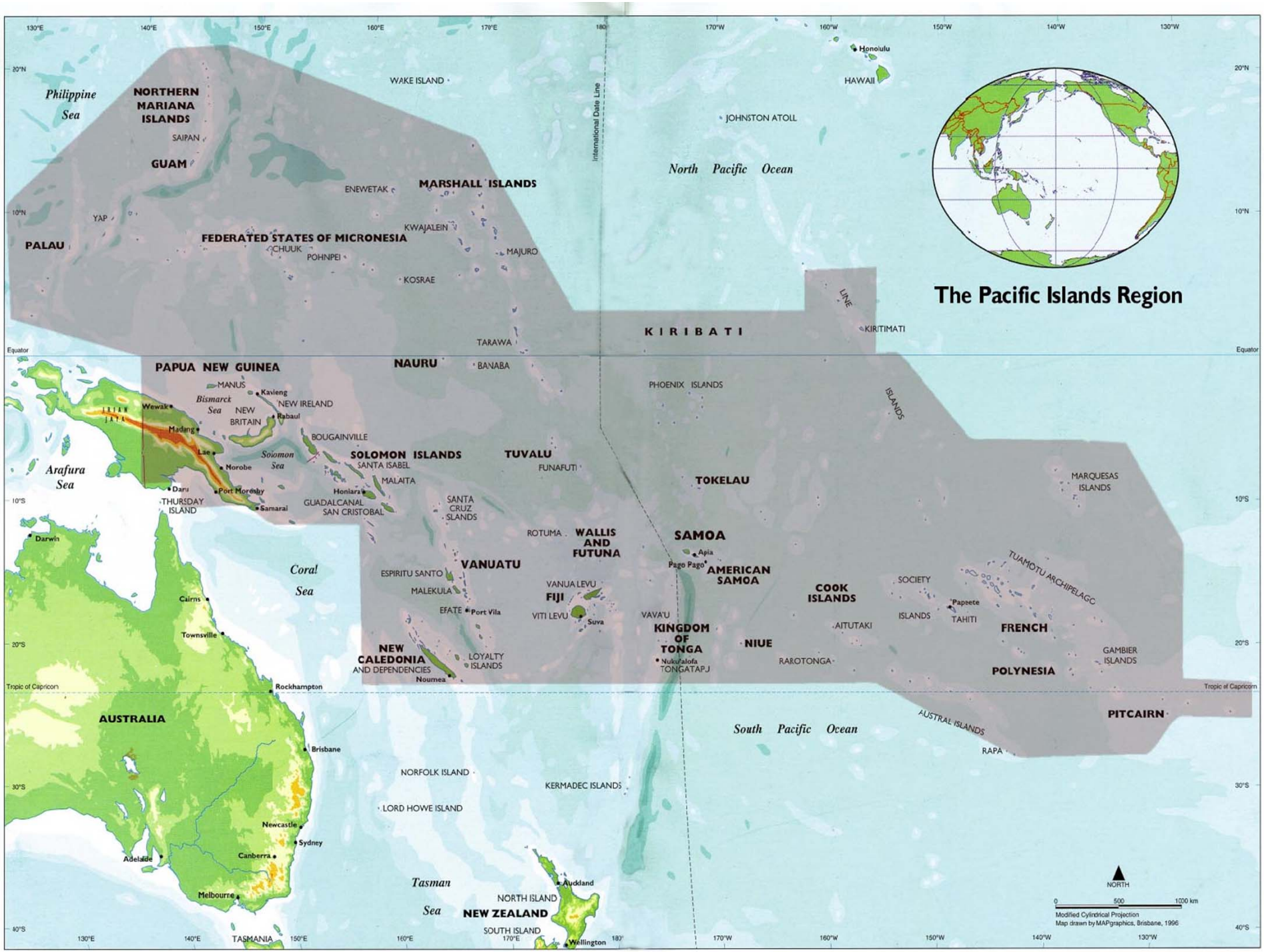
Outline of Presentation

- Context and challenges
- Energy legislations and policies
- Renewable energy in the energy mix

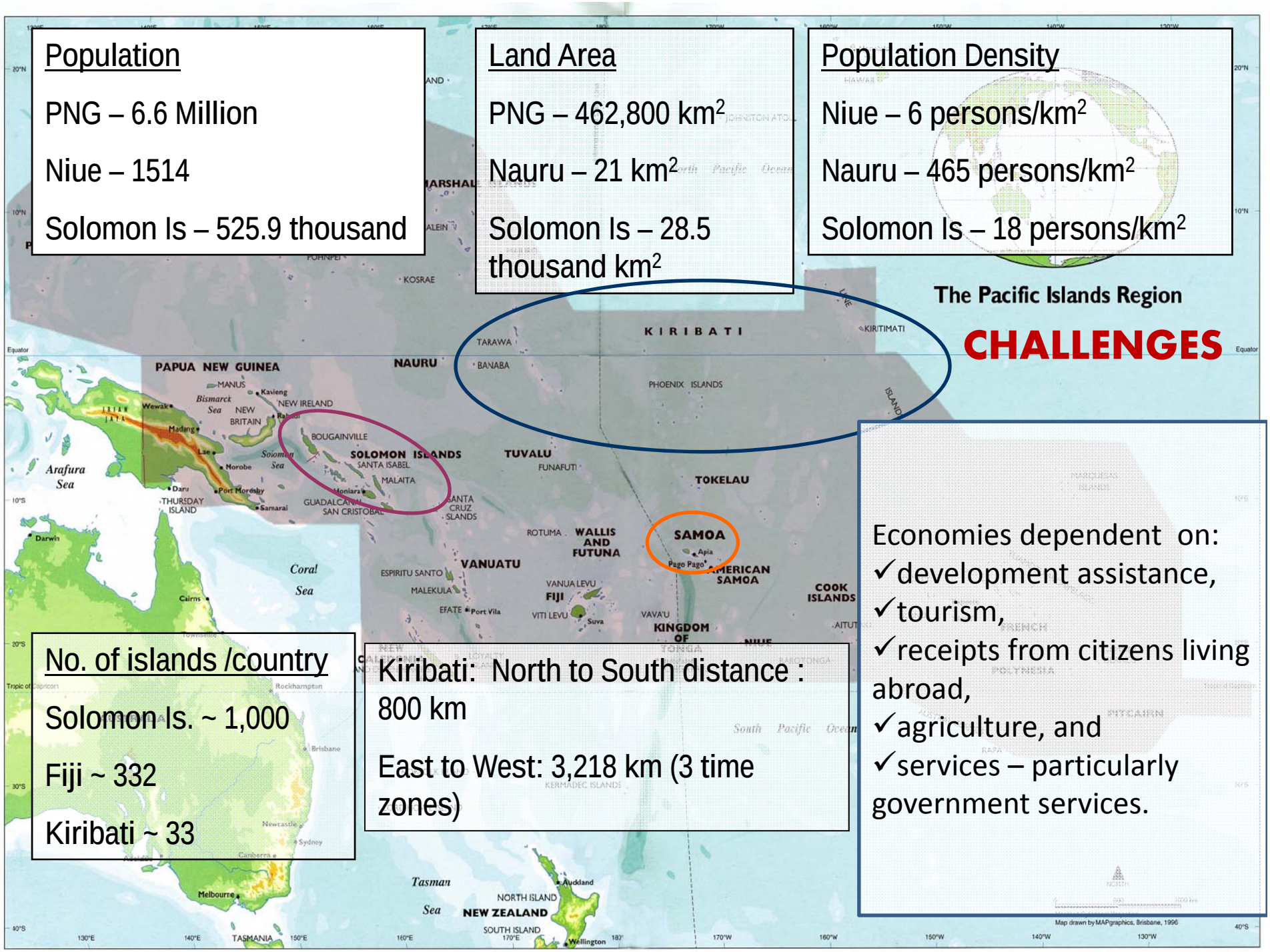
About SPC

- In August 2010 at the 41st Pacific Islands Forum the Forum Leaders endorsed the Framework for Action on Energy Security (FAESP) 2010-2020 as the regional blueprint for the provision of technical assistance to the energy sectors of Pacific Island countries and territories (PICTs).

- FAESP encompasses the Leaders' vision for an energy-secure Pacific, where Pacific people at all times have access to sufficient sustainable sources of clean and affordable energy and services to enhance their social and economic well-being.


The Pacific Islands Region
Philippine Sea
NORTHERN MARIANA ISLANDS
SAIPAN
GUAM
WAKE ISLAND
International Date Line
Honolulu
HAWAII
JOHNSTON ATOLL
North Pacific Ocean
ENEWETAK
MARSHALL ISLANDS
YAP
PALAU
FEDERATED STATES OF MICRONESIA
CHUUK
POHNPEI
KWAJALEIN
MAJURO
KOSRAE
LINE
KIRIBATI
KIRITIMATI
TARAWA
Equator
PAPUA NEW GUINEA
NAURU
BANABA
PHOENIX ISLANDS
ISLANDS
MANUS
Kavieng
NEW IRELAND
Bismarck Sea
NEW BRITAIN
Rabaul
Wewak
Madang
BOUGAINVILLE
Lae
Morobe
Soiomon Sea
SOLOMON ISLANDS
SANTA ISABEL
MALAITA
TUVALU
FUNAFUTI
Arafura Sea
Daru
Port Moresby
Samarai
THURSDAY ISLAND
Honiara
GUADALCANAL
SAN CRISTOBAL
SANTA CRUZ ISLANDS
TOKELAU
MARQUESAS ISLANDS
Darwin
ROTUMA
WALLIS AND FUTUNA
SAMOA
Apia
Pago Pago
AMERICAN SAMOA
Coral Sea
ESPIRITU SANTO
VANUATU
MALEKULA
VANUA LEVU
FIJI
EFATE
Port Vila
VITI LEVU
Suva
VAVA'U
KINGDOM OF TONGA
Nuku'alofa
TONGATAPU
NIUE
COOK ISLANDS
SOCIETY ISLANDS
Papeete
TAHITI
AITUTAKI
RAROTONGA
TUAMOTU ARCHIPELAGO
FRENCH POLYNESIA
GAMBIER ISLANDS
Cairns
Townsville
Rockhampton
Tropic of Capricorn
NEW CALEDONIA AND DEPENDENCIES
Noumea
LOYALTY ISLANDS
AUSTRALIA
South Pacific Ocean
AUSTRAL ISLANDS
RAPA
PITCAIRN
Brisbane
NORFOLK ISLAND
KERMADEC ISLANDS
LORD HOWE ISLAND
Newcastle
Sydney
Canberra
Adelaide
Melbourne
Tasman Sea
Auckland
NORTH ISLAND
NEW ZEALAND
SOUTH ISLAND
Wellington
TASMANIA
NORTH
0 500 1000 km
Modified Cylindrical Projection
Map drawn by MAPgraphics, Brisbane, 1996

1. All PICs put together contribute to 0.4% of the total global land mass.
2. Population of the PICs contribute to 0.14% of the total global population in 2009.
3. PICs are scattered over 165.2 million km^2 in the Pacific Ocean which accounts for 44% of the worlds ocean.



Population

PNG – 6.6 Million

Niue – 1514

Solomon Is – 525.9 thousand

Land Area

PNG – 462,800 km^2

Nauru – 21 km^2

Solomon Is – 28.5 thousand km^2

Population Density

Niue – 6 persons/km^2

Nauru – 465 persons/km^2

Solomon Is – 18 persons/km^2

No. of islands /country

Solomon Is. ~ 1,000

Fiji ~ 332

Kiribati ~ 33

Kiribati: North to South distance : 800 km

East to West: 3,218 km (3 time zones)

Economies dependent on:

- ✓development assistance,
- ✓tourism,
- ✓receipts from citizens living abroad,
- ✓agriculture, and
- ✓services – particularly government services.

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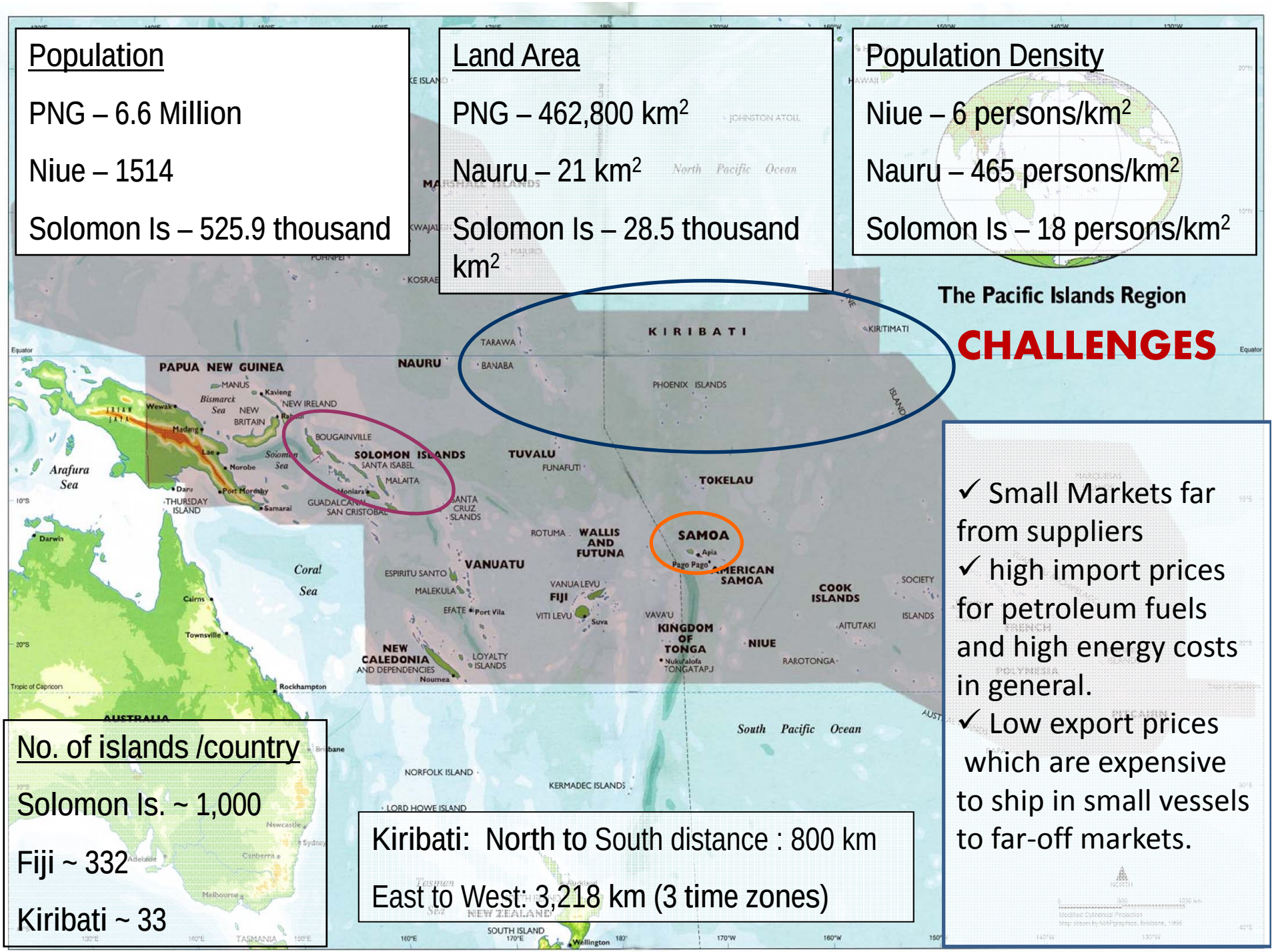

- ✓ Small Markets far from suppliers
- ✓ high import prices for petroleum fuels and high energy costs in general.
- ✓ Low export prices which are expensive to ship in small vessels to far-off markets.

No. of islands /country

Solomon Is. ~ 1,000

Fiji ~ 332

Kiribati ~ 33

Kiribati: North to South distance : 800 km

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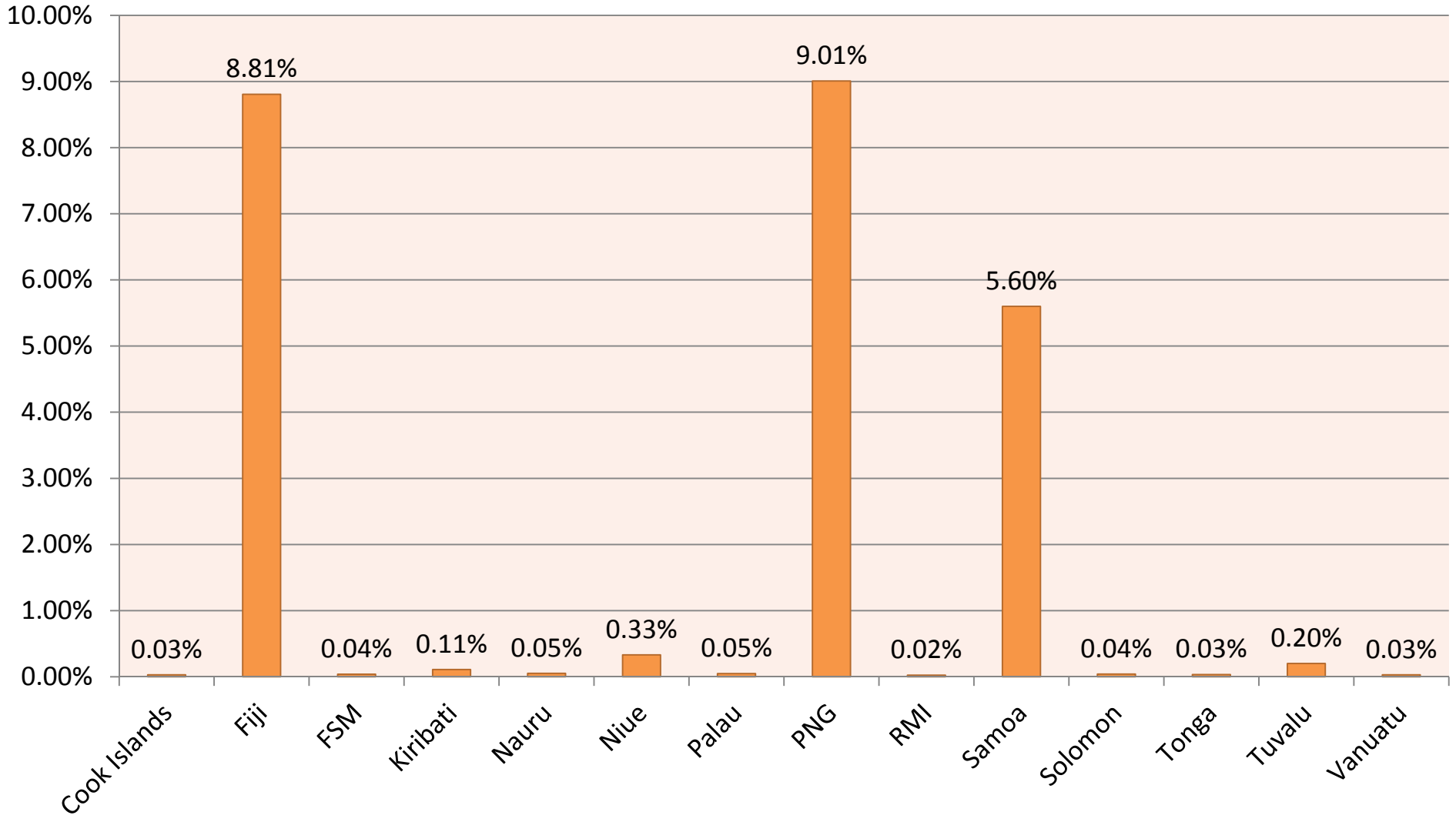
ENERGY RELATED LEGISLATIONS

		Energy Act	Electricity	Petroleum	Renewable	Energy Efficiency
1	Cook Islands	√	√	√	X	X
2	Fiji	X	√	√	X	X
3	FSM	X	√	√	X	X
4	Kiribati	X	√	√	X	X
5	Nauru	X	√	√	X	X
6	Niue	X	√	√	X	X
7	Palau	√	√	√	X	X
8	PNG	X	√	√	X	X
9	RMI	X	x	x	X	X
10	Samoa	X	√	√	X	X
11	Solomon Islands	X	√	√	X	X
12	Tonga	X	√	√	√	X
13	Tuvalu	X	√	√	X	X
14	Vanuatu	x	√	X	x	x

ENERGY RELATED POLICIES

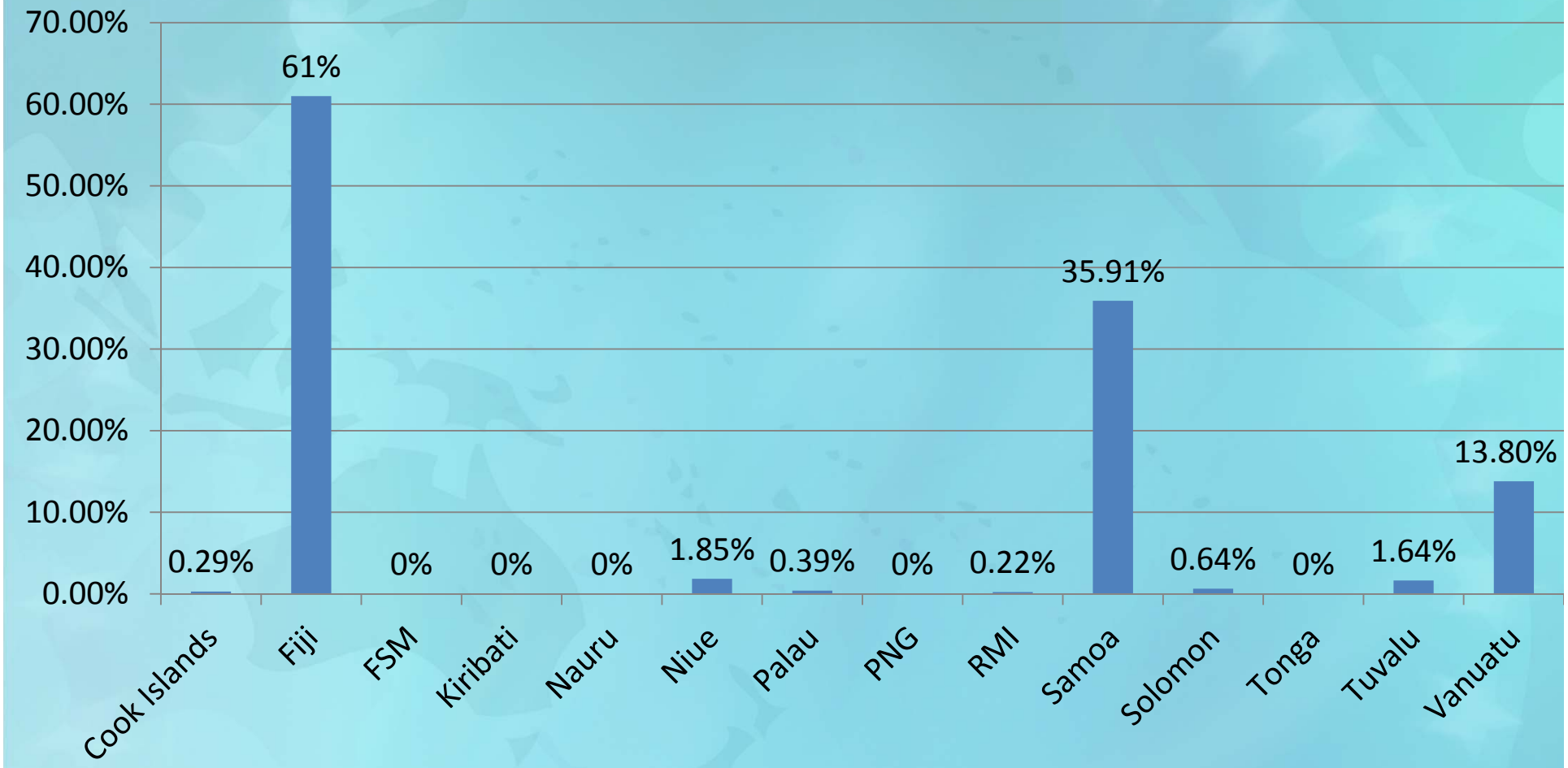
		Energy Policy/Roadmap	Net metering	Feed in tariff	Renewable Energy Targets (power generation)
1	Cook Islands	√	√	x	100% by 2020
2	Fiji	√	x	√	81% by 2020
3	FSM	√	X	X	10% by 2020 (urban area) 50% by 2020 (rural areas)
4	Kiribati	√	X	X	23% by 2025 (Tarawa) 40% by 2025 (Kiritimati)
5	Nauru	√	X	X	50% by 2020
6	Niue	√	X	X	100% by 2020
7	Palau	√	√	X	20% by 2020
8	PNG	√	√	X	50% by 2030 (GHG reduction)
9	RMI	√	X	X	20% by 2020
10	Samoa	√	x	X	10% increase by 2016
11	Solomon Islands	√	X	X	50% by 2015
12	Tonga	√	√	X	50% by 2020
13	Tuvalu	√	x	X	100% by 2020
14	Vanuatu	√	√	√	100% by 2020

Renewable energy share - 2009

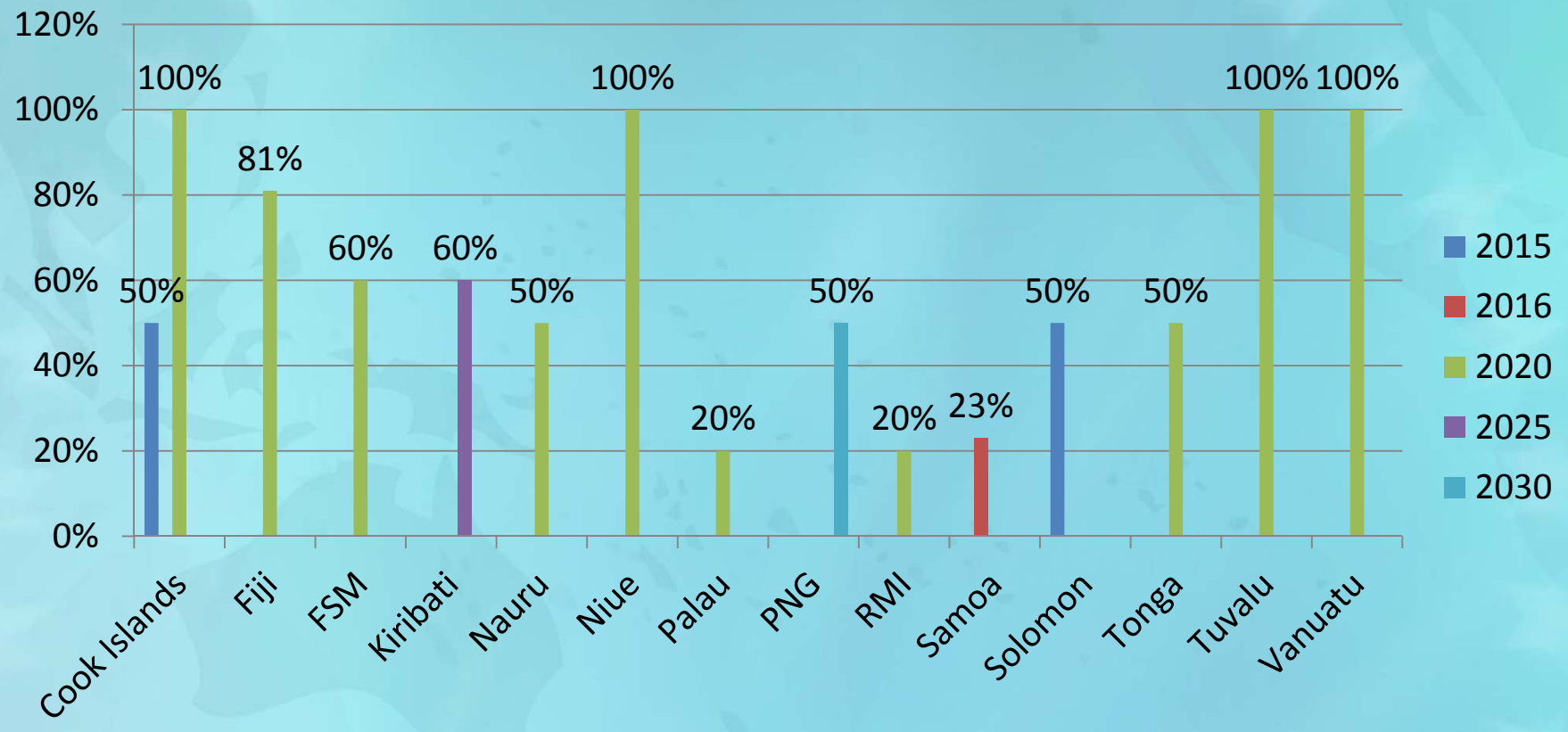


Contribution from traditional use of biomass such as household cooking is excluded in analysis

2009 RENEWABLE ENERGY SHARE FOR POWER GENERATION

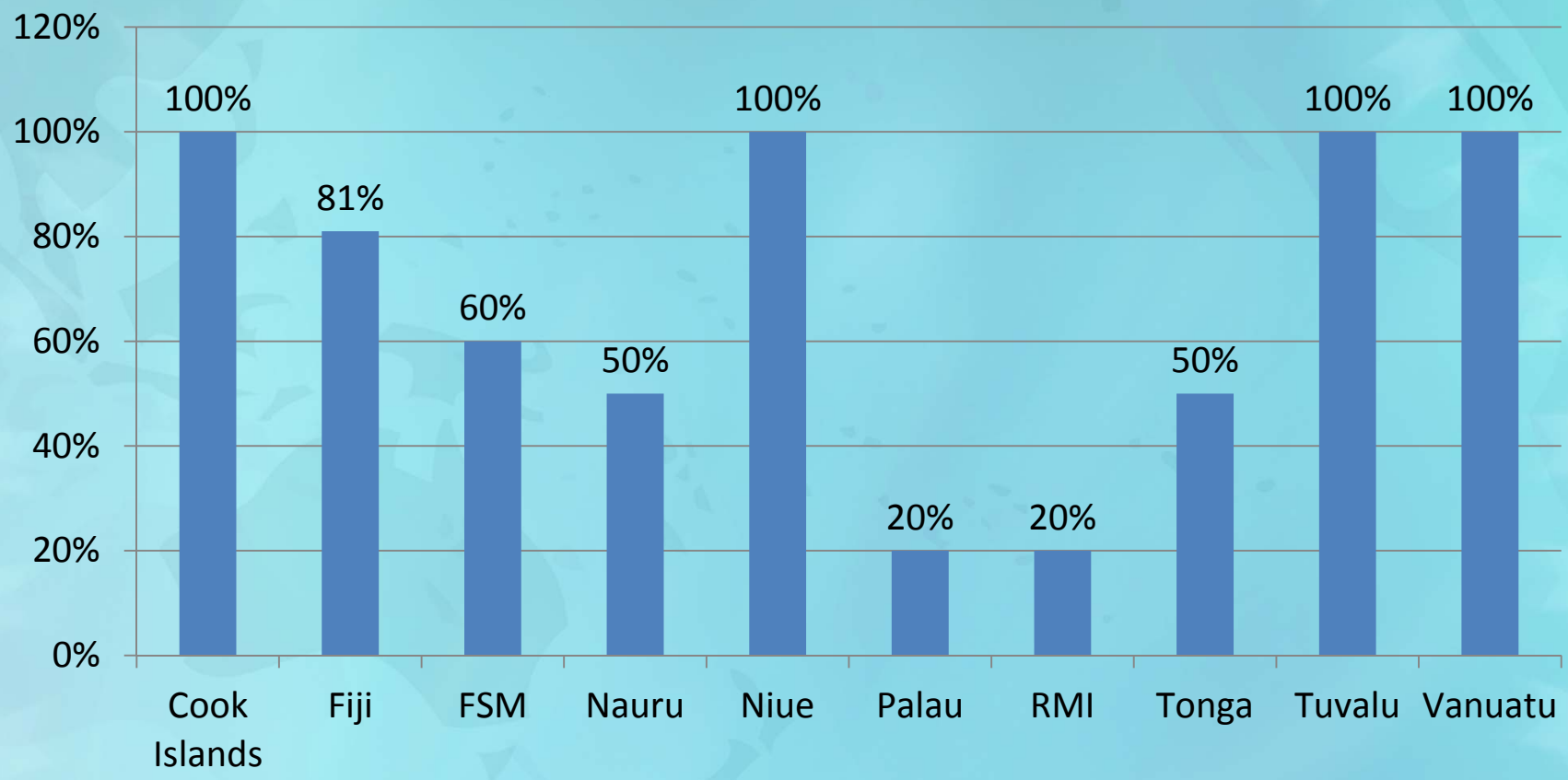


RENEWABLE ENERGY TARGETS FOR POWER GENERATION (2015 – 2030)



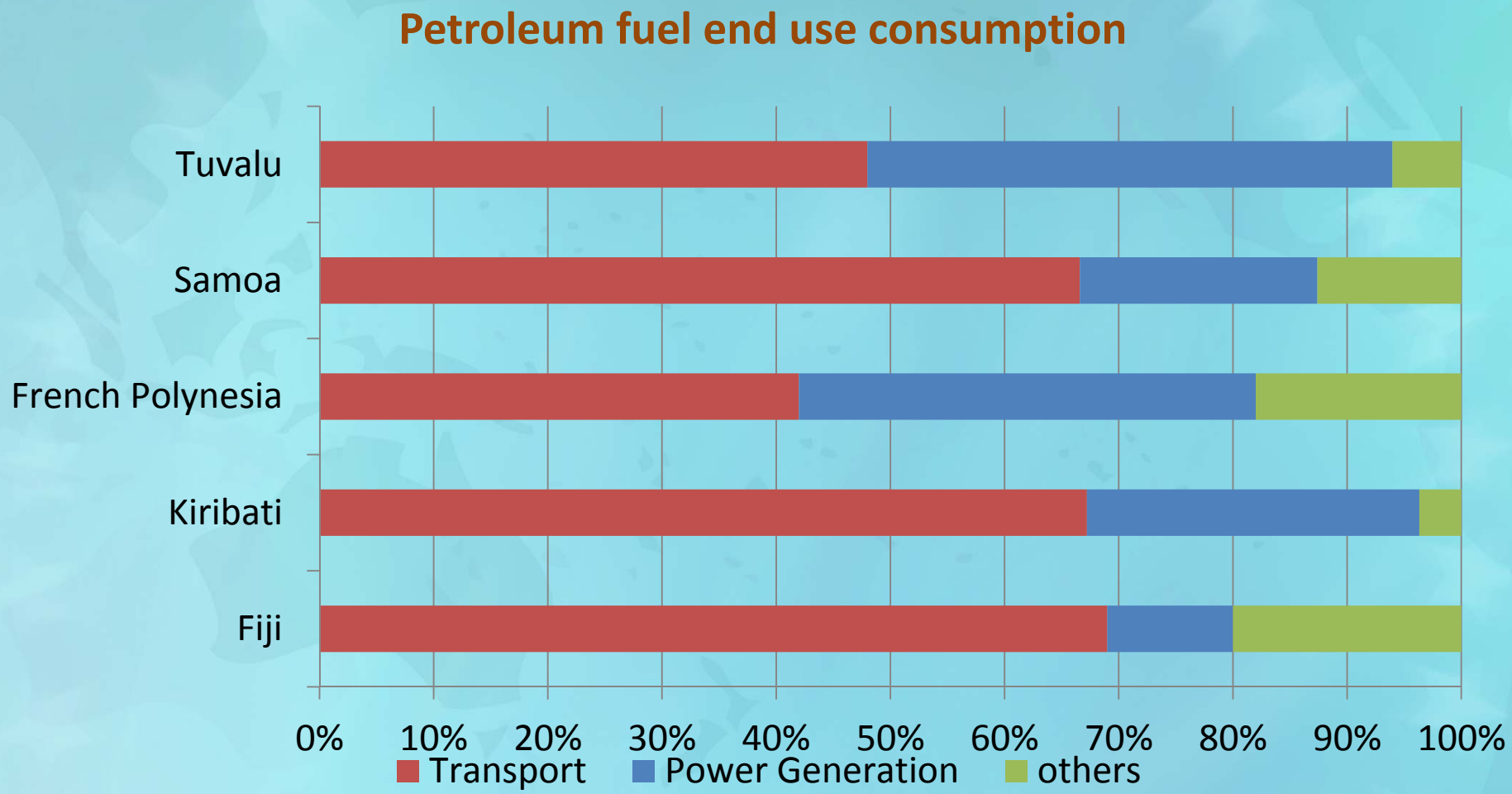
Note: PNG target is on GHG emission reduction

PICs WITH RENEWABLE ENERGY TARGETS FOR Y2020



RENEWABLE ENERGY IN PICS – WHERE?

Where is most of the energy currently being used?



RENEWABLE ENERGY IN PICS – WHERE?

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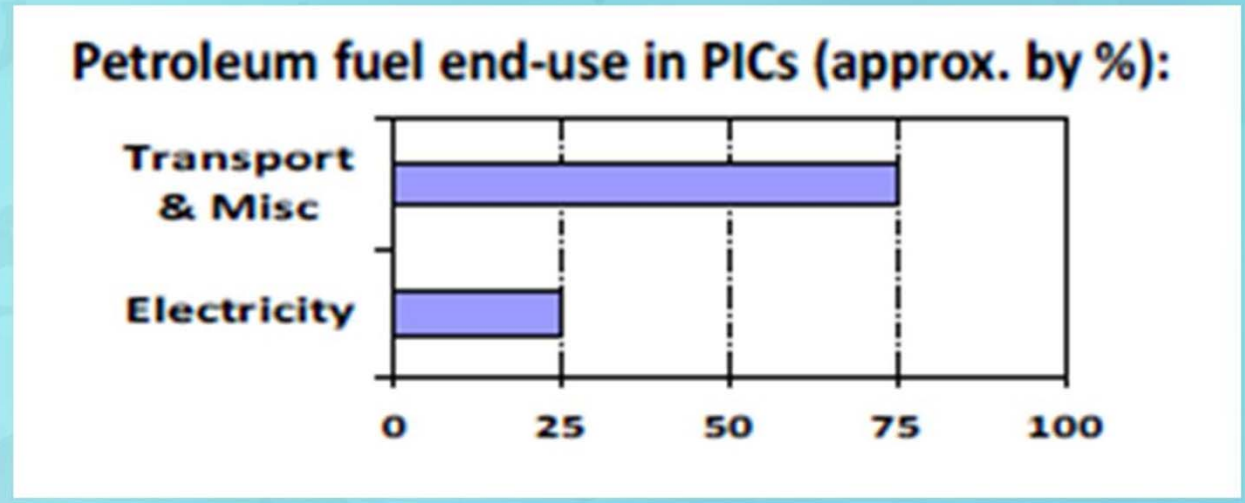

- If we are to limit the use of fossil fuels, we have to target the high users of energy. Power generation is not the high user of energy, how about cooking?, land transport?, sea transport?, heating? What alternatives other than fossil fuels can be used?

- Major portion of petroleum imports are for transport so this must be addressed

Thank you for your attention