



**REGIONAL MEETING ON SUSTAINABLE ENERGY  
FOR ASIA – PACIFIC LEAST DEVELOPED COUNTRIES  
KATHMANDU, NEPAL, 22<sup>ND</sup> – 23<sup>RD</sup> MARCH 2017**

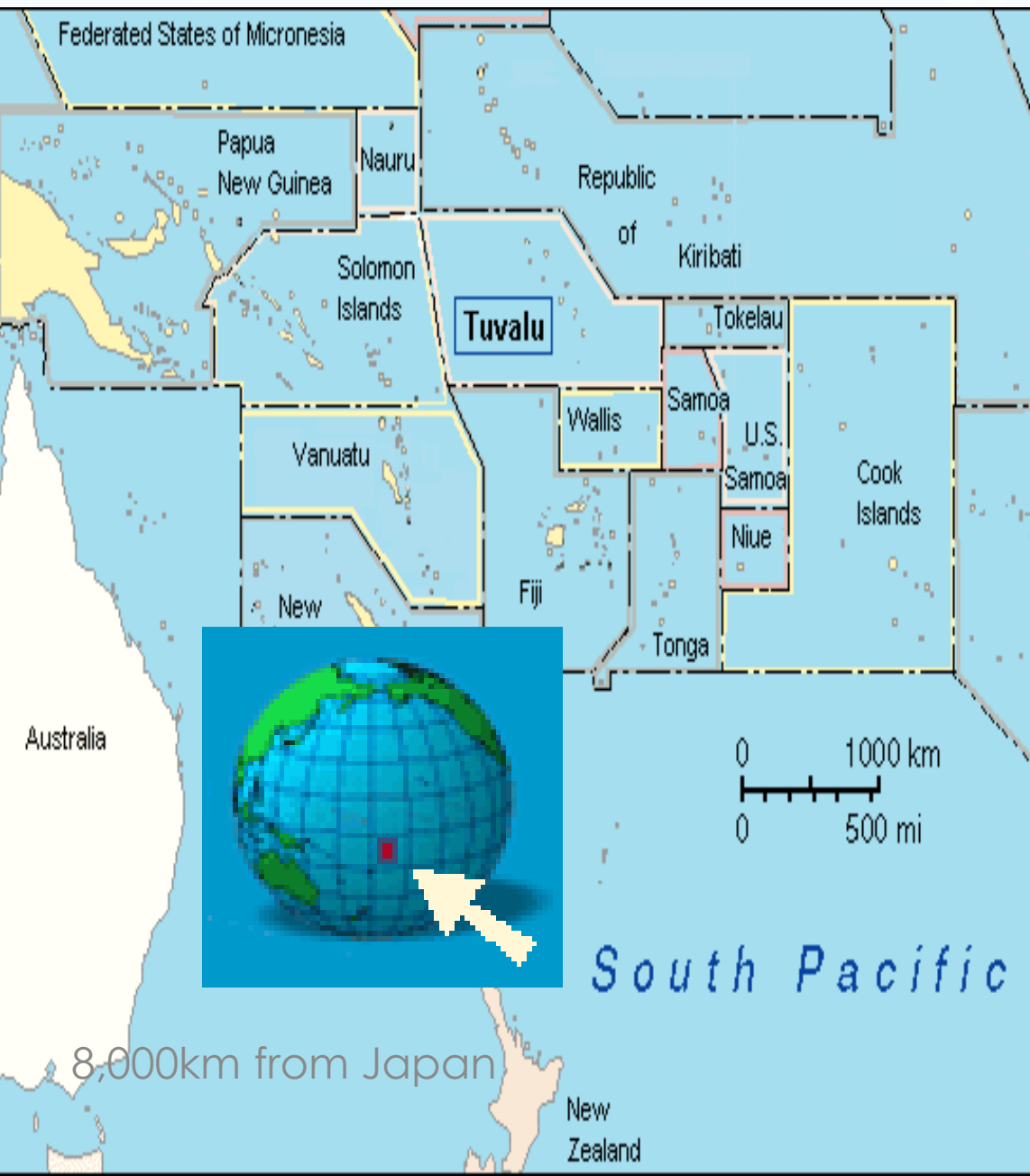
**Sustainable Energy Investment Plan in National  
Development Strategy - TUVALU**

Tuvalu

# AGENDA

- ✧ Country Profile
- ✧ Place of Sustainable Energy Investment Plan in National Development Strategy
- ✧ Progress of Implementation
- ✧ Main challenges & Key Issues
- ✧ Main challenges & lessons learned from preparing and in processing IP
- ✧ How IP will be integrated into the medium and long term development planning
- ✧ Main challenges for accessing finance to improve access to sustainable energy
- ✧ How IP could better incorporated a multi-stakeholder approach and engage with prospective financiers regarding investment opportunities

# TUVALU PROFILE



- 9 inhabited islands
- Land area – 26km<sup>2</sup>
- Population – 11,206 (2012)
- 47% live on Funafuti
- GDP - USD46.1m (2016)
- Electricity Access Rate is 98%
- Total Electricity Cost is USD 0.79 per kWh
- Average fuel cost is USD 0.59 per kWh
- Fuel imported and cost approx. USD1.5 per litre.

# Place of Sustainable Energy Investment Plan in National Development Strategy

- ✧ Tuvalu is committed to the achievement of 2030 Agenda including SDG 7
- ✧ Call for UN member countries to secure access to affordable, reliable, sustainable and modern energy for all under SDGs 7.
- ✧ Tuvalu National Strategy for Sustainable Development 2016 to 2020 (TKIII) is aligned to the UN SDGs
- ✧ Tuvalu National Energy Policy (NEP) endorsed in 2009 while the Tuvalu Renewable Energy Master Plan was adopted in 2012

# Place of Sustainable Energy Investment Plan in National Development Strategy ....cont'd

- ✧ The NEP is a fifteen years framework to 2024, and aim to reinforce energy security by adopting sustainable energy systems.
- ✧ The NEP has seven strategic areas: energy planning, coordination and management; petroleum; transport; electricity; renewable energy; conservation and efficiency; and environment.
- ✧ The NEP announce the Government of Tuvalu goal of 100% of using renewable energy by 2020, and which revised to 2025 in the TKIII.
- ✧ The formulation of Tuvalu Renewable Energy Master Plan 2012 – 2020 for the country to have greater energy security.

# Progress of Implementations

- ✧ In 2008, about 98% of Tuvalu electricity generation is diesel based, therefore power costs are very sensitive to increase in fuel prize.
- ✧ EU funded and completed installation of 202kW of solar, batteries ancillary on three of the outer islands. (May 2015)
- ✧ Government of NZ funded and completed installation of solar photovoltaic (PV) projects on the remaining four of the outer islands with 1,030kw of solar PV, batteries and ancillary. (Dec 2015)
- ✧ Other donors including Australia, Japan, Italy, United Arab Emirates and the World Bank have assist Tuvalu with their activities focused on the replacement of diesel generations with renewable energy technologies.

# Progress of Implementations

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- ✧ UAE through Masdar initiative have provided funds for the installation of grid connected solar PV on Funafuti.
- ✧ NZ is providing installation of 170kW of grid connected solar PV also on the capital Funafuti.
- ✧ The World Bank has approved funding for the installation of 925kW of solar PV and 200kW of wind power for the capital.
- ✧ Efforts from donors to increase the use of biofuel with the target of having 5% share in electricity generation by 2025.
- ✧ Currently, present access rate to quality lighting is 100%.

# Key Challenges & Issues

- ✧ High dependency on costly imported fuel;
- ✧ High maintenance costs of the generation and distribution systems in marine environment;
- ✧ High capital cost for power infrastructure which requires development assistance from donor partners;
- ✧ Tuvalu's small size limits the opportunity for private sector development of renewable energy;
- ✧ Limited land space for solar arrays to be mounted resulting constraint the development of renewable energy sources.



# Main challenges in preparing IP

- ✧ Technical capacity to guide and prepare investment prospectus is not easily available, and Tuvalu is highly depend on regional and international organizations;
- ✧ Time taken to prepare an IP may take longer depend upon the availability of regional and international technical experts.

# Key lessons learned in processing IP

- ✧ Efficiencies in the clean energy or research development in biofuels and other green technology, all count for a low emission development model;
- ✧ Further decouples emissions from growth and truly sustainable for climate vulnerable SIDS like Tuvalu.

# How IP will be integrated into the medium and long term development planning

- ✧ Tuvalu has integrated sustainable energy investment prospectus into its National Development Plan (TKIII);
- ✧ Tuvalu has completed its' National Infrastructure Strategic Investment Plan (TISIP II) and its' Asset Maintenance Framework in early 2017.
- ✧ The TISIP II considers energy infrastructure needs as in the NEP and the National Renewable Energy Master Plan including among other infrastructure needs for the next 10 years while Asset Maintenance consider maintenance of energy infrastructure including replacement of solar PV batteries in the next 10 years.

# In Asia-Pacific context, the most appropriate financial instruments in implementing the sustainable energy projects

- ✧ Through donor support both in terms of finance and technical support;
- ✧ Maintaining and creating new stakeholders partnerships is important vehicles for mobilizing and sharing of knowledge, expertise, technologies and financial resources to deliver sustainable energy.

# Main challenges for accessing finance to improve access to sustainable energy

- ✧ Stringent criteria set by some of the development partners to access finance;
- ✧ Application process for donor funding can be long and difficult;
- ✧ Lack of information and knowledge on the types of finance available for a country like Tuvalu which is isolated and with high communication and transaction costs;
- ✧ Donors sometime have their own priorities rather than meet priorities of the recipient country.

How IP could better incorporated a multi-stakeholder approach and engage with prospective financiers regarding investment opportunities

- ✧ If all relevant parties and stakeholders have the desire to share their knowledge and experiences on their relevant issues;
- ✧ A need for strong leadership and commitment from all levels including at political level;
- ✧ Raise capacity and awareness at all levels to access finance.

# Conclusion and Recommendations

- ✧ Tuvalu National Strategy for Sustainable Development 2016 to 2020 highly consider the importance of have sustainable energy to meet its vision of have a more prosperous and healthier country in 2020;
- ✧ Although Tuvalu has 98% of the households have access to electricity, there is a very high cost to sustainably deliver energy due to the high operational and maintenance costs.
- ✧ Tuvalu has embarked on a rigorous pathway for electricity to generate from renewable energy instead of diesel generators.
- ✧ Tuvalu is vulnerable to the effects of climate change and natural disasters, therefore we continue to call for UN DESA to review its LDC graduation criteria to include the Economic Vulnerability Index as one of the two criteria for an LDC country to graduate from its LDC status.