

**Pacific High-level Policy Dialogue on  
“The Role of Macroeconomic Policy and Energy Security in supporting  
Sustainable Development in the Pacific”**

**8-9 October 2012, Nadi, Fiji**

**Jointly organized by  
UN ESCAP and Sustainable Development Working Group of the Council of Regional  
Organizations in the Pacific (CROP)**

**Session 2 – Enhancing Energy Security for Sustainable Development**

*Presentation*

**Enhancing Energy Security for Sustainable Development**

by

**Amelia Kinahoi-Siamomua**, Programme Advisor, Division of Sustainable  
Development, **Tom Hamlin**, Inter-Regional Adviser (Energy, Transport &  
Climate Change), UN DESA, New York

**October 2012**

## *Session 2: Enhancing Energy Security for Sustainable Development*

- Tom Hamlin, Inter-Regional Adviser (Energy, Transport & Climate Change), [hamlin@un.org](mailto:hamlin@un.org)
- Amelia Kinahoi-Siamomua, Programme Adviser (SIDS), [siamomua@un.org](mailto:siamomua@un.org)

UNDESA (Dept. of Eco & Social Affairs)  
Division for Sustainable Development  
New York



### **Pacific Small Island Developing States (Pacific SIDS)**

Part 1: Global Policies & Strategies

**(i) Barbados Programme of Action  
(BPOA) -1994**

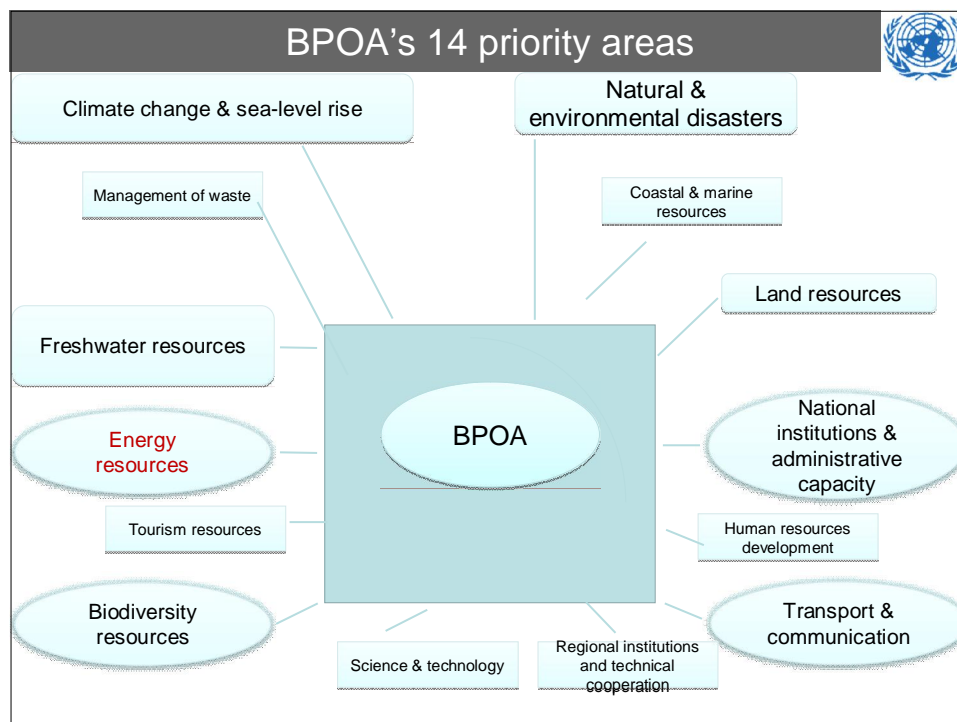
**(ii) Mauritius Strategy for Implementation  
of the BPOA - 2005**

**(iii) The Future We Want (from Rio +20) -  
2012**

**(iv) Inter-governmental process of CSD -  
à High Level Forum @ UN in New York**

Part 2: Technical Cooperation to support  
energy security for sustainable developme...






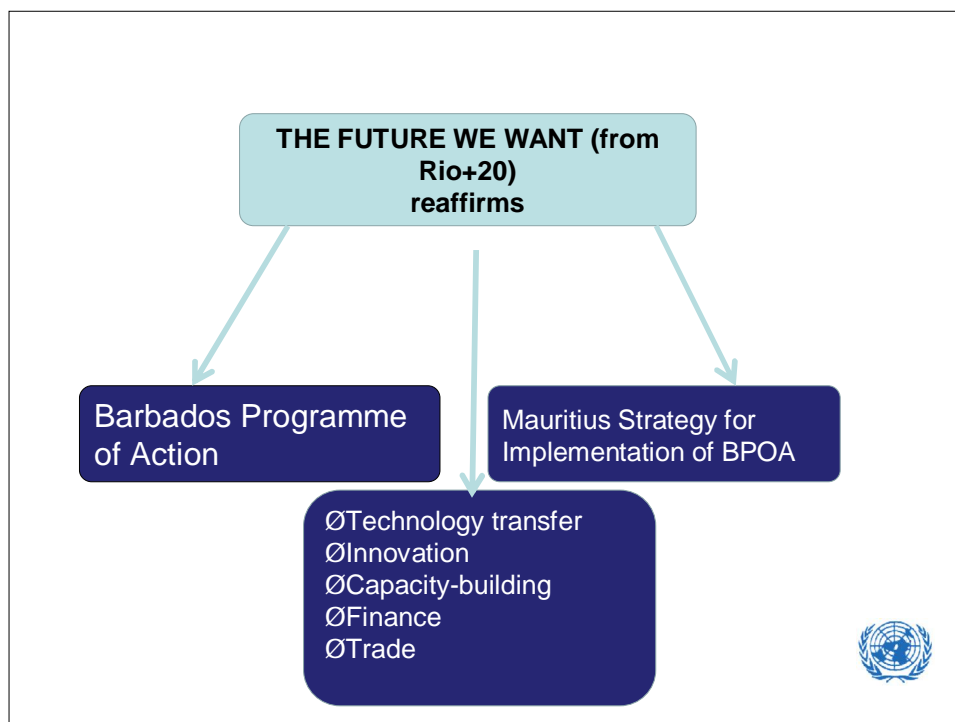
### *Mauritius Strategy for Implementation (MSI) of the BPOA*

à energy dependence as major source of economic vulnerability  
 à develop and implement integrated energy programmes for building resilience

### *The Future We Want*

à reaffirms BPOA, MSI

à integration of 3 pillars of SD 



## Technical Cooperation

- Ø Country VRP – Vulnerability Resilience Profile, a methodology for self-assessment of progress on BPOA, MSI. More specifically, using a core set of indicators of SD (including the energy sector).
- Ø Tom Hamlin, Inter-Regional Adviser (Energy, Transport & Climate Change) à Low Carbon SIDS Technology Transfer



## Policy and technology transfer

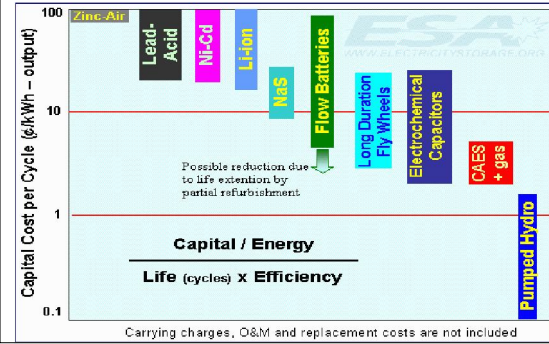
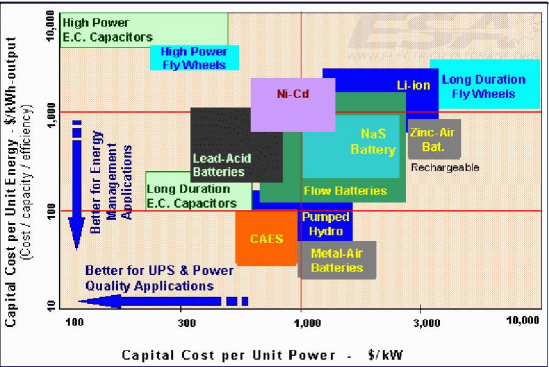
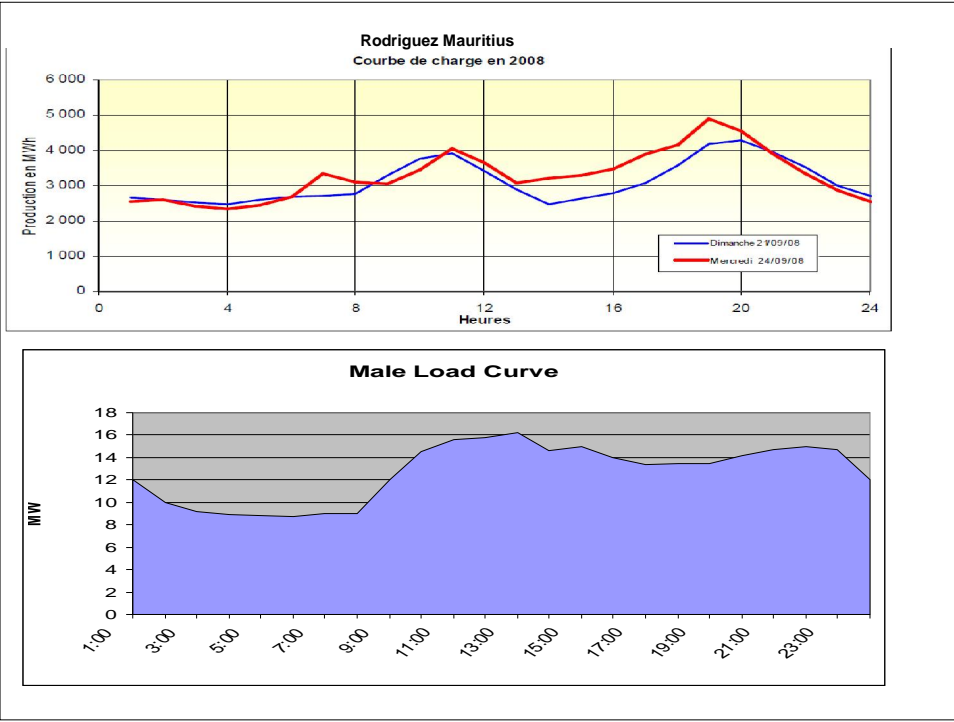
- SIDS policy targets – as low of imported fuel as possible (50 to 10% Renewables)
- Over 30% penetration of solar and wind energy is not considered feasible due to fluctuating output and loads
- Batteries technology too expensive, low service life, creates disposal problems (heavy metals)



## Technology Transfer/ Adaptation Opportunities

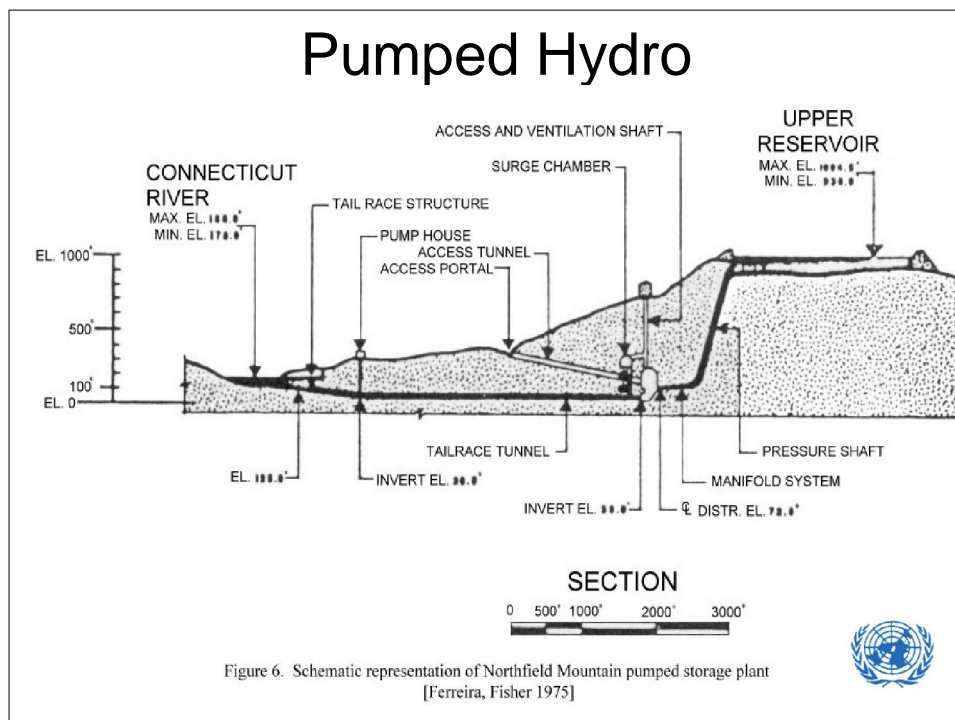
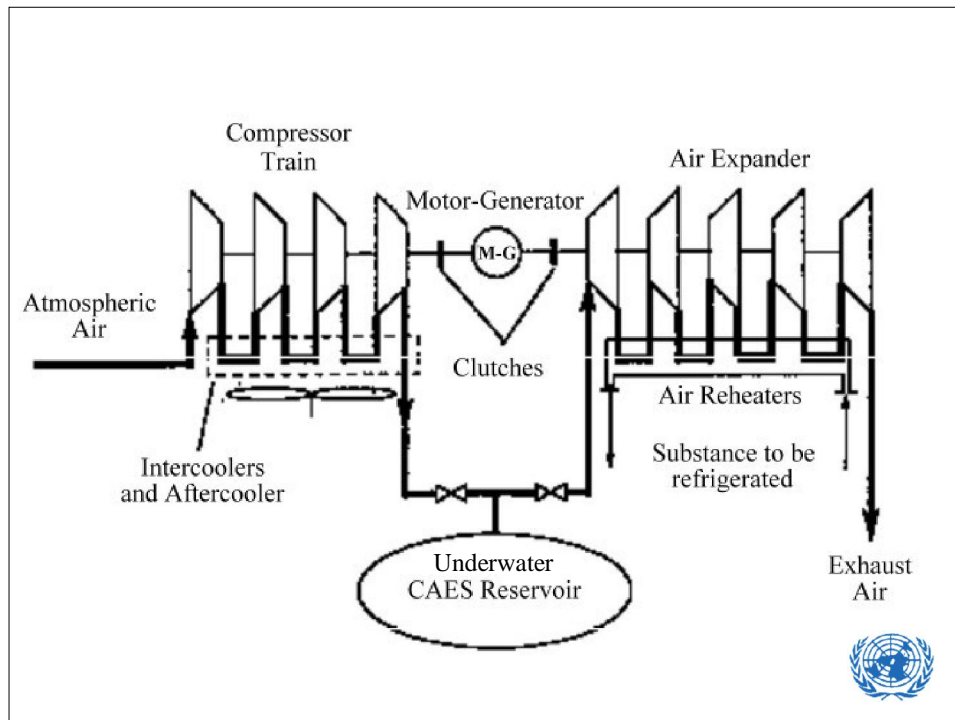
- Pumped Hydro with water management benefits
- Compressed Air Energy Storage with cogenerated refrigeration
- Ice storage
- Sea Water Cooling
- Other?





Under Water  
CAES

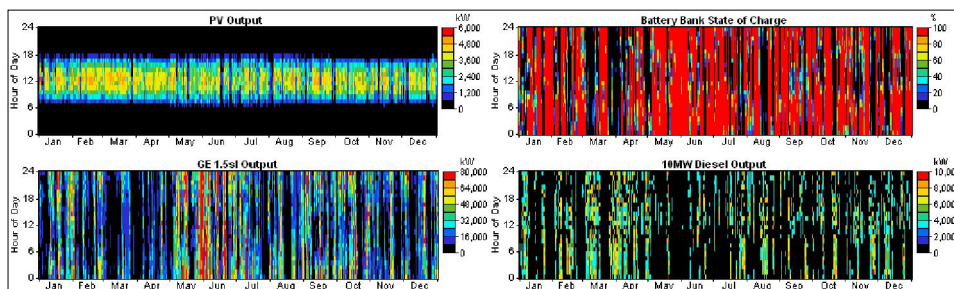




# UNDESA analysis of zero carbon system for Male'

## System architecture

- PV Array 5 MW
- Wind turbine 50 - GE 1.5MW
- 25 MW Bio-Diesel
- Compressed air (battery) power 20 MW capacity 20 MWh
- Dispatch strategy Load Following with excess generation to Reverse Osmosis Water Plant





## Policy and technology working together

- Low Carbon SIDS project is at inception stage
- 4 SIDS currently under policy review, 2 Sites to be identified for pilots, sub-regional workshops to include other interested SIDS



## THANK YOU!

- Tom Hamlin, Inter-Regional Adviser (Energy, Transport & Climate Change), [hamlin@un.org](mailto:hamlin@un.org)
  - Amelia Kinahoi-Siamomua, Programme Adviser (SIDS), [siamomua@un.org](mailto:siamomua@un.org)
- UNDESA (Dept. of Eco & Social Affairs)  
Division for Sustainable Development  
New York

