

A PECC International Project 2011-2012 Sustainable Management of Marine Resources

Seminar Two: Oceans as a Source of Renewable Energy Hawaii | March 26-28, 2012

Major economic, environmental and social challenges are upfront when dealing with the necessary management of oceans and coastal areas. An integrated and sustainable management of marine resources is strongly needed to allow for better protection and exploitation of marine resources as well as for the development of recreational and economic activities. Economic activities are mostly located on the coastal areas. Today, 40% of the populations worldwide live in the coastal area or within a 70km range; in particular, in the emerging economies of the Asia-Pacific. The World Bank estimates that by 2025 this figure would dramatically increase. Such challenges deserve a serious attention; they have a worldwide bearing. Oceans account for more than 75% of earth's surface; and it is for this very reason that it is necessary to promote a sustainable management of the oceans.

On October 22, 2010 the PECC Standing Committee in Tokyo endorsed the proposal made by FPTPEC, to conduct, in close cooperation with other PECC economies, a PECC international project on the **Sustainable Management of Marine Resources**.

The first seminar, "***Oceans at Risk: Protection from the ocean to the coast, sharing marine resources***," was held in Nouméa, New Caledonia, November 22-24, 2011. Presentations and papers from Nouméa seminar are available on the PECC website.

The Nouméa seminar has put forward four main issues:

- an increased vulnerability of the coastline due to climate change
- a need to change direction immediately to avoid risks for international security
- a need for more solidarity amongst countries worldwide
- a need for new economic models for a better governance.

The second seminar entitled, "***Oceans as a Source of Renewable Energy***" will be held in Hawaii during March 26-28, 2012.

Four issues will be addressed:

- Available technologies, new technologies/industries to be developed for a better and wider use of energy from the oceans;
- New sources of energy from the oceans (thermal, wave, tidal, wind, etc.);
- Ways to increase the use of energy from marine sources (research, incentives, etc.);
- Role of marine energy in building sustainable cities for the future, cost and financing of necessary infrastructures.

DAY ONE (Monday, March 26)

(VENUE: East West Center, John A. Burns Hall, Honolulu)

- 08.30-09.00 Registration
- 09.00-09.20 Opening Remarks
- 09.20-12.30 **Session 1: New and existing technologies to optimize use of energy from the oceans**
Chair: Dr. Charles E. Morrison, International Co-Chair, PECC/ President of East West Center
- 09.20-09.40 Recent Commercial OTEC Developments in the Pacific Islands Region
(Dr. Hans Krock, Energy Harvesting Systems, LLC, Honolulu, Hawaii)
- 09.40-10.00 Honolulu Seawater Air Conditioning (HSWAC) Project
(Mr. Anders Rydaker, Chief Operating Officer, HSWAC, Honolulu, Hawaii)
- 10.00-10.20 Coffee Break
- 10.20-10.40 Overall picture of the marine renewable energy Innovation policies: a projected timetable to promote new marine technologies from research and development to industrial implementation: a cost-efficiency approach
(Mr. Henri Boyé, French Ministry of Sustainable Development, France)
- 10.40-11.00 Mechanical energy: actions of elements and energy conversion, materials and structures, need for computational and experimental modelling, technological obstacles
(Mr. Marc Le Boulluec, IFREMER, France)
- 11.00-12.30 Discussions
- 12.30-14.00 Lunch at EWC**
- 14.00-15.30 Session 2: New sources of energy from the oceans (thermal, wave, tidal, wind) - from technical potentialities to economic reality**
Chair: Mr. Michel Paoletti, Secretary General, FPTPEC Polynesia
- 14.00-14.20 Ocean thermal energy conversion: challenges and opportunities
(Dr. Gerard C. Nihous, Associate Professor, University of Hawaii)
- 14.20-14.40 Exploring ways to switch from fossil fuel to renewable electricity - the example of a Polynesian public utility
(Mr. Marc Chin Foo, Project Manager, EDT French Polynesia)
- 14.40-15.00 Usage of new marine technologies in the coastal cities and integrating a wide range of renewable energies into urban electricity network: Operator's views on smart grids
(Mr. Nicolas Renard, Veolia Environnement, France)
- 15.00-15.20 Exploration and utilization of marine renewable energy in China
(Amb. Wu Zhenglong, Vice Chair, China National Committee for Pacific Economic Cooperation)
- 15.20-16.00 Discussions
- 17.00 Departure on bus to Honolulu Airport

DAY TWO (Tuesday, March 27)

VENUE: Natural Energy Laboratory of Hawaii Authority (NELHA)

09.00-11.30 Session 2 continued

09.00-11.30 Hawaii Ocean Science: Using Renewable Marine Resources and Ingenuity for the 21st Century
(Mr. Greg Barbour, Executive Director, NELHA, Hawaii)

11.30-12.30 Lunch at NELHA

12.30-16.30 NELHA Field Visits: Sopogy (Solar CSP), Makai Ocean Engineering (OTEC), Cellana (marine bioalgae), and Big Island Abalone. NELHA marine support and OTEC infrastructure.

19.00 Dinner at the Hilton Waikoloa Village hosted by FPTPEC

DAY THREE (Wednesday, March 28)

VENUE: Natural Energy Laboratory of Hawaii Authority (NELHA)

09.00-12.30 Session 3: Ways to increase the use of energy from marine sources: research and incentives

Chair: Amb. Wu Zhenglong, Vice Chair, China National Committee for Pacific Economic Cooperation (CNCPEC)

09.00-09.20 AMI-ADEME (invitation for expression of interest by the French Agency for Environment and Energy Management) and AAP IEED (call for projects for Institute of Excellence in Decarbonated Energies), *France Energie Marine*
(Mr. Marc Le Boulluec, IFREMER, France)

09.20-09.40 EMACOP (Marine Coastal and Portuary Energies) - A research project from France
(Mr. Henri Boyé, Ministry of Sustainable Development, France)

09.40-10.00 "Synergie" - A case study of New Caledonia Cluster to develop, promote and expand new renewable energy: wave energy
(Mr. Philippe Marconnet, New Caledonia)

10.00-10.20 Coffee Break

10.20-10.40 Development and commercialization of the CETO wave technology - lessons and global market potential
(Mr. Tim Sawyer, Site Development Manager, Carnegie Wave Energy Ltd, Australia)

10.40-11.00 SPC (Secretariat of the Pacific Community) – a case study of a regional organization that helps non-autonomous territories attain energy independence and human resources development through capacity-building
(Mr. Solomone Fifita, Deputy Director of Energy, Secretariat of the Pacific Community, New Caledonia)

11.00-12.30 Discussions

12.30-14.00 Lunch

14.00-15.30 Session 4: Case studies of renewable energy in operation

Chair: Dr. Jerry Finin, Director of Pacific Islands Development Program, East West Center

14.00-14.20 A case study from Chinese Taipei: the development of a tidal power unit
(Prof. Cheng-Han Tsai, National Taiwan Ocean University, Chinese Taipei)

14.20-14.40 Thermal energy: a 10 MW project in Tahiti
(Mr. Philippe Dubau, Groupe Albert Moux)

14.40-15.00 A case study from the Indian Ocean, La Réunion
(Mr. Henri Boyé, Ministry of Sustainable Development, France)

15.00-15.20 SWAC integration in luxury hotels in French Polynesia: case presentation on behalf
of Dick Bailey, Intercontinental Bora Bora and Brando resort in Tetiaroa
(Mr. Michel Paoletti, Secretary General, FPTPEC Polynesia)

15.20-16.00 Discussions

16.00-17.00 Session 5: Follow up and conclusion by session chairs

Chairs: Dr. Charles E. Morrison, Prof. Jean Luc Le Bideau

- *Session chairs are requested to compile key points and recommendations discussed during their respective sessions and briefly present them during the concluding session.*

[END OF PROGRAM]