

ENHANCED OCEAN UPWELLING: Science, Engineering and Potential Applications

AGENDA: Tuesday 29 November 2011 • East-West Center (EWC), Asia Room
Science – Technology – Engineering - Modeling

- 0800-0830 **Coffee**
- 0830-0900 **Welcome (Dave Karl, Brian Taylor, David Kingsbury)**
- 0900-0930 **Dave Karl, UH Mānoa**
*Ocean upwelling, new production and carbon sequestration:
Can we, or should we, enhance nature?*
- 0930-1000 **Luis Vega, UH Mānoa**
*Ocean Thermal Energy Conversion (OTEC): Technology, economics
and environmental impacts*
- 1000-1030 **Break**
- 1030-1100 **Frederic Berg, Honolulu Seawater Air Conditioning LLC**
Why seawater air conditioning?
- 1100-1130 **Lissa Morgenthaler-Jones, LiveFuels**
The truth about algae, biofuels and the future of food
- 1130-1200 **General discussion**
- 1200-1300 **Lunch: EWC Garden Lanai, Bangkok Chef buffet**
- 1300-1320 **Greg Rocheleau, Makai Ocean Engineering**
Modeling the physical and biological effects of OTEC plumes and artificial upwelling concepts
- 1320-1340 **Gerard Nihous, UH Mānoa**
Studies of OTEC environmental interactions using ocean general circulation models
- 1340-1400 **William Munslow, Lockheed Martin Corporation**
Progress toward commercialization of OTEC
- 1400-1420 **Charity Deluca, LiveFuels**
A case for upwelled nutrients in multi-trophic aquaculture (MTA)
- 1420-1440 **Ulf Riebesell, IMF-GEOMAR**
Ocean acidification in the high Arctic: a mesocosm CO₂ perturbation experiment
- 1440-1500 **Daniela Böttjer, UH Mānoa**
BAG-1: An open ocean mesocosm deployment
- 1500-1530 **Break**
- 1530-1550 **Angelicque White, Oregon State University**
An open ocean trial of controlled upwelling using wave pump technology
- 1550-1610 **E. Gordon Grau, UH Mānoa**
UH Sea Grant's Center for Sustainable Coastal Tourism
- 1610-1630 **Pat Takahashi, UH Mānoa and Huffington Post**
The Pacific International Ocean Station
- 1630-1700 **General discussion; Review of Day 1; Preview of Day 2**
- 1700-1900 **Reception: EWC Garden Lanai, Gordon Biersch**



SCHOOL OF OCEAN AND EARTH
SCIENCE AND TECHNOLOGY
UNIVERSITY OF HAWAII AT MĀNOA

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AGENDA: Wednesday 30 November 2011 • C-MORE Hale, Moore Conference Center
A prospectus for the future

- 0800-0830 **Coffee**
- 0830-0845 **Review of Day 1; Preview of Day 2 (Dave Karl)**
- 0845-0905 **Marlin Atkinson, UH Mānoa**
Predicting coral reef responses to elevated nutrients, particles and dissolved inorganic carbon of upwelled water
- 0905-0925 **Sasha Tozzi, UC at Santa Cruz**
Monitoring photosynthetic performance of marine phytoplankton in response to anthropogenic perturbations
- 0925-0945 **Karin Björkman, UH Mānoa**
Phytoplankton response to deep sea water enrichment in the North Pacific subtropical gyre: Effects on biomass, community structure and nutrient utilization
- 0945-1015 **John Dore, Montana State University**
Phytoplankton blooms in stratified ocean waters: Stimulation via natural entrainment processes and a look at associated inorganic carbon system perturbations
- 1015-1045 **Break**
- 1045-1115 **Ricardo Letelier, Oregon State University**
From mesocosm to ecosystem: The challenge of extrapolating experimental observations across scales
- 1115-1200 **Dave Karl, UH Mānoa**
Remaining challenges and opportunities, including needs
- OPTIONAL
- 1200-1330 **Lunch (no-host) at UH Mānoa campus eateries, or elsewhere**
- 1200-1400 **Tour of C-MORE Hale** (let us know and we will arrange)
- 1330-1500 **Tour of IFM-GEOMAR mesocosms**
(UH Marine Center)
- PLANNING COMMITTEE
- 1330-1700 **Draft workshop report, continue discussion of "next steps"**
(C-MORE Hale Agora)

