SOLAS Mid Term Strategy Initiative “Air-sea gas fluxes at Eastern boundary upwelling and Oxygen Minimum Zone (OMZ) systems”

Lima, Instituto de Geofísica de Peru (IGP)
As of October 15th, 2012

Workshop on Towards an integrative regional coupling in the EBUS, November 26-27, 2012

One day Series of conferences, November 28, 2012 (7 talks of 45 minutes each including questions)

Available funding: 25 K$ from SOLAS

Invited scientists:

Dimitri Gutierrez, IMARPE, Peru
Michelle Graco, IMARPE, Peru
Aurélien Paulmier, IMARPE/LEGOS, Peru
Ken Takahashi, IGP, Peru
Jose Macharé, IGP, Peru
Aldo Montecinos, University of Concepcion, Chile
René Garreaud, University of Chile, Chile
Rainer Volkamer, University of Colorado, USA on November 27th only
Christoph Garbe, University of Heidelberg, Germany
Tim Fischer, GEOMAR, Germany
Hermann Bange, GEOMAR, Germany, OK only on November 28 for Series of Conferences
Ivonne Montes, GEOMAR, Germany
Danielle Wain, University of Galway, Ireland
Roberto Sabia, Frascati, ESA, Italy
Boris Dewitte, LEGOS, France
Christophe Maes, LEGOS, France
Veronique Garçon, LEGOS, France
Renato Salvatecci, LOCEAN, France
Guy Caniaux, CNRM Météo France
Zouhair Lachkar, ETH Zurich, Suisse
Parv Suntharalingam, UEA, UK
Martin Hernandez Ayon, UABC, Mexico

+of course scientists from IGP who would like to participate

List of speakers for the One day Series of Conferences:

René Garreaud,
Rainer Volkamer,
Zouhair Lachkar
Christophe Maes,
Hermann Bange
Guy Caniaux
Parv Suntharalingam
Ivonne Montes
Final agenda

Monday November 26, 2012

08:30  Departure from hotel in Miraflores (Senorial, www.senorial.com)
09:30  Welcome to IGP
Ronald Woodman, Ken Takahashi, José Macharé
   Introduction of SOLAS and to the Workshop
Véronique Garçon
09:50  Surface (energy and water) fluxes at the air-sea interface (in situ measurements of fluxes and satellite-based flux estimates)
Turbulent flux measurements on both sides of the air-sea interface
Danielle Wain
Heat and freshwater budget closure from a model approach
Guy Caniaux
11:00  Coffee break
11:20  Winds forcing; Results from VOCALS-Rex
Aldo Montecinos, René Garreaud, Ken Takahashi
12:40 Lunch

Tuesday 9:30
14:40 Challenges in modeling of regional ocean-atmosphere interaction in the Peru EBUS
Ken Takahashi, B. Segura, Julio Quijano, Katerina Goubanova, Boris Dewitte
15:30 The response of the Peruvian upwelling system to centennial-scale global change during the last ~1700 years
Renato Salvatecci
16:20 Coffee break
16:40 Inferring CO₂ fluxes from space: A multiscale approach
Véronique Garçon, Joël Sudre, Hussein Yahia, Boris Dewitte, Aurélien Paulmier, Isabelle Dadou, André Butz and Christoph Garbe
Assessing atmospheric gas concentrations and interfacial fluxes from remote sensing
Christoph Garbe
OMZ influence on the CO₂ system in the Midriff islands of the Gulf of California: A promising observatory for global change studies
Martin Hernandez Ayon
18:25 Ice breaker at IGP
19:30-20:00  Departure to Miraflores
Tuesday November 27, 2012

08:30  Departure from hotel in Miraflores
09:30  El Niño events in the Peru EBUS

Ken Takahashi, Kobi Mosquera, Aldo Montecinos, Katerina Goubanova, Boris Dewitte
Intraseasonal upwelling variability off Peru: remote and local forcings versus non-linear processes

Boris Dewitte, Serena Illig, Katerina Goubanova, Ken Takahashi, Kobi Mosquera, Ivonne Montes, Aurélien Paulmier and Véronique Garçon
Is air-sea interaction inhibited in Tropical upwelling systems?
Tim Fischer

11:15  Coffee break

11:35  Very short lived halogens and OVOC over the tropical Pacific Ocean

Rainer Volkamer

12:15  Rationale for a reference site off Peru (Hormigas Islands) as part of Ocean SITES (climate quality instrumentation, data-handling systems, multi-variable site)
Ken Takahashi, Jose Macharé, Boris Dewitte, Aurélien Paulmier

13:15  Lunch

14:45  Towards an integrative regional coupling in the EBUS: modelling and observations (in situ and remote sensing): atmosphere, physical and biogeochemical dynamics

Denitrification versus Anammox in the Eastern Tropical Pacific: a numerical modeling study

Ivonne Montes

Physical influence on the biogeochemical feature and processes in the Peruvian OMZ

Aurélien Paulmier, Mélanie Giraud, Justyna Jonca, Violeta Leon, Jonathan Valle, Ivonne Montes, Joël Sudre, Octavio Moron, Jorge Quispe, Gaute Lavik, Patricia Grasse, Martin Frank, Lothar Stramma, Boris, Dewitte, Véronique Garçon

N cycling in upwelling zones and low oxygen environments

Parv Suntharalingam

Exploring the sensitivity of coastal hypoxia to climate change in EBUS

Zouhair Lachkar

16:55  How to address the challenges of Future Earth: Research for global sustainability?
Roberto Sabia

17:40  Closure of workshop
Ken Takahashi, Véronique Garçon

18:00  Departure to Miraflores

20:00  Workshop dinner
Wednesday November 28, 2012

08:30  Departure from Miraflores
09:30  The coastal wind regime along western South America
       René Garreau
10:15  Recent results on air-sea interactions over the Atlantic equatorial upwelling
       Guy Caniaux

11:00  Coffee break

11:30  Tropical oceans, Atmospheric Chemistry and Climate: Role of reactive halogens and
       oxygenated VOC
       Rainer Volkamer
12:15  Ocean circulation of the South Pacific gyre
       Christophe Maes

13:00  Lunch

14:30  Trace Gases (N₂O, CH₄, DMS) in the ocean
       Hermann Bange
15:15  Quantifying Oceanic Biogeochemical Fluxes: Modelling Applications and Challenges
       Parv Suntharalingam

16:00  Coffee Break

16:30  Modeling the OMZ of the Eastern Tropical Pacific
       Ivonne Montes
17:15  How do ocean mesoscale eddies affect biogeochemical processes? Insights from
       model simulations and satellite observations
       Zouhair Lachkar

18:30  Departure to Miraflores