III International Conference on E N S O

Bridging the gaps between Global ENSO Science and regional processes, extremes and impacts

Guayaquil, Ecuador 12-14 November 2014

Organized by

CIIFEN

CENTRO INTERNACIONAL PARA LA INVESTIGACIÓN DEL FENÓMENO DE EL NIÑO

With the sponsorship of

Secretaría de Gestión de Riesgos

Global Framework for Climate Services

World Meteorological Organization

WCRP World Climate Research Programme

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BACKGROUND

It is broadly known that the warm and cold phases of ENSO (namely, El Niño and La Niña) cause serious social and economic impacts to countries around the world. Knowledge about ENSO and its impacts help to strengthen prediction tools used in support of early warning systems. Therefore, improving our understanding of ENSO is fundamental in reducing societal vulnerabilities.

The high social and economic relevance of ENSO research and prediction must be visible in the international arena and the past experiences of extraordinary ENSO events such as the El Niño 1982-1983 and 1997-1998 remind us of our vulnerability as a society. This vulnerability to extreme natural climate hazards is moreover likely to increase in the face of global warming.

The past 30 years has seen significant progress in our ability to observe, understand and predict ENSO. Yet, in the past decade, ENSO prediction skill has declined with significant consequences on how to prepare for and cope with the associated climatic impacts. This decline in prediction skill has occurred despite new theoretical approaches, significant advances on physical parameterizations of subgrid-scale processes, and better and more robust computer power. In addition, there are major unsolved questions about the influence of climate change on ENSO both in the current climate and in the future.

It is also needed to bridge the gaps between the global and the regional science and to improve operational ENSO prediction. These imperatives demand a strong and coordinated scientific effort that requires sustaining vital observing systems such as the TAO-TRITON array, advancing ENSO science, including more regional processes in climate models, and developing improved assimilation systems for new ocean and climate data on region scales.

This background highlights the need to address ENSO scientific challenges in the context of international climate research, assessments, and operational prediction efforts. As a catalyzing activity in this process, CIIFEN proposes a **III International Conference on ENSO**, dedicated to "***Bridging the gaps between Global ENSO Science and regional processes, extremes and impacts***" to be held in Guayaquil, Ecuador from 12-14 November 2014. This conference is a follow-on to the Second International "Workshop on ENSO, Decadal Variability and Climate Change in South America: Trends, teleconnections and potential impacts" held in October 2010 and the First International ENSO Conference: "The El Niño phenomenon and its global impact" in May 2005, both held in Guayaquil, Ecuador.

The III International Conference on ENSO in November 2014 will aim to synthesize progress on ENSO research, with a detailed view of the climate-society relationship, and to share experiences in vulnerability assessment methodologies used by the climate impact studies community. This conference will bring together scientists and experts involved in research, observations and operational climate services to build on new knowledge for improving the prediction of ENSO and its regional impacts, and to discuss decision support approaches in preparation of and response to ENSO climate anomalies. Our intent is to provide a forum for efficiently linking science with societal needs, one of the envisaged World Climate Research Program (WCRP) "Grand Challenges."

MAIN GOAL OF THE CONFERENCE

To review progress on the science of ENSO and related regional processes in order to improve the prediction of regional impacts; and to contribute to development of decision support frameworks that allow timely and appropriate planning and response at national and local levels.

OBJECTIVES

- To synthesize the progress in ENSO research: physical processes and feedbacks, theoretical approaches, improved representation of ENSO in complex climate models, decadal to centennial variations in the ENSO cycle, the role of the extratropics in ENSO development, ENSO interaction with regional processes, and related topics.
- To review the global and regional challenges of ENSO prediction and climate information services.
- To review the history of recurrent hazards related to ENSO extremes and the need to enhance research efforts in this field.
- To update our understanding of global ENSO teleconnection patterns and related impacts.
- To update progress on new global and regional efforts for ENSO prediction, observations and early warning systems.

CONVENER

International Research Centre for El Niño Phenomenon - CIIFEN

PARTICIPANTS

It is expected to have participation of 200 scientists from around the world who are working on climate variability and climate change associated to ENSO issue and on assessment of climate socioeconomic impacts, as well as participants from Environmental Community, Risk and Disasters Management sectors, and Decision Makers.

VENUE

The Conference will be held in the Auditorium of the Centro Cultural "Libertador Simón Bolívar" ex-MACC- Malecón 2000 in Guayaquil, Ecuador.

THE CONFERENCE

The III International Conference on ENSO will be organized in 6 plenary sessions for oral and poster presentations:

I. ENSO dynamics
II. ENSO and other modes of climate variability (intraseasonal, decadal, centennial)
III. ENSO modeling and prediction
IV. ENSO and Regional processes
V. ENSO impacts
VI. ENSO global, regional and national information services

CLIMATE SERVICES STAGE

The CLIMATE SERVICES stage is a special venue where selected ENSO Conference participants are allowed (10-15) minutes to present a climate services related topic, project or initiative. Its aim is to widen the array of topics that are discussed at the Conference beyond those that are presented in the main specialized sessions.

The CLIMATE SERVICES stage will be presented all the days of the Conference between 12h30-14h00 in a special location in the exhibition room. All the presentations will be recorded and posted in a special site for wider dissemination. The topics for each day are Climate services for:

- **Day 1** (12h30-14h00): Agriculture, food security, health and water resources sectors.
- **Day 2** (12h30-14h00 Risk management and adaptation
- **Day 3** (12h30-14h00): Decision makers, planners and authorities

Additionally, the **INTERNATIONAL EXHIBITION "CLIMATE & SOCIETY"** will be organized to allow different Weather & Climate centers, science and technology institutions, the private sector, environmental NGOs and commercial agencies to promote their activities, products and services.

III International ENSO Conference Main Program

DRAFT by 20th July, 2014

Wednesday, 12th November	
8:00-8:30	Registration
8:30 - 8:45	Opening Ceremony
8:45 -10:00	**Opening Conferences** **B. Stewart** (WMO): "ENSO information and GFCS") **M.McPhaden** (NOAA, USA):"ENSO Dynamics, Decadal Variability and Climate Change")
	Break Coffee
SESION 1: ENSO Dynamics	
10:00-11:00	Central Session Conference **Wen Ju Cai** (CSIRO, Australia): " Extreme ENSO events in a warming climate" **A. Wittenberg** (NOAA, USA): "ENSO Dynamics, Diversity, and Change"
11:10-13:00	6 oral presentations 20´ each
LUNCH TIME	Poster Presentations **Climate Services Stage**
14:00-15:00	**Session 1** continues 3 oral presentations
SESION 2: ENSO and others climate variability modes	
15:00-16:00	Central Session Conference **A. Karumuri** (CCCR-IITM, India): "ENSO flavors" **A.Timmerman** (University of Hawaii): "A new paradigm for annual cycle/ENSO interactions"
16:00-16:20	Break Coffee
16:20-18:20	6 oral presentations 20´each
	Adjourn

Thursday, 13th November	
SESION 3: ENSO Modeling and Prediction	
8:15-9:15	Central Session Conference **E. Guilyardi** (IPSL/LOCEAN, France):Challenges in modelling ENSO" **Matthew Collins** (U. of Exeter, UK): "Future changes in mean climate and ENSO"
9:15-10:35	4 oral presentations 20´each
10:35-11:00	Break Coffee
11:00-13:00	6 oral presentations 20´ each
LUNCH TIME	Poster Presentations **Climate Services Stage**
SESION 4: ENSO and Regional Processes	
14:00-15:00	Central Session Conference **K.Takahashi** (IGP, Perú): "A view of ENSO diversity from the Eastern Pacific" **D. Enfield** (RSMAS, University of Miami, USA): "The Amazon and El Niño: Its relationship in large scale and a methodology for the mesoscale study in regional watersheds
15:00-16:00	3 oral presentations 20´ each
16:00-16:20	Break Coffee
16:20-18:20	6 oral presentations 20´each
	Adjourn

Friday, 14th November	
SESION 5: ENSO Impacts	
8:15-9:15	Central Session Conference **J.Marengo** (INPE, Brazil): "Impacts of El Nino/ Tropical Atlantic variability in human and natural systems in South America" **Y. Luna** (AEMET, Spain): "On the ENSO influence on the Spanish climatic observations"
9:15-10:35	4 oral presentations 20´each
10:35-11:00	Break Coffee
11:00-13:00	6 oral presentations 20´ each
LUNCH TIME	Poster Presentations **Climate Services Stage**
SESION 6: ENSO, Global, Regional, and National Information Services	
14:00-15:00	Central Session Conference **K.R. Kumar** (WMO): Title to be defined **C. Fernández-Jaureguí** (WASA-GN): "Desafios en la gestión de recursos hídricos: el papel de la predicción climática"
15:00-16:00	3 oral presentations 20´ each
16:00-16:30	Break Coffee
16:30-17:30	3 oral presentations 20´each
17:50-18:10	Closure ceremony

ALL DAYS, ALL TIME

EXPOSITIONS IN POSTER HALL

"CLIMATE & SOCIETY" INTERNATIONAL EXHIBITION

2 Confirmed Key note speaker

12 Confirmed Opening Session Speaker

A total of 50 oral presentations and 75 posters

SCIENTIFIC COMMITTEE

OF THE III INTERNATIONAL CONFERENCE ON ENSO

Michael McPhaden (National Ocean and Atmosphere Administration – NOAA, USA)

Aldo Montecinos (Universidad de Concepción –UDEC. Chile)

Eric Guilyardi (IPSL /LOCEAN, France)

José Marengo (Instituto Nacional de Pesquisas Espaciaes – INPE, Brasil)

Matthew Collins (University of Exeter, United Kingdom)

Rupa Kumar Kolli (World Meteorological Organization - WMO)

Ashok Karumuri (Centre for Climate Change Research; Indian Institute of Tropical Meteorology, India)

Francisco Doblas Reyes (Institut Català de Ciències del Clima, Spain)

María del Pilar Cornejo (Escuela Superior Politécnica del Litoral, Ecuador)

Wenju Cai (CSIRO Marine and Atmospheric Research -Australia)

José Daniel Pabón (Centro Internacional para la Investigación del Fenómeno de El Niño –CIIFEN)

CONFERENCE PARTICIPATION FEES

Currently the registration is open for attending the Conference. The following fees are established for participants

Before October 31st, 2014	After November 1st, 2014
US $ 250,oo	US $ 300,oo

With the payment, participant will obtain: Printed material (program, Conference ID Card - badge; Certificate of participation; tourist information), e-Proceedings (a compilation of abstract in USB Memory Stick), Coffee breaks, Participation in social and cultural events, souvenir

EXHIBITION AREA FEES

In the **Climate & Society Section** of the International Exhibition the NGOs, climate centers, climate related research groups or universities can expose the experiences of case studies where the relationship climate-society is pointed out (climate knowledge application, adaptation to climate variability and change, participative warning system, and so on). Exhibition area unit with 2,5 x 2 meters ($5m^2$) will be available at a price of US$3750,oo (US$750,oo by m^2) each. This include a table, two chairs, power outlet, registration (with special ID badges) for 2 individuals of the exhibitor agency with access to the coffee breaks and Conference social event.

In the **commercial section** different agencies could present products related to the climate monitoring, analyzing, and modeling, weather forecasting and climate prediction tools. For that, exhibition areas unit with 3x2 ($6m^2$), a table, 2 chairs and power outlet will be available at US$4500,oo (US750,oo by m^2). The payment for unit exhibition area will include registration (with special ID badges) for 2 individuals of the commercial exhibitors personal with access to the coffee breaks and social event of the Conference. In the exhibition area Wi-Fi will be available during the conference. Exhibitors can separate and pay for multiple units to organize the exposition

REGISTRATION

The registration for participation (oral or poster presentation or exhibitor) can be made directly by the CIIFEN Web page http://www.ciifen.org/nternational ENSOConference filling out the form provided for this purpose.

PAYMENT

The payment may be made through the conference Web page (http://www.ciifen.org/nternational ENSOConference) using VISA, Master Card or American Express credit cards.

TIMELINE

15ht September 2014	**Deadline for full manuscript submission (for approved abstracts)** **Deadline for exhibition registration**
30th September 2014	**Deadline for payment to be included in the Final Program**
31st October 2014	Final Program Publication
12th - 14th November 2014	International Conference

In the Final Program will be included only the timely received contributions that have already paid for participation at 30 September 2014

LOCAL Co-ORGANIZING INSTITUTION

Secretaría de Gestión de Riesgo (**SGR**) de Ecuador – Instituto Nacional de Meteorología e Hidrología (**INAMHI)**

Additional information may be obtained sending e-mail message to

ENSO-International-Conference@ciifen.org

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