Potential contributions of CIIFEN to CliMWaR-LAC and Water security project in Western-South America

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Acknowledgements

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CIIFEN is a non-profit international organization established on January 10th 2003 as the result of several resolutions adopted by the United Nations since 1998. Its International Board is composed by the Governments of Ecuador and Spain, the UN International Office for Disaster Reduction (UNISDR) and the World Meteorological Organization (WMO) as observer.

MISSION

To implement actions to consolidate the science-policy interface and improve climate services to contribute on risk management and adaptation
WMO Regional Climate Center for Western South America (RCC-WSA)
CIIFEN was officially designated as WMO Regional climate Center in June 2015
WMO Regional Climate Center for Western South America (RCC-WSA)

América Tropical
Resolución de 30 x 30 Km
Temperatura Superficial (2 metros)

Venezuela-Colombia-Ecuador
Resolución de 10 x 10 Km

Perú-Bolivia-Norte de Chile
Resolución de 10 x 10 Km

Precipitación
Humedad Relativa
Viento Zonal y Meridional 200 hPa
Viento Superficial
II Meeting of the RCC-WSA Steering Committee Cartagena, Colombia, 3 March 2015
DROUGHT INFORMATION SYSTEM FOR WSA
LACA&D system. Daily data repository and assessment developed by KNMI

1222 stations from 9 countries.

Repository of meteorological variables provided by NHMSs

http://lacad.ciifen.org/
The main strategic objectives of the RCC-WSA are:

1) Strengthening capacities for climate data management
2) Capacity building for seasonal prediction.
3) Strengthening of climate services to priority sectors.
4) Positioning and visibility.
5) Resource mobilization and technical cooperation.
Regional activities of CIIFEN
The Western South America Climate Outlook Forum

- 15 RCOFs to date.
- Standardized methodology.
- Monthly seasonal forecast which is discussed and disseminated virtually.
- Operational since 2005.

Main users:
- The agricultural producers.
- The government risk management agencies.
- The water resource management officials and,
- The public health organizations.
Implementation of Statistical and Dynamic Models for Climate Prediction at NMHSs in WCCA

Regional Training Workshops


Main outcomes:

- Assessment of operational capabilities and gaps.
- Better understanding of sector specific needs.
- Agreement of road maps and regional coordination actions.
- Improved interaction with relevant contacts in agriculture and health at national and regional level.
Main outcomes:

- Intensive training on CPT and identification of potential regional trainers in Spanish.

- Intensive training on Rclimdex.

- Initial agreement in WSA countries to adopt CPT for the RCOF to replace Exever.

- Initial discussions on regional projects to strengthen climate applications for agriculture.
Guayaquil, Ecuador October, 2008

‘Ibero American Workshop in Seasonal Prediction’.

19 countries, 52 participants, from 17 NMHS.

2 TIPE workshops, the next one was held in 2009
CLIPS Training workshop on operational climate prediction for Ibero-American experts
Cuernavaca, Mexico, April 2011

- Intensive training on seasonal prediction.
- Exchange of lessons learnt among Central and South America RCOFs
- Coordination for mutual support and horizontal cooperation.
- Action Plan to develop the Guide of Good practices on seasonal prediction for Latin America.
Main outcomes:

• To adopt a Regional Work Plan aimed to perform a guided homogenization and regionalization of climate data stations in Central America, Colombia, Venezuela, Republica Dominicana, Cuba and Mexico.

• To obtain an homogenized grid for the region

• To develop a reviewed publication.
Improving seasonal prediction

Regional effort as strategy to strengthen capacities at National level
Centro Internacional para la Investigación del Fenómeno de El Niño

Guía Técnica para la Implementación de un Sistema Regional de Información Climática Aplicada a la Gestión de Riesgo Agrícola en los Países Andinos

Guía de Buenas Prácticas para la Predicción Estacional en Latinoamérica

2011
I Conferencia Internacional

1st Alexander von Humboldt International Conference on “The El Nino Phenomenon and its global impact”
Guayaquil, Ecuador
16-20 May, 2005

153 científicos-41 papers

http://adv-geosci.net/6/index.html

II Conferencia Internacional

International Workshop on ENSO, Decadal Variability and Climate Change in South America. Trends, teleconnections and potential impacts.
WCRP/CLIVAR/CIIFEN,
Guayaquil, Ecuador,
12-14 octubre de 2010.

110 científicos-11 papers

http://www.adv-geosci.net/33/index.html
III Conferencia Internacional

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

210 científicos-25 papers (en proceso)

http://www.advances-in-geosciences.net/about/scheduled_proceedings.html
Understanding vulnerability as part of climate services building
Methodologies to support decision making have been developed. In the case of the agriculture sector, a geographic information system was designed to represent spatially the vulnerability of the designated crops according to the area of intervention. These systems have been implemented in the NMHSs from Western Coast of South America (WCSA).
Only an integrated and multi disciplinary approach can represent the reality and communicate better our messages to policy makers and stakeholders.
Social and economical vulnerability

Environmental vulnerability

Vulnerabilidad socioeconómica

Vulnerabilidad Ambiental total

Leyenda
Vulne_SocioEconomica

categoría

Muy alta
Alta
Moderada
Baja
Muy baja

Leyenda
VulneAmbTotal

Categoría

Muy alta
Alta
Moderada
Baja
Muy baja

CIIFEN, 2012
REGIONAL INFORMATION SYSTEM TO SUPPORT PUBLIC POLICIES ON CLIMATE CHANGE AND BIODIVERSITY IN THE ANDEAN REGION

- Ministerios de Ambiente y Servicios Meteorológicos de Bolivia, Ecuador y Perú en coordinación con CIIFEN
- Empezó en Mayo 2012
- Establecer un sistema regional sobre cambio climático y biodiversidad
- Orientado a formular políticas públicas

First coordination meeting. May 2012
Guayaquil-Ecuador
VULNERABILIDAD DE LOS PÁRAMOS EN ECUADOR

$$V_{TOTAL} = 0.3 \times (S_{SE} - CA_{SE}) + 0.7 \times (S_{A} - CA_{A})$$

http://geoportal.ciifen.org/es/
Political response:

- Land Use Plans.
- Infrastructure regulations.
- Development Plans
- Regulatory framework
Building the Climate service

Climate Information System in the Andean Countries
El Consorcio Enfrentando al Cambio Climático en la Cordillera Costera (CECCCCO) es una iniciativa de este proyecto, que nació el 14 de septiembre del 2011 en la ciudad de Guayaquil como respuesta de los GAD para trabajar mancomunadamente ante los efectos del cambio climático. Desde esa fecha, el proyecto apoya al fortalecimiento, la institucionalización y operativización del Consorcio.

TALLERES PARA LA ACTUALIZACIÓN DE LAS NORMATIVAS COMUNITARIAS...

Talleres para fortalecimiento de capacidades

Durante todo el mes de enero del 2014, se han realizado talleres en Manglar Alto, las Balsas y Dos Mangas en Santa Elena; y en San Pablo y Pedro Pablo Gómez en Manabí para recopilar información que permita llevar a la actualización de las normativas comunitarias para uso sustentable de los recursos naturales en Chongón Colón. Este es un proceso que se inició en 2013 con dos talleres que convocaron a representantes de las comunas La Entrada, Las Núñez, Olón, San Francisco, Río Blanco, Dos Mangas, Barcelona, La Barranca, Sube y Baja, Icera, Salanguillo, Las Balsas y Las Malvinas.
Providing climate services: El Niño 2015-2016 and lessons learnt
Centro Internacional para la Investigación del Fenómeno de El Niño

Climate Services: El Niño 2015-2016

Consciente de la importancia de este fenómeno climático, la UEES invitó a Julián Hernández del Centro Internacional para las Investigaciones de Fenómeno del Niño (CIIFEN) quien habló a estudiantes de Ingeniería Ambiental y el público en general sobre.

El delegado del @ciifen Julian Hernández, explica a los alcaldes condiciones climáticas #FenomenoDelNiño

A través de la Coordinación de ECHO en Bolivia, CIIFEN junto con SENAWII-Bolivia presentaron el análisis de las condiciones El Niño 2015-2016 y la predicción climática para Bolivia a las autoridades del Viceministerio de Defensa Civil y la cooperación internacional.

CIIFEN fue invitado a presentar el informe de las condiciones de El Niño 2015-2016 en el Taller Regional de DIFECHO-Sudamérica organizado con la oficina regional UN-DRR para las Américas.
Climate Services in Latin America: El Niño 2015-2016

- Contribution to the RCOF of Central America.
- Report to UNASUR authorities and Regional action Plan –DIPECHO.
- Report to the National authorities of the Caribbean region-UNISDR-DIPECHO
- Report to Bi-national Forum Ecuador-Peru.
- Report to the Council of Ministries of Paraguay.
- Report to the National authorities of Bolivia.
- Report to National authorities of the CPPS ERFEN Programme (Colombia, Ecuador, Peru and Chile).
- Report to WHO/PAHO for Focal points in Central and South America.
- Report to WFP Focal points in South America.
- Report to PLAN INTERNATIONAL Focal points in Latin America
- Report to International Conferences: (Latin American workshop on non linear phenomena, Colombia and 8th ACRE workshop, Chile).
- More than 60 presentations to different sectoral users from public and private sector in the region: RISK MANAGEMENT, AGRICULTURE, FISHERIES, ENERGY, HEALTH, INFRASTRUCTURE, TRANSPORT, TOURISM, INSURANCE.
- More than 56 interviews/articles with international media.
- Record on visits to CIIFEN web site and more than 3550 followers from 43 countries (90% Latin America) in Facebook.
The critical gaps of the provision of climate services

- To **package** the information from multiple sources in a **simple, understandable and consistent** message is essential.

- Climate services are **not available** to all...

- The **most vulnerable** communities are not so well informed as the authorities, private investors and most of the urban population.

- The **last mile to deliver actionable climate services** to these users is the big challenge.
Effective climate services are possible...

• A product becomes a service when it is used.

• Improved climate services require face to face interaction with target audiences.

• A mutual learning of providers and users is the basis for sustained dissemination networks for climate information.
Some thoughts about Climate Services to Water sector
Climate Services in the Water Sector, some thoughts:

• A climate product itself is not a climate service.

• A climate service implicates a complex and continuous chain of processes and activities (production, dissemination/delivery, use and application).

• There are overlapping efforts to offer information to water sector: diverse portals, similar information from different UN, academic or other international organizations. There is a need to package the information for specific users.

• It is evidenced a strong emphasis in the provision side, but probably less efforts on building the user interface (which is not necessarily a web based tool).

• Human interfaces are essential to build up a sustainable and effective climate services for water sector users.
Potential contributions of CIIFEN
Potential contributions of CIIFEN to CliMWA-R-LAC and Water security project in LAC:

**OPERATIONAL ASPECTS**

1) To offer the operational structure of the RCC-WSA as a mean to enhance drought monitoring and early warning capacities.

2) To offer the current CIIFEN’s dissemination mechanisms in Latin America with emphasis in Western South America region for services oriented to support water resources management.

3) To implement as part of our operational exchange with the NMHS from WSA the seasonal forecast including more complex analysis with SPI and eventually SPEI plus other remote sensing products which are in construction.

4) To contribute in the integration and “translation” of the different drought monitoring information sources at global and regional level produced by several institutions, UN agencies and countries in order to facilitate the understanding of wider communities of beneficiaries, the use and effective application of such information and the necessary elements to ensemble an adequate climate user interface for water managers.
Potential contributions of CIIFEN to CliMWaR-LAC and Water security project in LAC:

**CAPACITY BUILDING**

5) To contribute in close coordination with NMHS on building up communities of users at national level considering the governmental institutions framework and including other stakeholders.

6) To share the experiences of CIIFEN in the assessment of climate vulnerability in different geographic environments and spatial scales, considering social, economic and environmental dimensions. This is essential to prioritize on climate services for water security.

7) To share the experiences and lessons learnt of CIIFEN implementing adaptation actions in semi-dry environments with local communities and increasing their climate resilience.

8) To share the experiences on enhancing local governance to support climate risk management and long term adaptation processes.
Limited but clear climate information, successfully delivered, could make the difference to trigger the user’s response.
Centro Internacional para la Investigación del Fenómeno de El Niño

www.ciifen.org

Muchas gracias!

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