

El Niño Ready Nations Idea as a “Social Invention”



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**Michael H. Glantz
Consortium for Capacity Building (CCB)
University of Colorado, Boulder**

E-mail:

mickeyglantz@Hotmail.com

Website:

www.elnino-readynations.com

www.ccb-boulder.org

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**Panel on “Implementing Food-Energy-Water Security Early
Warning Systems for Adaptation to Climate Change”**

10

Rainfall changes, 1875-2012

Rainfall
 Wetter (Blue)
 Drier (Orange)

Ocean current
 Warm-water movement eastward (Red arrows)

Sources: International Research Institute for Climate and Society; NOAA

The map displays various rainfall change periods across the globe, including:

- North America:** Jan to Apr, Jun to Sep, Nov to Mar, Dec to Mar, Nov to Apr, Jun to Mar, Apr to Jun.
- Europe/Africa:** Jul to Sep, Jan to Apr, Oct to Jan, Oct to Dec, Nov to Mar.
- Asia/Australia:** Jun to Sep, Jun to Jan, Jul to Mar, Jul to Nov, Jul to Jan.
- Pacific:** Jul to Apr, Jun to Apr, Sep to Mar.
- South America:** Jul to Dec, Jan to May, Jun to Sept, Sep to Jan.

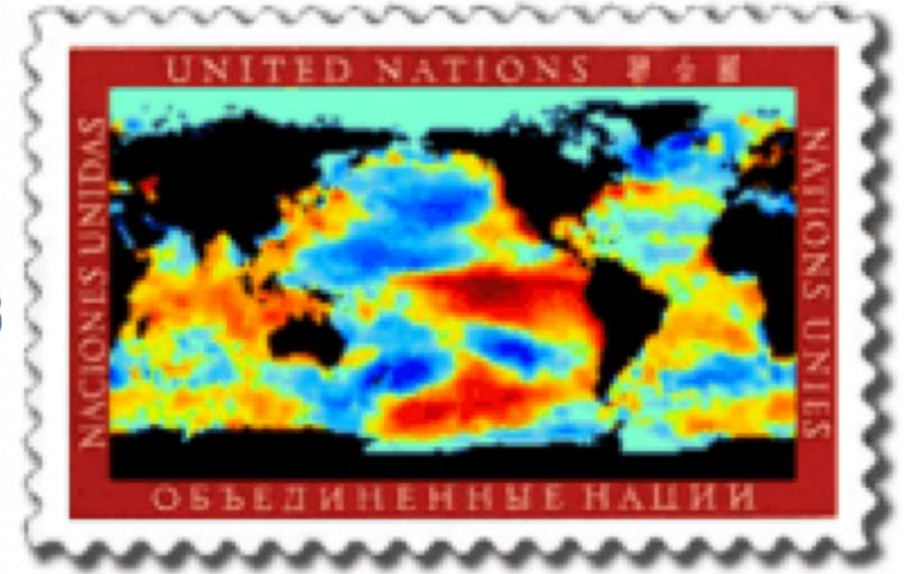
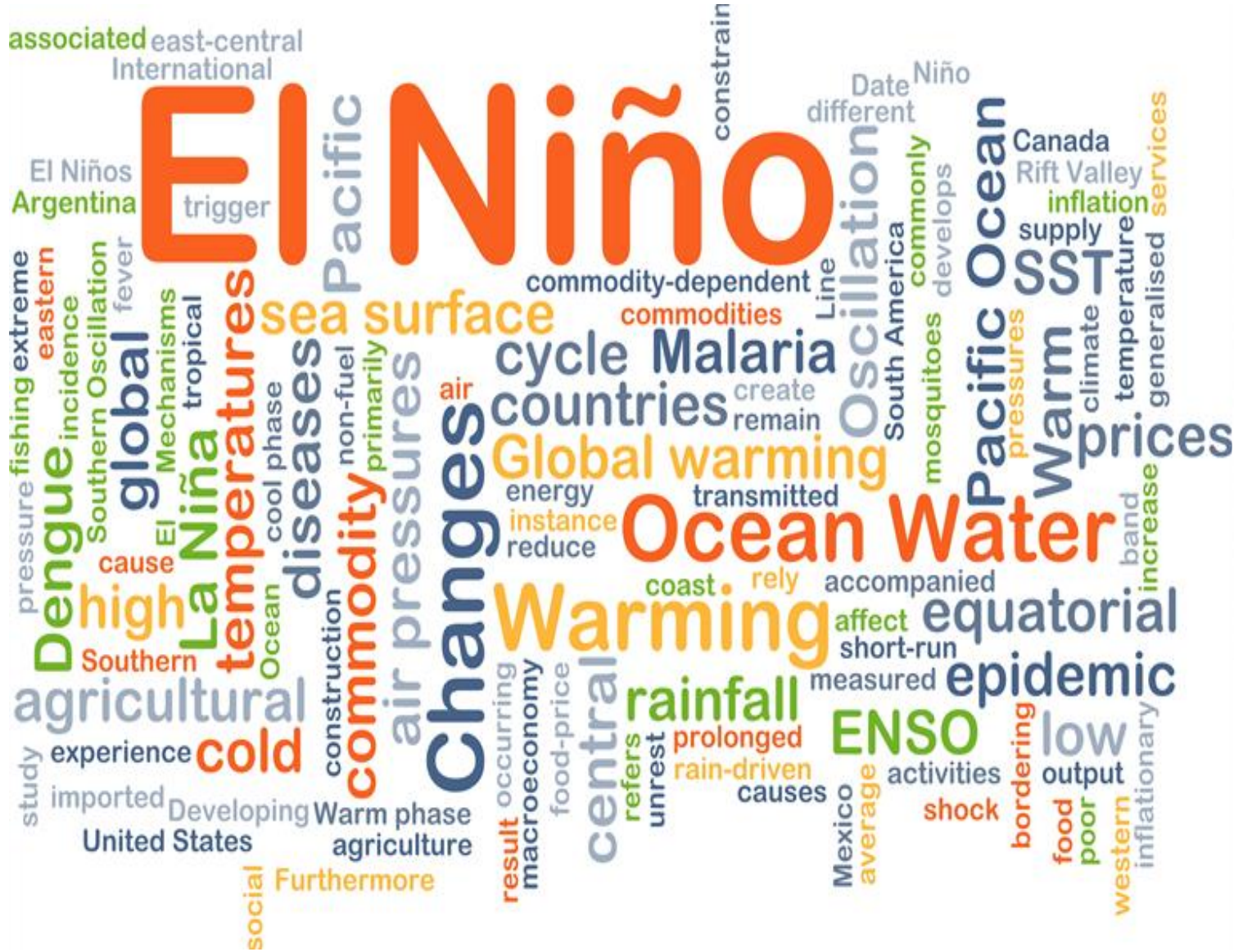
Red arrows in the Pacific and Atlantic Oceans indicate warm-water movement eastward.

■ Wetter ■ Drier

Sources: International Research Institute for Climate and Society; NOAA

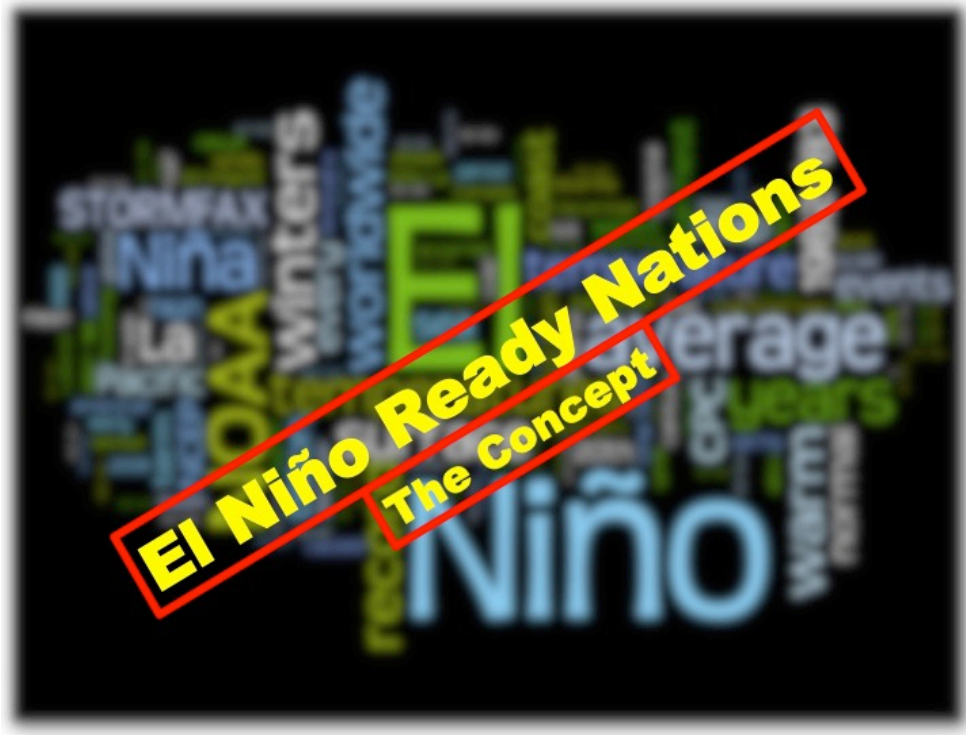
Warm-water movement eastward

El Niño's Seasonality Shift Impacts worldwide



El Niño Ready Nations (ENNRNs) is a “Social Invention”

A Social Invention is an idea that alters human, societal and organizational behavior



1. **Identify** Lessons Learned about Lessons Learned” about Disaster Risk Reduction in a Changing Climate
2. **Contribute** to modernizing the NMHS for El Niño in the 21st Century
3. **Develop** El Niño Ready Nations tailored to a country’s climate, water and weather concerns
4. **Identify existing** “Readiness” level to cope with El Niño

Readiness

- **What does Readiness mean?**
- **How to measure levels of readiness?**
- **What are the limits to Readiness?**
- **Who should be ready?**

What it means to be El Niño Ready

- **What ought to be:** *El Niño Readiness is perfect*
- **What is:** *Scarce funds, policy makers divided*
- **What could be:** *a “satisficing” (good enough) level of readiness*

What does El Niño Readiness mean?

- **Adequate funding, societal awareness
community capacity building and
technology**
- **El Niño on the national DRR
agenda**
- **Strength of its institutions, e.g.
NMHSs**

Measuring the level of “El Niño Readiness”

Self-identified measures:

- **Governments**
- **NMHSs**
- **Communities**
- **At-risk people (ZORs)**



Limits to El Niño Readiness

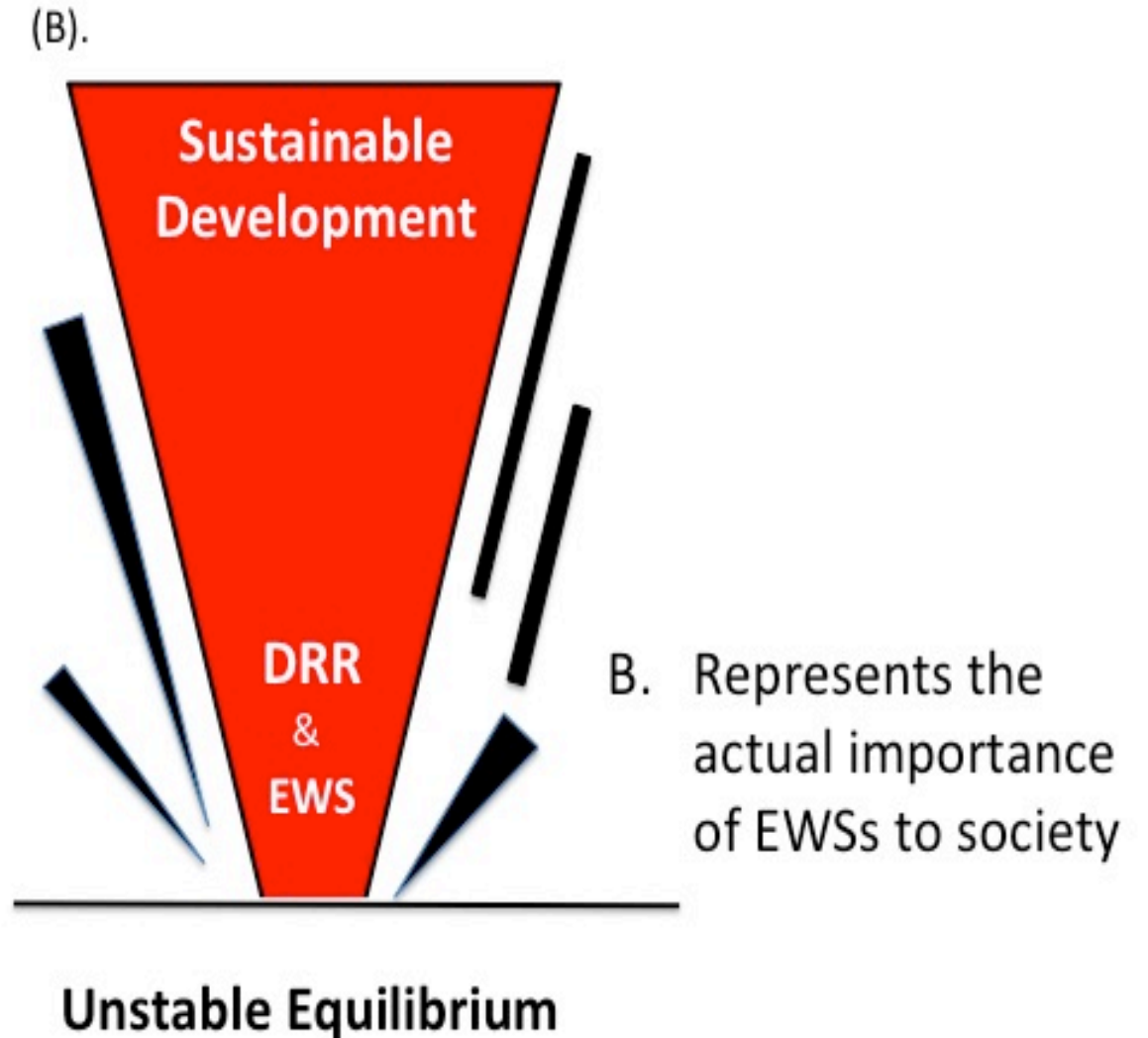
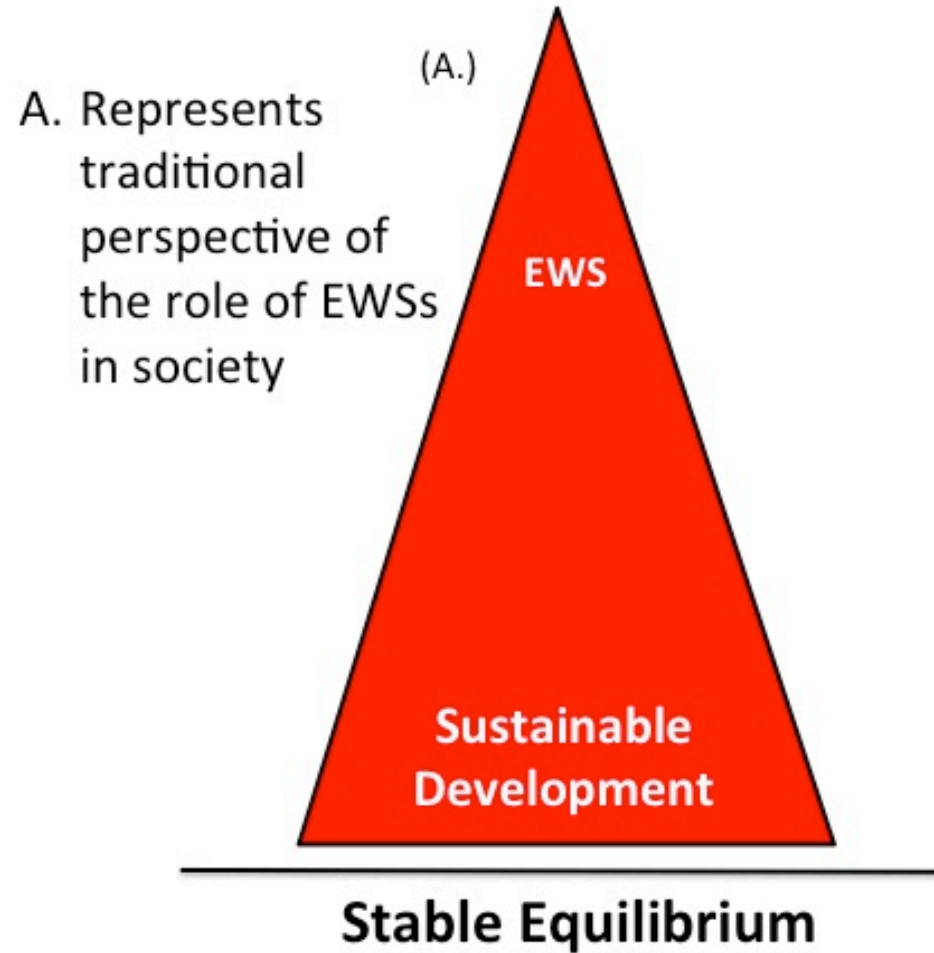
- Limits on present scientific understanding
- Lack of reliability of the forecast
- A government does not have the resources
- Policy makers are coping with many problems
- Need personnel and upgraded equipment
- El Niños recur irregularly
- Once El Niño peaks, interest wanes
- Lack of forethought and planning



El Niño EWS is both a bridge and a barrier

- **EWS is the bridge between the past and the future**
- **EWS is barrier between hazard and disaster**
- **Though hazards remain, the more fortified the barrier, the fewer disasters**

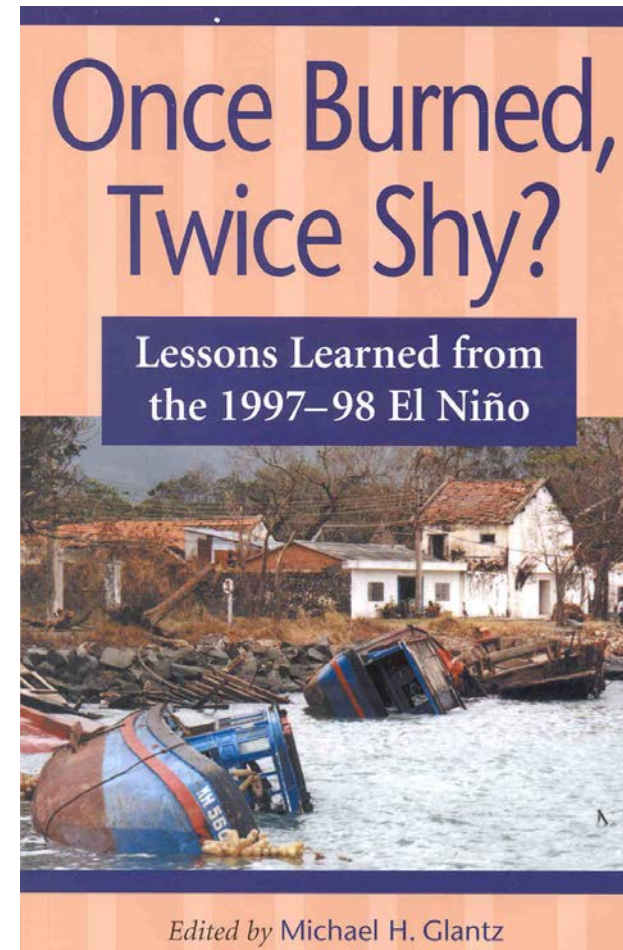
The value of early warning systems



Reviewing the Notion of “Lessons Learned”

**Are we really
learning lessons or
are we just
identifying them?**

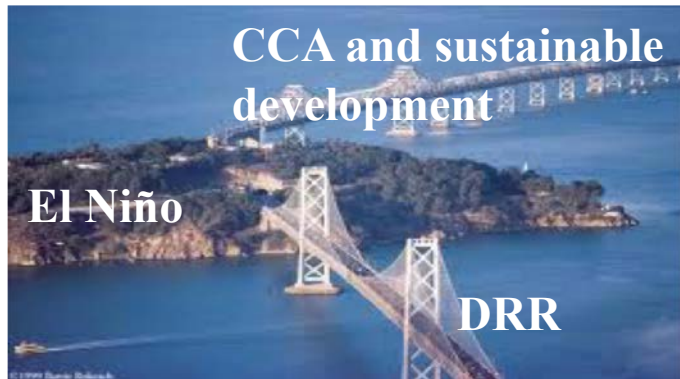
**“Experience is a hard teacher. She
gives a test first, and the lesson
afterward.”**



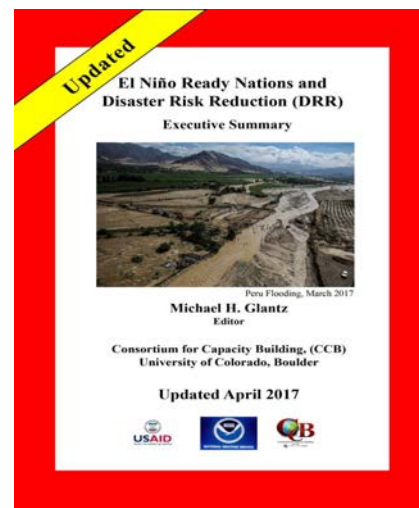
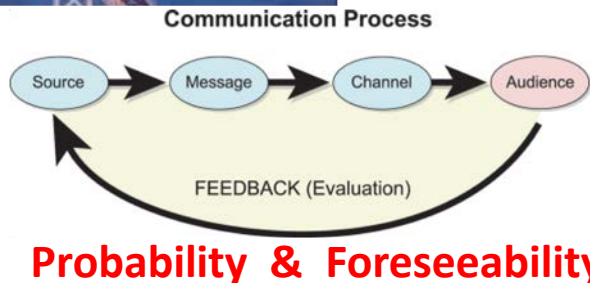
Impact of El Niño Seasonality



ENRN Bridges DRR & Sustainable Development via Resilient Adaptation



End to End to End (feedback)

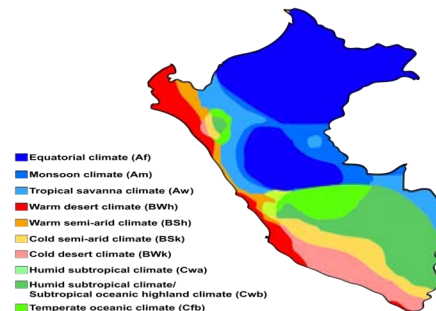


Defining Readiness and Lessons

El Niño Ready Nations

During El Niño, Koeppens climate types can change

Peru map of Köppen climate classification



Early Warning for seasonal hydromet anomalies



El Niño yields lessons for a changing climate



Contributes to bridging climate and weather