CHANGE: Climate and Hydrology Academic Network for Governance and the Environment

Gregg Garfin, University of Arizona
Nancy Lee, Agriculture and Agri-Food Canada
J. Terry Rolfe, Integrity Research and Communications
CHANGE: Governance

- Greek: “to steer”
- Processes through which societies make decisions
CHANGE: What?

• Research coordination
• Knowledge exchange
Facilitate academic collaboration.
Foster permanent exchange networks.
Topics highly relevant to Canada - U.S. - Mexico relations include:
  • Sustainable development
  • North American climate change
  • Canada/US/Mexico border issue comparisons
Photo: International Boundary and Water Commission
What and Why?

- Research coordination network
- Knowledge exchange network

Source: IPCC, 2007
CHANGE: Borders

Similarities
• Climate, resource base, environment
• Traditional economic mainstays

Differences
• Economy, civil society, laws
• Culture, language
• Vulnerabilities and adaptive capacities

Adapted from Robert Varady, University of Arizona
**CHANGE: March 2009 Workshop**

- **Context:** bilateral agreements and governance
- **Themes**
  - Drought monitoring
  - Climate change and variability
  - Water availability
  - Water management and policy
  - Implications of land-use changes
Paul Brown, U. Arizona

Chris Smith, USGS

Roger Bales, UC Merced

USDA-NRCS SNOTEL
Roger Bales, UC Merced

Beyond Drought
Global Participation for Better Planning and Response

Mark Svoboda, NDMC
Recharge = Precipitation – Evapotranspiration – Runoff – ΔSoil Moisture
Crisis
Risk
Uncertainty
Integrated Approaches

- Biophysical
- Impacts
- Thresholds
- Trade policies
- Poverty
CHANGE: Policy Relevance

Photo: Decision Theater, Arizona State University

Chart: Holly Hartmann, Univ. Arizona; based on Tucson Water

Scenario Planning

Elements Common to A-D

Elements Common to A-C

Elements Common to A-B

Possible Futures

A
B
C
D
International Workshop for CHANGE

(Climate and Hydrology Academic Network for Governance and the Environment)
March 5-6, 2009
México City, D.F., México

Project Report
Prepared for:
Foreign Affairs and International Trade Canada (DFAT)

Authors:
Gregg Garfin, Institute of the Environment, University of Arizona
Nancy Lee, Agriculture and Agri-Food Canada
Victor Magaña, Universidad Autónoma de México
Ronald Stewart, University of Manitoba
Jamie McEvoy, University of Arizona

http://www.environment.arizona.edu/change
http://www.environment.arizona.edu/change

Institute of the Environment

CHANGE: Latest News

North American Water and Climate Information Database.
October 4, 2009

CHANGE has initiated a project to develop an online information resource for researchers, resource managers, and policy makers on the CHANGE core topics of: Climate, Water, Environment and Governance. Under the leadership of James Boxall, Director of Map and Geospatial Information, Killam Library, at Dalhousie University, and with generous funding from Dalhousie University (Halifax, Nova Scotia, Canada), CHANGE researchers will contribute information regarding research projects, reports, literature, success stories and other relevant information for an online database and bibliographic resource. After initial development, CHANGE partners will update the resource monthly. This project will implement a key recommendation from the 2009 CHANGE Workshop: a tangible collaborative project, with timely benefits to researchers, students, decision-makers, and stakeholders in North American transboundary regions. For more information, or to contribute information to the database, please contact dmaps@dal.ca or James Boxall (james.boxall@dal.ca). (Note: send information in ASCII comma-delimited text).

13th North American Higher Education Conference will be held April 21-23, 2010, in Houston, TX, USA. (Informacion en Espanol)

The conference is organized by the Consortium for North American Higher Education Collaboration. CONAHEC is a tri-national consortium linking higher education institutions in North America. The conference will focus on the important role of higher education in strengthening North America and connecting it with the rest of the world. The conference
North American Water and Climate Information Database

- Researchers, resource managers, policy makers
- Content (monthly):
  - Research projects
  - Literature
  - Initiatives
  - Success stories
- James.Boxall@dal.ca

AWRA – November 12, 2009
CHANGE: Collaborations

Preparing for 21st Century Drought in the Okanagan Basin: Enhancing Transboundary Stakeholder Decision-Making Capabilities in Response to Climate Change

• Key gaps in transboundary drought preparedness?
• Coordination, communication, information, procedures, and policies?
• Lessons about drought preparedness →
  → increase resiliency to climate change
CHANGE: Measuring Success

- Expansion of network
- Collaborative projects
- Requests for information
- Coordinated events
- Partnerships
- Evidence of impact
CHANGE: Challenges

- Sustainability
- Resources
- Scope
- Branding