

Evaluating Climate Services and Use Inspired Research in the US Southwest



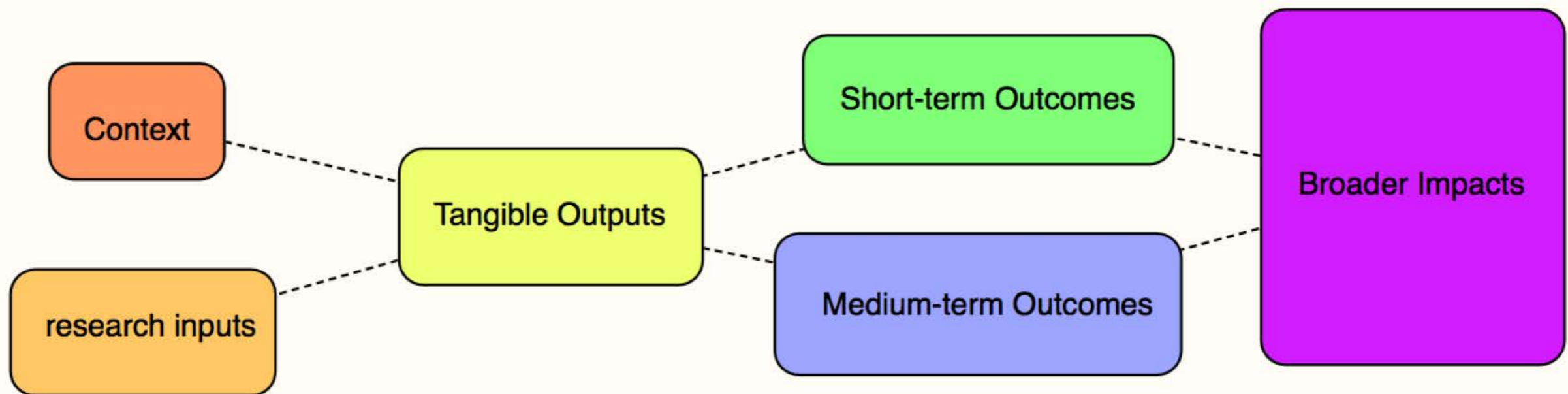
RISA
Regional Integrated Sciences
and Assessments

Gigi Owen (gigi@email.arizona.edu)

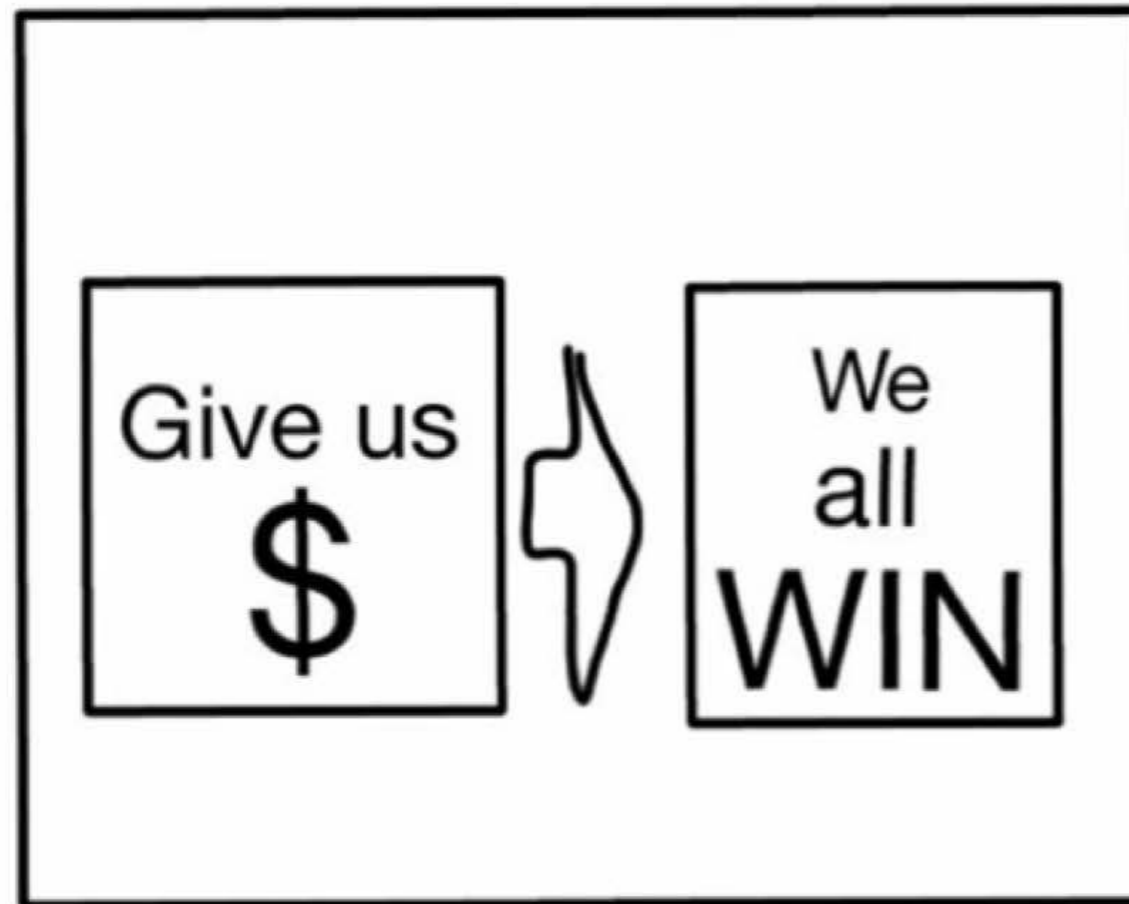
CLIMAS Colloquium Series - 4.20.18

CLIMAS Program Evaluation

2012-2017



Here is our
new simplified
logic model



CLIMAS Mission

Improve region's ability to respond sufficiently and appropriately to climatic events and climate changes

use-inspired research
usable knowledge



2

Online Resources

- Figure 1 National Center for Environmental Information <http://www.ncei.noaa.gov>
- Figure 2 High Plains Regional Climate Center <http://www.hprcc.unl.edu/>
- Figures 3-4 Western Regional Climate Center <http://www.wrcc.dri.edu/>
- Figure 5 U.S. Drought Monitor <http://droughtmonitor.unl.edu/>
- Figure 6 NOAA - Climate Prediction Center <http://www.cpc.ncep.noaa.gov/>

CLIMAS YouTube Channel

Visit our YouTube channel for videos of content pulled from the podcast.
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Podcasts

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March Southwest Climate Outlook

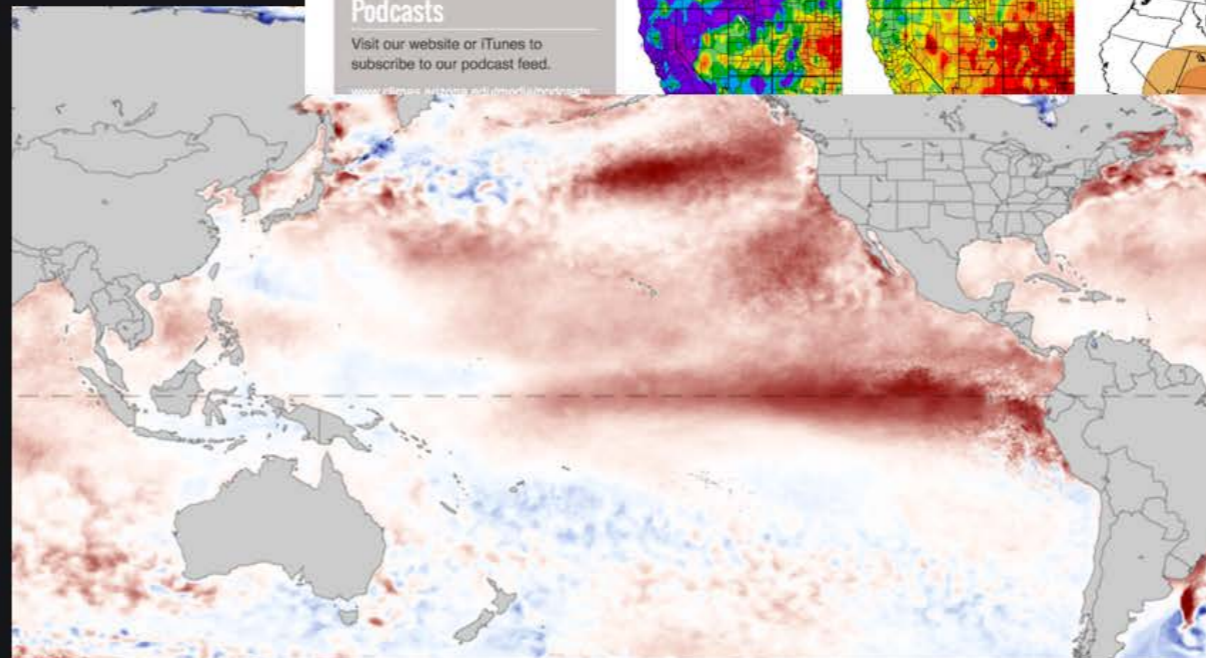
Figure 1: Feb 2017 Precipitation (a) & Temperature Ranks (b)

Figure 2: Mar 2017 Pct. of Ave. Precip. (a) & Temp. Departure from Ave. (b)

Figure 3: Basin Percent of Average Snow Water Equivalent (Mar 13, 2017)

Figure 4: US Drought Monitor - Mar 14, 2017

Figure 5: ENSO Hub map showing El Niño and La Niña impacts on the Southwest



ENSO Hub

News & Information about El Niño and La Niña Impacts on the Southwest

MAR 2017

READ MORE



how do we know if we're
doing good?

talk outline

- history of use-inspired research
- theory of use-inspired research
- evolution of CLIMAS program theory
- theory in practice



science policy



Vannevar Bush

“The Freedom
of
Inquiry
Must Be
Preserved”

As long as [universities] are vigorous and healthy and their scientists are free to pursue the truth wherever it may lead, there will be a flow of new scientific knowledge to those who can apply it to practical problems in Government, in industry, or elsewhere.”



- *Vannevar Bush, 1945*

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- Vannevar Bush, 1945

Mode 2 Science (1994) - Gibbons, Nowotny, et al.

Transdisciplinarity

Knowledge Co-production

(1998) - Sheila Jasanoff, Bryan Wynne; (2005) Maria Carmen Lemos and Barbara Morehouse

use-inspired basic research

(1997) - Donald Stokes

interactive environmental research

(1999) - Alistair Scott et al

Interactive social science (2000) - Steve Woolgar

Boundary organizations, boundary objects

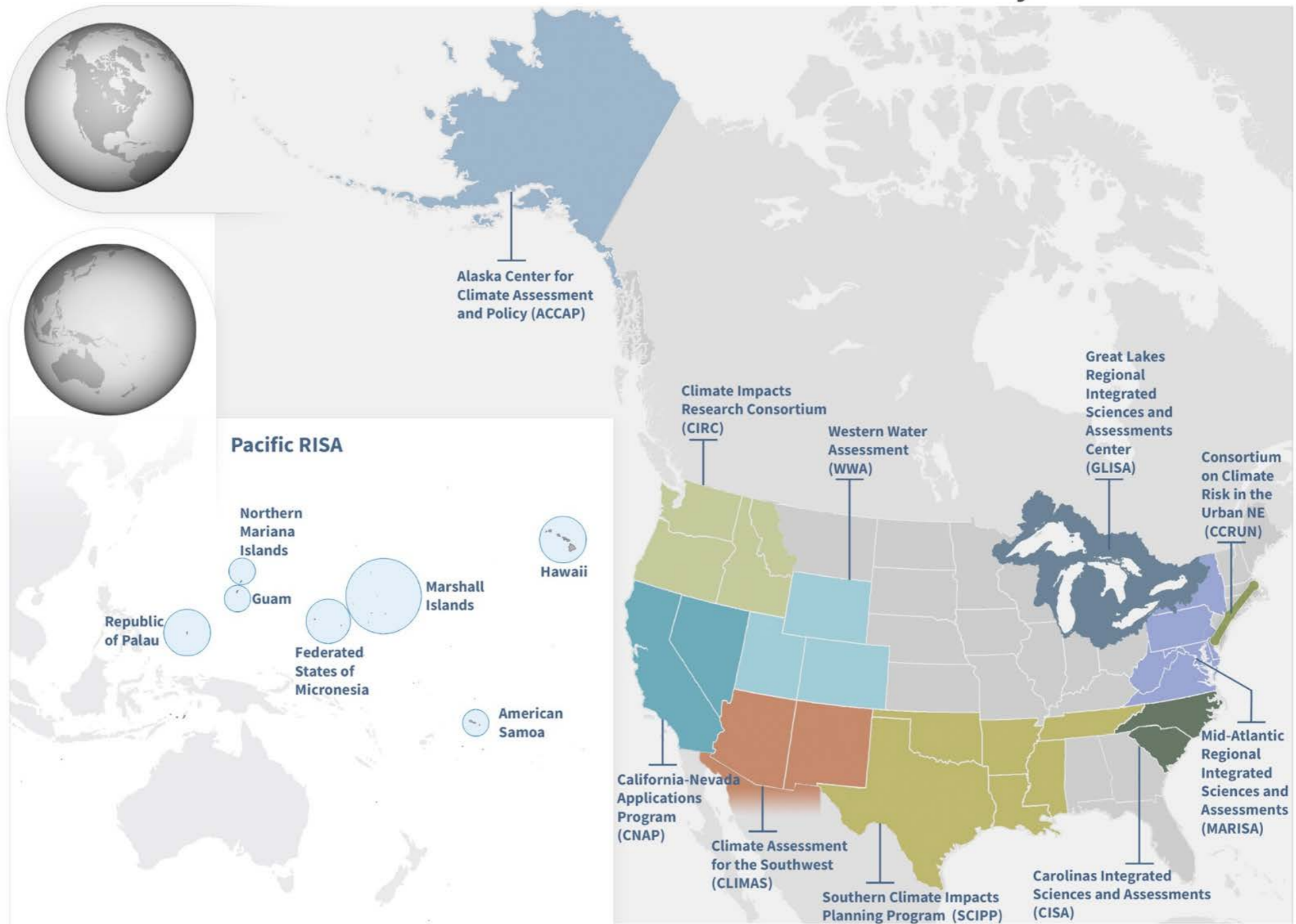
(2001) - David Guston

end-to-end model (2001) -

Shardul Agrawala, Kenneth Broad, David Guston

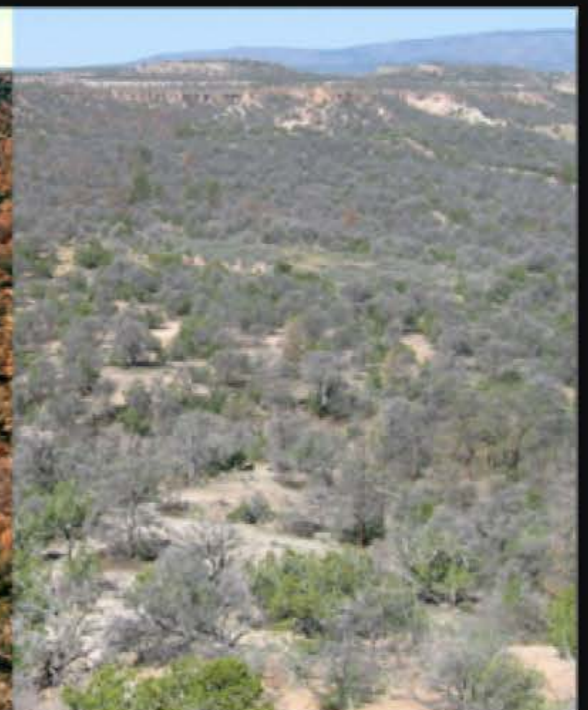
iterativity (2005) - Lemos and Morehouse

Currently Funded RISAs





“collection, interpretation, valuation, and communication of information of relevance to decision makers, resource managers, and other interested individuals” (Bales, 1997)



Mode 2 Science (1994) - Gibbons, Nowotny, et al.

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**interactive environmental
research**

SOCIAL LEARNING SYSTEMS

Boundary organizations, boundary objects

(2001) - David Guston

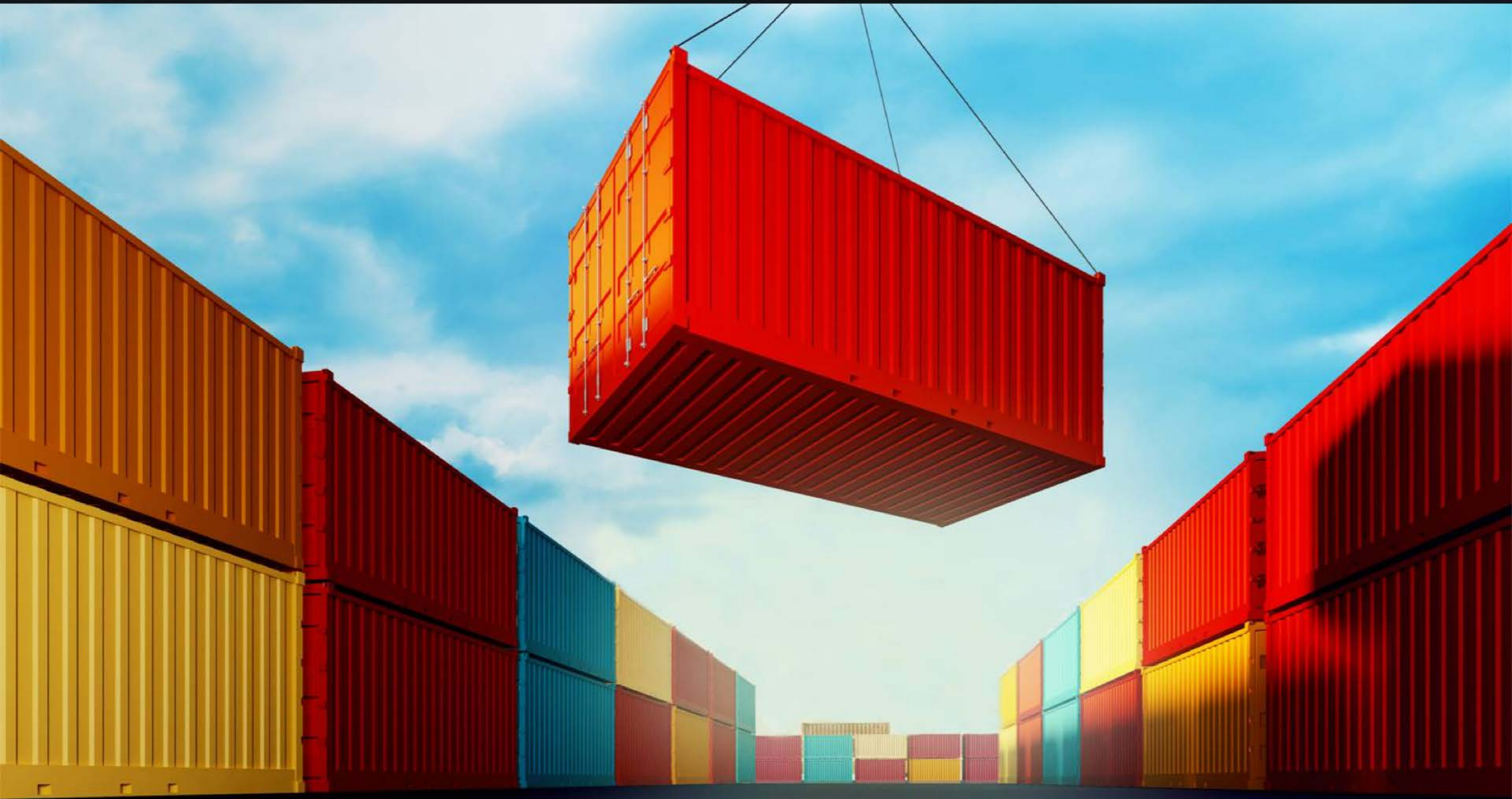
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iterativity (2005) - Lemos and Morehouse

Social Learning Systems

- Etienne Wenger (2000)

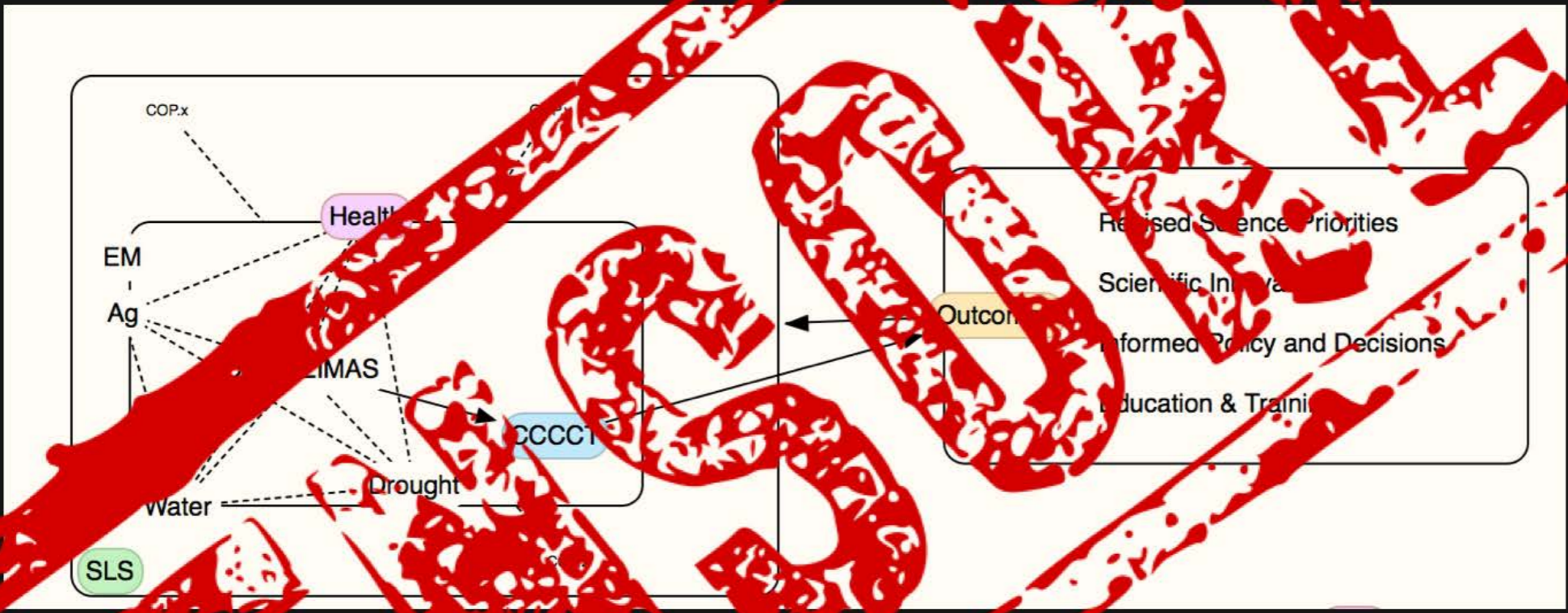


Social Learning Systems

The background of the slide features a photograph of a shipping yard. In the foreground, several stacks of intermodal containers are visible in various colors, including yellow, red, and blue. In the upper portion of the image, a red container is being lifted by a crane, with its cables extending upwards against a clear blue sky. The overall scene is brightly lit, suggesting a sunny day.

iterative interactions between physical, natural, social scientists, and non-academic partners contribute to the development of a social learning system made up of researchers and practitioners who collaborate to address regionally important issues with relevant climate-related research

Climate Resilient Social Learning System in the Southwest (a working model)



5 CLIMAS functions within the Climate Resilient SLS




Communicate

- interact with the largest amount of people
- establish CLIMAS brand within the region

Issued: July 22, 2008

Southwest Climate Outlook

THE UNIVERSITY OF ARIZONA
ADVANCING THE FRONTIERS



Source: Zack Guido

Photo Description: This photograph of monsoon rainfall was taken on the Colorado Plateau near Springerville, AZ in August 2007.

Would you like to have your favorite photograph featured on the cover of the Southwest Climate Outlook? For consideration send a photo representing Southwest climate and a detailed caption to: knelson7@email.arizona.edu


In this issue...

Monsoon → page 14
True to form, the monsoon has been highly variable. While several areas of New Mexico have experienced greater than 6 inches of rain, parts of the Navajo Nation have received less than 0.1 inches...

Fire Outlook → page 18
The seasonal wildland fire outlook predicts increasing fire potential in southeastern New Mexico during August through October. The outlook, which was released on July 1, does not account for substantial recent precipitation in southeastern New Mexico...

ENSO → page 19
The National Oceanic and Atmospheric Administration (NOAA) reports that ENSO-neutral conditions are present in the equatorial Pacific Ocean. NOAA also states that equatorial sea surface temperatures in the central Pacific Ocean have returned to near average...

CLIMAS ANTIPODAS COOPERATIVE EXTENSION



The information in this packet is available on the web: <http://www.lspe.arizona.edu/climas/forecasts/swoutlook.html>

Convene

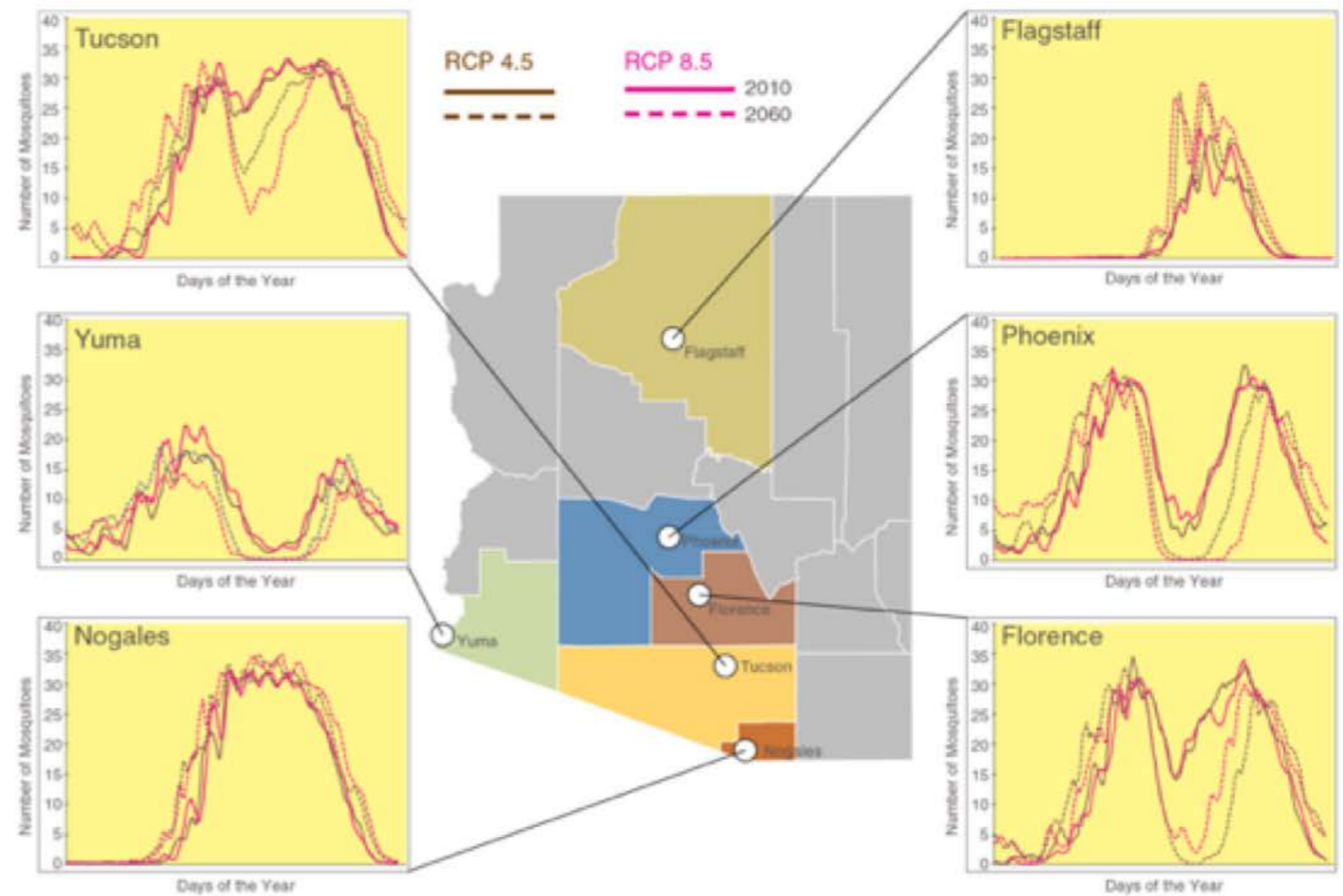
- connect virtually and physically
- create space for iterative interactions



Consult

- tailored, expert advice
- data collection, analysis, interpretation, synthesis

a. Current and Projected *Culex tarsalis* Abundance



Collaborate

- co-produce information with demonstrable impact
- varies as to project duties



Train - next generation



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[FELLOWS](#)

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final thoughts

- Evaluation has brought clarity of thought and purpose
- now have a better way to measure impact in these five areas
- knowledge production is inherently social
- the actions that CLIMAS takes to produce knowledge are social