



CIRC

Climate Impacts Research Consortium

A NOAA RISA TEAM

Leads:

Phil Mote, OSU

Denise Lach, OSU

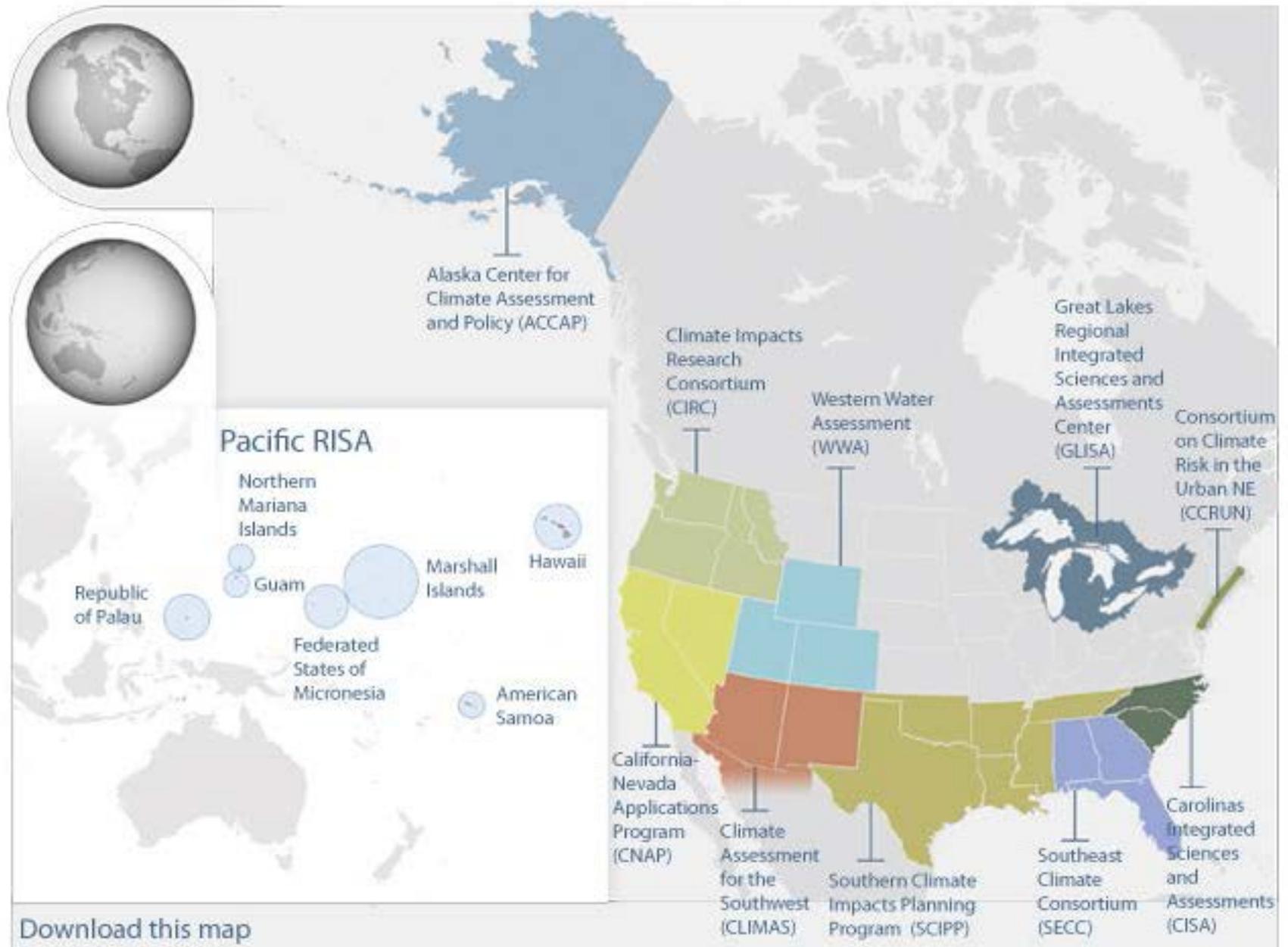
Bart Nijssen – UW

Climate Science to Engineering Operations for Watershed Management:

A CCAWWG Workshop

August 25-27, 2015, Seattle, WA

Currently Funded RISAs



[Download this map](#)

NW Climate Science Centers University-Federal Partnerships

(2)



(1)



(3)



**NW Climate
Science
Center**

University of
Washington

University
of Idaho

Oregon State

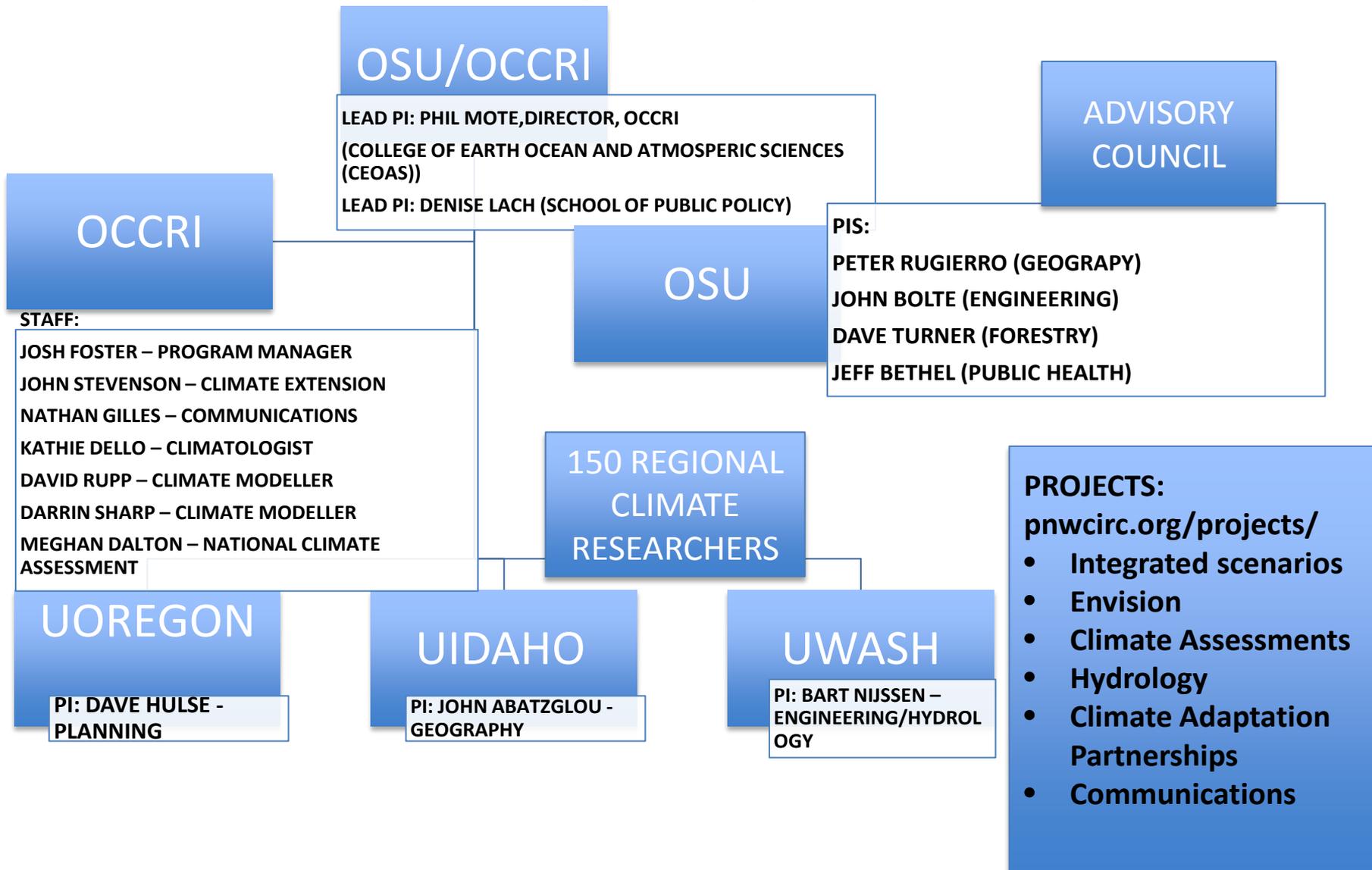
Oregon
Climate
Change
Research
Institute

**Climate
Impacts
Research
Consortium**

- UWashington
- UIdaho
- UOregon
- Agric. Extension
- Sea Grant

2010-15: 5-year cooperative agreements (~\$8M)

Climate Impacts Research Consortium (CIRC)



2011 Research & action plan

- Scenarios of climate, water, and vegetation
- Develop small set of stakeholder projects: PUMA, WW2100, Puget Sound Envision, Columbia Basin Treaty, Corps -Willamette, Oregon community adaptation, First Foods, Coastal vulnerability
- Regional 'traffic control' "filter the noise around new climate research" - monthly e-newsletter
- National Climate Assessment - NW region

Accomplishments

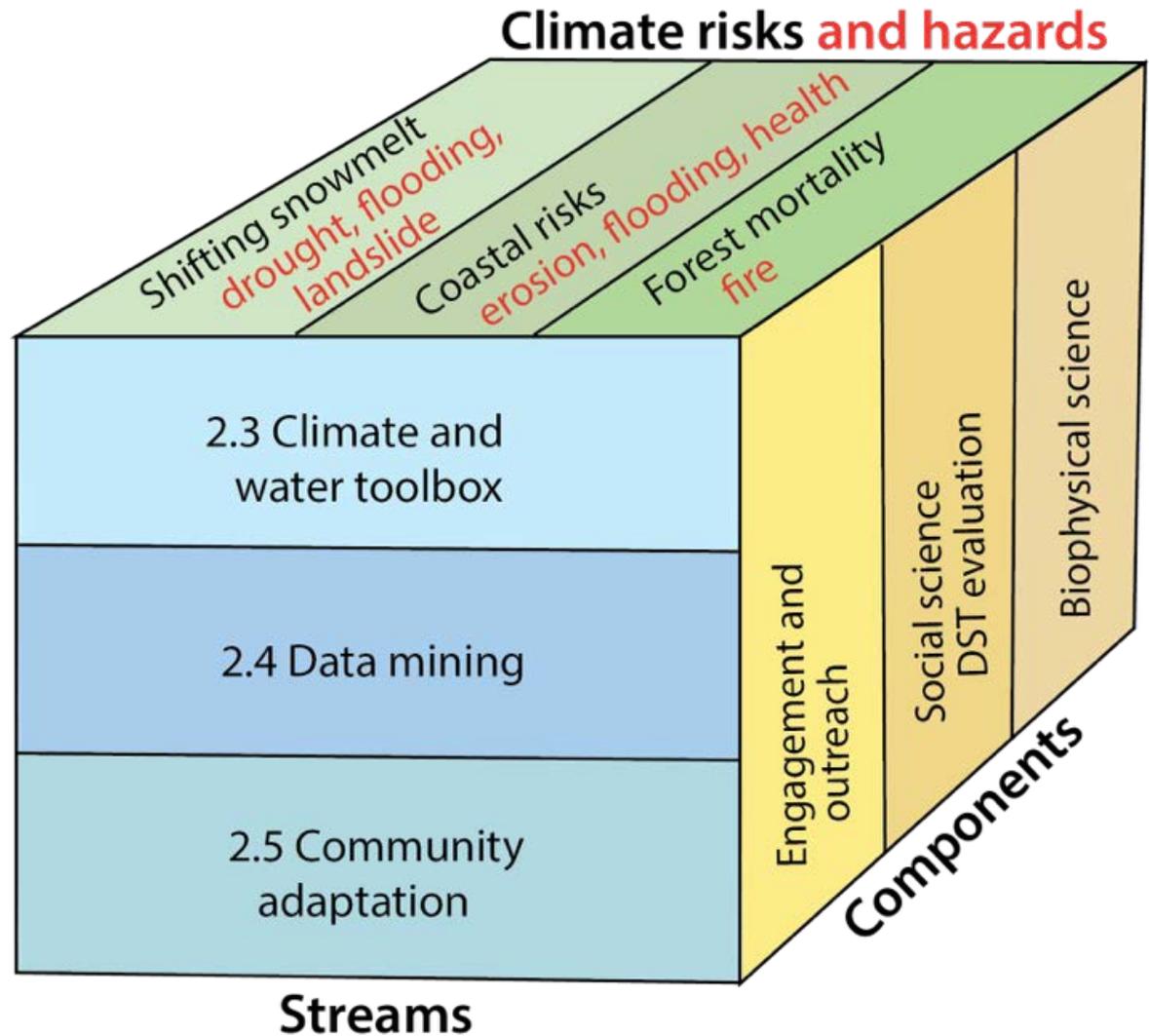
- *Scenarios of climate, water, and vegetation
- *Willamette Water 2100
- Big Wood Basin alternative futures
- *Tillamook County coastal futures
- *National Climate Assessment - NW report, chapter, & meetings
- Coupling surface & groundwater models in Idaho
- *Hydrologic sensitivity analysis
- Coping with drought
- *PUMA - Portland, Seattle
- *US Forest Service adaptation project
- Law of the River
- *Local adaptation partnerships
- *Tribal cultural dimensions of climate change
- Communications - CIRCulator, twitter, NW climate magazine
- *NW Climate Conference
- *Extension & Outreach - climate 101 training

**Leveraged*

CIRC 2.0

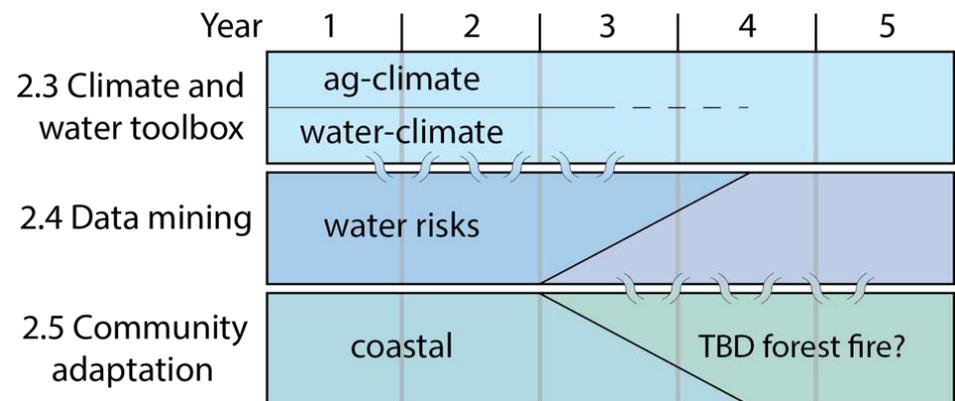
New context

- CSCs, LCCs, Regional Climate Hubs; strong alignment in NW
- Climate Resilience Toolkit
- Political pressure against all things 'climate'



Co-production of knowledge for adapting to climate-related hazards

- Co-production of usable knowledge
- Decision support tools
 - Stream 1: Climate toolboxes
 - Stream 2: Data mining to anticipate climate-related hazards/hot spots
 - Stream 3: Community adaptation



Stakeholder engagement

- Regional Extension Climate Specialist
- Advisory Council
- Partnerships with regional climate enterprises

Predicting the Hydrologic Response of the Columbia River System to Climate Change

Bart Nijssen/Oriana Chegwidden – University of
Washington

Phil Mote/David Rupp – Oregon State University

BPA Project Manager: Erik Pytlak

Project synopsis: goals

- **Update:** Evaluate the implications of climate change – as projected by the CMIP5 global model simulations – for the hydrology of the Columbia River Basin
- **Extension:** Assess the effects of methodological choices on the hydrologic projections (e.g. hydrologic model, downscaling method, global climate model)

Project synopsis: study overview

Period: 1950-2100

Three hydrologic models

Two downscaling methods

Ten global climate models

Two representative concentration pathways

3 x 2 x 10 x 2 = 120 future hydrologic scenarios

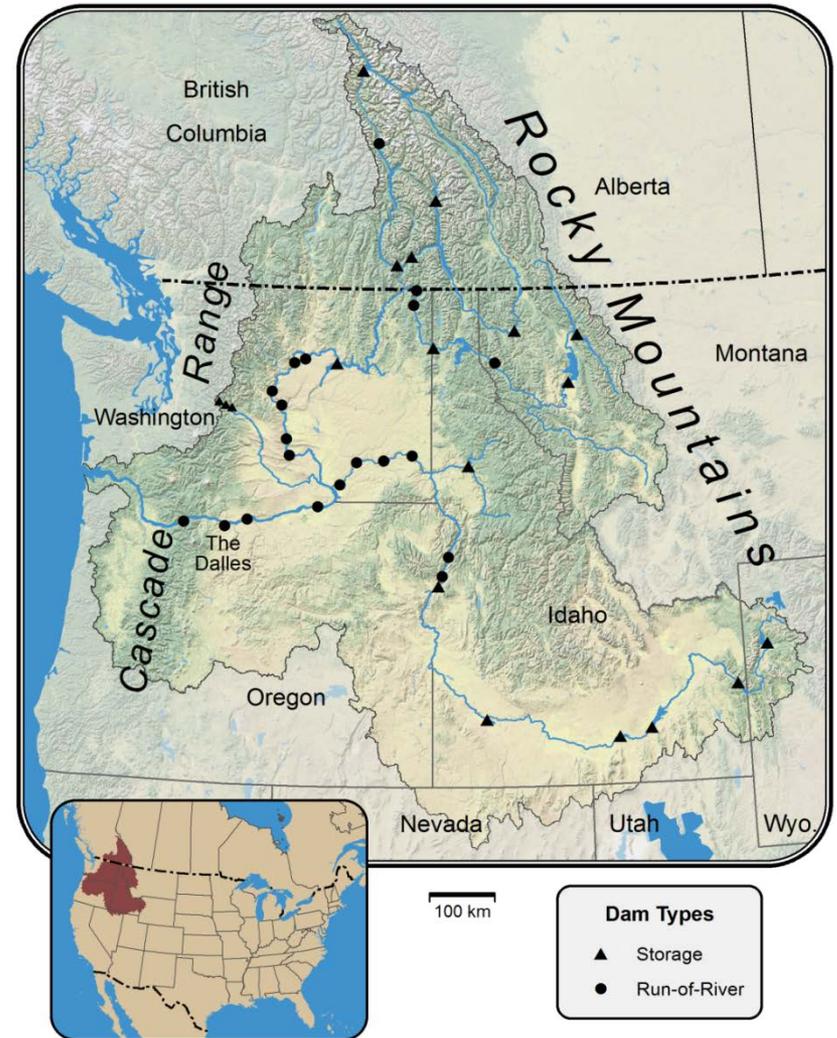
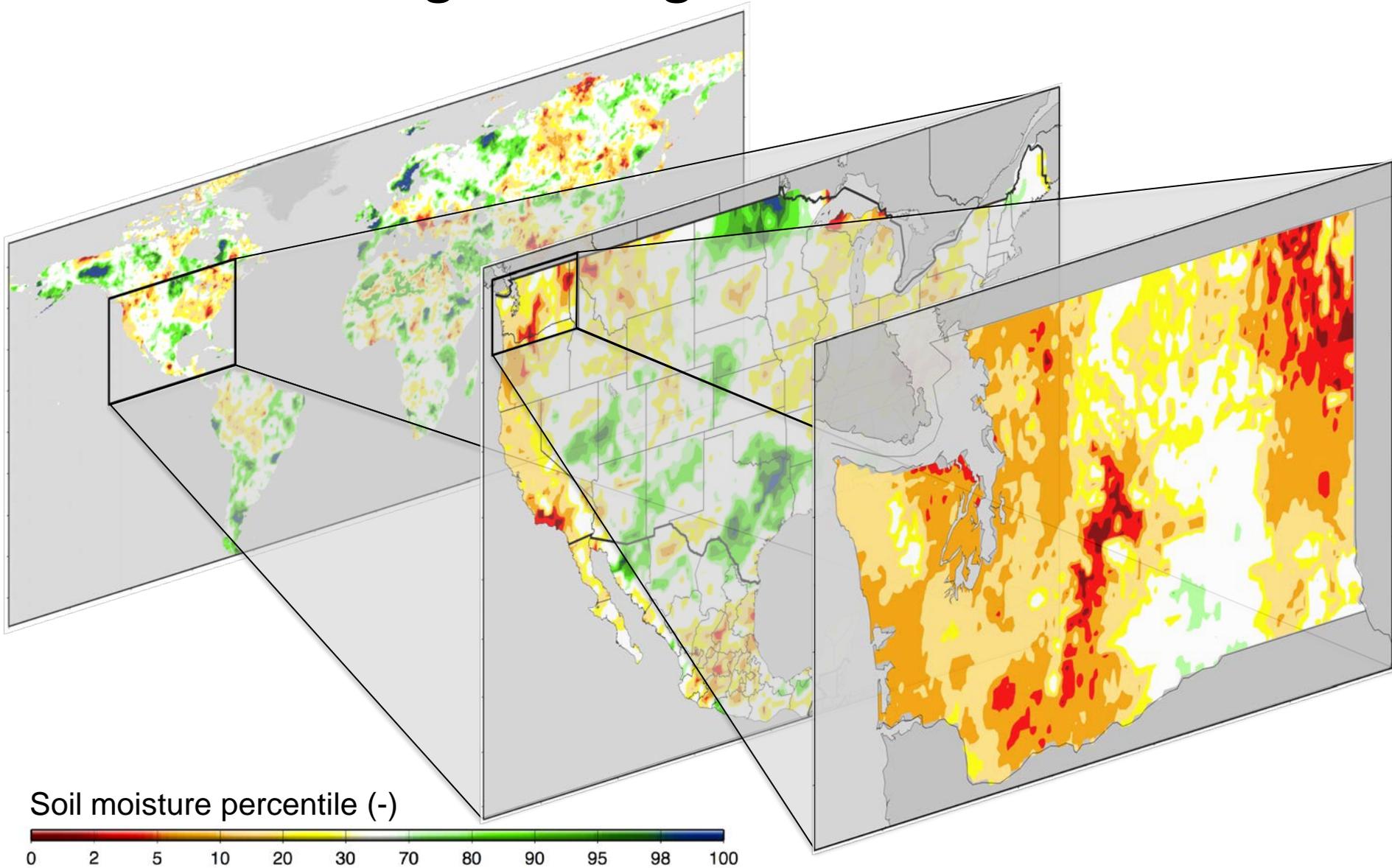


Figure: Robert Norheim, Climate Impacts Group,

SW Monitor: Regional to global



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NW Climate Toolbox

John Abatzoglou (UI) - Bart Nijssen (UW)

