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EcoClimate News Southwest

November 2019



Reflections from the Director

This month, I am pleased to introduce the Southwest Climate Adaptation Science Center's inaugural newsletter, *EcoClimate News Southwest*, which will be published monthly on the second Tuesday of every month. A newsletter has long been a part of SW CASC discussions, centered on the question

“Given the multitude of online newsletters that address climate and the environment, will yet another newsletter provide any further value to people in the southwest region?” We decided yes, for the following reasons: to facilitate and even foster the flow of communication between natural resource managers, practitioners,

information to inform natural resource management decisions; and to document our activities and progress.

The key issue on my mind, as we head into publishing the inaugural issue of EcoClimate News Southwest, is the initiation of another autumn of rapidly-moving and damaging California fires. Since the initiation of the SW CASC, in 2011, we have devoted much attention to research and communication on wildland fires. I will spare you a litany of SW CASC fire-related research and products, which you can find in our website's [Science](#), [Resources](#), and [Outreach](#) pages. Let me mention recent research by SW CASC consortium scientists at UCSD/Scripps, whose [work on characterizing the Santa Ana winds](#) that fuel the rapid spread of California autumn and winter fires, and [projected changes](#) to the seasonal timing of Santa Ana winds activity could help forest, fire, and emergency managers anticipate changes to future fire risk. [Research by SW CASC consortium scientists at UC Davis](#) places current and future California and regional forest vulnerability, to risks like fire, front and center. Finally, long before this year's fires commenced, SW CASC has been planning to focus on California's extensive severe fires, during the first of two year-long roundtable engagements between natural resource practitioners, researchers and others. The goal of the fire-focused roundtable is to examine the prospects for reducing fire risk, from forest, to grassland, to the wildland-urban intermix, including reducing the risk of deaths during these horrific fires. The fire roundtable discussion is now more salient and urgent than ever.

While I do not expect EcoClimate News Southwest content to be sufficiently scintillating that readers will skip lunch in anticipation of each upcoming issue, I look forward to the exchange of ideas and information that an online newsletter provides the SW CASC and interested parties.

Sincerely,
Gregg Garfin

Feature Article

Climate-Related Needs of State Game and Fish Managers

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Ever wonder what's on the mind of natural resource managers, as they take on the challenges of climate variations and long-term climate shifts? Ever wonder how they're using climate-related science products, or want to know the spatial scales that are important for their work? We at the SW CASC regularly ask these questions and many more as we aim to develop climate-related scientific insights, information and products that address the needs of natural resource managers. To inform the SW CASC's second phase of operations (2018-2023), Dr. Arin Haverland and Dr. Gregg Garfin conducted an assessment of the climate science needs and training and communications preferences of state game, fish, and wildlife agencies in Arizona, California, Nevada and Utah. We were assisted by Dr. Kristin VanderMolen of the Desert Research Institute (Reno, NV), and Sarah Randall, a University of Arizona graduate researcher. This work was part of a broader effort to update SW CASC understanding of emerging regional science needs, and to understand the opportunities and barriers to partnership with the SW CASC. [Continue reading](#)

SW CASC Scientist in the News



SW CASC Investigator Alexander ("Sasha") Gershunov and his research team have recently been featured in the news for their work on atmospheric rivers and wildfires. Sasha has been with the SW CASC since 2011. His research focuses on the interrelated aspects of weather, climate and society. His professional interests include understanding the links between regional weather extremes and large-scale

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atmospheric rivers, Santa Ana winds, extreme weather and climate impacts on wildfire, energy, ecosystems, water resources and public health, climate influence on society and human influence on climate.

Read the news articles here:

New York Times - [How climate change could shift california's Santa Ana winds, fueling fires](#)

The Sacramento Bee: [Never mind those earthquakes: Atmospheric Rivers could put Sacramento 30 feet under water](#)

Read his published articles on the [SW CASC Publications web page](#).

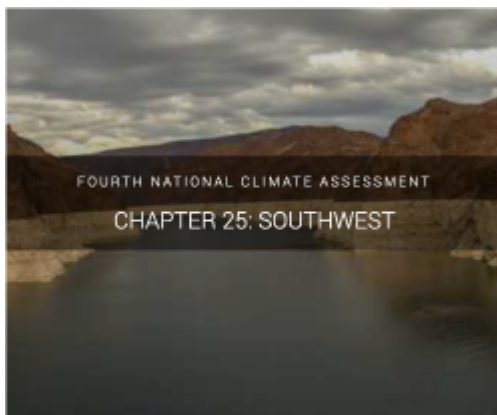
Fellows' Highlights



The SW CASC Natural Resources Workforce Development (NRWD) Fellowship was initiated to provide graduate students with opportunities for training and practice in developing use-inspired science to inform natural resource management decisions. The inaugural cohort of NRWD fellows includes Lydia Jennings and Drew Eppehimer from the University of Arizona, John Kemper from Colorado State University, Ann Willis from UC Davis, Elizabeth Fard from UCLA, Mike Sierks from Scripps Institution of Oceanography at UCSD, Joshua Sturtevant from University of Nevada Reno, and Christina Morrisett from Utah State University. These students will be mentored by Nancy Huntly and Michelle Baker (Utah State University) and Gregg Garfin (University of Arizona) in a year-long research experience under the theme of improved understanding of the linkages between the management of headwater ecosystems and downstream water resources. [Continue reading.](#)

Upcoming Events

Webinar Series on the 4th National Climate Assessment



The Southwest Climate Adaptation Science Center (SW CASC) is hosting a webinar series on the Southwest chapter of the 4th National Climate Assessment (NCA4) in Fall 2019. The webinars will focus on Tribes and Indigenous Peoples, Water Resources, and Ecosystems. During each webinar, an NCA4 author and a resource management practitioner from the Southwest will pair up to discuss information presented in the NCA4, improvements to the NCA, and emerging issues facing Southwest stakeholders. Each 60-minute webinar (40 minutes for presentations and 20 minutes for Q&A) will be moderated by Gregg Garfin, University Director of the SW CASC. Webinars will be recorded and available [here](#) one week after the event.

Webinar #2: Water Resources

Keely Brooks, Southern Nevada Water Authority

Brad Udall, Colorado State University

Date: November 20, 2019

Time: 2-3pm MST

Register Now**Webinar #3: Ecosystems**

Chris Stetson, U.S. Forest Service, Coronado National Forest

David Breshears, University of Arizona

Date: December 12, 2019

Time: 10-11am MST

Register Now

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Google Earth Engine Training Series

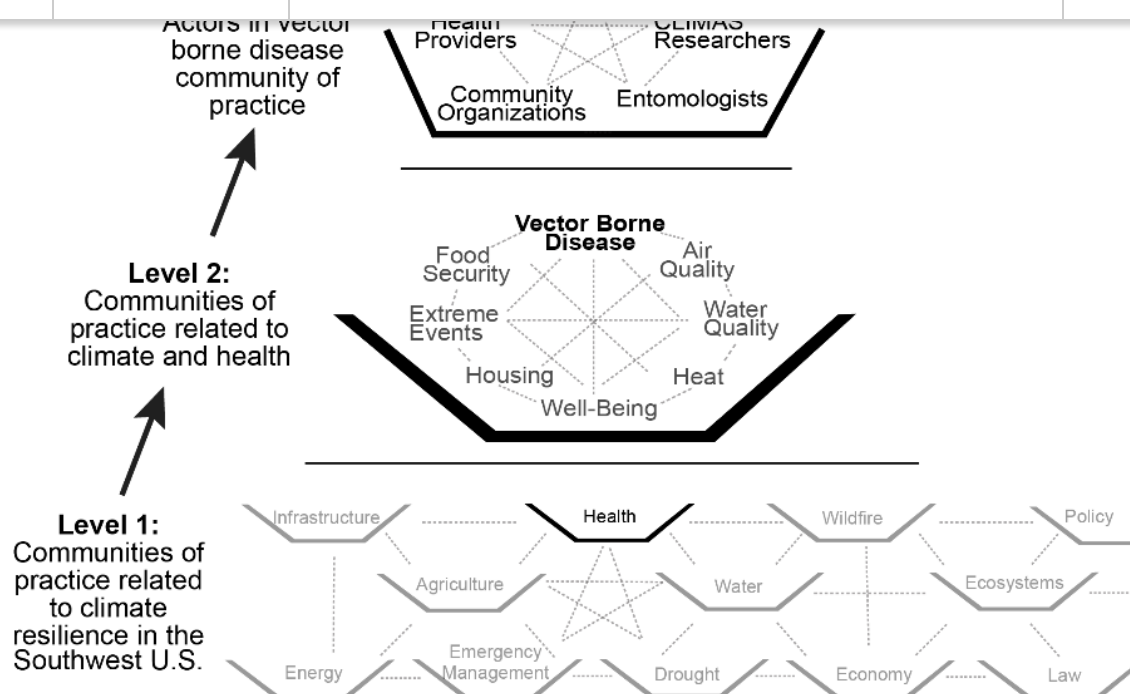
Friday, November 22 - 9 am–12 pm AST

Hosted by Erin Trochim, Postdoctoral Researcher at the University of Alaska Fairbanks. This webinar will provide an introduction to the basics of remote sensing and processing big datasets. Participants will review the many uses of Google Earth Engine, and explore examples of how Google Earth Engine can rapidly aggregate and analyze data. The workshop is free and it is the first of three trainings on the topic.

[Pre-Register Here](#)

Partners' Highlights

Over the past two decades, the Climate Assessment for the Southwest ([CLIMAS](#)) program has shifted its understanding and practice of stakeholder engagement. During the program's early years, stakeholder engagement was expressed as multidisciplinary and interdisciplinary interactions among the research team, which were novel innovations at the time. A recent program evaluation illuminated gaps in these underlying program models and led to the inclusion of social learning systems theory to reflect the program's movement toward transdisciplinarity. This framework decentralizes conventional sites of knowledge production and empowers communities of practice to determine how knowledge is produced, communicated, and valued. [In this paper](#), we describe five roles that CLIMAS plays in developing, fostering, and maintaining a Social Learning System for Climate Resilience in the U.S. Southwest, including: communicating, convening, consulting, collaborating, and training. [Click here for more info.](#)

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From: Owen et al. 2019

Conceptual model of a climate resilient social learning system in the Southwest, showing nested communities of practice. Level 1 illustrates a sample network of communities of practice working to address regional climate resilience issues; level 2 focuses on the health and climate community of practice, revealing eight more communities of practice, each addressing a specific human health issue; level 3 identifies groups of actors who work within a regional vector borne disease community of practice.

Upcoming Partner Events

The California-Nevada Drought Early Warning System (CA-NV DEWS) November 2019 Drought & Climate Outlook Webinar

Monday, November 25, 2019 - 11:00am to 12:00pm MST

This webinar is part of a series of regular drought and climate outlook webinars designed to provide stakeholders and other interested parties in the region with timely information on current drought status and impacts, as well as a preview of current and developing climatic events (i.e. El Niño and La Niña).

[Register Here](#)

Useful Climate Monitoring Tools

[Precipitation Tracking website](#)

[Drought Tracker website](#)

Job and Funding Opportunities

[Subscribe](#)[Past Issues](#)[Translate ▼](#)[Assistant Professor of Global Change Biology](#)

North Carolina State University is looking for a candidate with strong quantitative skills as well as candidates with demonstrated experience in research across ecology, economics, and policy for the quantification of ecosystem services under a changing climate.

DEADLINE - December 15th, 2019.

[Post Doc Position at the University of Maryland's National Socio Environmental Synthesis Center](#)

Dr. Isabel MD Rosa at Bangor University, Sarah Weiskopf at the USGS National Climate Adaptation Science Center, and the University of Maryland's National Socio Environmental Synthesis Center (SESYNC) seek a postdoctoral researcher to investigate the linkages between biodiversity, ecosystem function, and ecosystem services, and how we can move towards integrated modeling of these relationships. The position is ideally suited to researchers with an interest in combining large-scale spatial modeling approaches, particularly related to biodiversity and ecosystem services modeling.

DEADLINE - Open until the position is filled.

[Post Doc Position at Oklahoma State University Department of Natural Resource Ecology Management](#)

Funding is available for a two year (with potential for a third year) postdoctoral research position in the Department of Natural Resource Ecology and Management (NREM) at Oklahoma State University. This position is funded through the South Central Climate Adaptation Science Center (SC-CASC) and will address research questions related to mapping and predicting climate change effects on habitats and species distributions in the southcentral United States. [Continue reading about this position.](#)

DEADLINE - Open until the position is filled.

Funding Opportunities for Students

[Margaret A. Davidson Graduate Fellowship](#)

A two year program which will provide students with the opportunity to participate in interdisciplinary research, network, and receive professional guidance and mentorship. Eligibility: US citizens currently enrolled in a graduate degree program with at least two years remaining in their program.

DEADLINE - December 20th, 2019.

[Institute for Tribal Environmental Professionals 2020 Student Summer Internship](#)

An 8 week program for Native American/ Alaskan Native students to work with tribal organizations to address tribal environmental issues. Both undergraduates and graduate students enrolled in a full time degree program can apply.

DEADLINE - February 28th, 2020.

[USFWS Directorate Fellows Program \(DFP\)](#)

A 12-week internship working on projects that support FWS conservation priorities. Eligibility: Undergraduate and graduate students who will not complete

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Professional Training Opportunities

[COMPASS 2020 Science Sentinels: Civic Engagement & Leadership Program](#)

This is a 9-month leadership program that "brings scientists working at the nexus of environment and society in the United States together to advance the role of science in society, inspire their peers, and support evidence-based decision making at the local level and beyond."

DEADLINE -November 15th

SW CASC Podcast

The SW CASC will be relaunching our podcast, EcoCast Southwest, this spring! What topics would you like for us to discuss? Are you a researcher or resource management practitioner who would like to be considered for a guest spot? Let us know [here!](#)

Contact us at:

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