

Virtual Panel Series Announcement

Salt Contamination of Water Supplies in Tidal Rivers



Access to clean and safe drinking water is critical to public health and economic prosperity. About 70% of U.S. drinking water supply comes from surface waters, including the tidal fresh regions of estuaries. Drought, sea level rise, watershed and port & harbor engineering, and changes in land-use are increasingly threatening such water supplies in coastal regions due to increasing risk of salinization. The risk extends to water extraction from the coastal zone for thermoelectric power, irrigation, and industrial production.

A series of virtual panels will be held between **June 2023 and December 2024**. We will discuss and review case studies of saltwater intrusion and salinization of freshwater in tidal rivers in the U.S. and around the world. An interdisciplinary team of researchers and stakeholders will be brought together to assess the risks of salt contamination of water supplies in tidal rivers, synthesize the current understanding and identify knowledge gaps. This exploratory investigation is timely and globally relevant as water infrastructure around the world is under threat from climate change, salinization, and local anthropogenic pressures. A better understanding of climatic and other anthropogenic effects on the water supplies will be valuable for bolstering the resilience of water infrastructure and protecting public health.

If you are interested, please register at <https://www.umces.edu/salt-contamination-of-water-supplies-in-tidal-rivers>.

Organizing Committee: Ming Li, Sujay Kaushal, Alfonso Mejia, Robert Chant, David Ralston.



Questions can be directed to Ming Li at mingli@umces.edu



Webinar V: Basin-ocean interactions in a semiarid context: The case of Central Chile
Time: 16 May 2024 (4:00 – 5:30 pm EDT)

Moderator: Alfonso Mejia, Associate Professor, Penn State

Panelists:

- **Sebastián Vicuña**, Associate Professor, Pontificia Universidad Católica de Chile
- **Sarah Leray**, Assistant Professor, Pontificia Universidad Católica de Chile
- **Megan Williams**, Assistant Professor, Pontificia Universidad Católica de Chile
- **Sebastián Aedo**, Research Associate, Stockholm Environment Institute

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|  | <p>Sebastián Vicuña, Associate Professor, Department of Hydraulic and Environmental Engineering, Pontificia Universidad Católica de Chile</p> <p>Sebastian Vicuna is Associate Professor at School of Engineering and Director of the Centro de Cambio Global at the Pontificia Universidad Católica de Chile. His research interests relate to water resources, hydrologic modeling, climate change adaptation and integrated watershed management. Sebastian was Lead Author for the Second Assessment Report on Climate Change and Cities (ARC3-2), Lead Author of the IPCC 5th Assessment Report in the chapter on Climate Change Impacts in Central and South America and Review Editor for the IPCC Special Report on Climate Change and Extreme Events in the chapter impacts. Currently Sebastian is co-chair of IPCC Task Group on Data Support for Climate Change Assessments. Sebastian is an Environmental Engineer from the Pontificia Universidad Católica de Chile. In 2004, he earned a Masters in Public Policy and a Masters in Environmental Engineering from the University of California at Berkeley. In 2007, he obtained a PhD in Environmental Engineering from the same university.</p> |
|  | <p>Sarah Leray, Assistant Professor, Department of Hydraulic and Environmental Engineering, Pontificia Universidad Católica de Chile</p> <p>Dr. Sarah Leray is assistant professor in the Department of Hydraulic and Environmental Engineering at the Pontifical Catholic University of Chile. Her areas of expertise are hydrogeology and numerical modeling. She completed an Engineering Title at the National School of Environment and Water of Strasburg (ENGEES, France), a MsC in Engineering and Technology at the University of Strasburg (France), and a PhD in Earth Sciences (groundwater dating and modeling) at the Géosciences Rennes laboratory (France). She worked for about 4 years as a Research Engineer at the French Institute of Petroleum and New Energies (IFPEN, France). She joined the Pontifical Catholic University of Chile in 2017. Her research focuses on the characterization and modeling of groundwater</p> |

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| | <p>flow patterns for groundwater resources, mainly in complex geological environments (e.g., fractured environments, and mountain systems). She develops direct and inverse methodologies for defining relevant descriptors of hydrogeological systems and concluding on the informational content of observables.</p> |
|  | <p>Sebastián Aedo, Research Associate, Stockholm Environment Institute Sebastián is a Research Associate at the Stockholm Environment Institute - Latin America Centre. His research interests relate to climate change impacts on water resources and integrated water resources modeling with focus on representing local processes, as seawater intrusion in aquifers and surface-groundwater interactions, at regional scale models. Sebastián is a Civil Engineer and holds a MSc degree in Hydraulic and Environmental Engineering, both from the Pontificia Universidad Católica de Chile. He also holds a Postgraduate Diploma in Hydrology and Climate Change Impacts from the Universidad Adolfo Ibáñez.</p> |
|  | <p>Megan Williams, Assistant Professor, Department of Hydraulic and Environmental Engineering, Pontificia Universidad Católica de Chile Assistant Professor at the Pontificia Universidad Católica de Chile in a joint appointment between Hydraulic & Environmental Engineering and the Faculty of Biological Sciences. Her work focuses on transport and mixing in coastal environments, particularly estuarine hydrodynamics, and sediment transport in Mediterranean-climate coasts.</p> |

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