

PhD

STEPCHANGE

seminar series

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RESTRUCTURING THE FUTURE OF THE COLORADO RIVER



ABSTRACT

The Colorado River is the lifeblood of the southwestern United States and northwestern Mexico, supplying water to over 40 million people and nourishing highly productive agricultural areas, but since 2000 the storage in the major reservoirs – Lake Mead and Lake Powell – have plummeted to levels not seen since shortly after their initial construction. Despite a century of infrastructure and institutional development, the river faces an unprecedented challenge of overuse compounded by drought and climate change. Furthermore, all previous agreements on how to manage shortages will expire in 2026. This seminar will explain the historical context leading up to this crisis, share recent research revealing the shocking magnitude of response required alongside proposed new operational policies, and describe the innovative model-driven approach being taken by Colorado River managers to reach a consensus that is expected to lead to new national and international agreements. The task is daunting, but failure is not an option.



BIOGRAPHY

Event date:
October 24th, 2023

Time:
11:30 am

Location:
Alario Room
Building 21

Contact:
Matteo Giuliani



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DIPARTIMENTO DI ELETTRONICA
INFORMAZIONE E BIOINGEGNERIA

Kevin Wheeler PhD, P.E. is a Senior Research Fellow at the Environmental Change Institute of the University of Oxford, advisor to the Future of the Colorado River Project at Utah State University, and Principal of Water Balance Consulting. His research and experience focus on the shared management of transboundary watercourses, emphasizing multi-stakeholder negotiations and cooperative planning to manage environmental risks through multi-objective infrastructure. His methods involve collaborative risk-based modelling, particularly when facing deep uncertainties of future climate changes and growing pressures on natural resources. Since 2000, Dr. Wheeler has worked on multiple issues surrounding the Colorado River for a variety of governmental, non-governmental and private stakeholders. Most notably he contributed substantively to Interim Surplus and Shortage agreements between the seven Basin States and to the successful negotiations between the USA and Mexico in 2012 on jointly managing droughts and shortages. Since 2012, Dr. Wheeler has extended this approach to the Nile River Basin by exploring cooperative development pathways among the co-riparian countries of Egypt, Sudan and Ethiopia. Alongside regional academic and governmental partners, he examines alternative cooperative management strategies for new and existing infrastructure to secure water supplies, meet growing energy demands, and support environmental needs.