Undam It? Klamath Tribes, Social Ecological Systems, and Economic Impacts of River Restoration [Abstract]

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This study explores the complex cultural, environmental, and economic forces that converge in the United States' Klamath River Basin, also addressing potential solutions. With watershed modifications and construction of dams in the early-twentieth century, ecosystems have been adversely impacted, creating significant challenges for tribes and wildlife, including fish populations. Competing interests and shifting policy priorities have contributed to a highly contested landscape that may be moving toward more sustainable development. Indigenous communities are playing a central role in moving away from long-term conflict among diverse stakeholders over fish and water resources and toward more recent collaborative efforts in planning one of the largest dam removals in history.

Two crucial questions are addressed in this paper: (1) What key factors influence environmental governance? and (2) How might proposed dam removal impact socioeconomic conditions? After a brief literature review regarding spatiotemporal conditions, I employ the Social Ecological Systems (SES) framework developed by Ostrom, together with a general economic evaluation, to provide an important preliminary step toward characterizing the multifaceted and interdependent issues. Meaningful variables are identified by unpacking the interactions of governance institutions, actors, and resources within nested settings. Findings from the benefit-cost analysis suggest that the net economic benefits from deconstruction and river restoration may be between \$14 to \$82 billion. Finally, I recommend further research and use of the Integrative Dam Assessment Modeling (IDAM) tool.

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