

# SENS



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## ■ Diagnosing Governance Effectiveness of Agricultural Water Management

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# Drainage

- Important climate adaptation strategy
- A governance issue that involves upstream/downstream and trans-boundary concerns
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# Objectives

1. Develop new knowledge on how people develop water governance institutions and policy
2. Produce novel approaches to socio-hydrological modeling by linking social-ecological governance models with hydro-climate models for scenarios planning

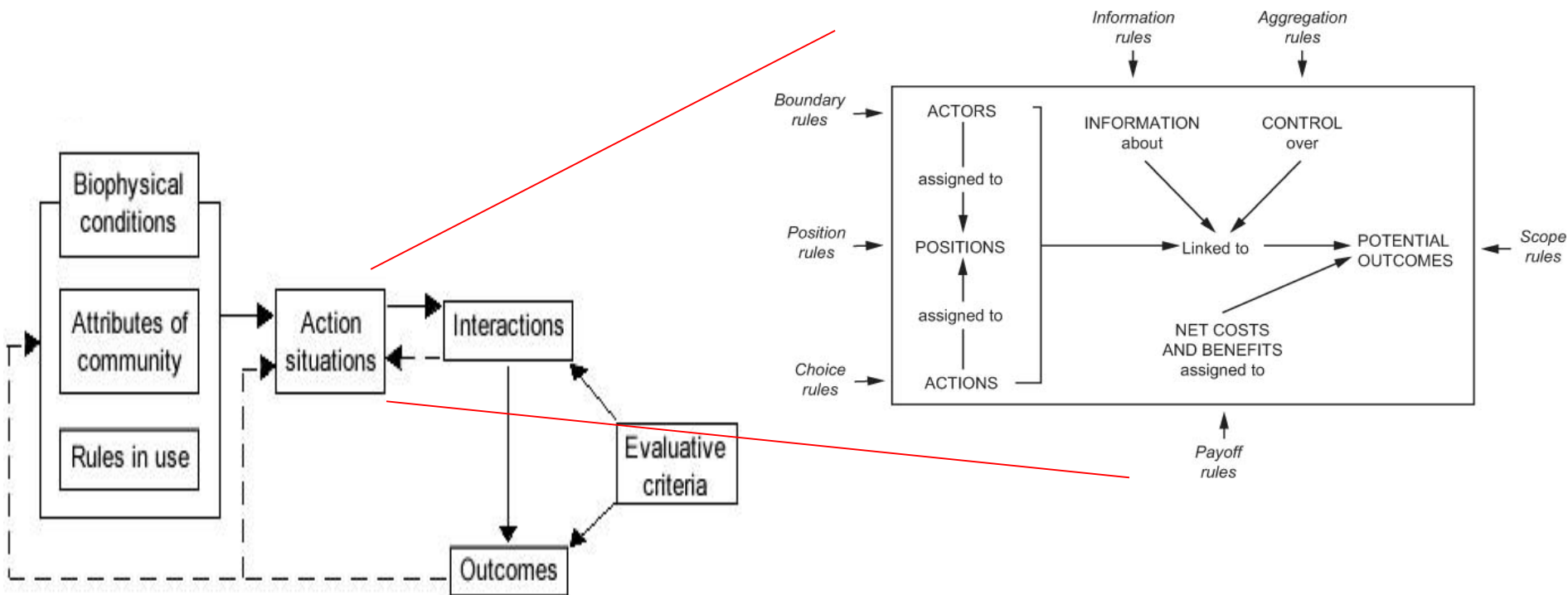


# Questions

1. What social institutions, whether formal or informal, allow for effective and equitable drainage management?
2. How do these institutions and policies shape risk and influence resilience and adaptability to change?
3. To what extent do conflicts shape and/or undermine these institutions?
4. How can policy variables and scenarios for drainage management be coupled with existing modeling efforts to better predict change?

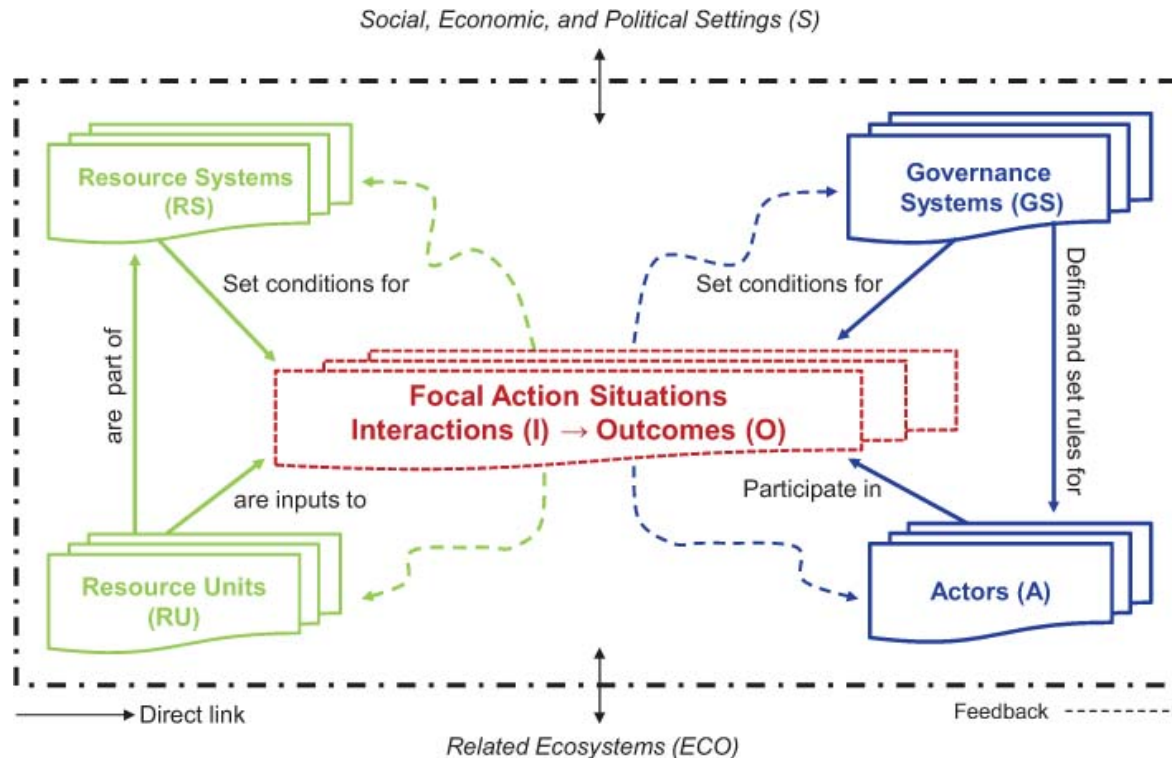


# Framework for Rules-based Modeling





# Data Framework for System Model



The Social-Ecological Systems Framework, for modeling the human dimension,  
Ostrom, 2009; Epstein et al 2013;