

Transforming coastal-marine governance in the face of climate change

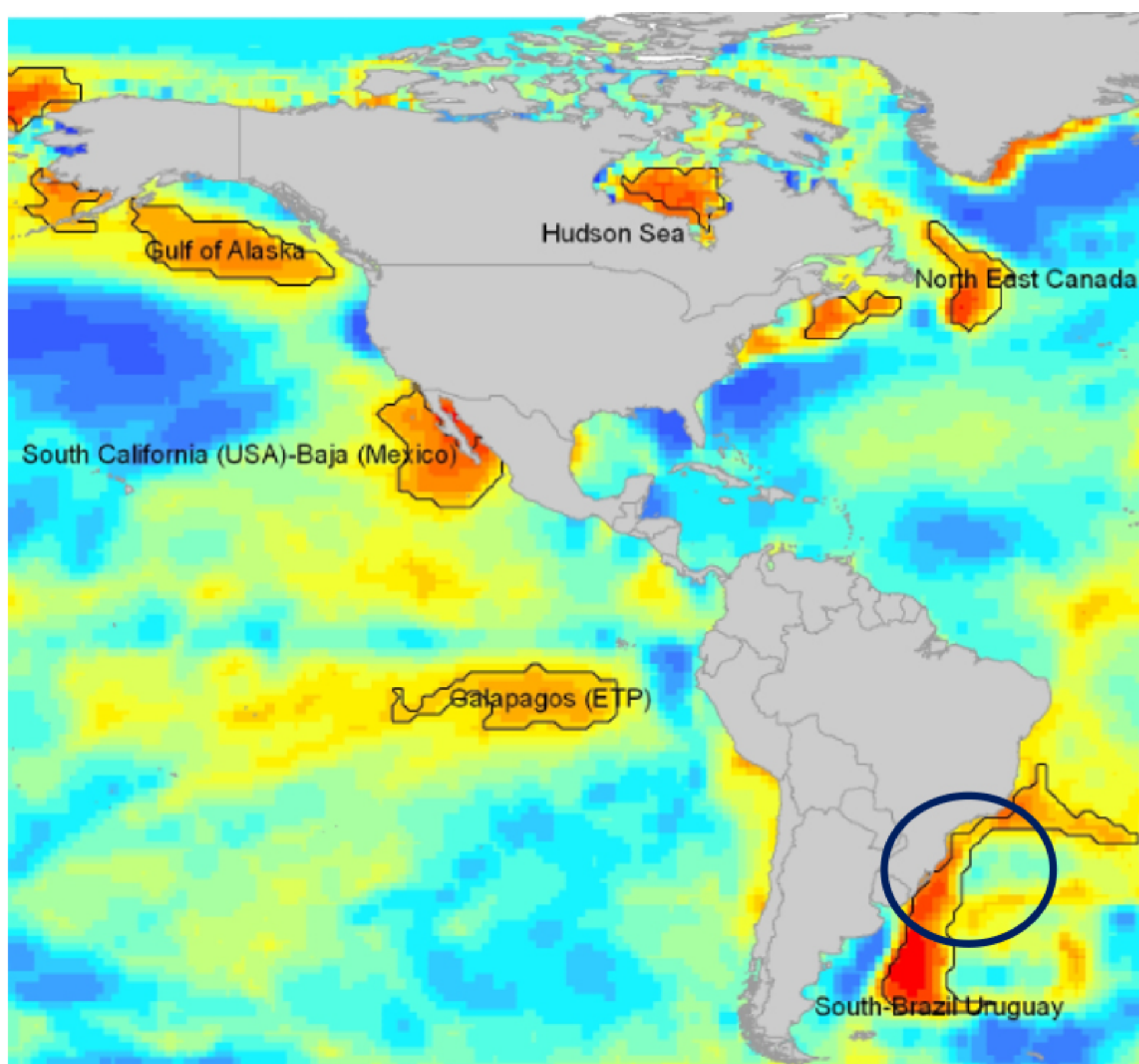
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Hotspots of marine biodiversity and climate change

- There are multiple maritime areas in the Americas that are hotspots of biodiversity and climate change (see the map below).
- These areas support the livelihoods and well-being of multiple coastal communities. Many of these communities engage in small-scale fishing practices.
- Effectively governing change in these hotspots requires engaging local people in relevant governance processes.



Source: Hobday et al. 2016

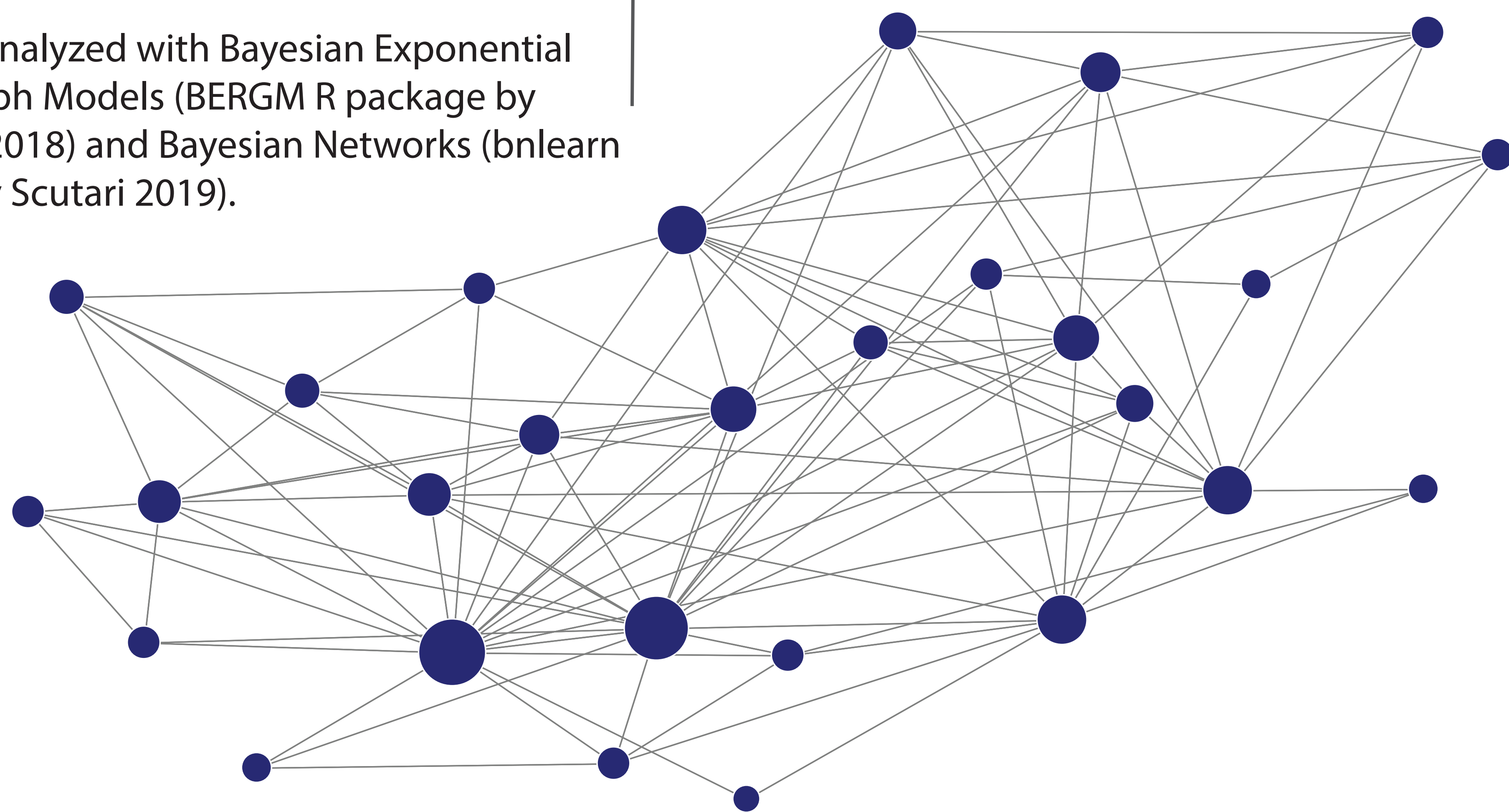
Case study: Barra del Chuy, Uruguay

- We surveyed 28 of the 31 active small-scale fishers in the yellow clam fishery in Barra del Chuy, Uruguay - a community at the forefront of marine ecosystem, and climate, changes.
- The fishery has been governed by a long-standing consultative co-management process, which provides community members the chance to voice their concerns and ideas regarding fisheries management decisions.
- Our interviews aimed to document:
 - (1) the local social networks that fishers use to discuss governance issues, and
 - (2) their perceptions of individuals' influence in, and the legitimacy of, the existing co-management process.
- Data were analyzed with Bayesian Exponential Random Graph Models (BERGM R package by Caimo et al. 2018) and Bayesian Networks (bnlearn R package by Scutari 2019).

Results

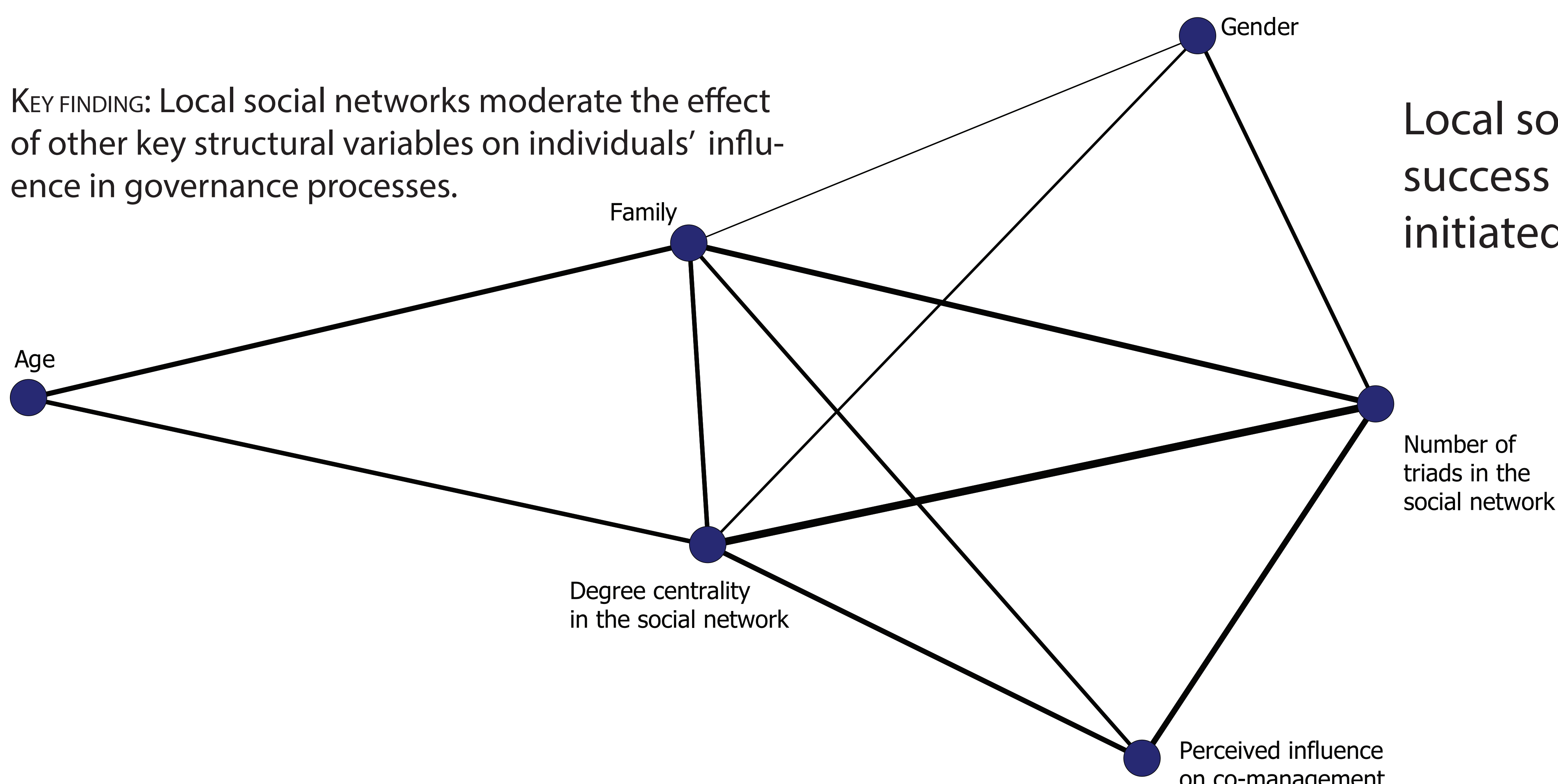
- We found that social and individual variables, such as family groups and age, had a significant influence on the local social networks.
- However, the structure of the local social network moderated the effect of other key variables on the influence that people have on the co-management process.
- NEXT STEPS: we will investigate if similar patterns are observed in other countries (e.g., Brazil, Argentina, Ecuador) and communities.

Fishers' local social network in Barra del Chuy, Uruguay



How can local people influence governance processes?

KEY FINDING: Local social networks moderate the effect of other key structural variables on individuals' influence in governance processes.



Local social networks will determine the success of governance transformations initiated at higher levels.