

# Linking equity, power and stakeholders' roles in relation to ecosystem services

Améline Vallet

Bruno Locatelli

Harold Levrel

Nicolas Dendoncker

Cécile Barnaud

Yésica Quispe Condé



# Power, equity and ecosystem services

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- Addressing power and equity issues is crucial for more sustainable, equitable and resilient governance of ecosystems and their services (Berbés-Blázquez et al. 2016)
- The concept of ecosystem services is poorly related to the questions of equity, power and environmental justice (Ernstson 2013; Felipe-Lucia et al. 2015)
- Stakeholders play different roles in relation to the distribution of ES or natural resources and their management (Schlager and Ostrom, 1992)
- Distributive vs. Participation equity (Cutter, 1995, Schlosberg, 2003)

# Stakeholders who benefit from ES do not always participate in ES management

“Only those who live in the protected area can collect medicinal plants”

“Why could we be banned?”



# Questions and objectives

- Who participates in ES management? How are ES managed? How are benefits distributed among stakeholders?
- Propose an analytical framework for identifying and qualifying stakeholders' roles in relation to ES flows
- Apply and test it in a real-world situation

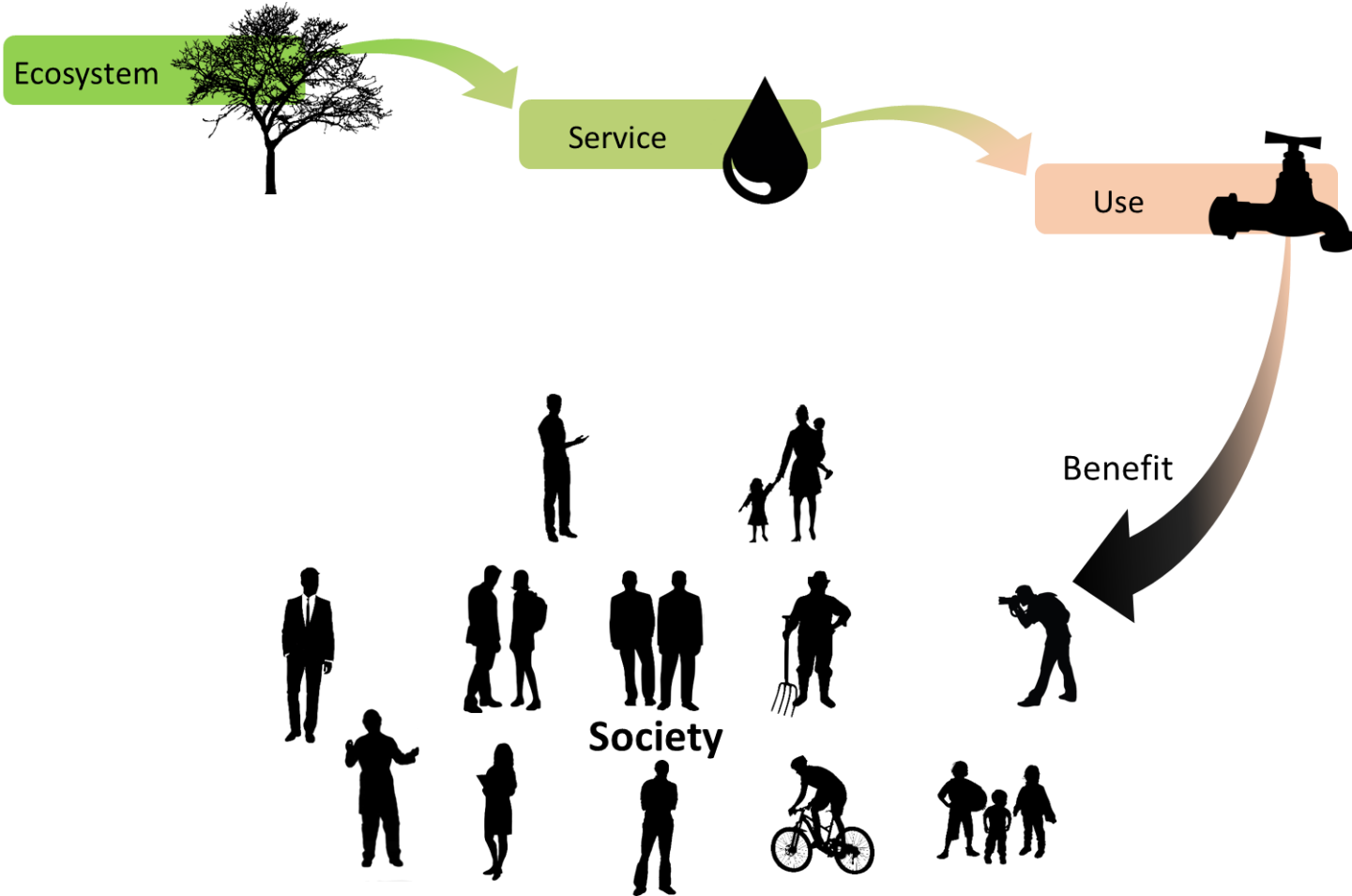


# Analytical framework

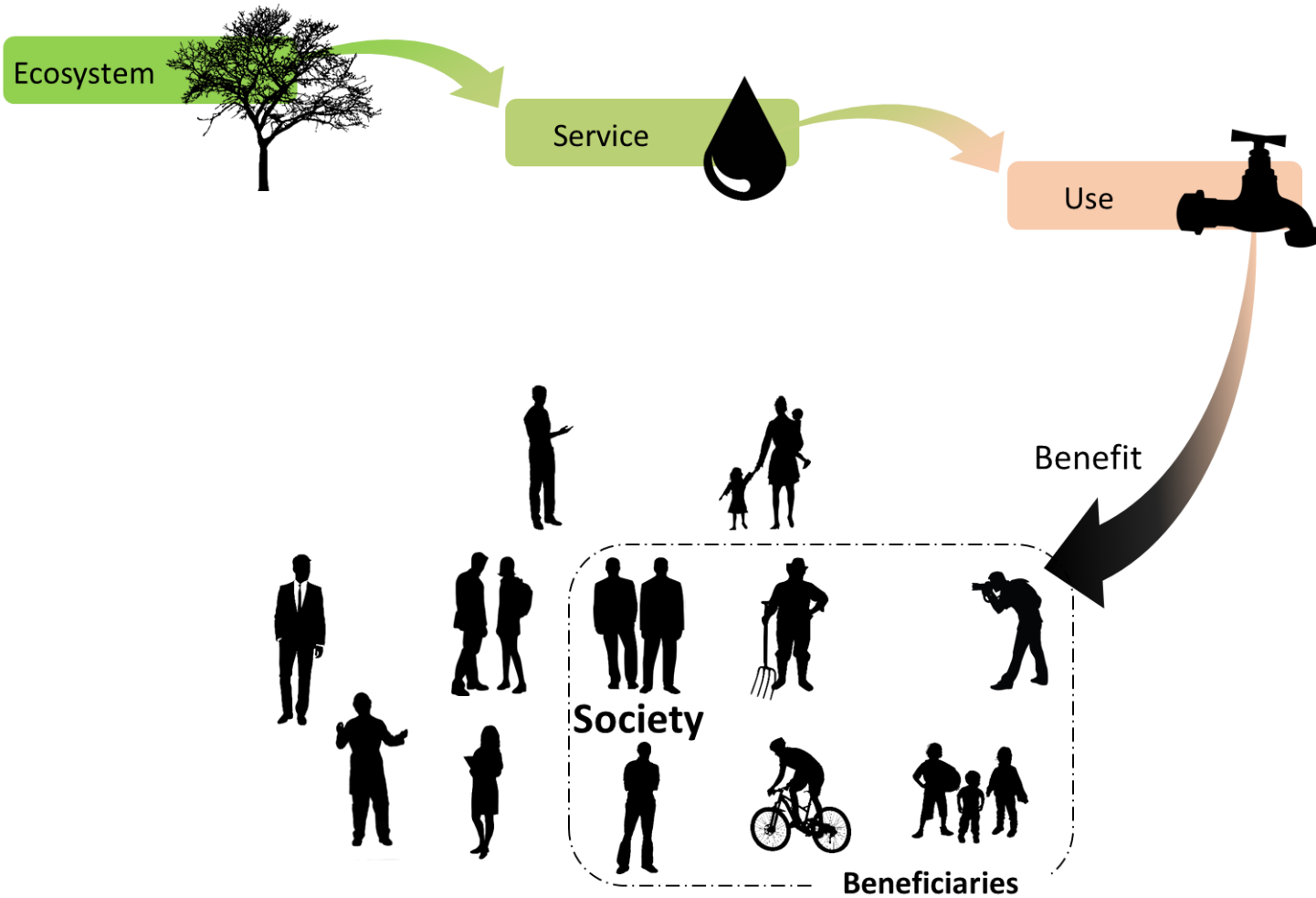
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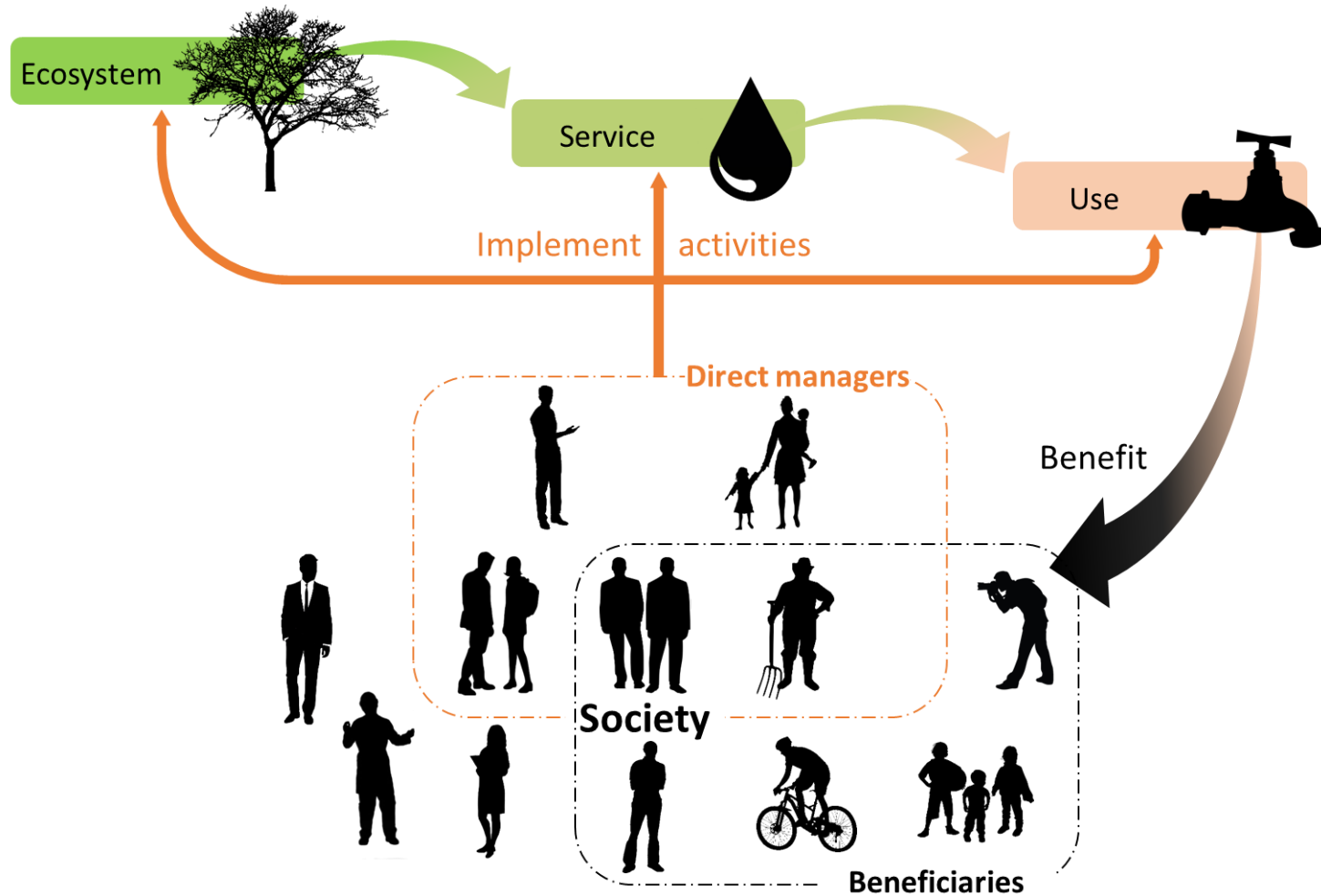
# Analytical framework



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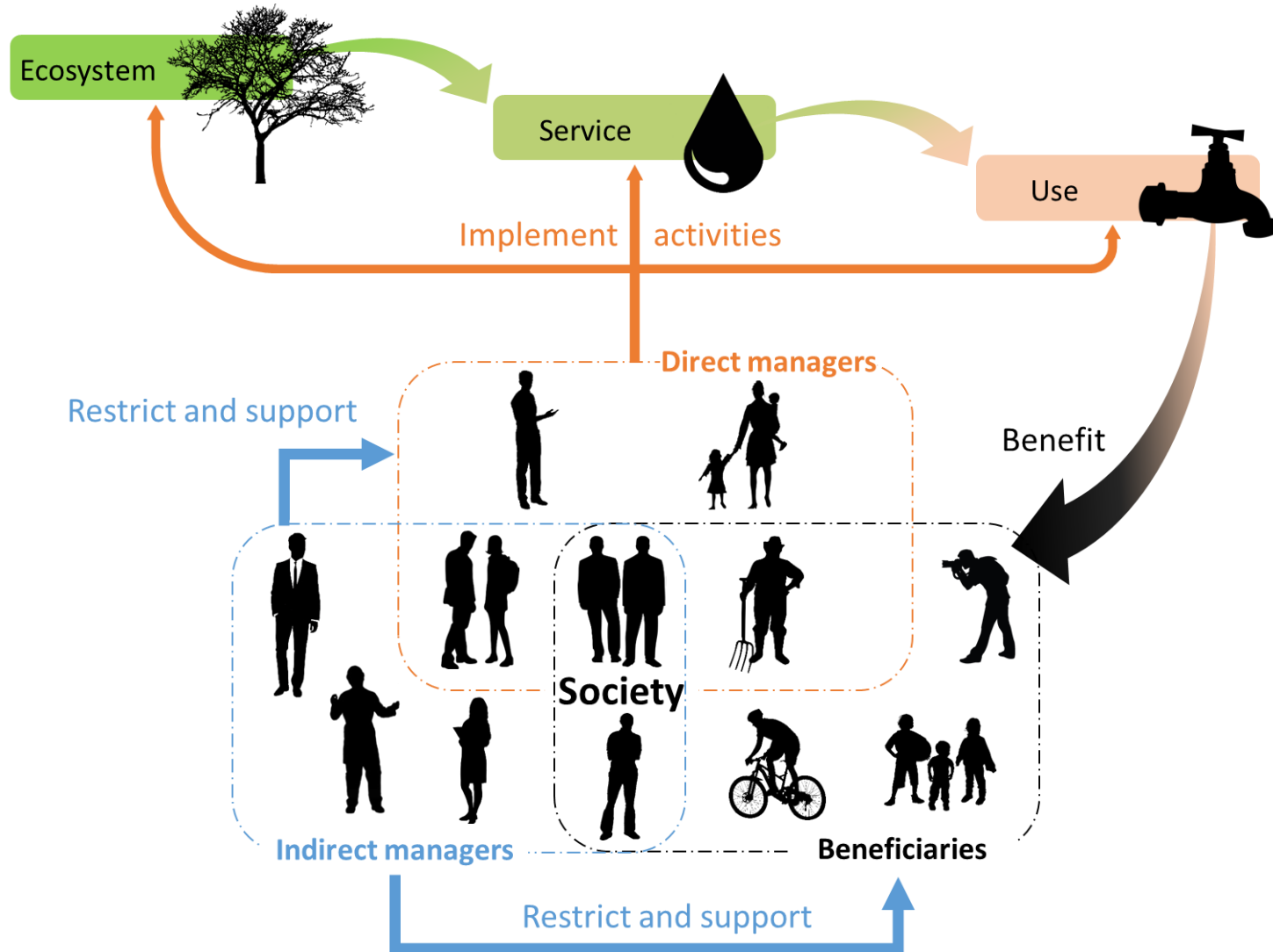


# Analytical framework





# Analytical framework



# Study Site

- Andean watershed (Mariño), Peru
- 284 km<sup>2</sup>
- Agroforest mosaics
- Presence of a protected area (Ampay Sanctuary)
- Environmental conflicts (water scarcity, urbanization boom, mining activities)



# Methods

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## Workshops

- Selection of ecosystem services
- Identification of stakeholders



# Methods

## Workshops

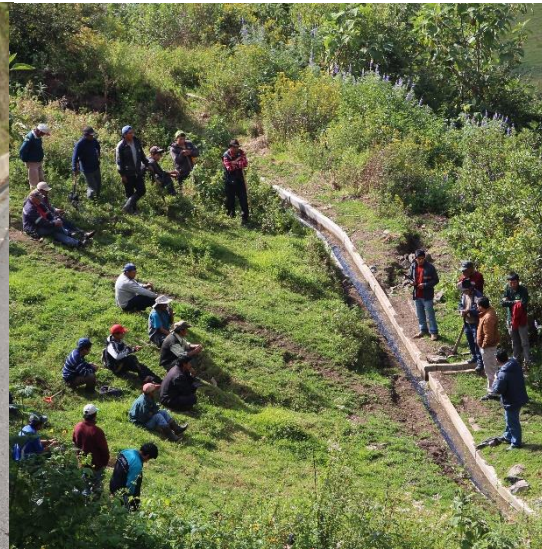
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# Methods

## Workshops

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# Methods

Workshops

- Selection of ecosystem services
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52 interviews

- What are the services you benefit from?
- What are the services you manage? How?



# Methods

Workshops

- Selection of ecosystem services
- Identification of stakeholders



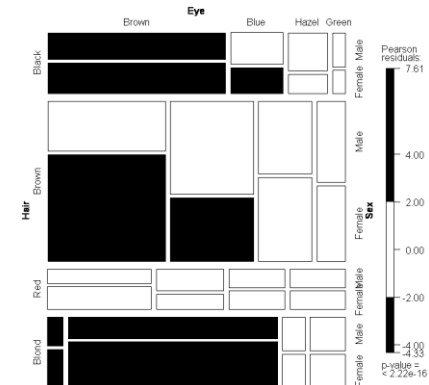
52 interviews

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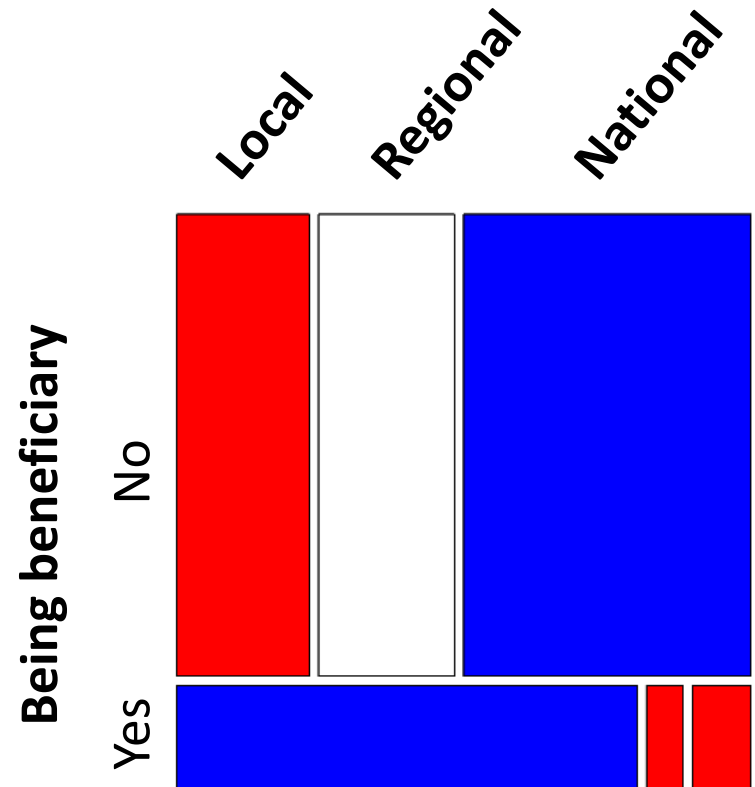
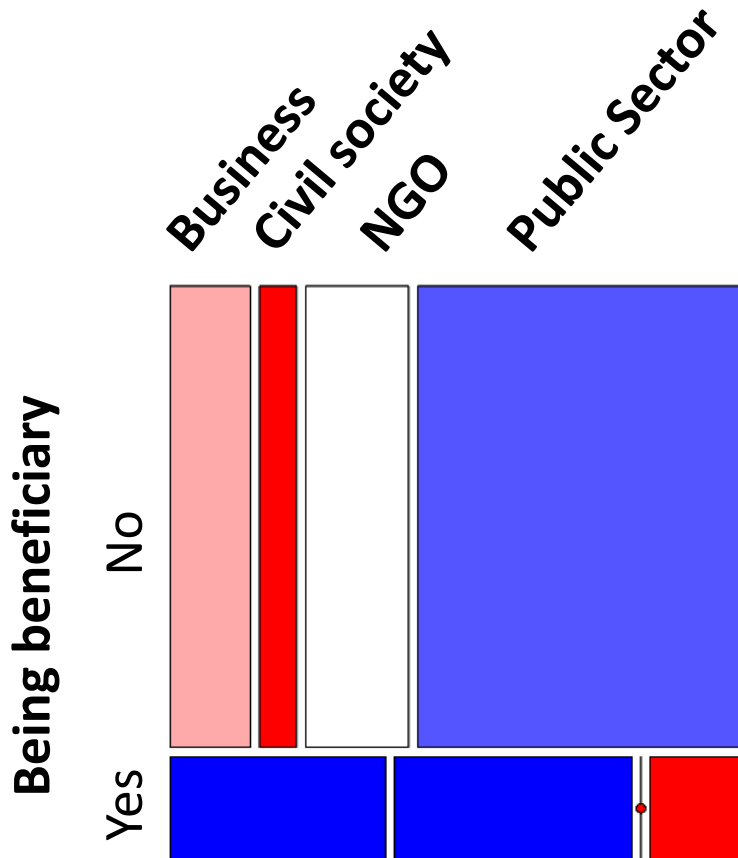


Analysis

- Qualitative description
- Retranscription and coding
- Statistical analyses



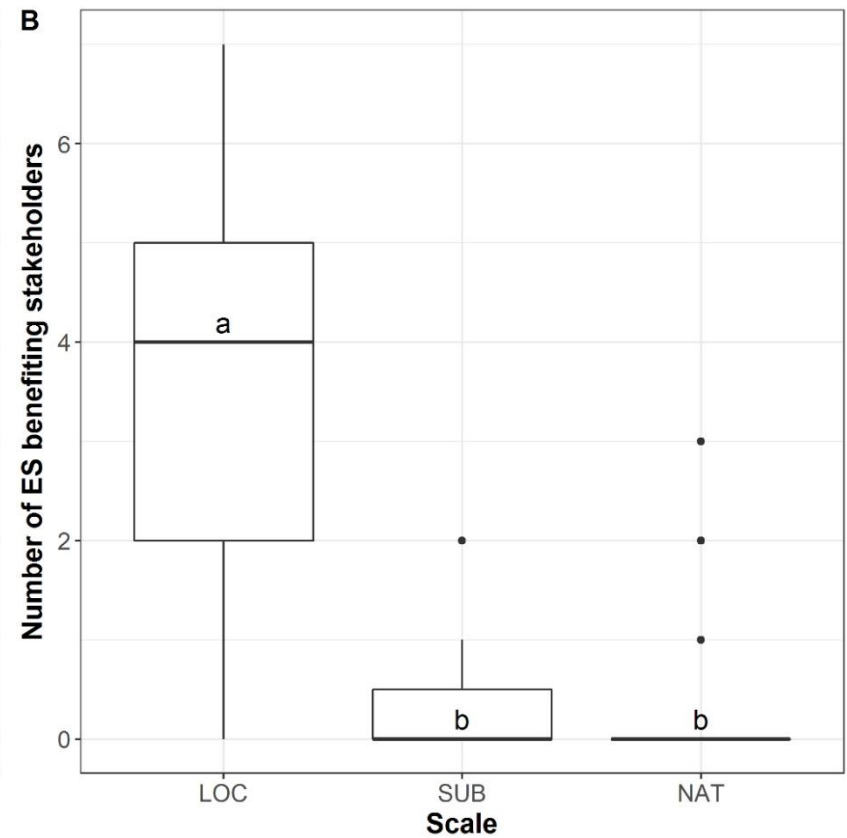
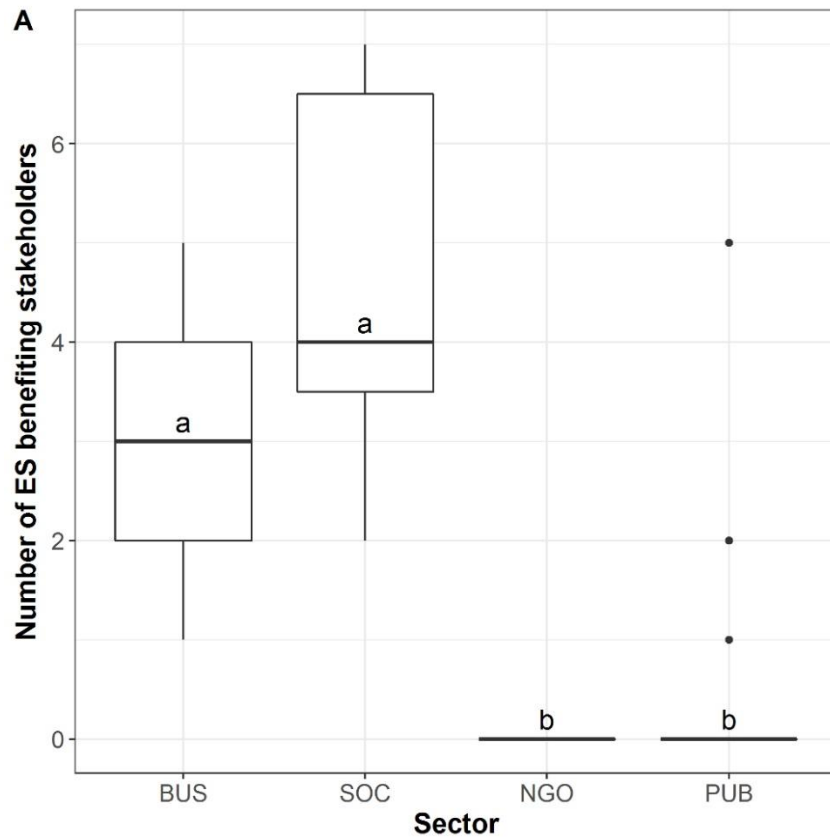
# Who benefits from ecosystem services?



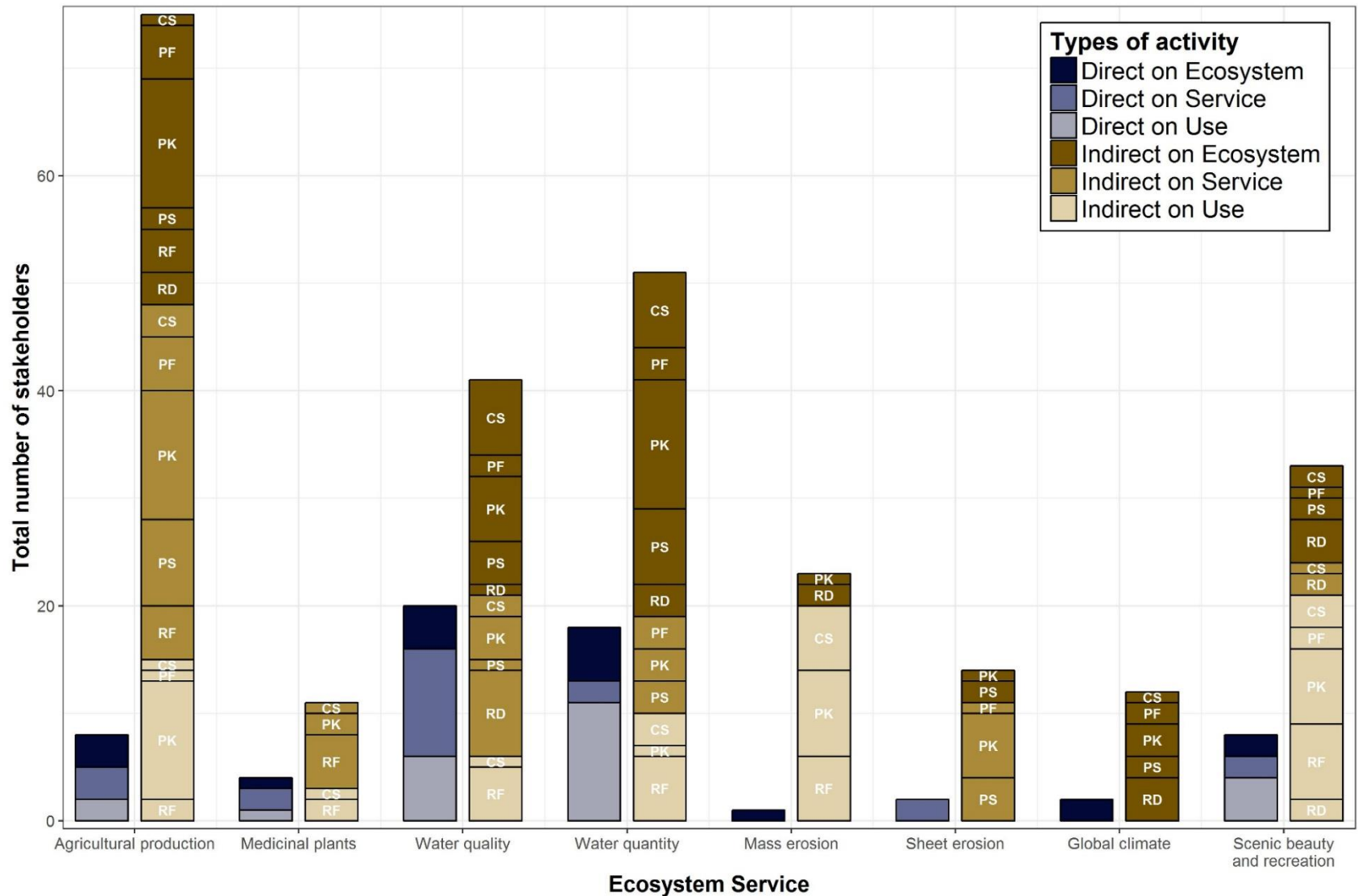
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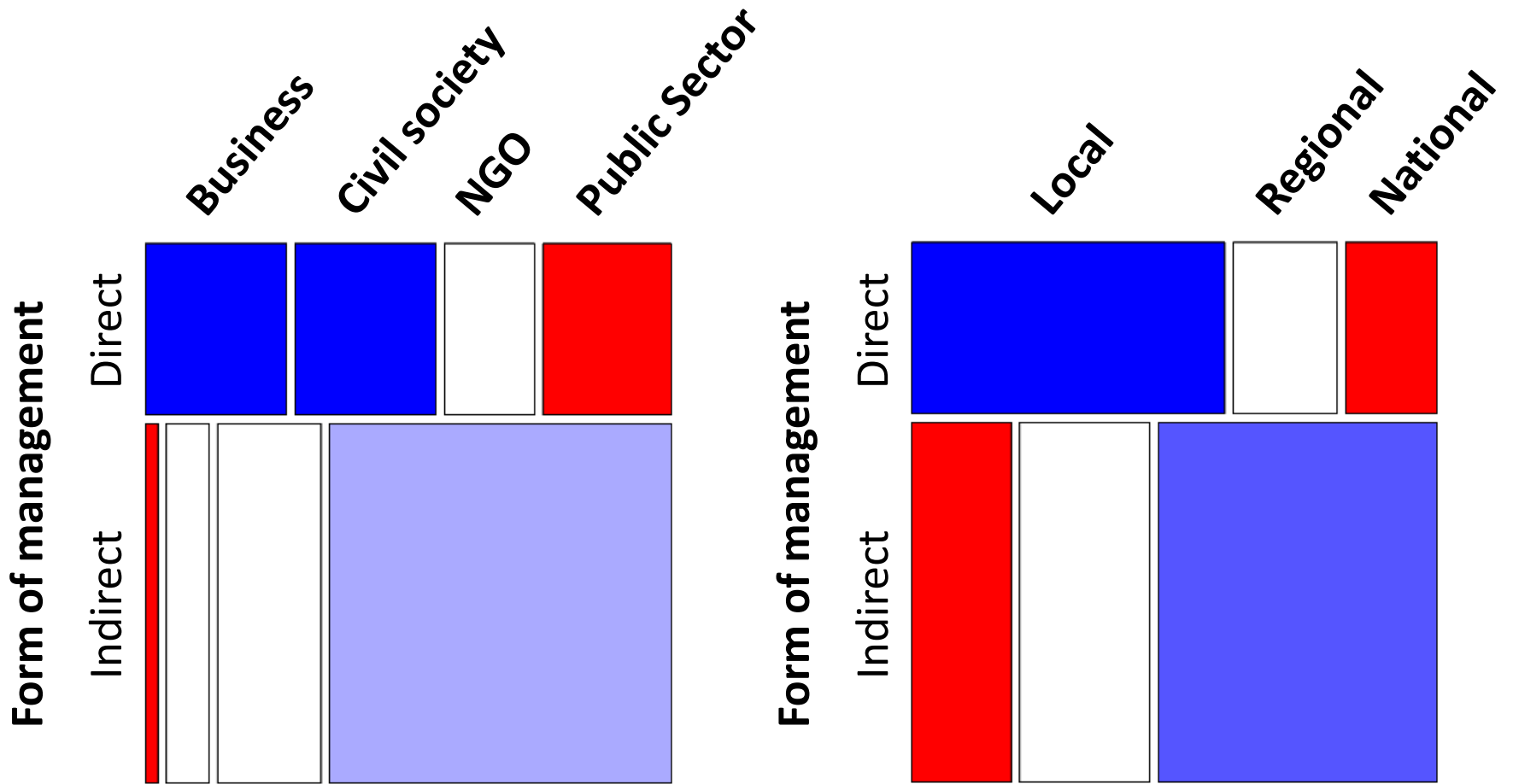
# Stakeholders benefited from different numbers of ES



# How are ES managed?

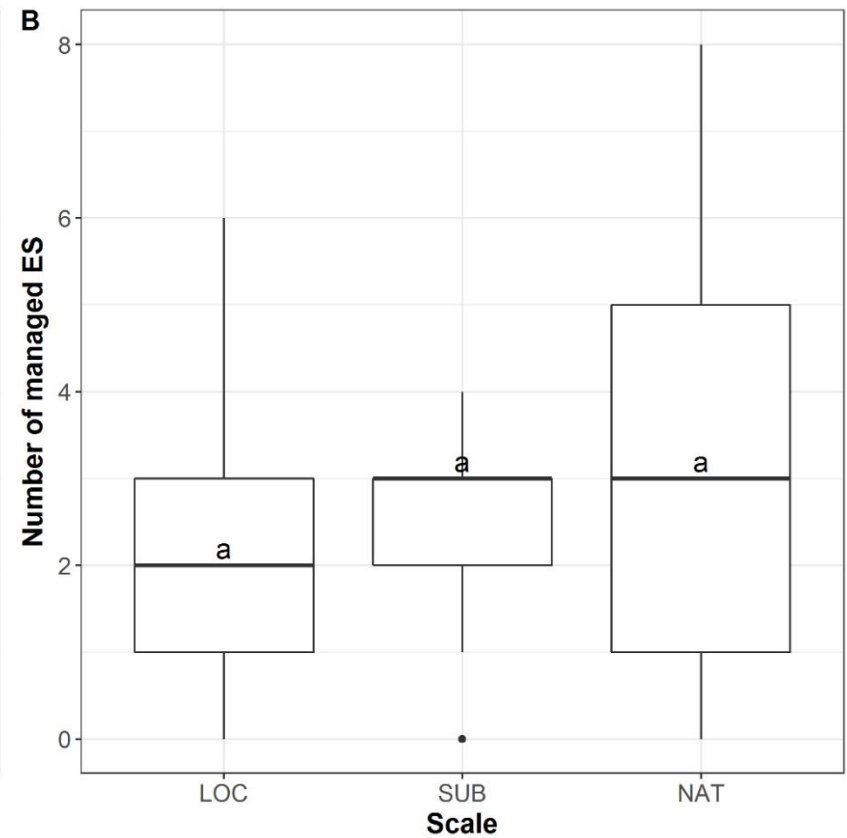
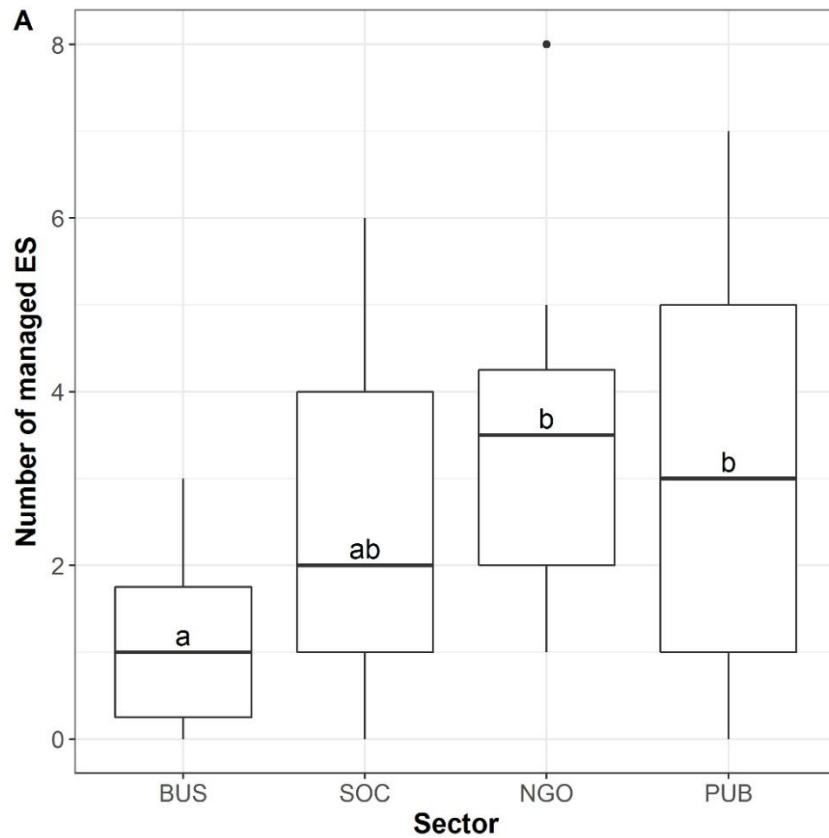


# Who manages ecosystem services?

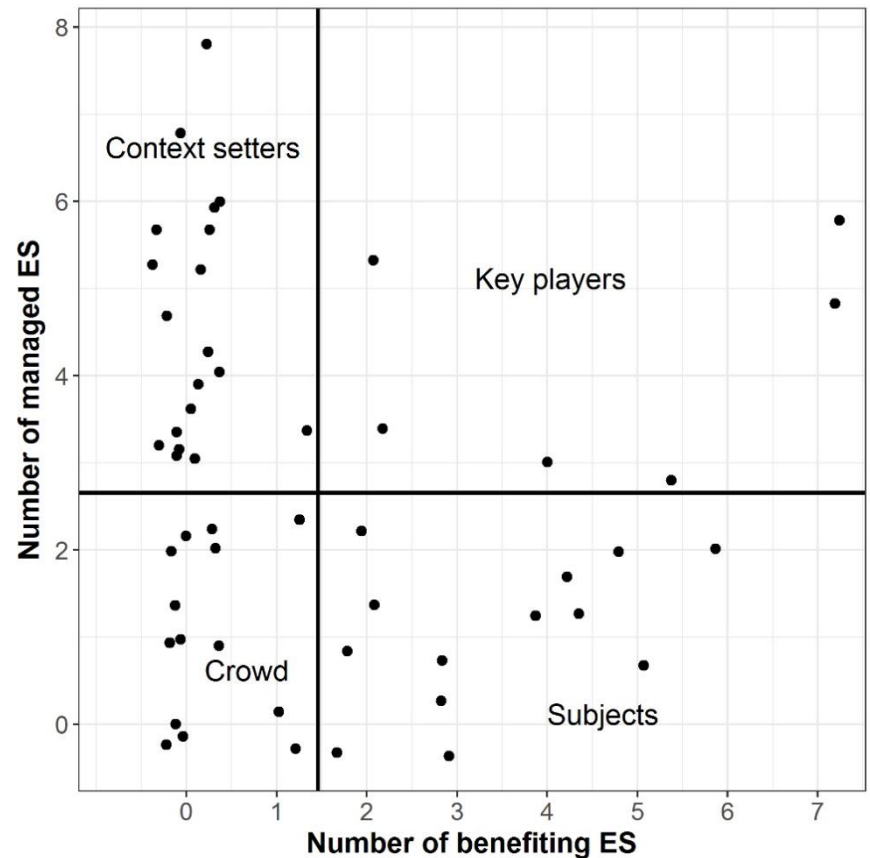
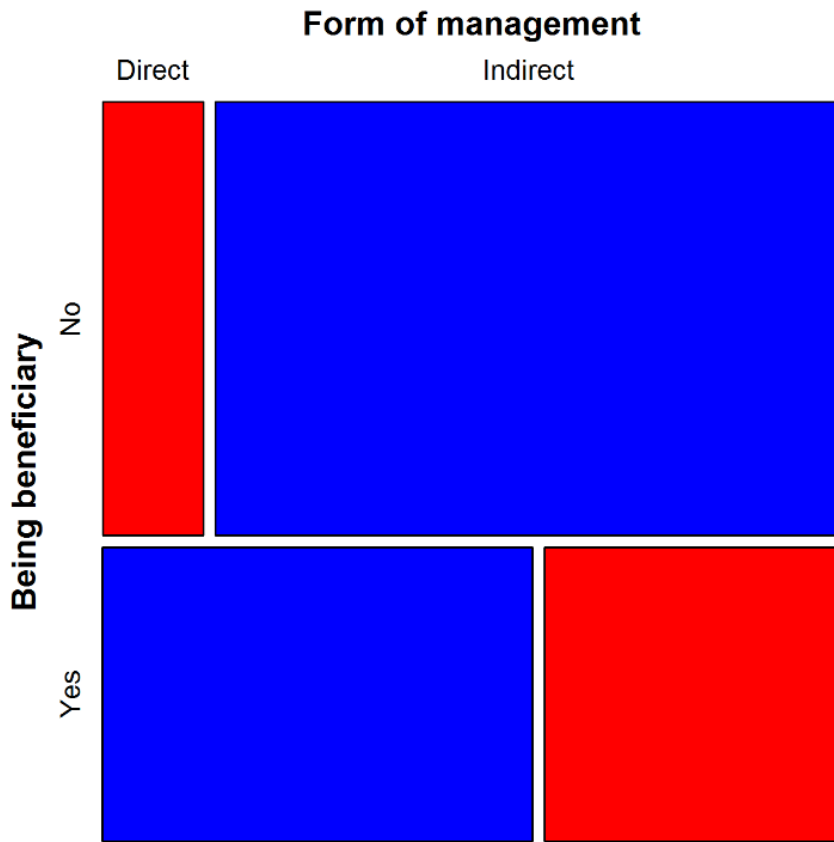


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# Stakeholders managed different numbers of ES



# Stakeholders who benefit from ES do not necessarily participate in ES management





# Conclusions

- Clear differences between those who managed ES and those who benefited from them (Alonso Roldán et al., 2015, Ernstson et al., 2008, Felipe-Lucia et al., 2015)
- Some stakeholders have the power to control directly or indirectly ES flow... And other not!
- Different from formal power
- Why does this matter?
  - Reduced adaptive capacity of the system (adaptation issue)
  - Mistrust in institutions that manage natural resources (legitimacy issue)
  - Created/enhanced conflicts (social unrest issue)

If you have questions or comments on this presentation:

[ameline.vallet@agroparistech.fr](mailto:ameline.vallet@agroparistech.fr)

 @ameline191



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