

# Evaluating the Effects of Transdisciplinary Research in the Context of Marine and Coastal Social-Ecological Systems

Preliminary insights from a systematic literature review

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**BRIDGES** RESEARCH PROGRAM



# Context

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- Limited evidence of the **effects of TdR**, despite its aspiration to produce more than academic knowledge outputs (Holzer et al., 2019)
- Little understanding of its **contributions to transformative changes** (Blackstock et al., 2007; Partelow et al., 2019; Sanchez-Jimenez et al., 2025)
- Evaluation as a means to **understand and critically reflect** on research practices and knowledge production (Cvitanovic et al., 2016; Pohl, 2010).



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## Challenges

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- We are not evaluating **simple or linear causal relationships** (Reed et al., 2021).
- Balancing **context specificity and the transferability** of evaluation results (Belcher & Claus, 2025; Lang et al., 2012).
- A lack of **common sense** and an **overarching overview** of evaluation criteria and indicators.



# BRIDGES Research Program & BRIDGES Impact

1. SWIO regional site, including the Scattered Islands

2. The Comoros and their 4 marine protected areas

3. Mayotte and its Marine Nature Park

4. Réunion Island

The west coast including its Natural Marine Reserve

5. Southern Mozambique  
from Maputo Bay to Ponta de Ouro.

Biodiversity conservation and equitable fisheries  
in the South Western Indian Ocean (SWIO)



**Objectives of BRIDGES-IMPACT:**

**Develop and apply an evaluation framework**



# Method: a Systematic Literature Review

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To what extent do evaluation methods and approaches assess (and contribute to) the transformative potential of transdisciplinary research and science policy interactions in social-ecological systems ?

- Following the guidelines of Collaboration for Environmental Evidence (2022)



# Steps of the systematic review

Publications identified  
n = 3722



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Publications after abstract screening  
n = 264 (~7% of 3722)

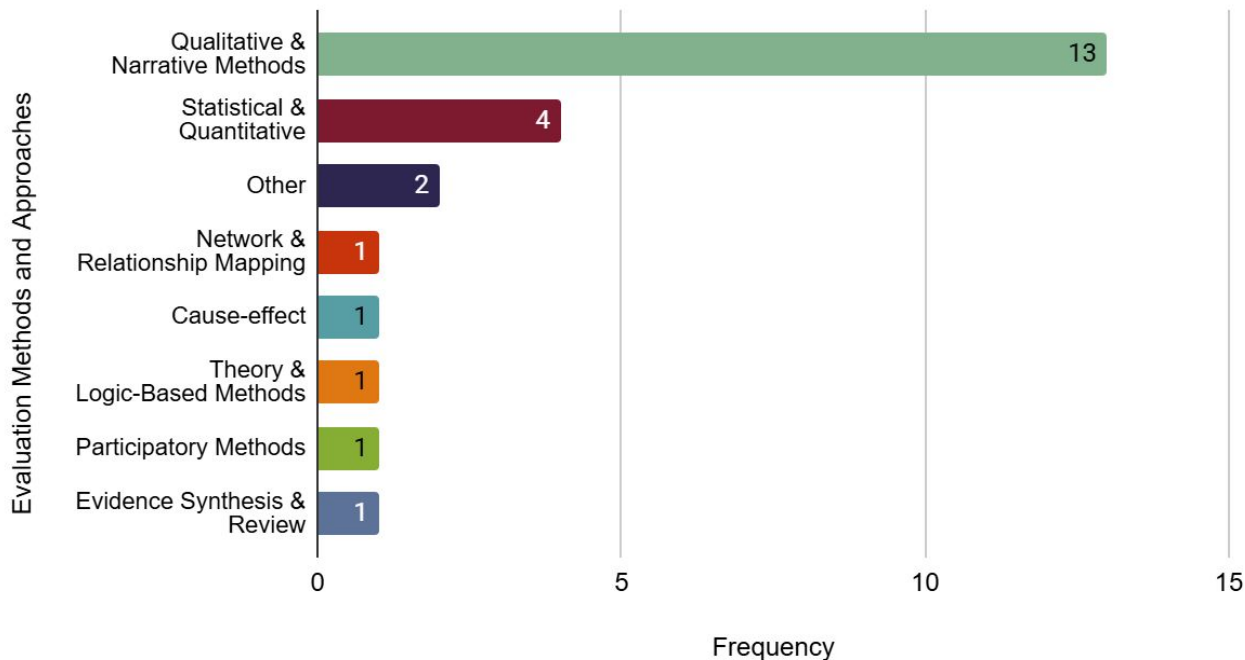
Publications after full text screening  
on **SES generally**  
(n = 112)

**Marine and coastal** publications after full  
text screening  
n = 16 (41% of 39 after abstract screening)



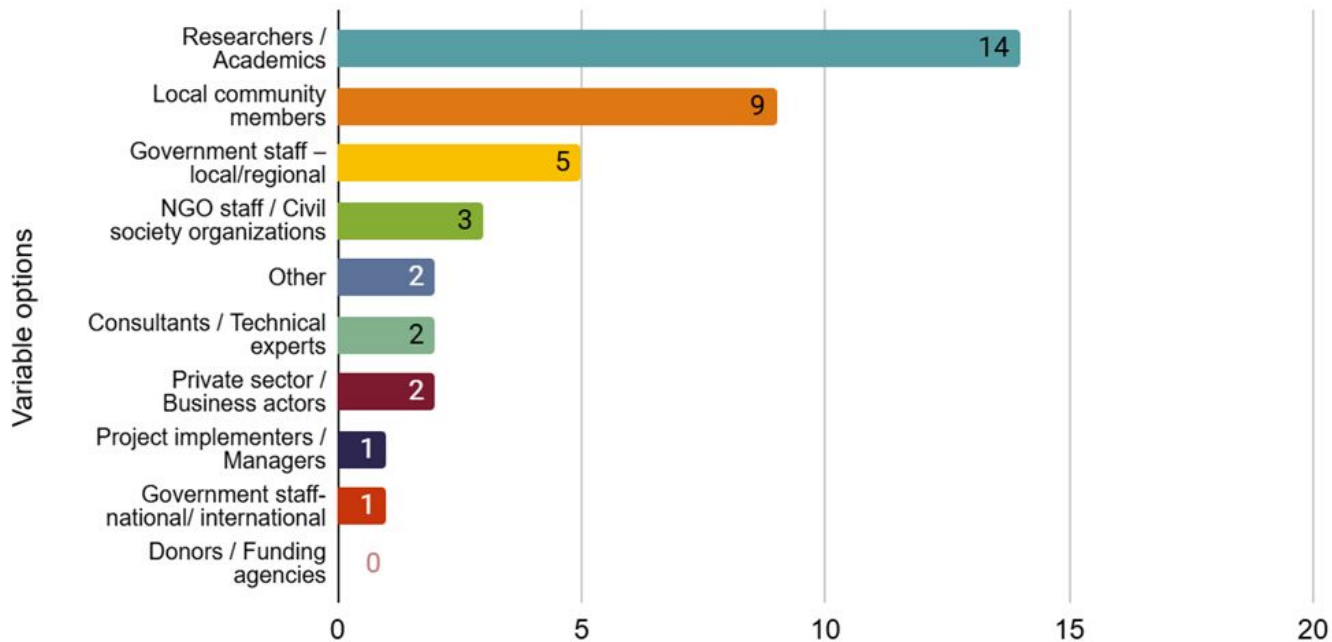
# Methods and comparators

## Frequency of Evaluation Methods and Approaches



*One study may cover several variables. Total number of studies: 16.*

# Who participates in the evaluation?

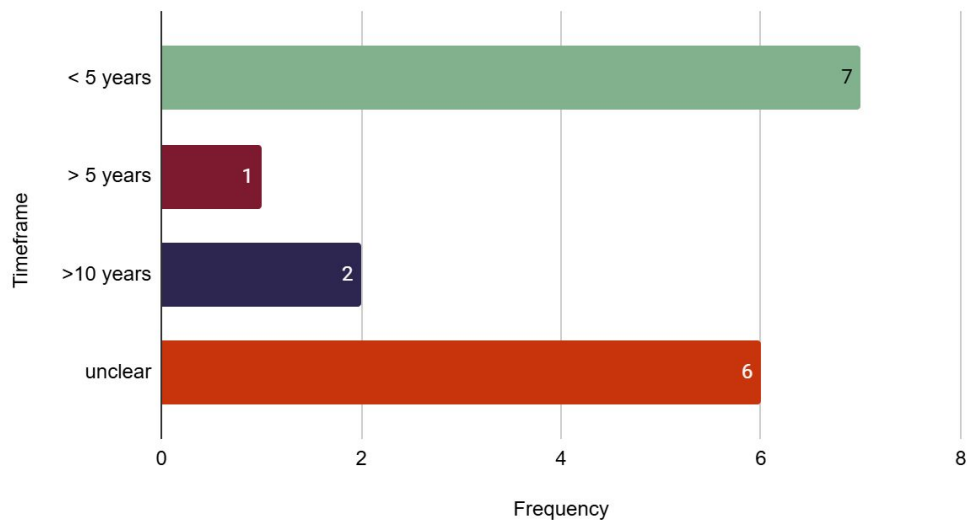


Participation in the evaluation. One study may cover several variables. Total number of studies: 16.



# Time frames and effect classes

Time frames evaluated

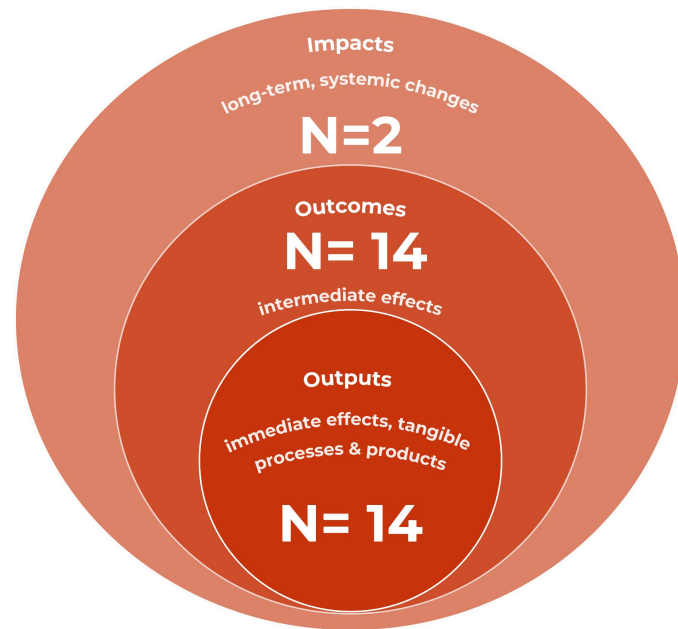
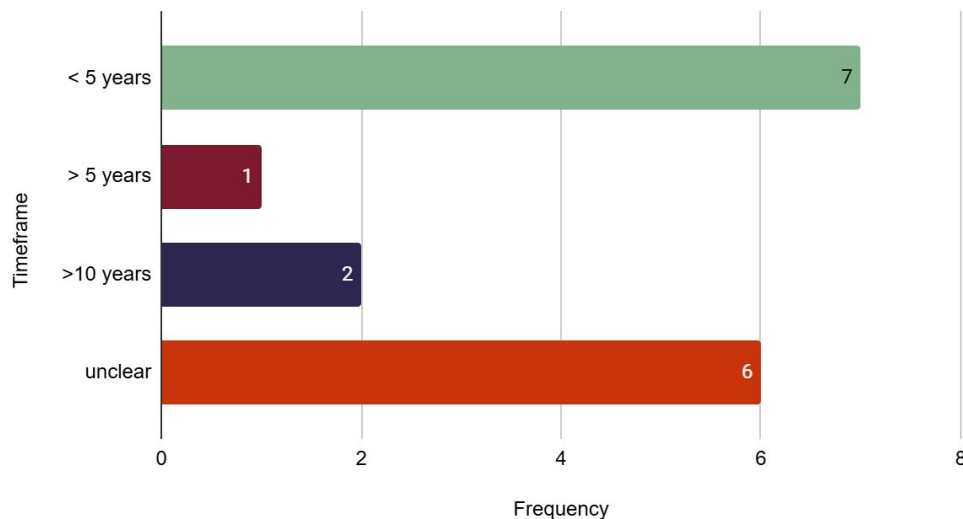


*One study may cover several variables. Total number of studies: 16.*



# Time frames and effect classes

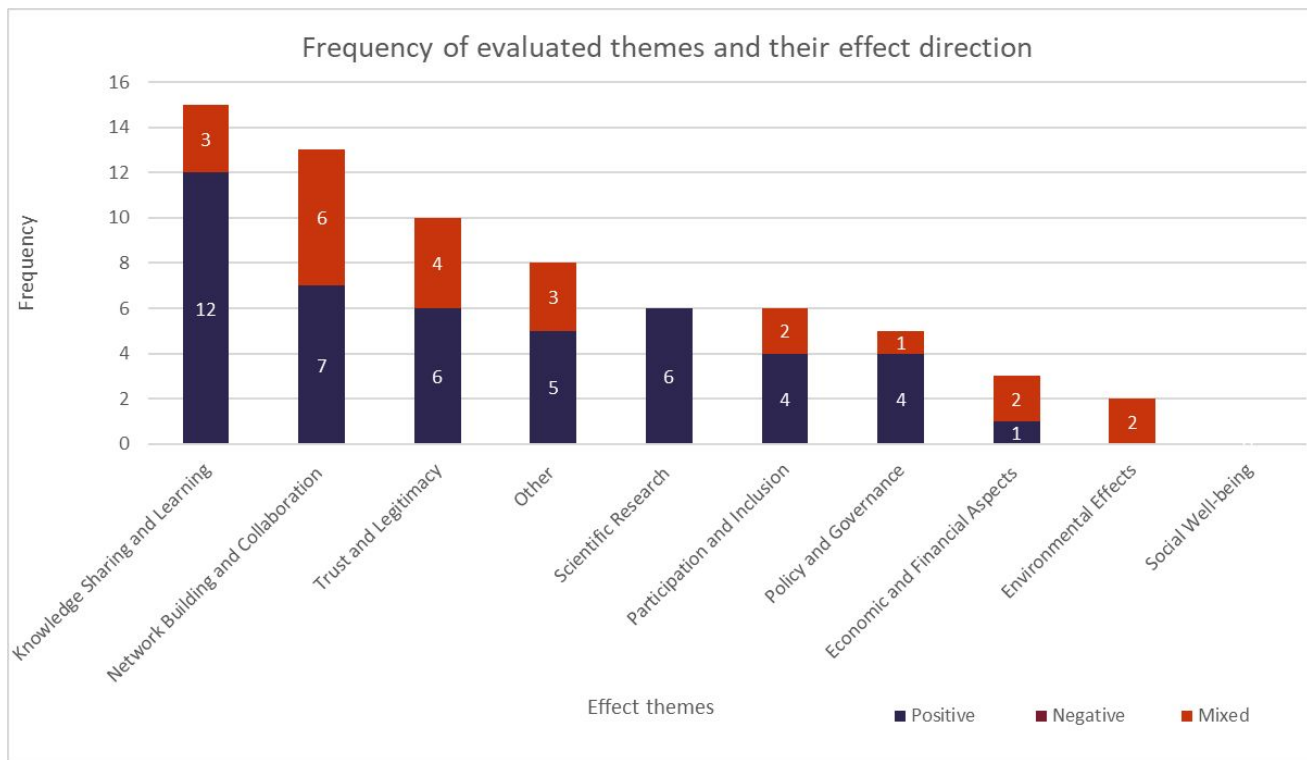
Time frames evaluated



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# Themes analysed



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# Conclusion and perspectives

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- Evaluation primarily focused on:
  - Short-term outputs
  - The research process (e.g., knowledge exchange, collaboration)
  - Primarily qualitative approaches.
- Persistent need for more systematic, longitudinal, and mixed evaluations.



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## Next steps

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- Comparison of marine/coastal SES with other SES
- Apply the analytical framework to the remaining articles
- Develop and apply an evaluation framework to Bridges



# Thank you !



[www.bridges-wio.com](http://www.bridges-wio.com)

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