

# A Doughnut-shaped Impact Assessment of Mangrove Restoration

Thyrza Zoons

Research Intern at Climate Cleanup



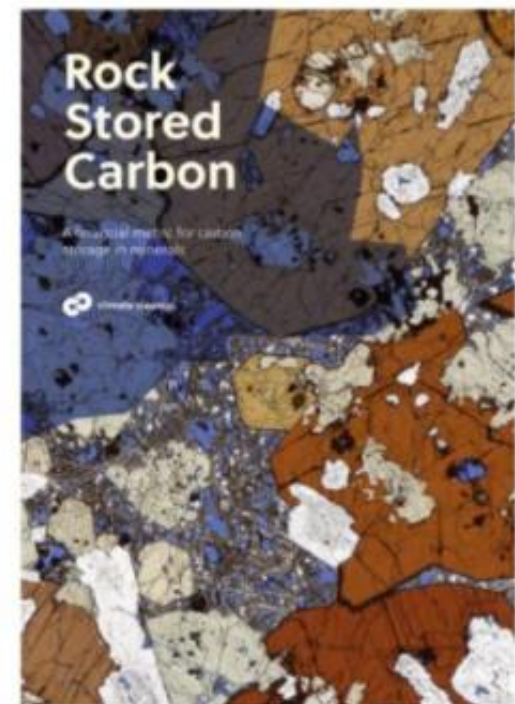
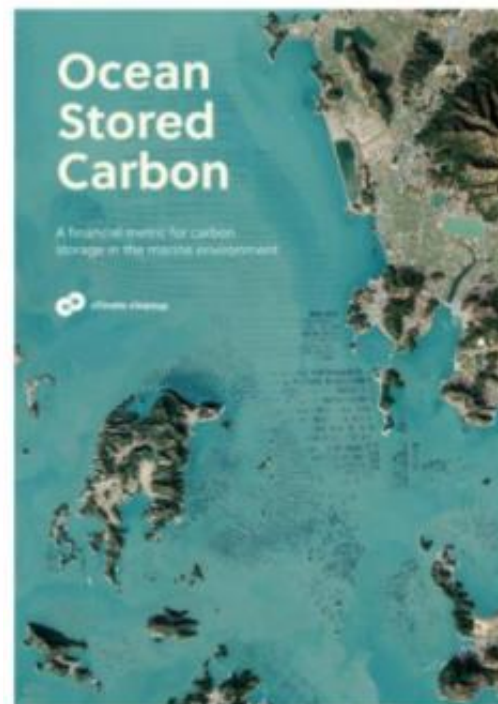
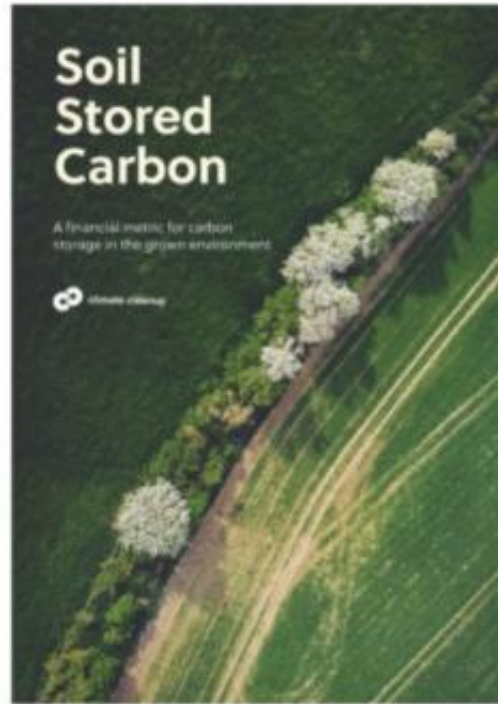
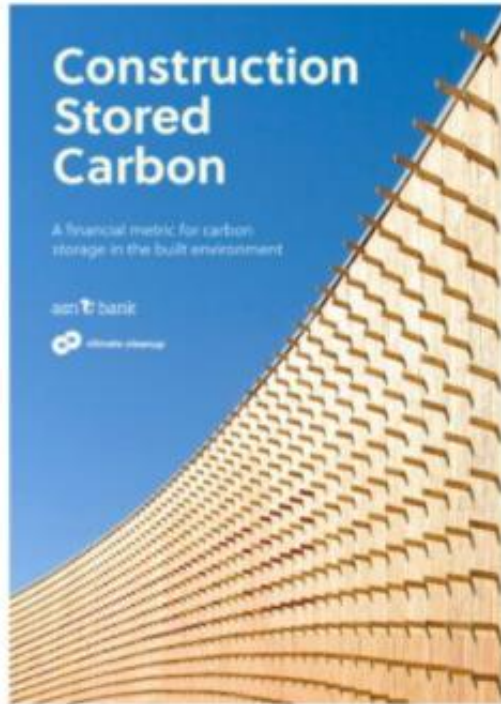
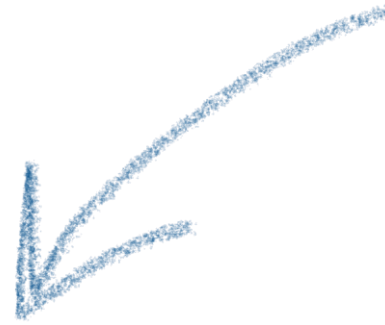
Universiteit Utrecht



climate cleanup

# Climate Cleanup

Double Nature. Store 1500 Gt of CO<sub>2</sub>.

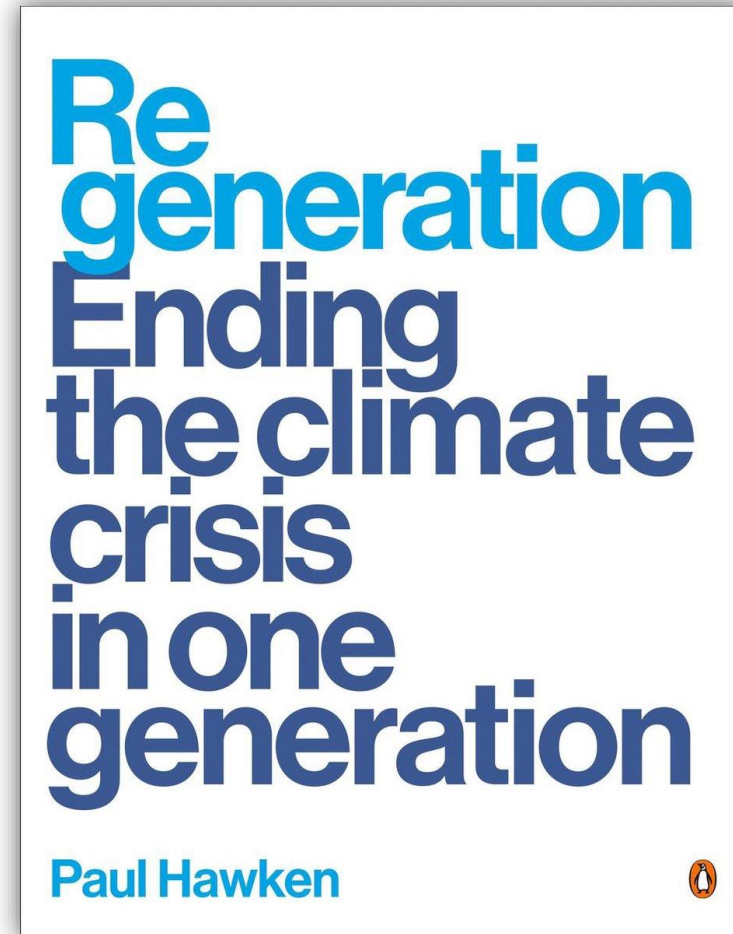




# Climate solutions: what about mangroves?

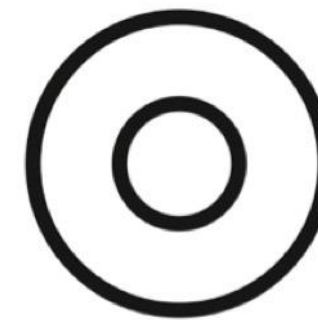
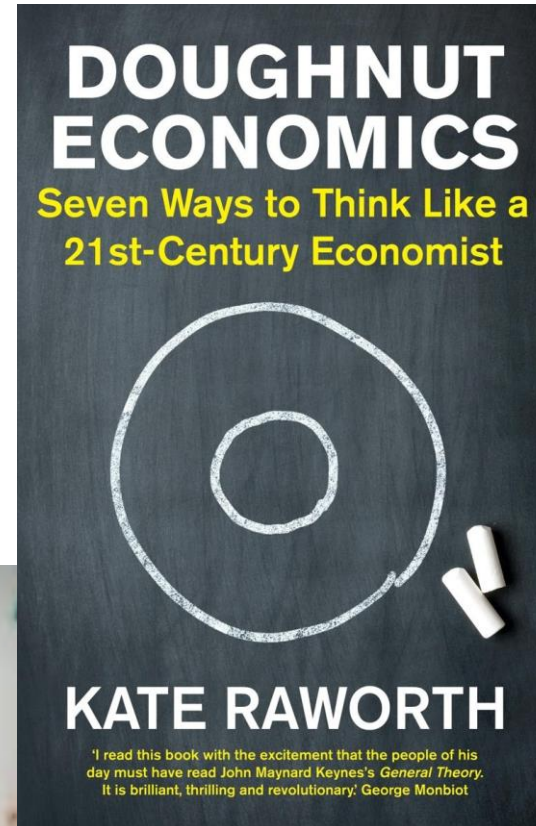


April, 2017



Sept, 2021

# About the Doughnut

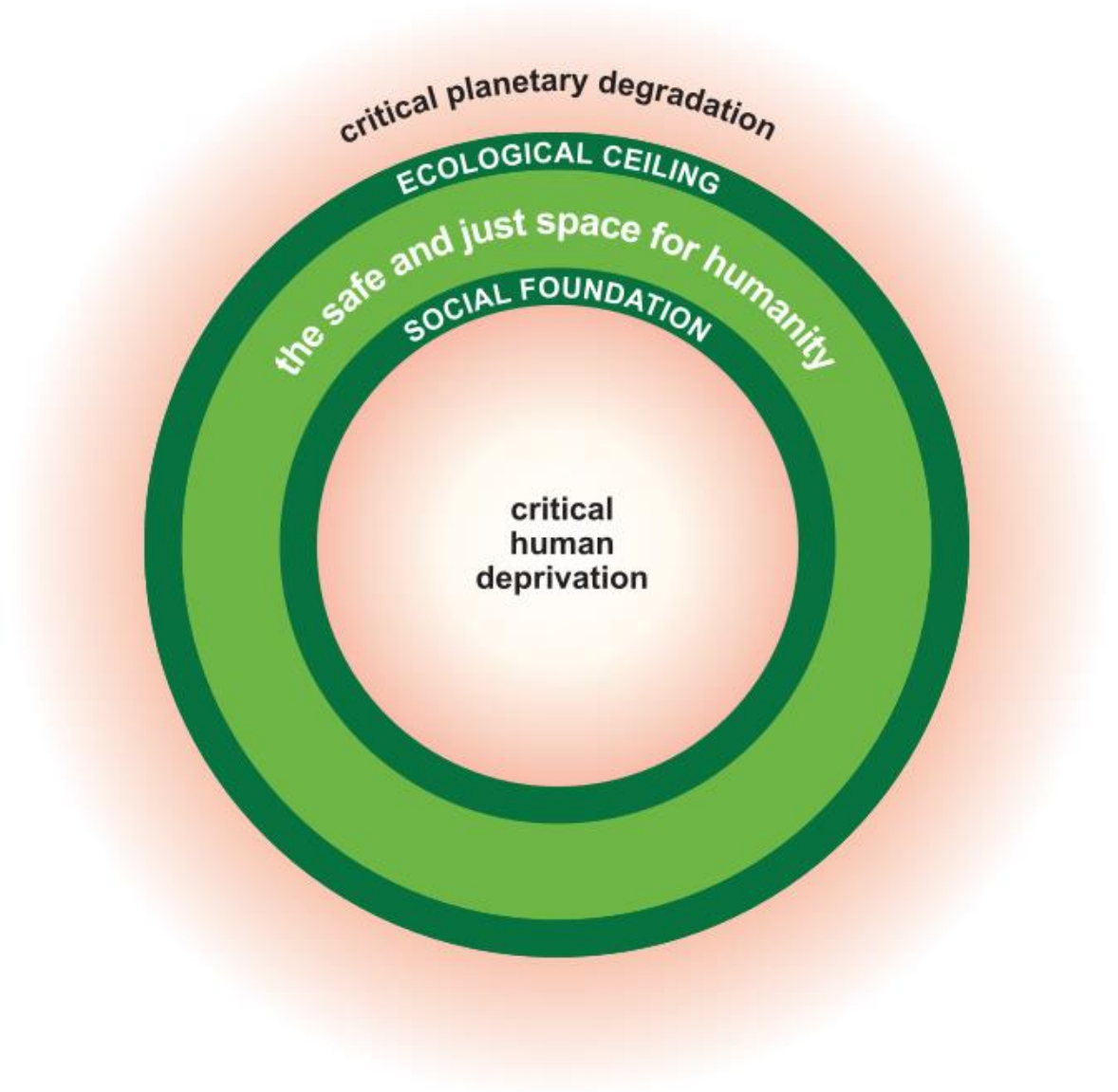


**DOUGHNUT  
ECONOMICS  
ACTION  
LAB**

TEDtalk: ['A healthy economy should be designed to thrive, not to grow'](#) (Kate Raworth)

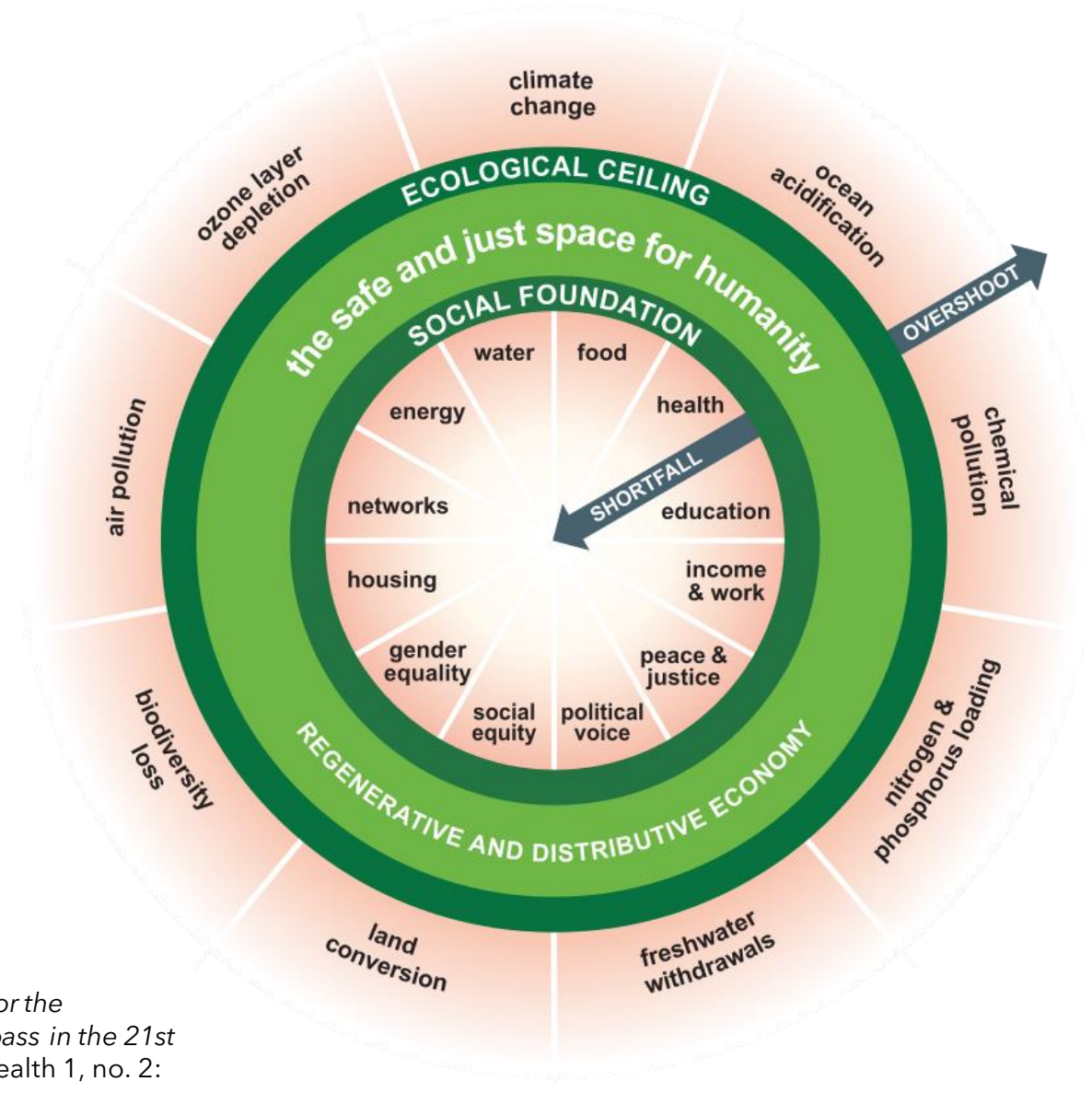
# About the Doughnut

- **1. The social foundation** – below which lies critical human deprivation
- **2. The ecological ceiling** – beyond which lies critical planetary degradation





# About the Doughnut



Raworth, K (2017). *A Doughnut for the Anthropocene: Humanity's Compass in the 21st Century*. The Lancet Planetary Health 1, no. 2: e48-49.

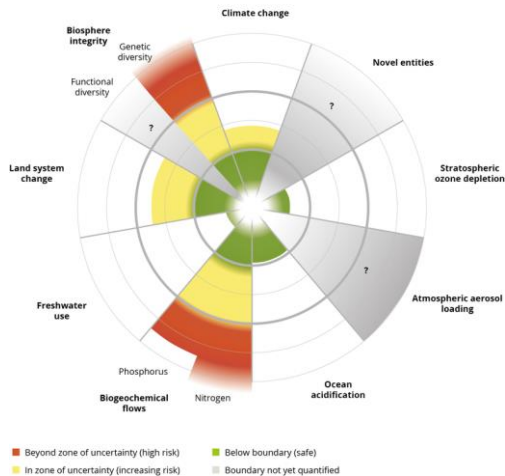
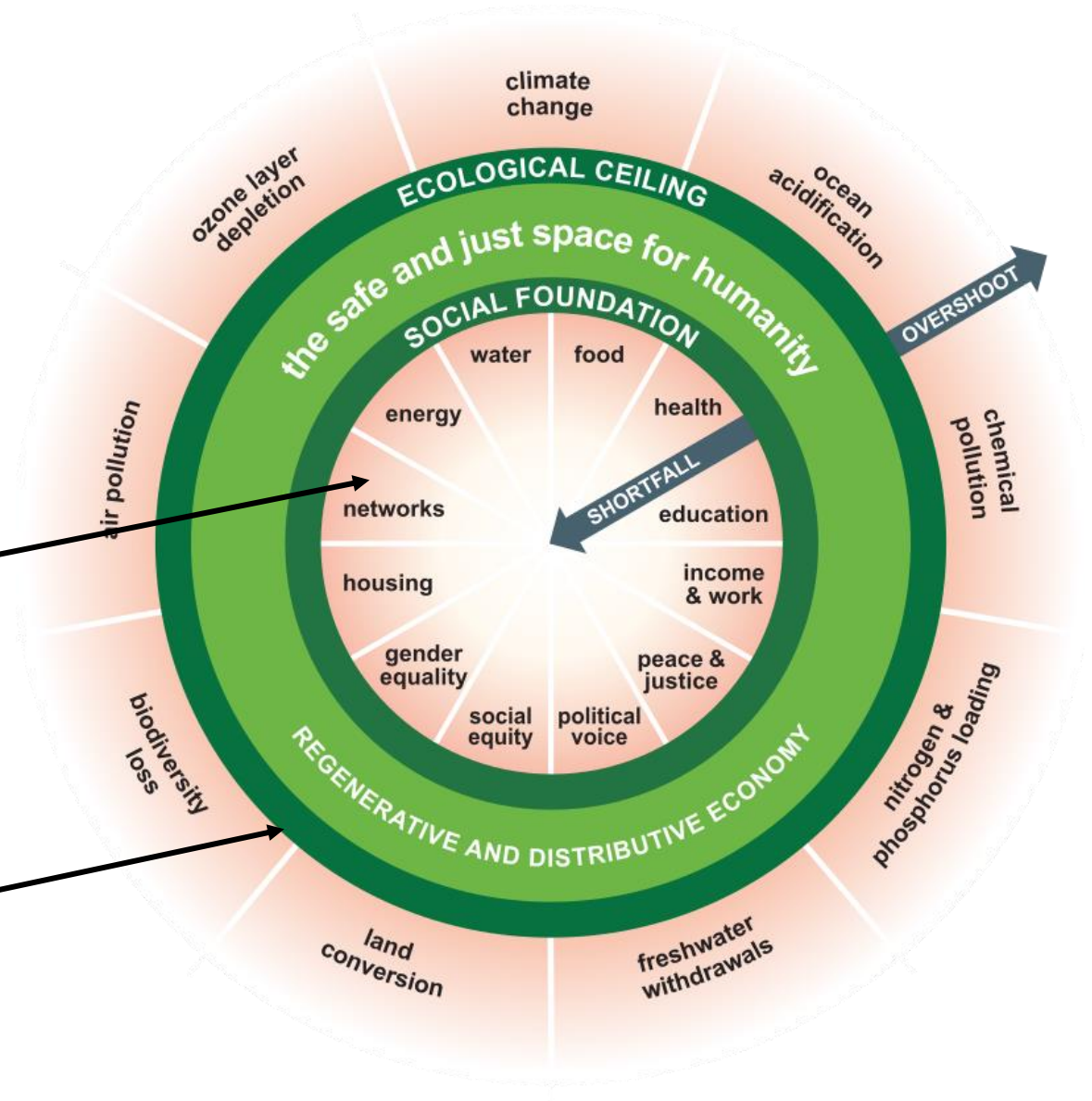
# About the Doughnut



**Social Foundation**

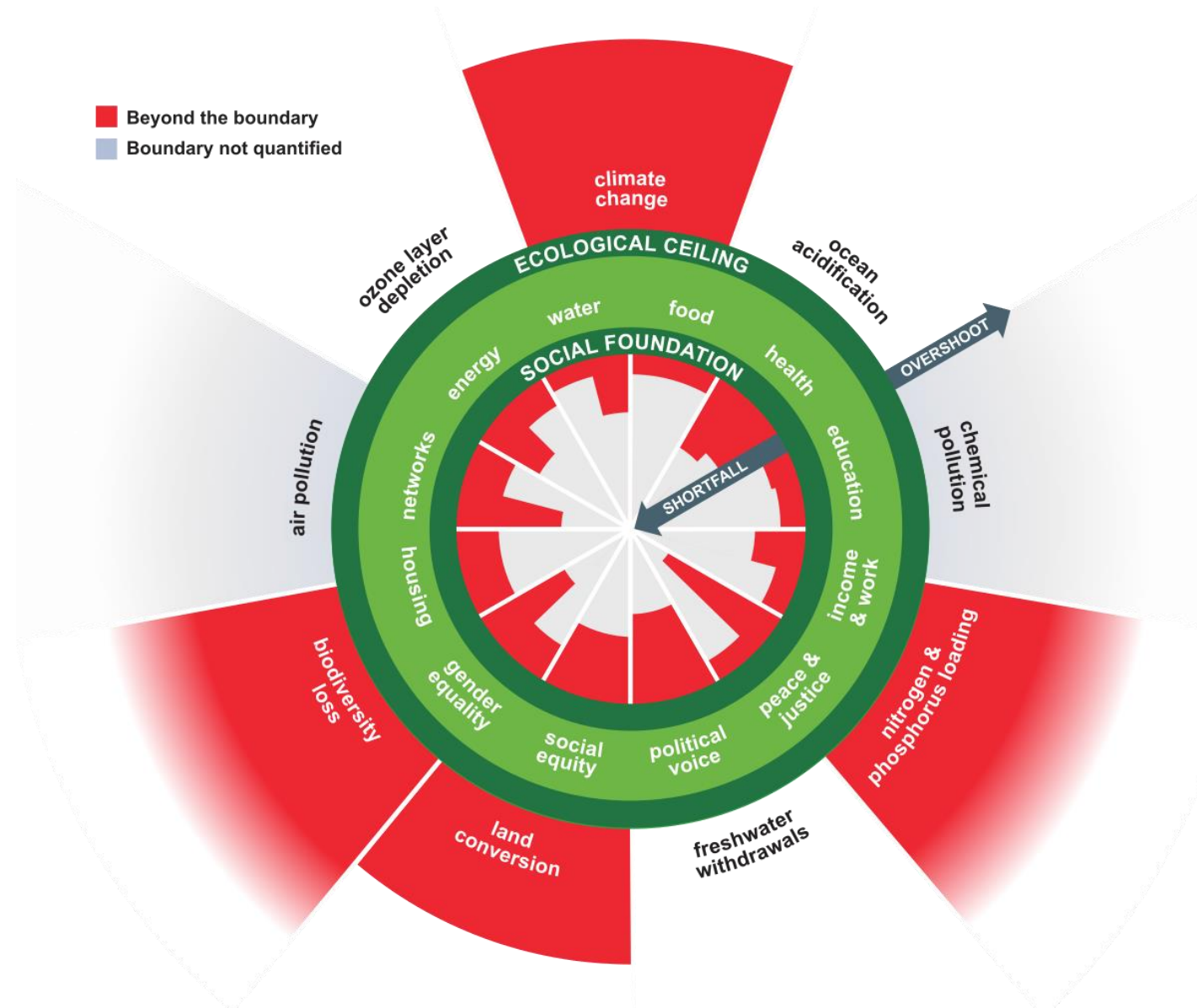


**Ecological ceiling**

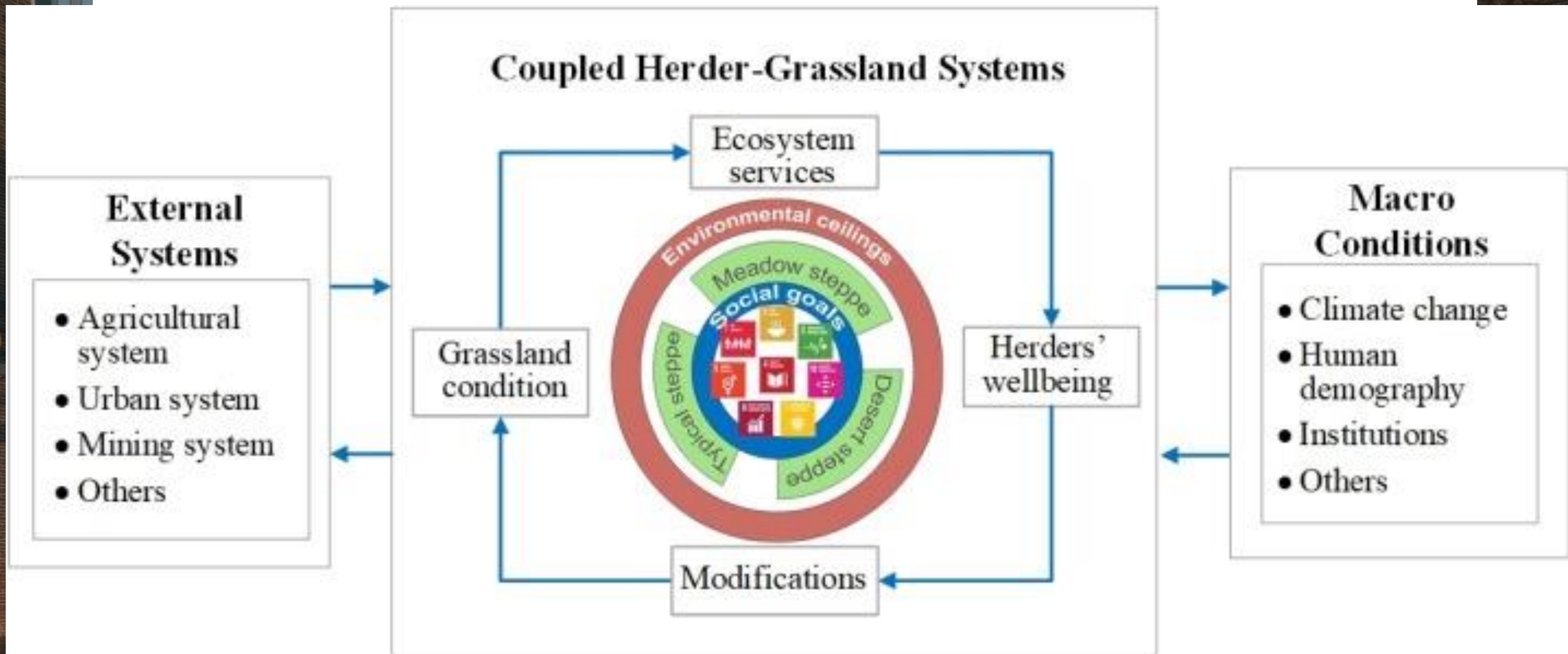


# About the Doughnut

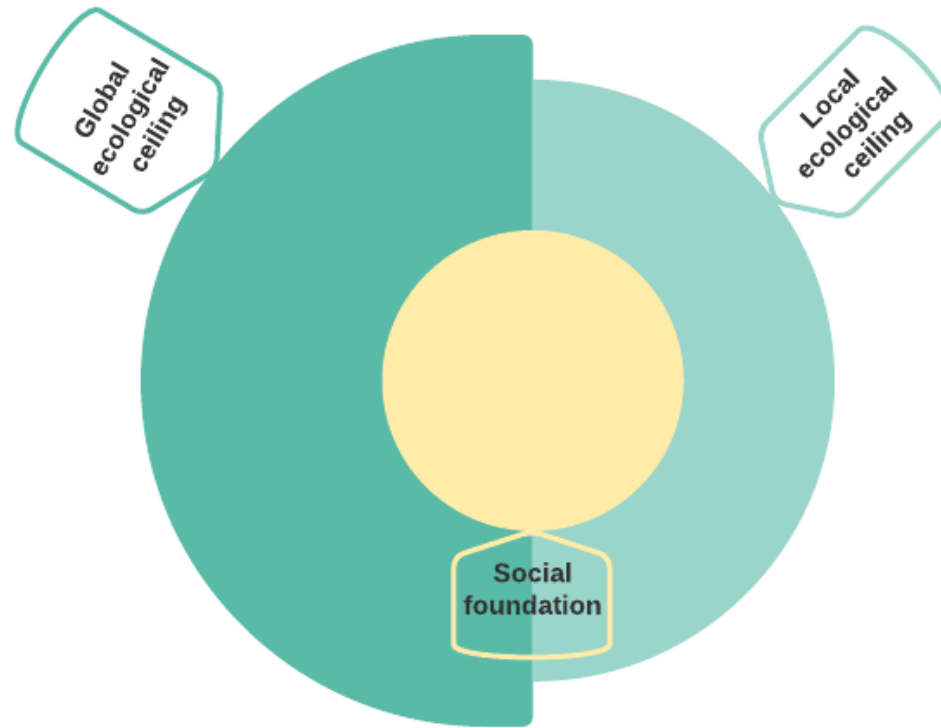
*"Humanity's 'selfie'"*







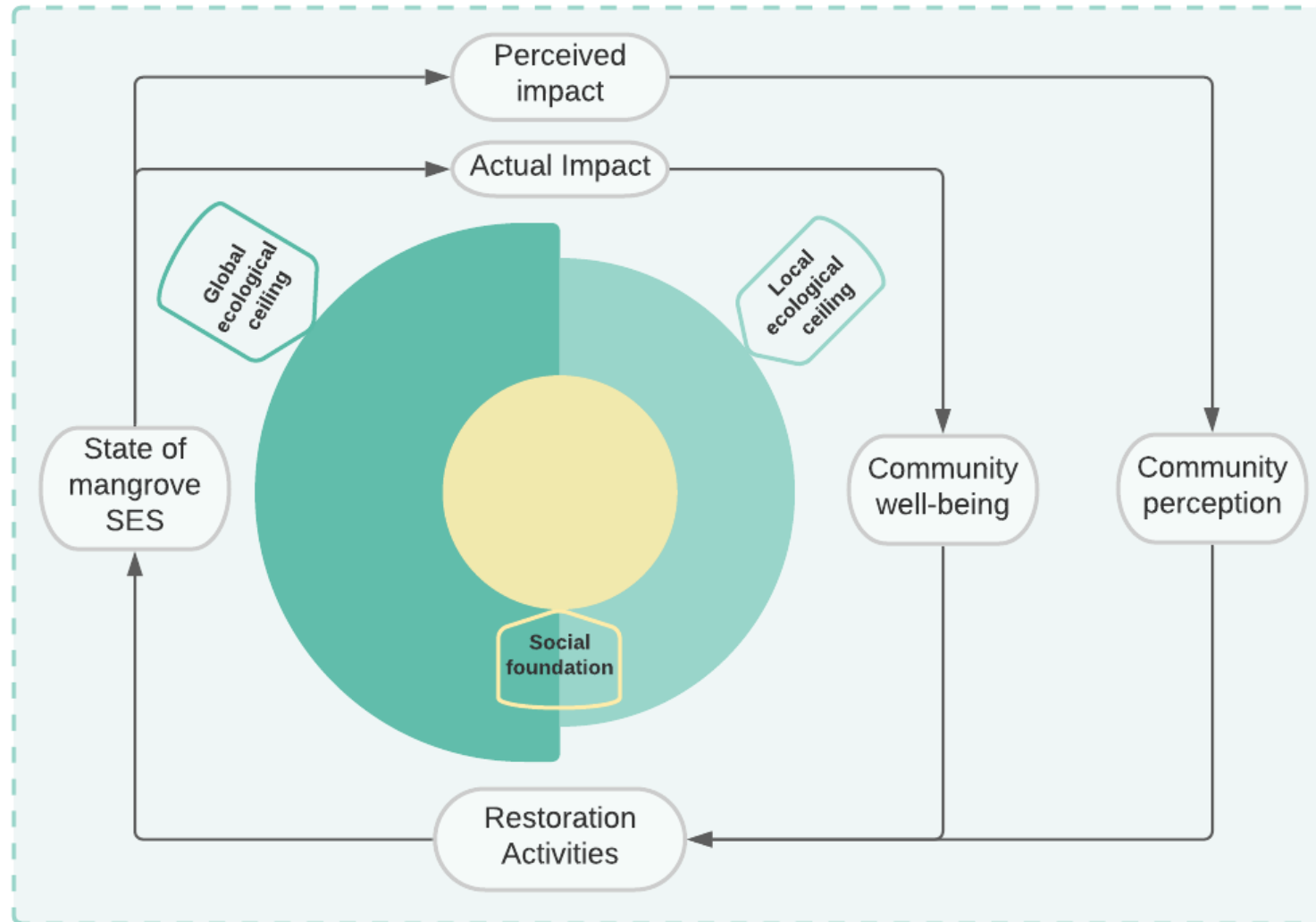
# Theoretical Framework



RQ1a:

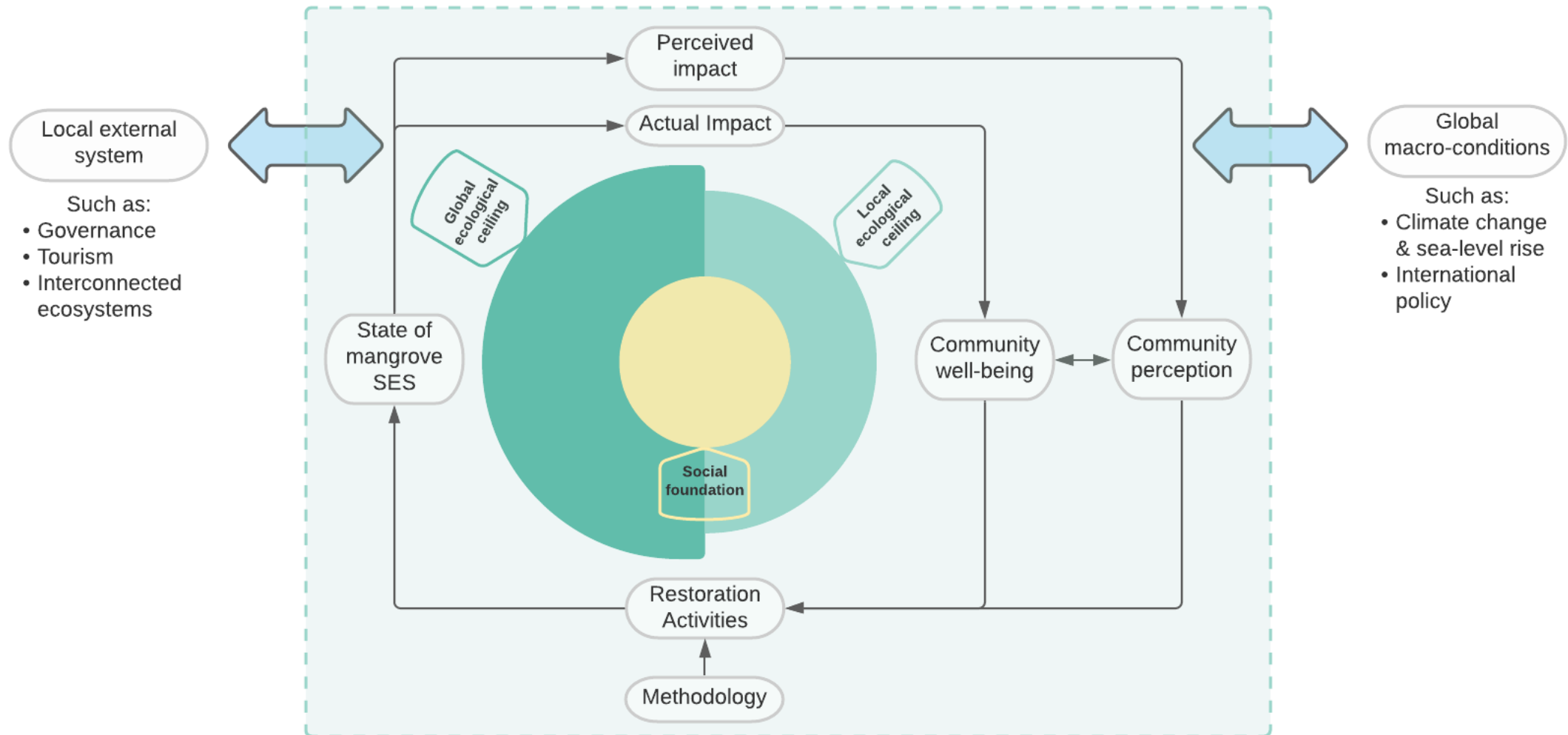
*“What are relevant **indicators** for the sustainability impact of mangrove restoration?”*

# Theoretical Framework

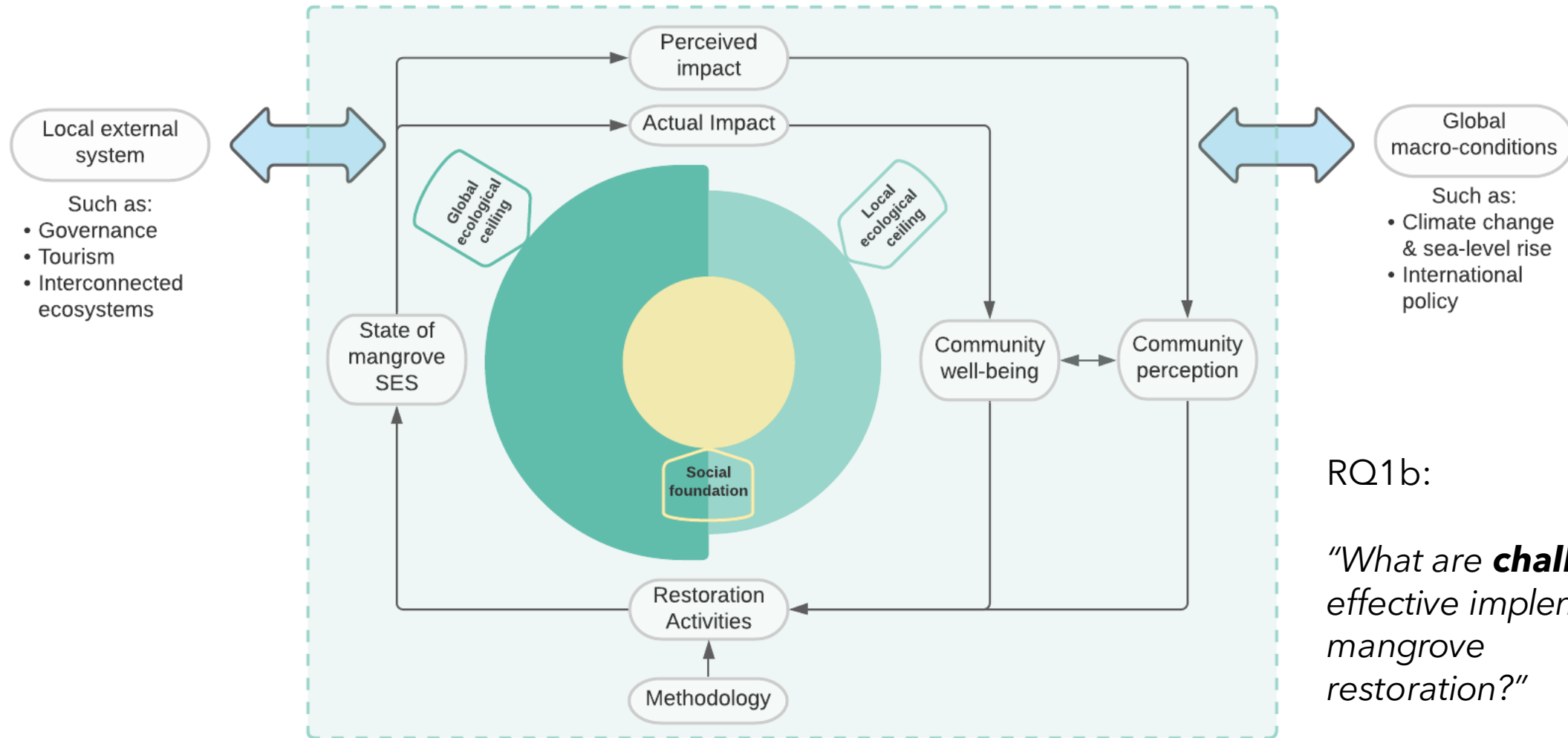




# Theoretical Framework



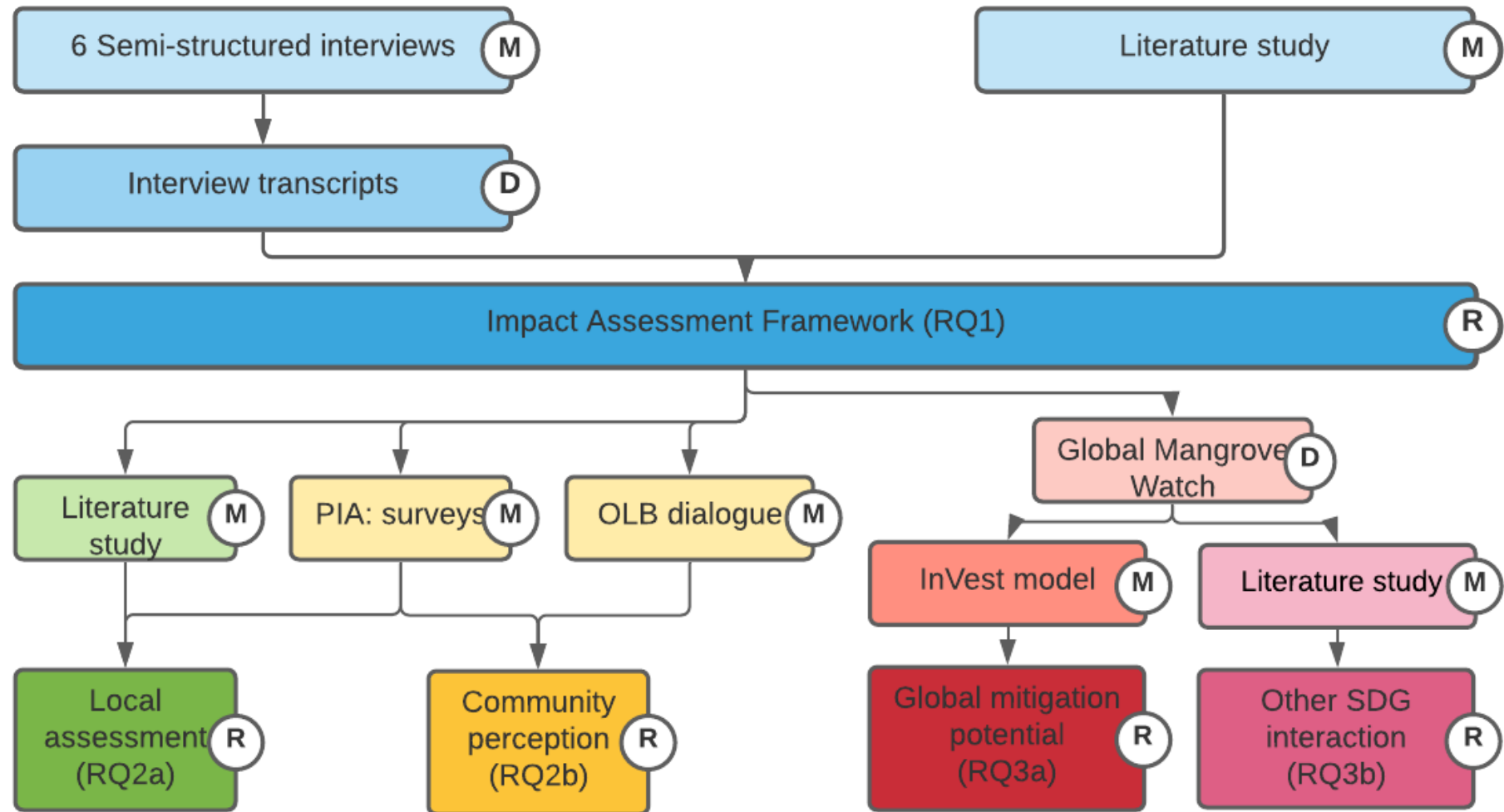
# Theoretical Framework



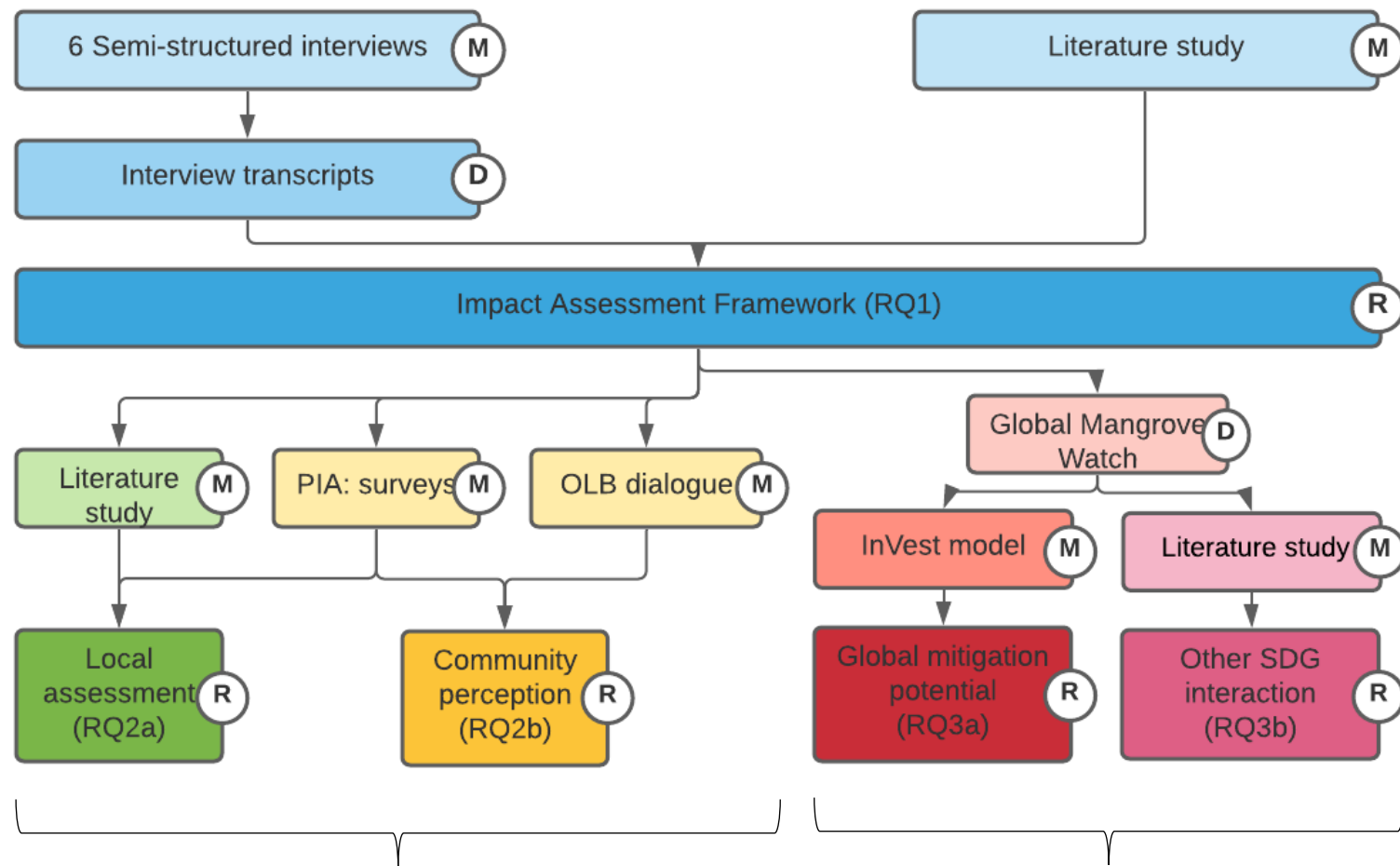
RQ1b:

*“What are **challenges** to effective implementation of mangrove restoration?”*

# Research Framework







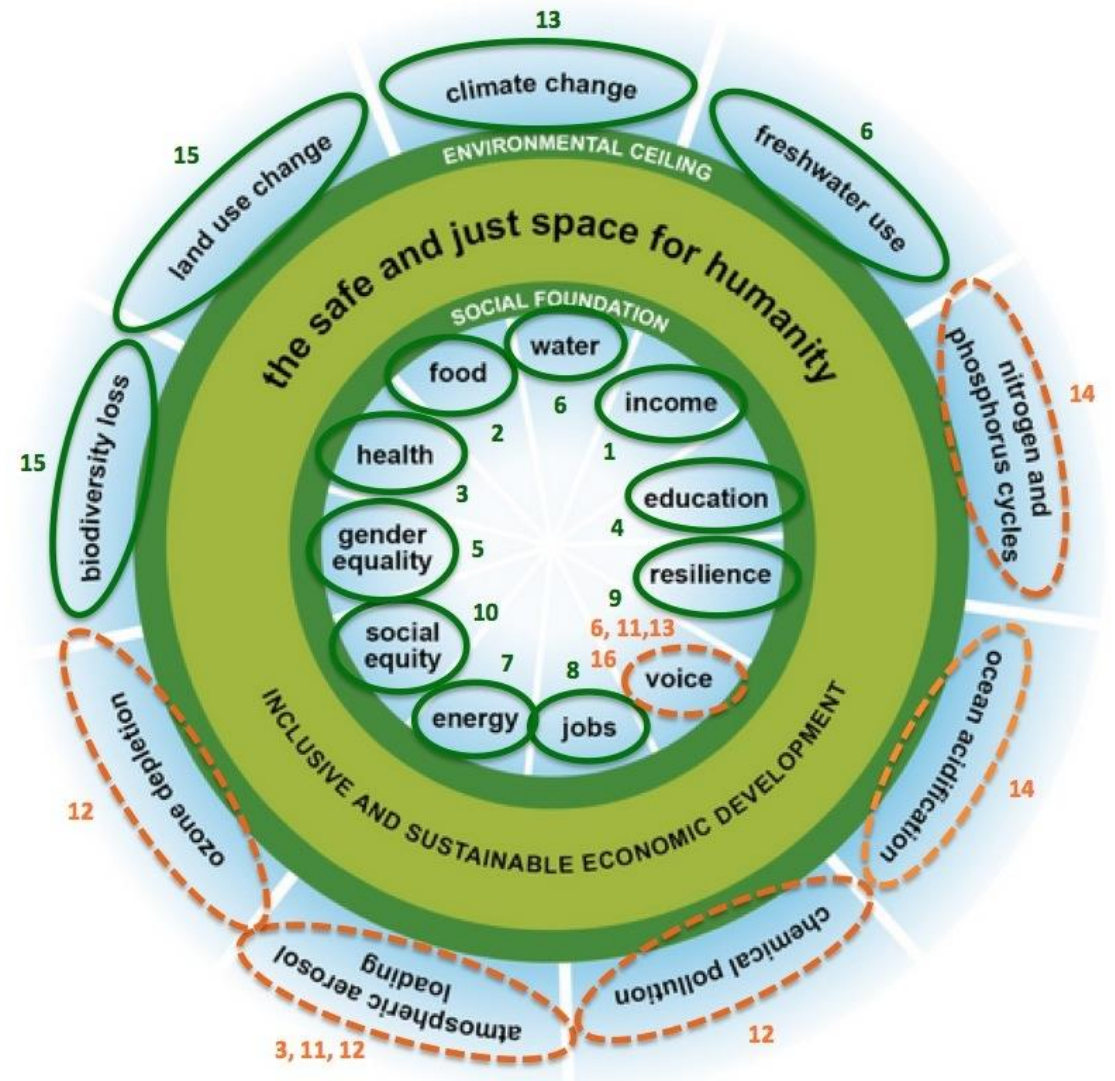
**Local** application: Bonaire

*"How does mangrove restoration on Bonaire contribute to sustainability?"*

**Global** application:

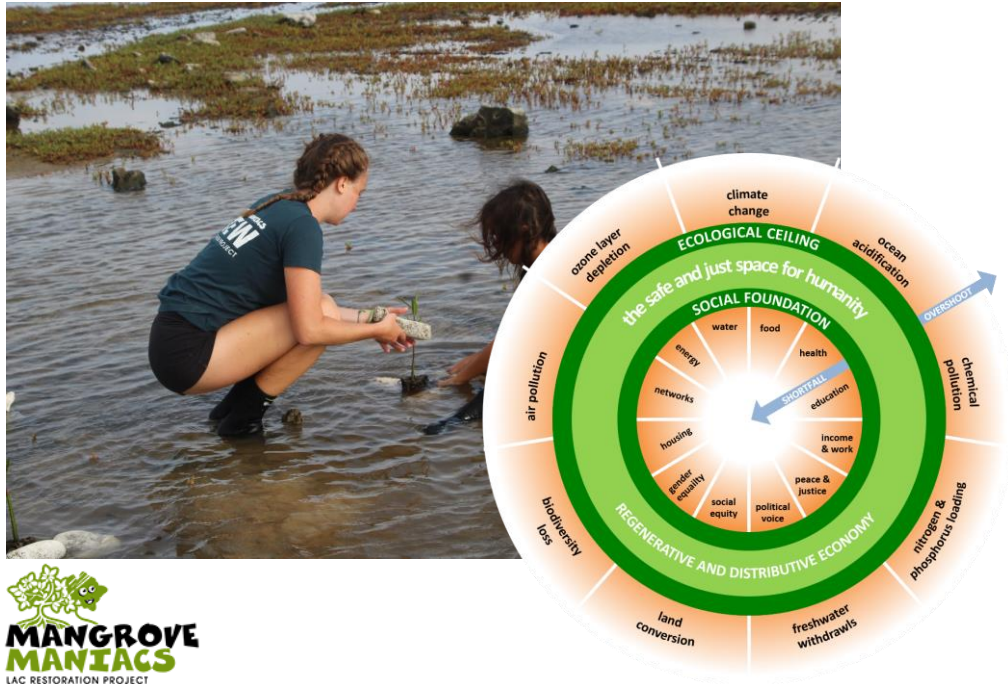
*"What is the global potential for mangrove restoration to contribute to the SDGs?"*

# SDGs and the Doughnut

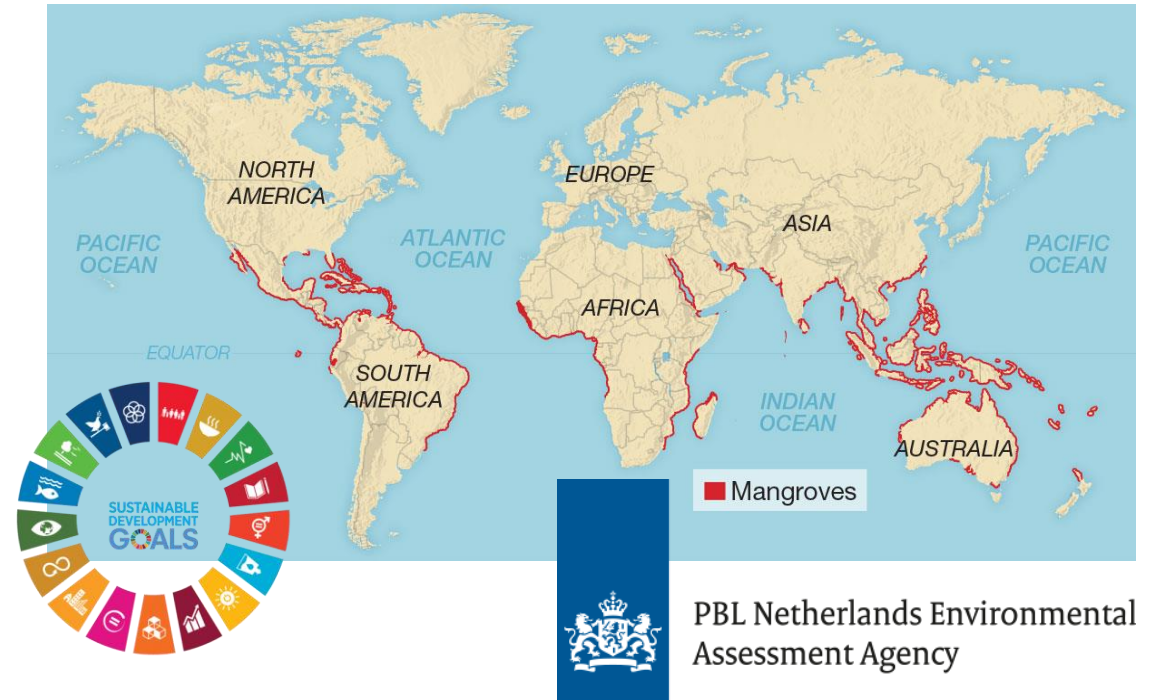


# Impact and potential of mangrove restoration

## Local



## Global





# References

- About Climate Cleanup: <https://climatecleanup.org/whatwedo/>
- Hawken, P. (Ed.). (2017). *Drawdown: The most comprehensive plan ever proposed to reverse global warming*. New York: Penguin.
- Hawken, P. (Ed.). (2021). *Regeneration: Ending the climate crisis in one generation*. New York: Penguin.
- <https://drawdown.org/>
- <https://regeneration.org/>
- Raworth, K (2017). *A Doughnut for the Anthropocene: Humanity's Compass in the 21st Century*. The Lancet Planetary Health 1, no. 2: e48-49.
- TEDtalk: ['A healthy economy should be designed to thrive, not to grow'](#) (Kate Raworth)
- Doughnut comparison of 150 countries:
  - <https://goodlife.leeds.ac.uk/>
  - O'Neill, D. W., Fanning, A. L., Lamb, W. F., & Steinberger, J. K. (2018). *A good life for all within planetary boundaries*. Nature sustainability, 1(2), 88-95.
- Fang, X et al. (2021). 'Assessing human-environment system sustainability based on Regional Safe and Just Operating Space: The case of the Inner Mongolia Grassland'. Environmental Science and Policy 116: 276-286.