Challenges & Priorities in Aquatic Food Systems

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WorldFish

Our Vision

An inclusive world of healthy, well-nourished people and a sustainable blue planet, now and in the future.

Our Mission

To end hunger and advance sustainable development by 2030 through science and innovation to transform food, land and water systems with aquatic foods for healthier people and planet.

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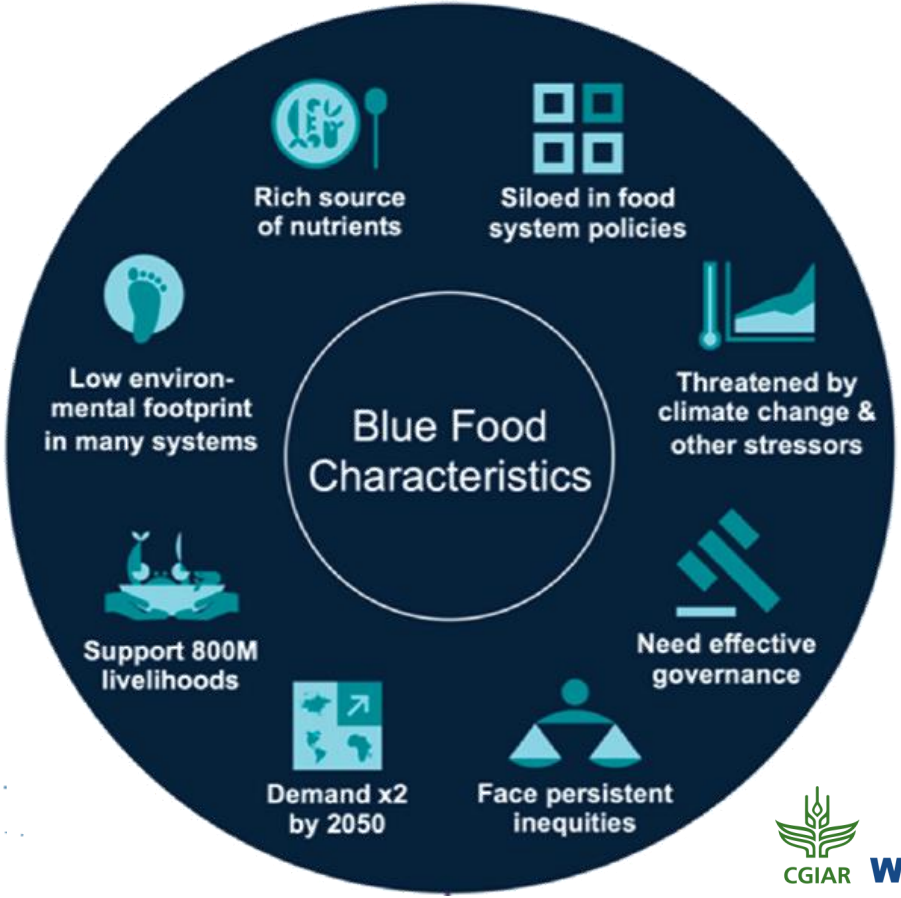
Aquatic or Blue Food Characteristics



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Tigchelaar et al. (2022) The vital roles of blue foods in the global food system, Globbal Food Security, https://doi.org/10.1016/j.gfs.2022.100637

Sustainable Aquatic Food Systems

A sustainable aquatic food system produces **safe**, **nutritious**, **accessible**, **affordable**, and **culturally preferred food**. It produces and distributes it through **fair working practices** that support livelihoods and communities. It is adapted to a changing climate and changing societal needs. It helps **preserve and restore nature** and **biodiversity.**

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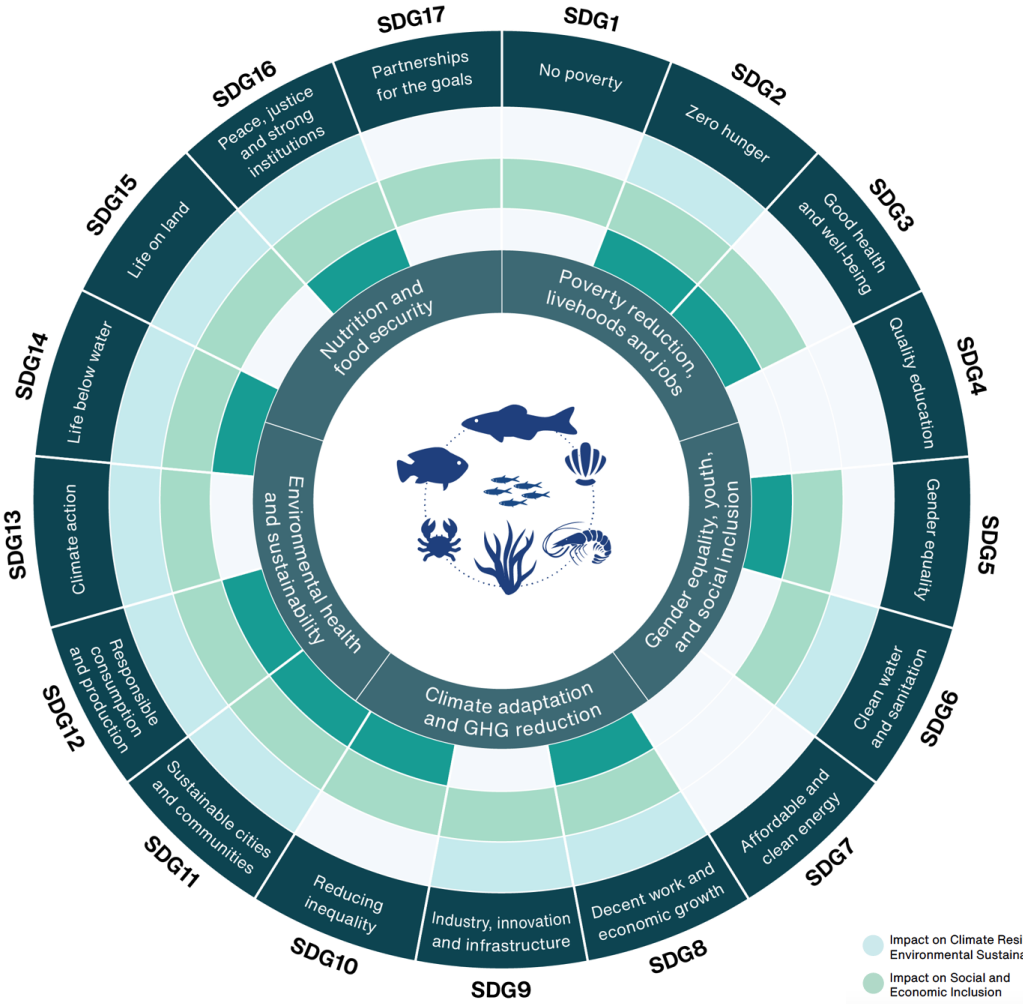

Tackling global challenges **WITH AQUATIC FOODS**

Aquatic foods, alongside land crops and livestock, are a significant part of the equation for healthy and sustainable diets within our planetary boundaries.

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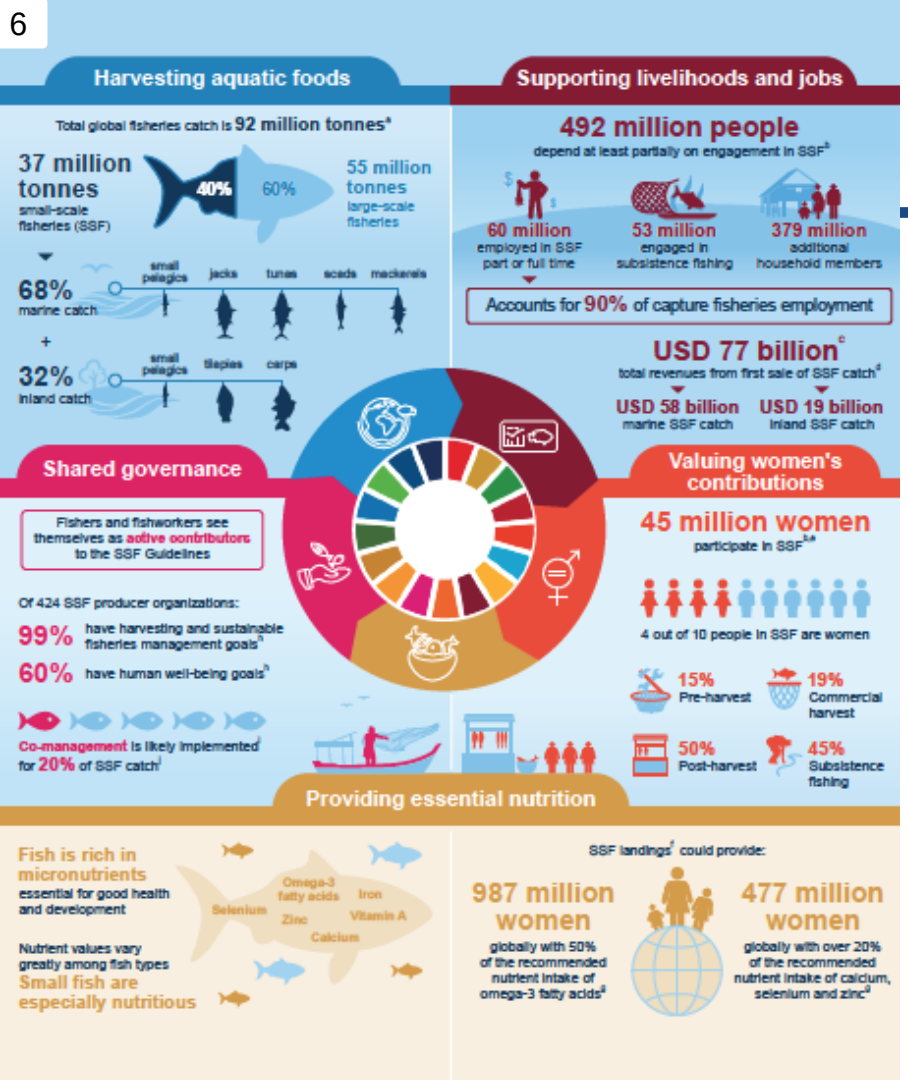
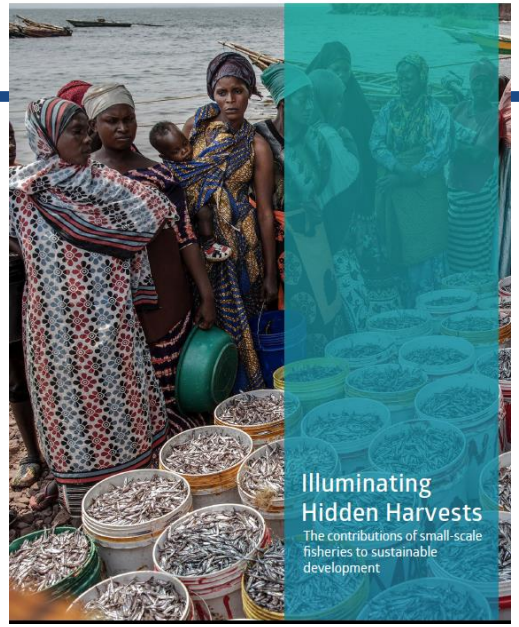
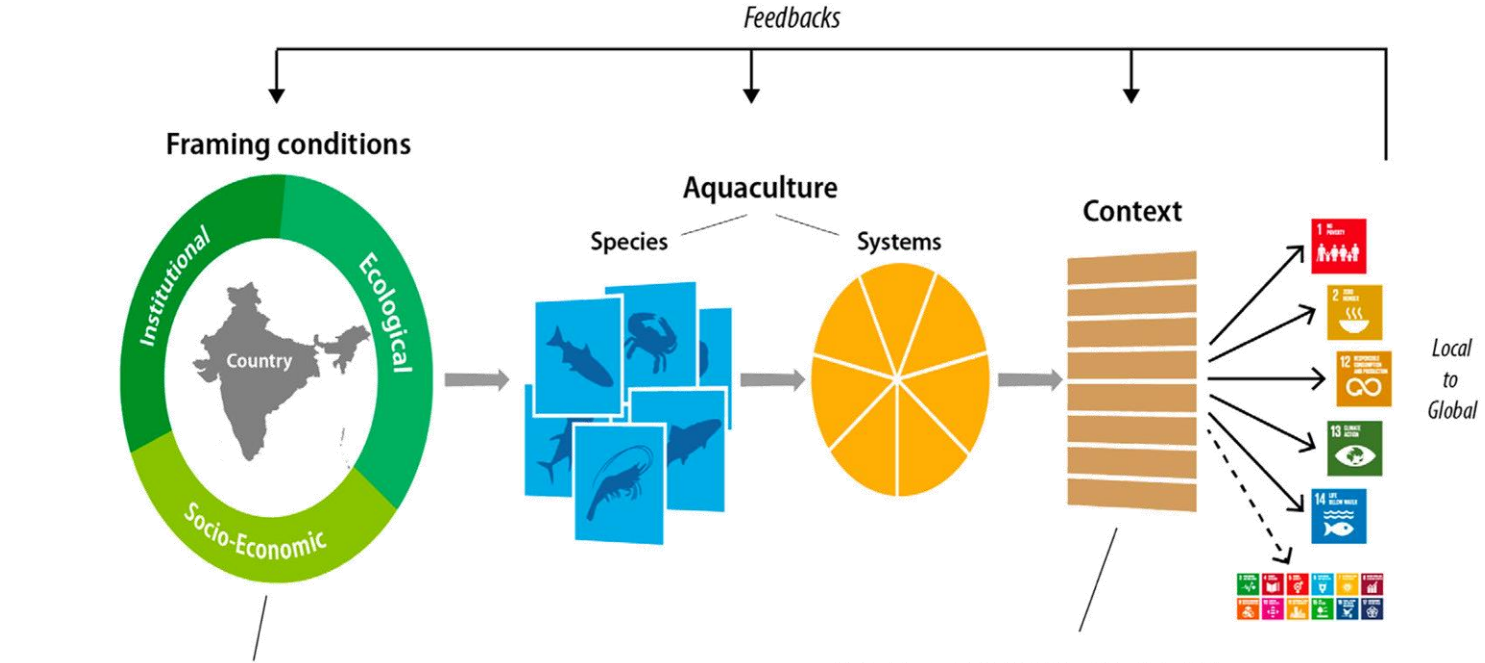




FAO, Duke University & WorldFish. 2023. Illuminating Hidden Harvests – The contributions of small-scale fisheries to sustainable development. Rome. https://doi.org/10.4060/cc4576en

What is “shaping” aquaculture's contribution to the Sustainable Development Goals



Troell, Max, et al. "Perspectives on aquaculture's contribution to the Sustainable Development Goals for improved human and planetary health." *Journal of the World Aquaculture Society* 54.2 (2023): 251-342.

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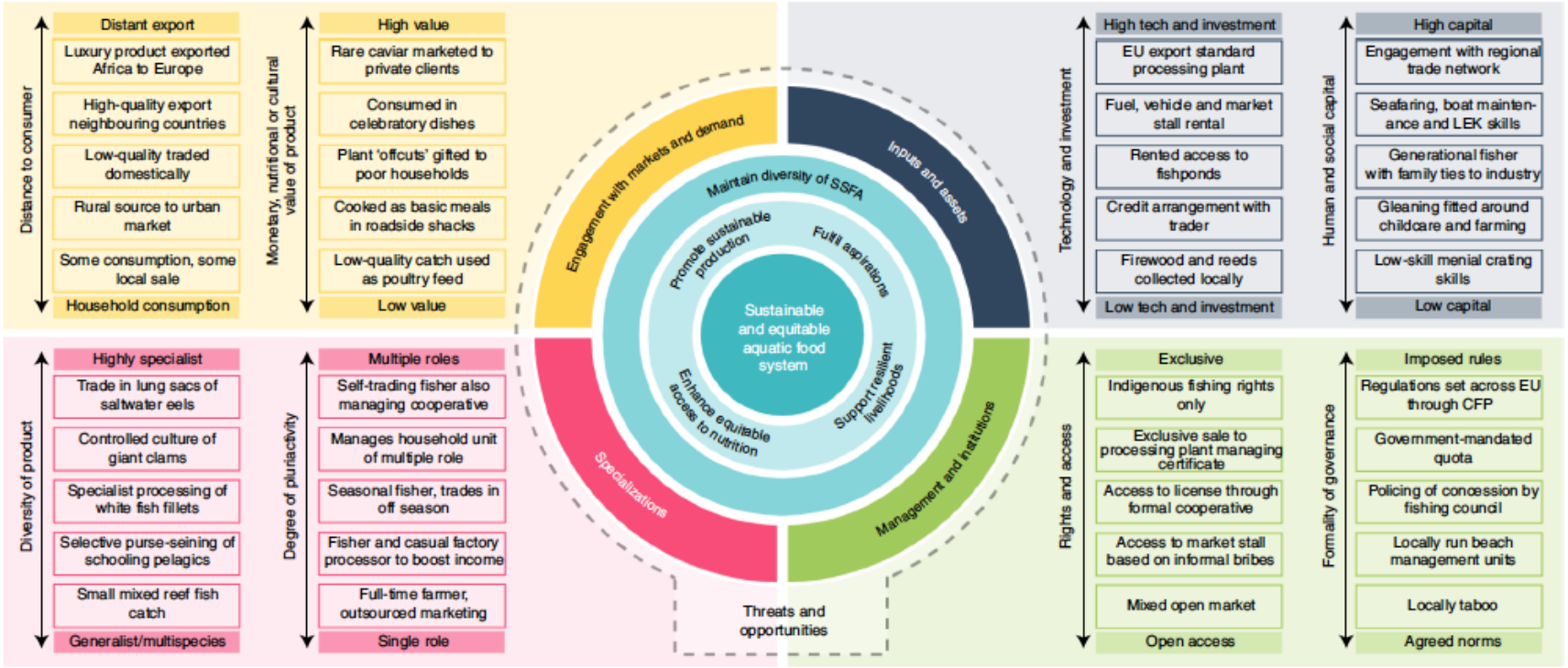
Contributions of Small-Scale Fisheries

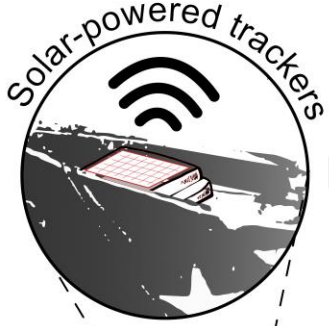
Short et al. (2021) Harnessing the diversity of small-scale actors is key to the future of aquatic food systems, Nature Food, https://doi.org/10.1038/s43016-021-00363-0

ANALYSIS NATURE FOOD



Data and Digital Innovation

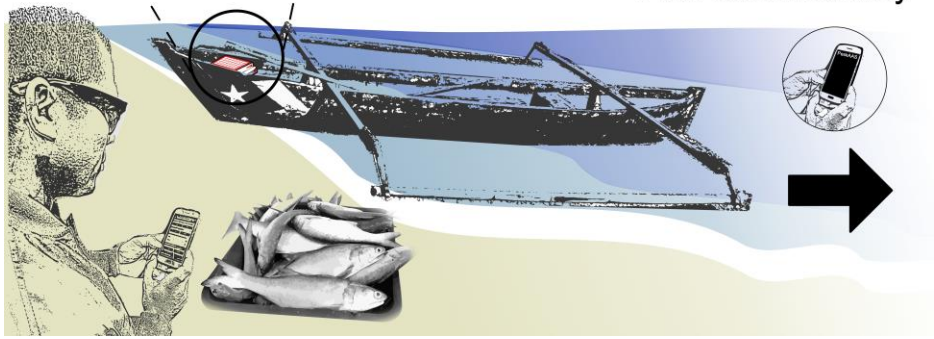
Alex Tilley



High resolution Vessel tracking

- Archival GPS vessel tracking
- Uploaded via telecom to DB
- Pulled through API

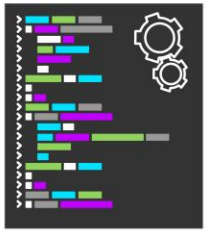
Fish catch survey



KoBoToolbox

- Android-based field survey
- Uploads catch records to KoboToolbox via 3G
- DB and API
- Stores & serves catch records on request

Peskas data pipeline



- Daily ingestion and pre-processing survey and trips data
- Validates data and flags records with potential errors
- Merges survey and trips data
- Estimates catch weight based on length data
- Models and produces national estimates of catch and revenue
- Exports clean and processed data

Peskas dashboard

- R shiny web app
- Interactive data exploration
- Queries data pipeline in real time
- Graphics and summary tables for stock assessment

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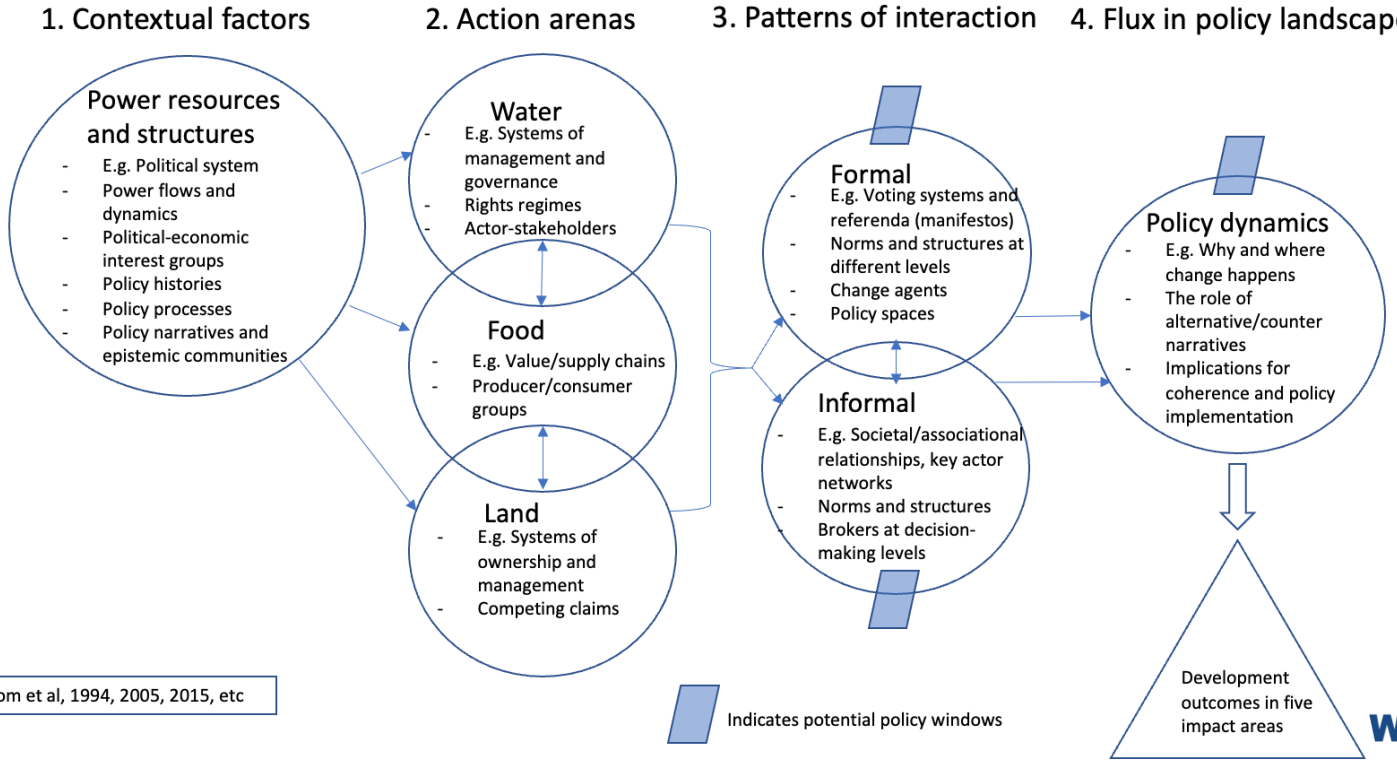
Governance and Policy

Marleen Schutter

Policy and Institutions Landscape Analysis)



After Ostrom et al, 1994, 2005, 2015, etc

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