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Evaluation Approaches and Methods

An overview of methods as applied to environmental evaluation

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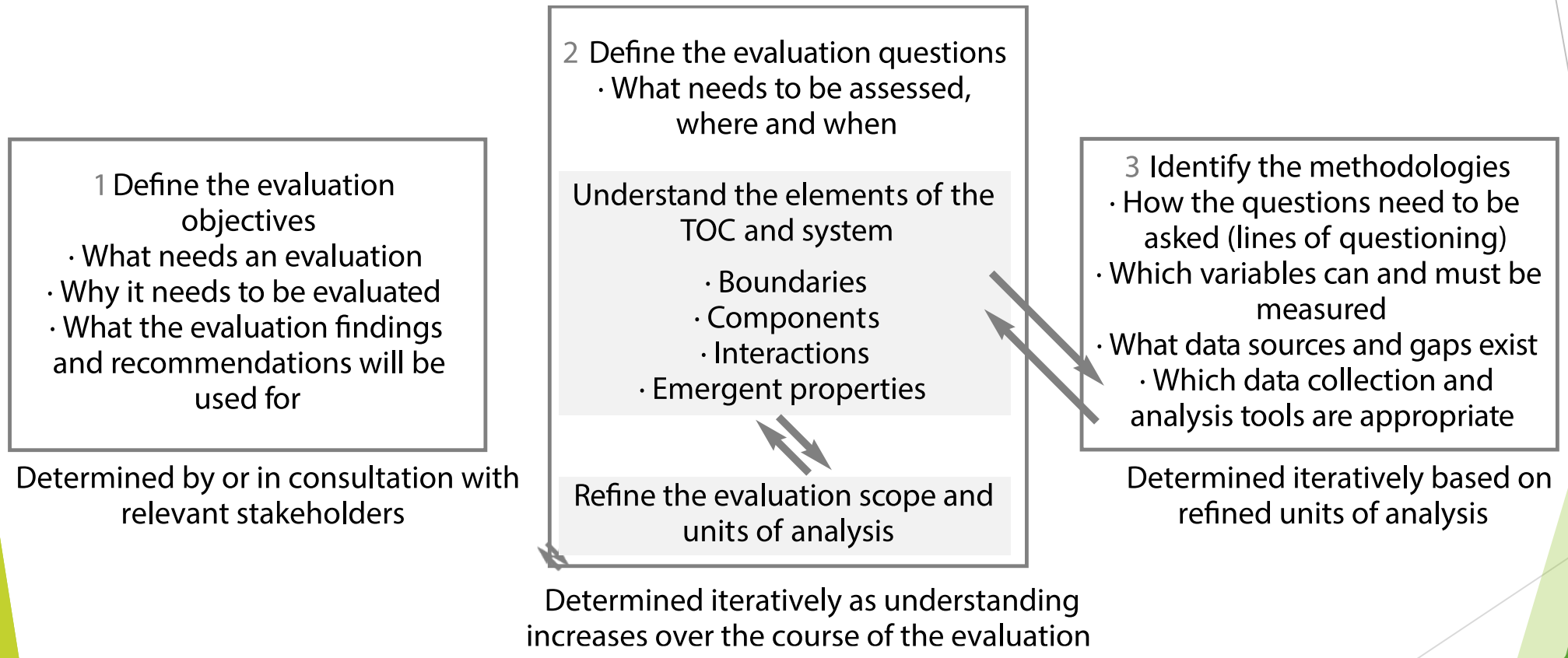
Designing evaluation at the nexus of human and natural systems



Source: Garcia and Zazueta, 2015

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I. Principles

II. Evaluation designs and methods

III. A few examples: from the big picture to detailed observation

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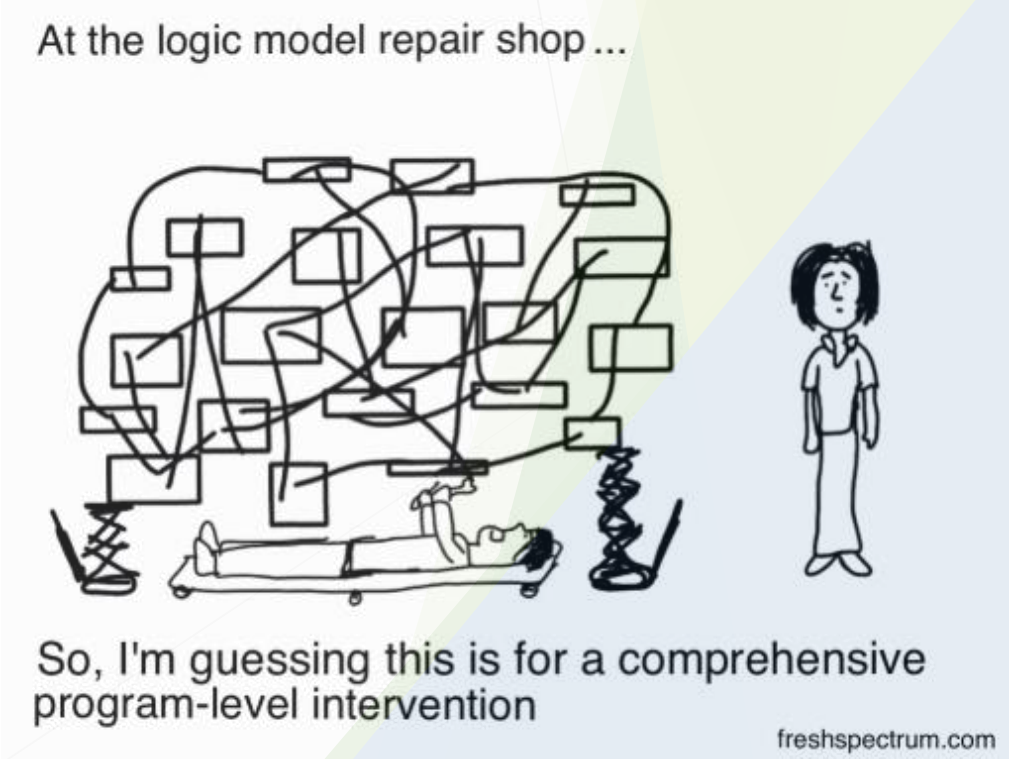
I. Principles

The ‘use’ principle to guide decisions on evaluation design and methods

- ✓ The focus should be on how the evaluation will be used.
- ✓ Emphasize the specific knowledge needed to support policy makers and decision-making processes (Ensure that evaluations are timely!)



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I. Principles

Considerations for valuing observed effects

- ✓ Important to take a broad view when valuing natural resources
- ✓ Economists have developed means to quantify values of both natural and human systems, but there are other considerations.
- ✓ Human cultural values may be much more difficult to quantify, but should be taken into account

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II. Evaluation designs and methods

Different approaches, fit for purpose

- Experimental designs (randomized controlled trial)
- Quasi-experimental approaches (propensity score matching, difference in difference)
- Before-after comparison (pre/post)
- Theory based approaches

II. Evaluation designs and methods

Units of Analysis

Simply, the major entity/entities that you are analyzing in your study based on your analysis of the theory of change and relationships between systems.

- Region/Country/Local
- Communities (villages, cities, counties, administrative areas)
- Decision-making entities (governments, regional councils, coalitions)
- Ecological systems (changes over time)
- Marketplaces

II. Evaluation designs and methods

Methods

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II. Evaluation designs and methods

Data sources

- Surveys
- Academic papers
- Crowd sourced data
- Project and Strategy documents
- Global databases
- Other evaluations

THE WORLD BANK
IBRD • IDA
World Development Indicators

LSMS
Living Standards Measurement Study

Food and Agriculture Organization of the United Nations
FAOSTAT

WORLD RESOURCES INSTITUTE
Global Forest Watch

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II. Evaluation designs and methods

Tips for managing process

- Mixed Methods is a common mantra. But how to do this in practice?
- We live in a world with tight deadlines and resource constraints
- In practice, some of these evaluation methods can be time consuming
- What follows is an example of a sequenced approach, showing how quantitative and qualitative methods are used in a cohesive, reinforcing manner.

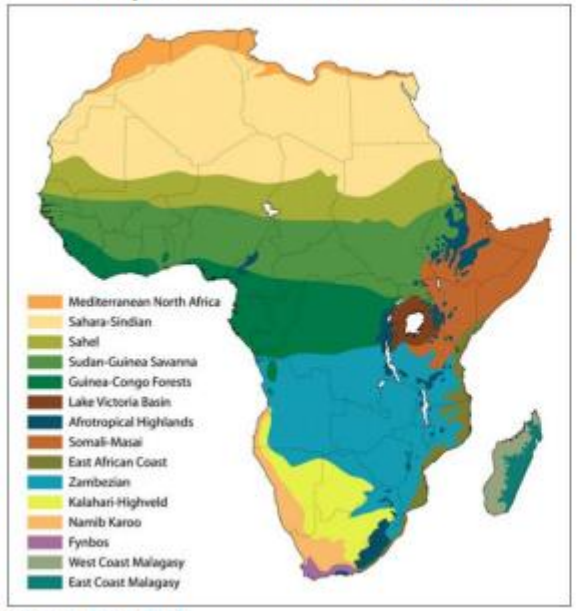
III. Example: From big picture to detailed observation

Evaluation of GEF support to the Sahel and Sudan-Guinea Savanna biomes

- Focused on key questions for common themes across the country clusters:
  1. Factors that influence sustainability
  2. Relevance of interventions

- Used aggregate portfolio and geospatial analyses to inform field studies in a sequenced way

Map 1: Sub-Saharan Africa biomes



Source: Riley 2012

Map 2: Countries in the two biomes

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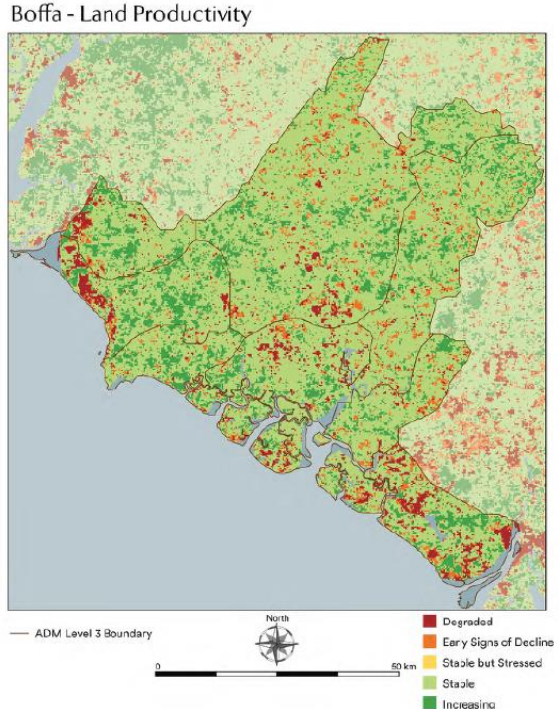
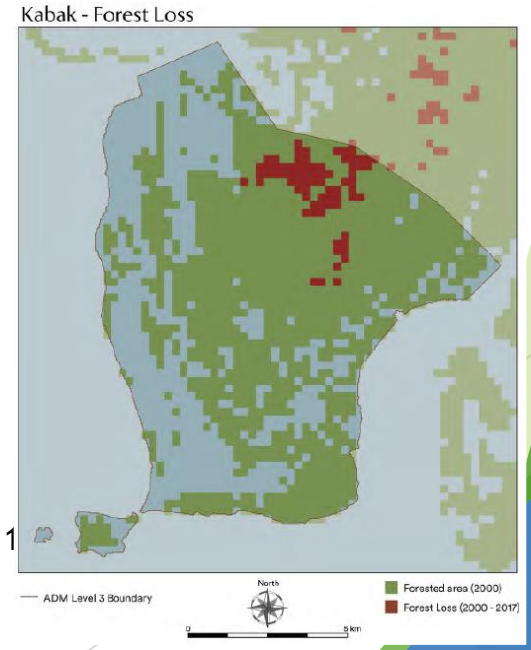
III. Example: From big picture to detailed observation

Evaluation of GEF support to the Sahel and Sudan-Guinea Savanna biomes

- First, the team identified countries and project for fieldwork, based on a portfolio review (outcome and sustainability ratings)
- Then they used geospatial analysis to create maps that showed changes in environmental conditions over time.

Maps used to select sites to visit during field verification





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III. Example: From big picture to detailed observation

Evaluation of GEF support to the Sahel and Sudan-Guinea Savanna biomes

Maps were also shared with beneficiaries and technical staff to stimulate discussion on key factors leading to any observed changes.

Field visit in Kaback Commune (Guinea, March 2019)

Kyenjojo District technical staffs reviewing (Uganda, May 2019)

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III. Example: From big picture to detailed observation

Evaluation of GEF support to the Sahel and Sudan-Guinea Savanna biomes

Post-mission GIS analysis of site visit location

2012 2019

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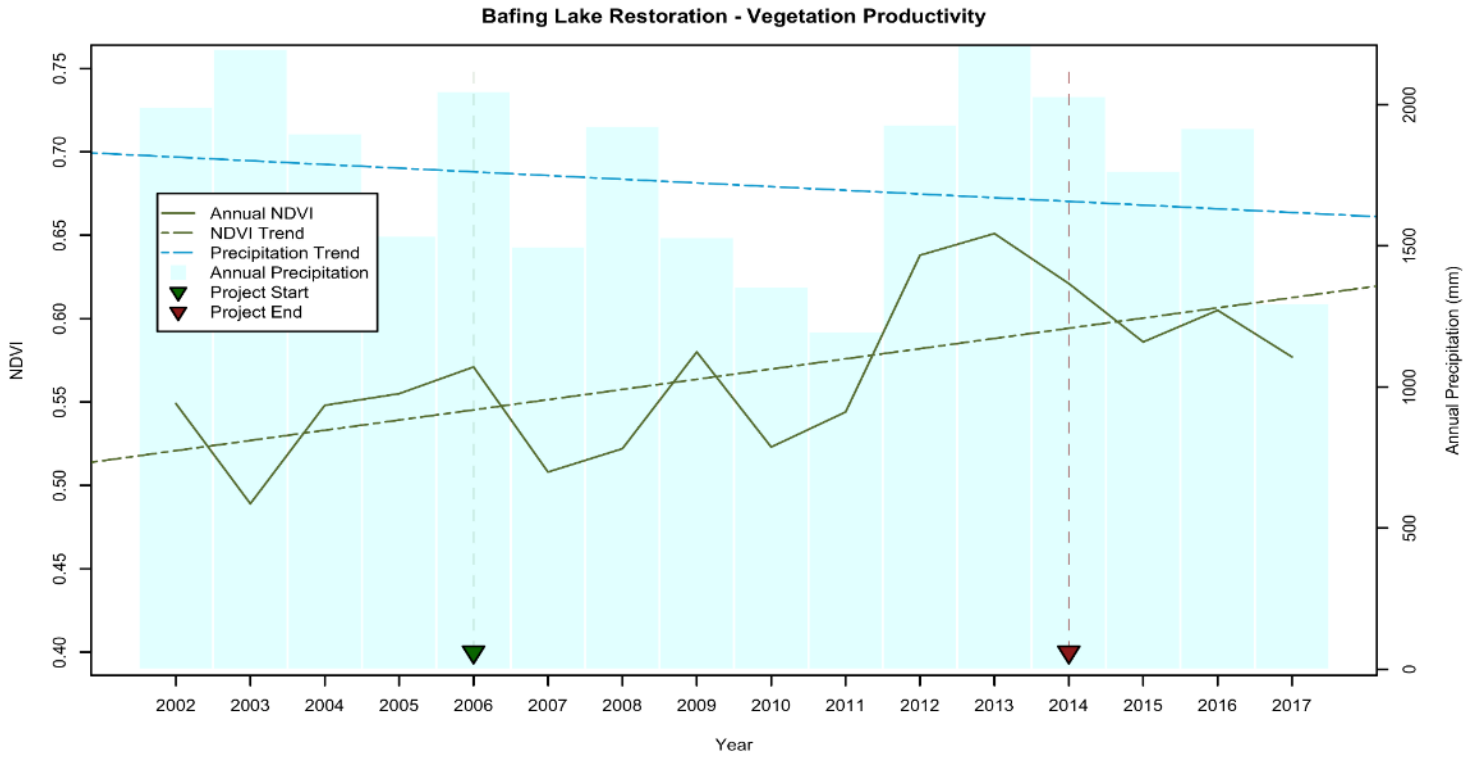
III. Example: From big picture to detailed observation

Evaluation of GEF support to the Sahel and Sudan-Guinea Savanna biomes

Post-mission GIS analysis of the Bafing Lake

- Increasing vegetation productivity despite lower precipitation



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Key Takeaways

- Focus on utilization
- Don’t forget to take a broad approach when valuing natural resources
- Important to take sequencing into consideration when designing mixed methods evaluations

III. Example: From big picture to detailed observation

Using a mixed methods, systems approach:

South China Sea Example

Interviews w/ different countries
Historical documents
Global databases
Scientific literature
Social network analysis

Interviews w/ different ministries
Financial documents
Qualitative comparative analysis
Propensity score matching

Interviews w/ different villages
Field visits
Local monitoring data
Remote sensing analysis

Match multiple data sources & methods to units of analysis

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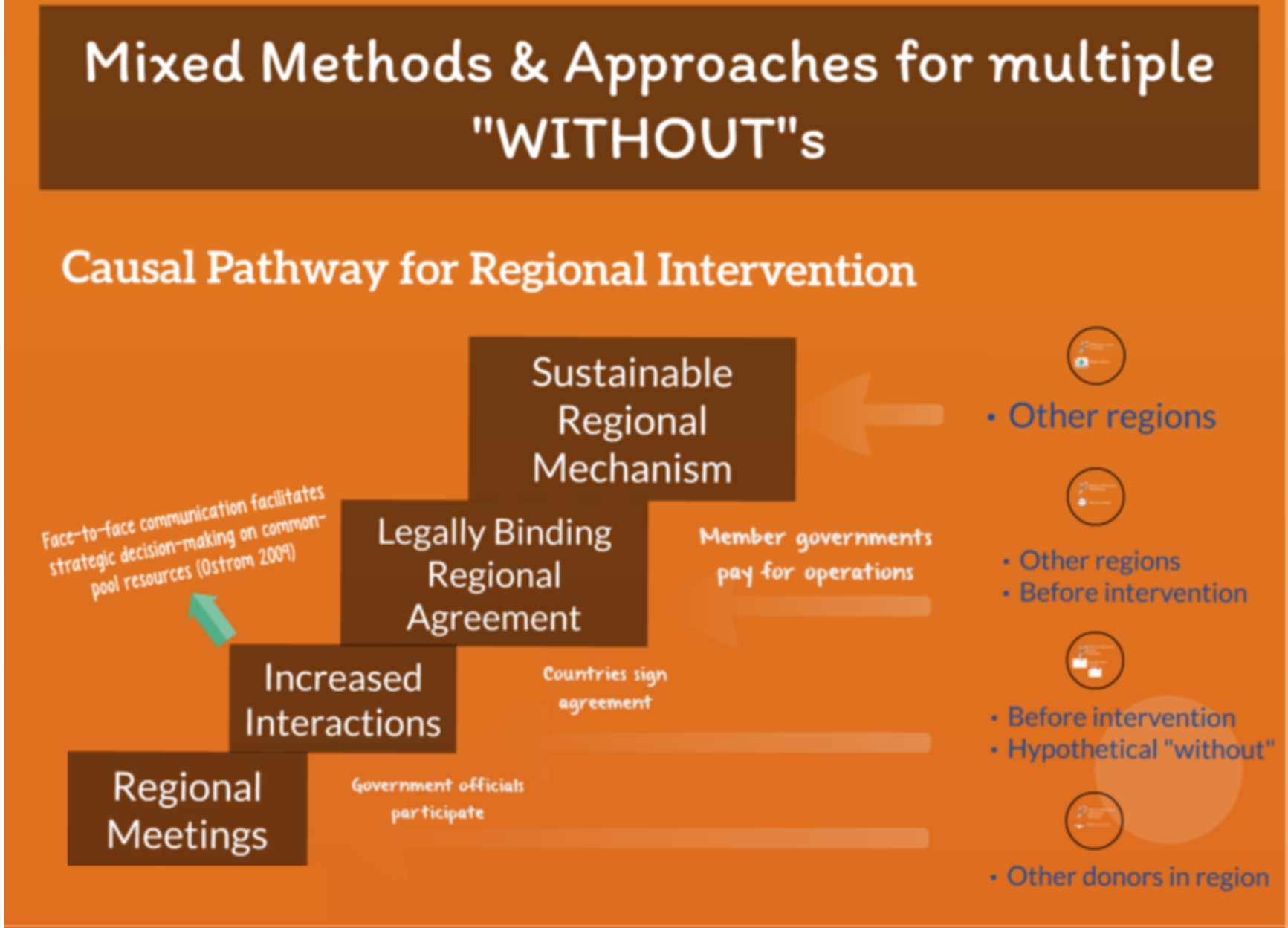
South China Sea example (continued)



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Now think back to the complex systems example we came up with earlier

Discuss in a small group potential methods and data sources

- Identify the changes to assess
- Identify units of space and time where change is expected to happen
- Identify potential methods and data sources

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