



Independent
Evaluation Office
GLOBAL ENVIRONMENT FACILITY

Complex Socio-Ecological Systems

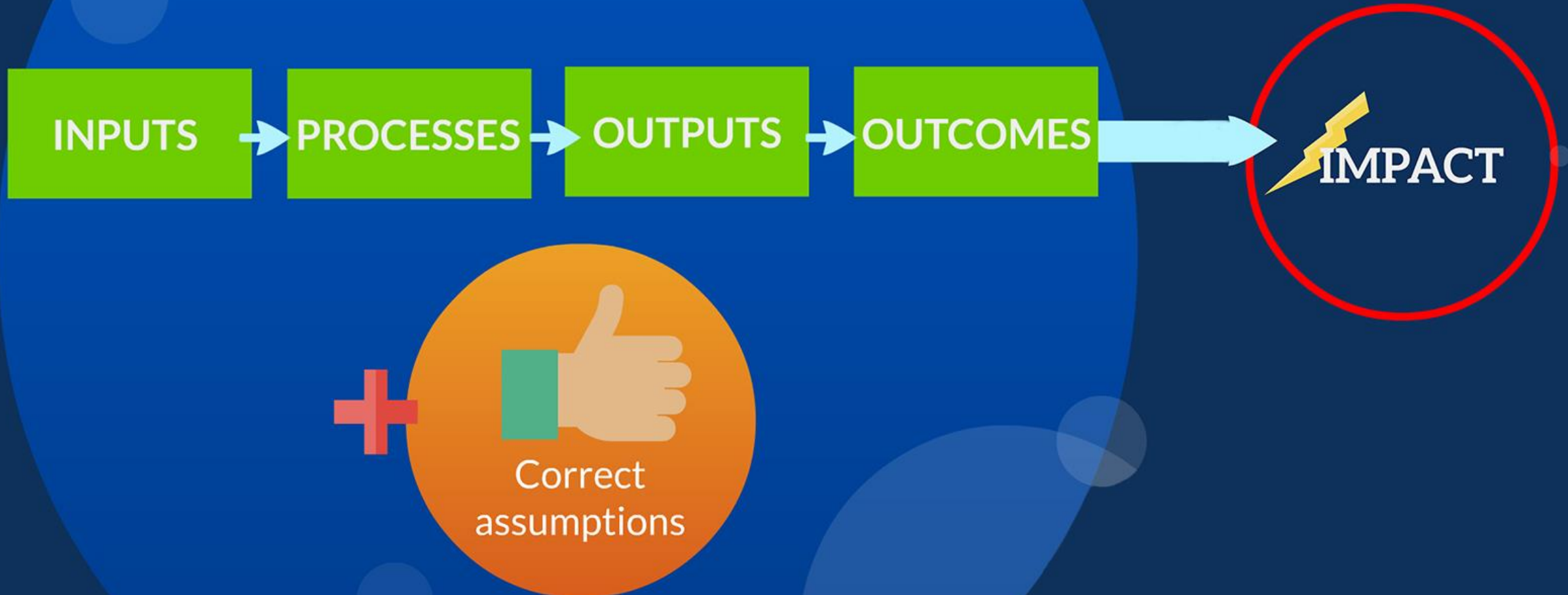
Developing an “expanded” theory of change

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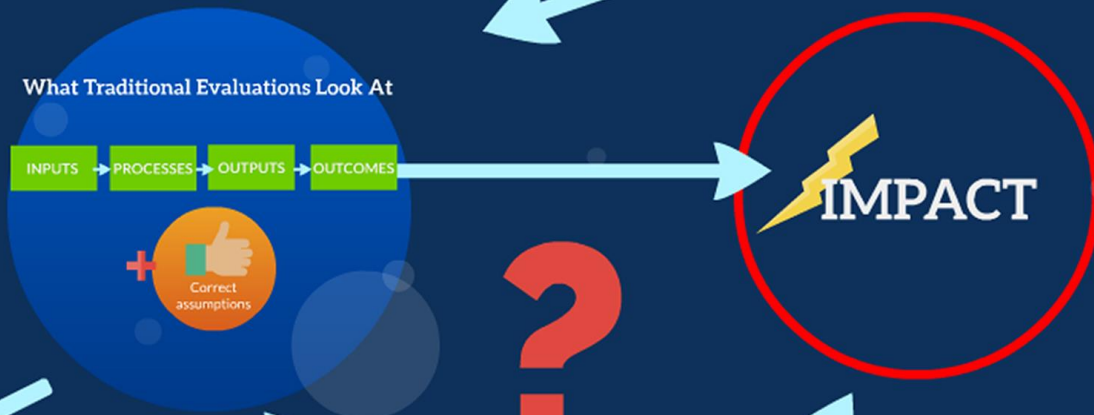
Outline

- Traditional evaluation and evaluation that embraces complexity
- Designing evaluation for the real world
- What to consider when designing evaluation for the real world
- Example from the South China Sea
- Let's try it!

What Traditional Evaluations Look At



The real world



What are we not seeing?

The real world



The real world considerations when working in environment



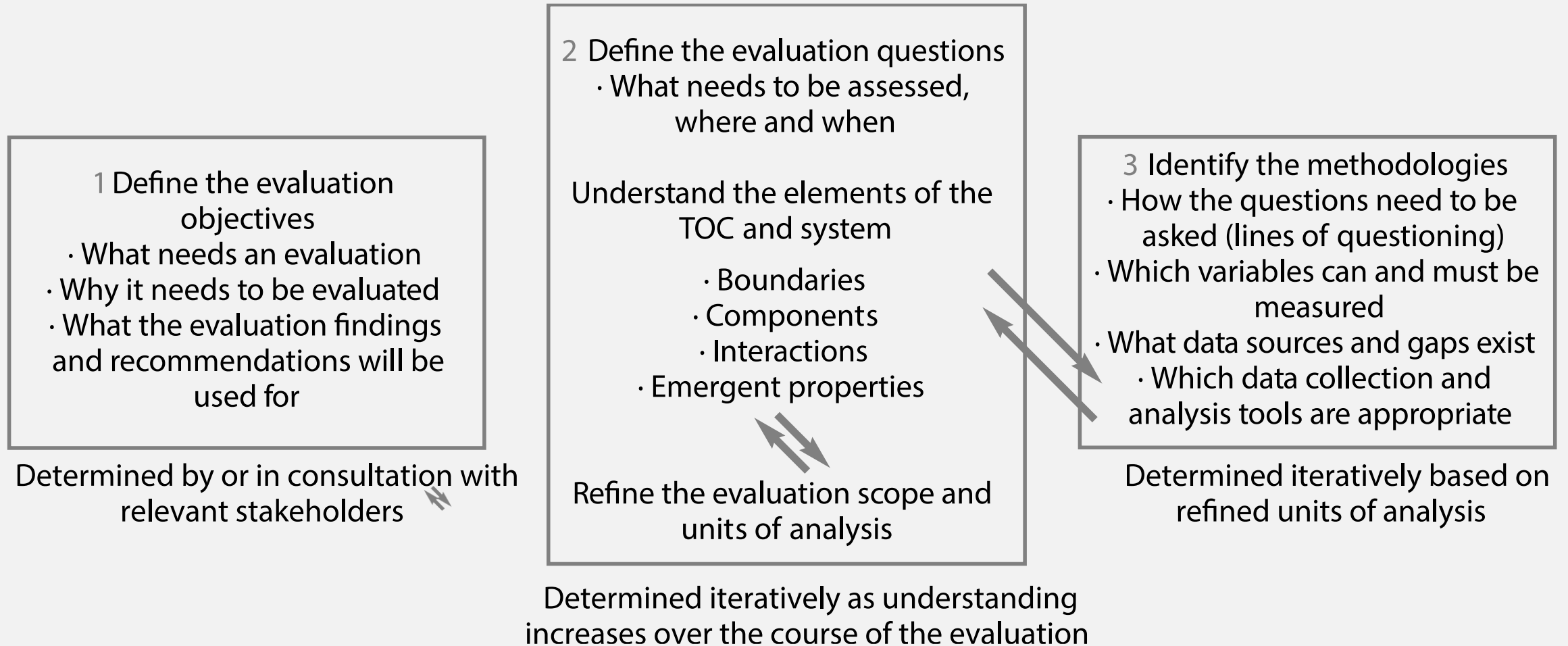
Multiple uses and users within same space

Multiple spaces and users for same resource

Mismatched scales of social and ecological systems in time & space

Data and information gaps

Designing evaluation for the real world



The theory of change and beyond

- Understand how the intervention intends to achieve impact
- Understand the interaction between the larger system and the intervention
- Define the evaluation questions (what to assess, where, and when)

Elements of the intervention and the larger system

- Boundaries
- Components
- Interactions
- Emergence

Boundaries

Intervention's and larger system's boundaries

- Spatial scales
 - Geographical coverage of the intervention
 - Ecological boundaries of the ecosystem
 - Political boundaries
 - Social boundaries
- Time scales
- Any mismatches?

Questions to consider:

- Where was the intervention implemented?
- Where, when, and how did it intend to achieve impact?
- What factors might influence the achievement of impact?
- What areas of the larger system might the intervention influence?

Components

“Actors” or “agents of change”:

- All key stakeholders and ...
- Those who are indirectly affected by change
- Those who have power to effect change

Questions to consider:

- What are their characteristics: interests, capacities, resources?
- What is their potential to influence the intended impacts?
- What is the intervention’s potential to influence them?

Interactions

Actions by a component that has an effect on another

- Regular interactions between components
- Significant events resulting from the component interaction

Questions to consider:

- What impacts may or may not be achieved by the intervention?
- When can these impacts be measured?

Emergent properties

Characteristics that the system has as a whole

- Processes triggered by all interactions that transform the entire system

Questions to consider:

- What affects how individual components interact?
- What is the overall function of the system? Is there a unity or diversity of purpose across the system?

Putting it together

Elements of the intervention and the larger system

- Boundaries
- Components
- Interactions
- Emergence

How do we understand the elements of the intervention and broader system?

- Document and literature review
- Previous evaluations
- Consultations with subject-matter experts
- ...and
- Iteratively over the course of evaluation

7 countries

20 years

34 projects

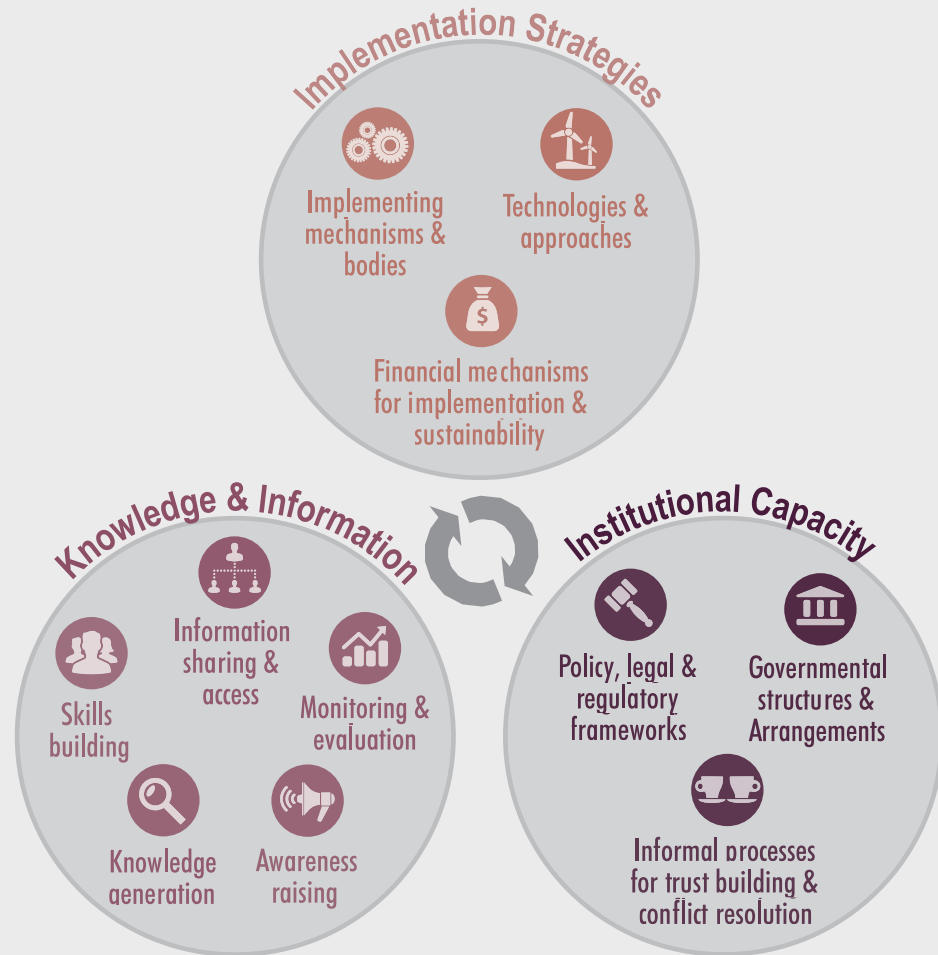
150 small grants

What is the impact of GEF support in the South China Sea?

115 million USD



GEF areas of contribution



Catalytic effect

Progress toward impact

Broader adoption

Sustaining
Mainstreaming
Replication
Scaling-up
Market change

Behavioral change

Criteria:
Economically feasible
Socially acceptable
Environmentally sound

Impact



UNEP-implemented South China Sea Project



Boundaries

South China Sea (oceanographic)

Components

National governments

Local governments

Scientists

Interactions

Steering committee meetings
among national ministers

Roundtable meetings among
local government executives

Scientific conferences

Emergent properties

Countries agree to fund and collaboratively implement SCS
Strategic Action Programme (INTENDED OUTCOME)

Sovereign Countries

DANIDA

Boundaries

East Asia (geopolitical)

Components

JICA

UNEP-initiated COBSEA

UNDP-implemented PEMSEA Project



- Boundaries
- East Asian Seas (geopolitical)
- Components
 - National governments
 - Local governments
 - Scientists
- Interactions
 - Network and conferences for local government executives
 - Multidisciplinary experts group

Interactions

Long-standing maritime disputes continue
National governments traditionally adopt but do not fund regional environmental plans

Emergent properties

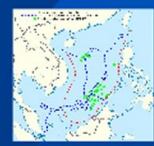
Countries reluctant to enter into legally binding regional environmental agreements due to sovereignty concerns

Other donors

SIDA

USAID

UNEP-implemented South China Sea Project



- Boundaries
- South China Sea (oceanographic)
- Components
 - National governments
 - Local governments
 - Scientists
- Interactions
 - Working on relationships among local officials
 - Providing local government education
 - Scientific collaboration

Emergent properties
Countries agree to fund and collaborate to implement SCS Strategic Action Programme (INTENDED OUTCOME)



SCS Strategic Action Programme signed by all beneficiary countries despite initial resistance from two countries

UNDP-implemented PEMSEA Project



Boundaries

East Asian Seas (geopolitical)

Components

National governments

Local governments

Scientists

Interactions

Network and conferences for local government executives

Multidisciplinary experts group

Emergent Properties

Countries agree to fund PEMSEA and implement Sustainable Development Strategy for Seas of East Asia (INTENDED OUTCOME)

Sovereign Countries

DANIDA

Boundaries

East Asia (geopolitical)

Components

JICA

UNEP-initiated COBSEA

UNDP-implemented PEMSEA Project



- Boundaries
- East Asian Seas (geopolitical)
- Components
 - National governments
 - Local governments
 - Scientists
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Emergent properties
Countries agree to fund PEMSEA and implement Sustainable Development Strategy for Seas of East Asia (INTENDED OUTCOME)

Interactions

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Emergent properties

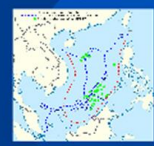
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Other donors

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UNEP-implemented South China Sea Project



- Boundaries
- South China Sea (oceanographic)
- Components
 - National governments
 - Local governments
 - Scientists
- Interactions
 - Working paper for meetings among national officials
 - Round table for sharing local government legislation
 - Scientific conference

Emergent properties
Countries agree to fund and collaborate to implement SCS Strategic Action Programme (INTENDED OUTCOME)



SCS Strategic Action Programme signed by all beneficiary countries despite initial resistance from two countries

Let's try it!

In groups

1. Review the handout – Demonstrating Biodiversity Conservation in China's Sanjiang Plain Wetlands
2. Think of this intervention:
 - What were the expected outcomes?
3. Now think of a larger system:
 - What else could potentially influence the expected outcome?
 - What else could the intervention potentially influence?

Thank you