Geographical Approaches to Evaluating Global Environmental Programs in the Age of Sustainability

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Introduction

Poverty remains and inequality grows

A hazardous planet: pandemic, climate change, hurricanes, wildfires...

Everything is interrelated
What I’m going to talk about:

• Why we need evaluation
• The Anthropocene context
• International responses
• The Global Environment Facility
• Evaluation at the GEF
• Geographical approaches to evaluation
• Closing remarks
Evaluation

We need evaluation to know what works, for whom, why and where.

Evaluation is a **systematic and impartial** assessment of an activity (program, strategy, etc.) that assesses *relevance, coherence, effectiveness, efficiency, impact* and *sustainability.*
A visual representation of the breakdown of geological time.

U.S. Global Change Research Program, 2018, Figure 2.1. By National Climate Assessment.

Human Origins Program, adapted from United States Geological Survey, and Visible Earth, NASA A visual representation of the breakdown of geological time.
Vulnerable people are disproportionately affected by climate change and the pandemic.

Countries have to get ready to adapt to climate change.

Source: NASA 2020

The Anthropocene Context: Climate Change

Global surface temperature change (1979–2019)
The Anthropocene Context: Nature and Biodiversity

International Institute for Applied Systems Analysis
The Anthropocene Context: Pollution and Waste
The Anthropocene Context: Root Causes

population, consumption, resource extraction, food production, deforestation, urbanization
International responses

UNFCCC and the Paris Agreement

Sendai Framework on Disaster Reduction

Global Commission on Adaptation
The SDGs

Credit: Stockholm Resilience Centre
Innovator and catalyst
5,000 projects and programs

Unique partnership
184 member governments
18 implementing agencies
International, private sector, civil society organizations

Financial mechanism
5 major environmental conventions

Established in 1991
US$ 21.5 billion
US$ 117 billion leverage

5 major environmental conventions

United Nations
Framework Convention on Climate Change

Convention on Biological Diversity

Stockholm Convention on persistent organic pollutants (POPs)

United Nations Convention to Combat Desertification

Minamata Convention on Mercury
Thematic areas

International waters

Chemical and waste

Land degradation

Climate change

Biodiversity
## Thematic areas (contd.)

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**Global environmental benefits**
Objectives of Independent Evaluation

• Promote **accountability** for the achievement of GEF objectives through the assessment of **results**, **effectiveness**, **processes**, and **performance** of the partners involved in GEF activities.

• Promote **learning**, **feedback**, and **knowledge sharing** on results and lessons learned among the GEF and its partners as a basis for decision making on policies, strategies, program management, programs, and projects; and to improve **performance**.
Comprehensive Evaluation of the GEF

- Provide evidence for GEF replenishment
- Assess to what extent the GEF is achieving its objectives of enhancing global environmental benefits
- Identify potential areas for improvement
- Assess the GEF’s progress in implementation and achievement of the GEF Strategy
Geographical Approaches to evaluation: Integrating Human and Natural Systems

Integration between natural and human systems: environmental, social, economic
Both synergies and trade-offs can occur within the same intervention.
Common types of trade-offs

- Environmental vs Socioeconomic Objectives
- Short term vs Long term
- Across Focal Areas
- Between Scales
How trade-offs can be mitigated

Compensation

direct payment or replacement of income to address the loss of socioeconomic benefits

Compromise

when the benefit to one focal area is decreased to reduce the anticipated loss to another focal area or socioeconomic aspect

Value Addition

when an intervention not only addresses the trade-off, but also creates benefits beyond the status quo
In Senegal, the creation of Community Nature Reserves was a compromise between benefits to biodiversity and the local economy. These reserves increase community access to natural resources, but reduce the maximum benefits to biodiversity that could have been obtained through complete protection.

In Brazil, the temporal trade-off in converting part of farms to private nature reserves is offset through tax benefits established by national law.
In China, to mitigate the loss of using indigenous grass as forage and bedding for sheep, the project provided warm sheep sheds and alfalfa as substitute fodder. This had the added value of providing permanent shelter for sheep, which improved their survival in harsh climates. Alfalfa as fodder was found to improve the quality of the sheep, which farmers could then sell for a higher price.
Geographical Approaches to evaluation: Teleconnections and vertical scale

**Commodity chains** - from local to global

**Wildlife trade** – need to deal with supply and demand

**Deforestation** – happens locally, but causes are global
Wildlife trade is a transmission pathway to zoonotic diseases

Relevant lessons from the GEF Global Wildlife Program evaluation:

- Importance of a globally coordinated approach
- Species coverage needs to be strategically expanded
- Appropriate focus on demand countries
- Explicitly addressing political will and corruption
- Attention to livelihoods security

Wildlife trade is a transmission pathway to zoonotic diseases.
Geographical approaches to evaluation: Place and Context Matter

**FCV, LDCs, SIDS**—There are no such thing as global best practices

Fragility, Conflict, and Violence affected states

Least Developed Countries

Small Islands Developing States
Geographical approaches to evaluation: drawing geographical boundaries

Need to draw system boundaries

Can’t see a project in isolation
Weeds flourish and fish decline in Lake Victoria's 'deadest' corner
Lake Victoria: Vegetation presence

Projects became effective once they considered infestation that came from upstream waters.
Geographical approaches to evaluation: 
Using Geospatial methods

Cardamom Mountains 
Integrated Protected Area System, Cambodia

Was this intervention sustainable?
Geographical approaches to evaluation:
Using Geospatial methods

SUSTAINABLE OUTCOME
Forest loss did not increase despite unprecedented increase in the buffer and at country level.
Households in proximity to GEF SFM interventions have more in **Household Assets** as compared to households further away.

Positive Correlation with GEF, not causation
Transformational change is deep, systemic, sustainable change with large-scale impact in an area of global environmental concern*

4 criteria:
- Relevance
- Depth of Change
- Scale of Change
- Sustainability

*Adopted from IEG. 2016. Supporting Transformational Change for Poverty Reduction and Shared Prosperity.
Internal Factors
- Quality of implementation
- Quality of execution
- Pre-intervention analytical and advisory activities
- Partnerships with donors

Transformational Mechanism
A mechanism to expand and sustain the impact of the intervention (through mainstreaming, demonstration, replication, or catalytic effects)

Contextual Conditions
- Government ownership and support
- Implementation capacity
- Policy environment
- NGO & community participation
- Private sector participation
- Economic and market conditions

Outcome
- Depth of change
- Scale of change

Relevance
- Climate Change
- Biodiversity
- Land Degradation
- Chemicals and Waste
- International Waters
- Sustainable Forest Management

Ambition Level and Focus
(of intervention objectives)
- Depth of change (market and system focus)
- Scale of change

Sustainability
- Financial
- Economic
- Environmental
- Social
- Political

Outcome
- Depth of change
- Scale of change
EXAMPLES
Transformational Change

Africa
1.3 mln – quality solar lanterns;
Private market transformed

Amazon
13.2 mln ha – strict protection
10.8 mln ha – sustainable use

China
Wind power
2005: 1.3 GW
2015: 129.3 GW

Uruguay
Wind power
2008: 0%
2016: 33%

Namibia
98% PAs improved;
Doubled number of wild dogs, leopards, cheetahs, lions (2004–12)
SUCCESS FACTORS FOR Transformational change

- Clear ambition in design
- Addressing market and system reforms through policies
- Mechanisms for financial sustainability
- Quality of implementation and execution
- May be achieved by projects of different size
Closing remarks

• Must deal with global environmental issues for people, planet and prosperity

• Interventions take place in place: natural conditions, politics, economics, culture matter

• Evaluation to ensure that limited resources are used wisely and that we learn from past experiences
Thank you!

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