2023 EPE Event

Evaluating Sustainable Pathways to Climate Resilience:

Recent experiences from evaluations of IFAD, FAO, and GEF

29th of March 3 PM-4 PM (CET)

UNEG
United Nations Evaluation Group

SESSION OVERVIEW

Lessons from a major Climate Adaptation Evaluation (IFAD)
Considerations for assessing climate adaptation solutions in agricultural sector and their environmental sustainability

Mainstreaming climate change into evaluations of agri-food systems interventions (FAO)
OED guidelines to integrate climate action into FAO evaluations

Application of Spatial Science to Evaluate Interventions at the Nexus of Climate Change, Environmental Conservation, and Development (GEF)

UNEG
United Nations Evaluation Group

As part of your regular work, how frequently do you evaluate the support for adapting to climate change?

https://www.menti.com/aln34o3wqy13

UNEG
United Nations Evaluation Group

Lessons from a major Climate Adaptation Evaluation (IFAD)
Considerations for assessing climate adaptation solutions in agricultural sector and their environmental sustainability

Nanthikesan, Suppiramaniam- Lead evaluation Officer

UNEG
United Nations Evaluation Group

BUILDING AN EVALUATIVE EVIDENCE BASE FOR CLIMATE RESPONSE

Why Climate Change Adaptation (CCA) interventions for rural agricultural sector?

- Increasing frequency and intensity of catastrophic events
- Disproportionate burden on smallholder farmers
- Weak database of working climate adaptation solutions

Evaluations critical for evidence-based knowledge base of CCA solutions.

Independent Office of Evaluation

IFAD
Investing in rural people

UNEG
United Nations Evaluation Group

EVALUATION APPROACH

- Measuring/Assessing resilience outcomes: No conceptual framework to assess climate resilience

  Approach:

  - Context specific
  - Goal Free evaluation – Need to develop resilience measures
  - Significance of unintended consequences (see below)

- Assessing environmental sustainability of agricultural solutions: Human system -Eco system nexus

  - (IFAD's) Project level analysis inadequate to understand the effects at the landscape levels: The need to understand the human system-ecosystem nexus.

  - Seek when feasible Climate , environment and development resilience together

EVALUATION METHODS

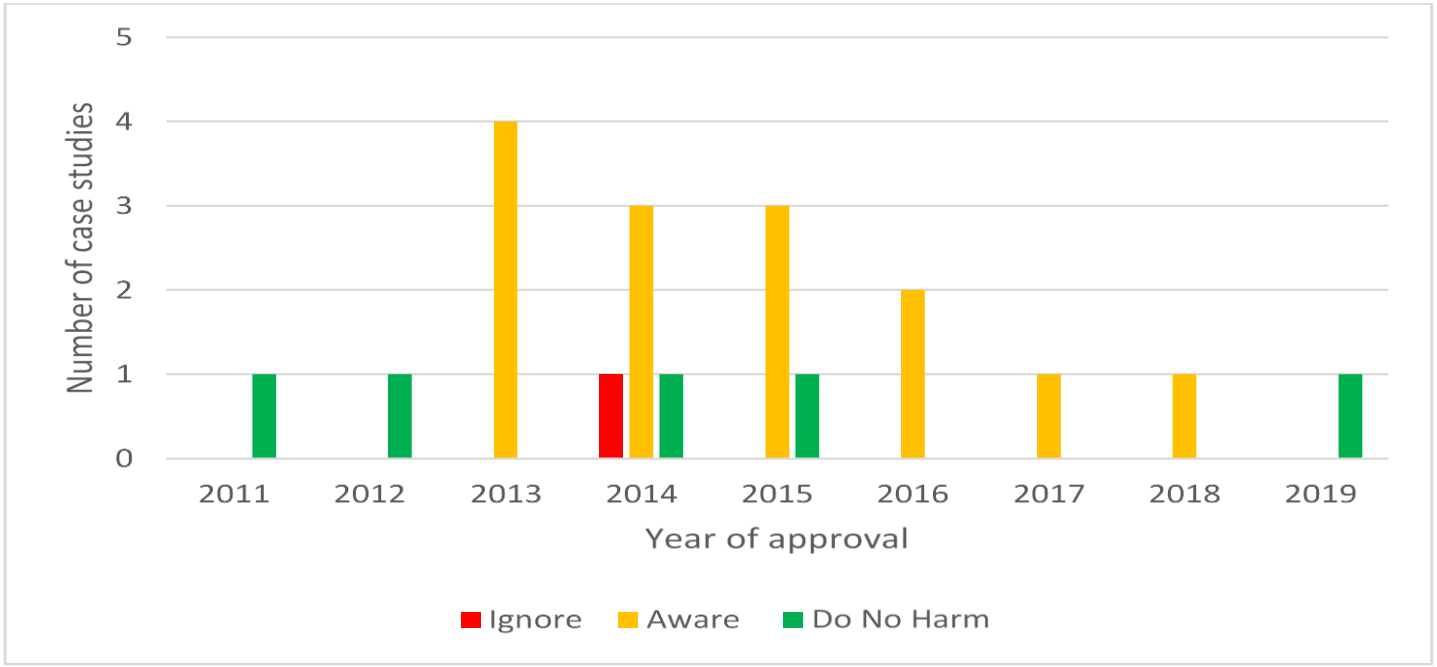
- Measuring/Assessing resilience outcomes:
  - Many approaches exist.
  - Chose a framework tested in IFAD country offices and tried in other Agencies (World Bank, Rome-based agencies – WFP, FAO and IFAD)
  - Climate resilience: Absorptive capacity, adaptive capacity and transformative capacity. Developed qualitative estimates to identify changes in each capacity

- Human system -Eco system nexus (Qualitative Approach)
  - Considerations – impact of agricultural (climate adaptive) solutions on bio diversity, soil health, land use, water and air quality (landscape level), and offsets
  - Consequences – (intensity of impact) Restoration/Do No Harm:
  - Techniques to assess: Ignore, Aware, Do No Harm, Restore

APPLICATION OF NEXUS APPROACH

Thematic Evaluation of IFAD support to Smallholder Farmers' Adaptation to Climate Change
(20 case studies, 35 projects)

Stance towards the environment 2011-2019



Source: IOE elaboration

UNEG United Nations Evaluation Group

Independent Office of Evaluation IFAD Investing in rural people

KEY TAKE AWAYS

Evaluations critical evidence-based knowledge base. Need for joint

1. Era of business-as-usual (= anthropocentric) approach to Climate Adaptation is over.
   - "Good is not Good enough" – to achieve CCA related SDG targets by 2030 and to avoid catastrophic consequences. TRANSFORMATIONAL CHANGES are needed.
2. Agriculture is essential for human life: It could be a perpetrator and a victim!.
   - Climate adaptation responses must 'do no harm' or better:

     Environmental Sustainability is key!
3. Many governments face significant challenges to incentivize sustainable climate adaptation response.
   - Ensure adequate climate finance & knowledge base of holistic CCA solutions

Thank you

s.nanthikesan@ifad.org

UNEG
United Nations Evaluation Group

Independent Office of Evaluation

IFAD
Investing in rural people

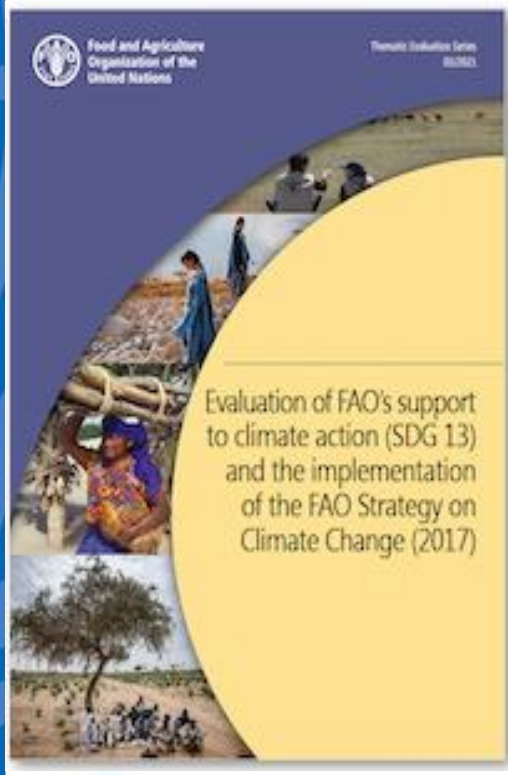
Mainstreaming climate change into evaluations of agri-food systems interventions-
OED guidelines to integrate climate action into FAO evaluations

Luisa Belli- Evaluation Officer

Lis Pinero- Evaluation Analyst

UNEG
United Nations Evaluation Group

EVALUATION OF FAO'S SUPPORT TO CLIMATE ACTION (SDG 13) AND THE IMPLEMENTATION OF THE FAO STRATEGY ON CLIMATE CHANGE (2017)



UNEG
United Nations Evaluation Group

- *Conclusion*: FAO has not yet mainstreamed its work on climate action. Root causes and solutions to climate change are not being coherently addressed
- *Recommendation*: FAO should systematically mainstream climate action into all offices, divisions and levels, and include coordination and guidance to embed procedures in the project cycle, quality assurance and learning mechanisms
- Including an assessment of climate change achievements, risks and trade-offs in all evaluation practice

OED GUIDELINES ON CLIMATE CHANGE IN EVALUATION (PILOTING PHASE)

Basic information about the consequences of climate change with a focus on food systems

Conceptual information on climate change mitigation and climate risk, adaptation and resilience

General framework for climate change evaluation and guiding evaluation questions

UNEG
United Nations Evaluation Group

GENERAL FRAMEWORK

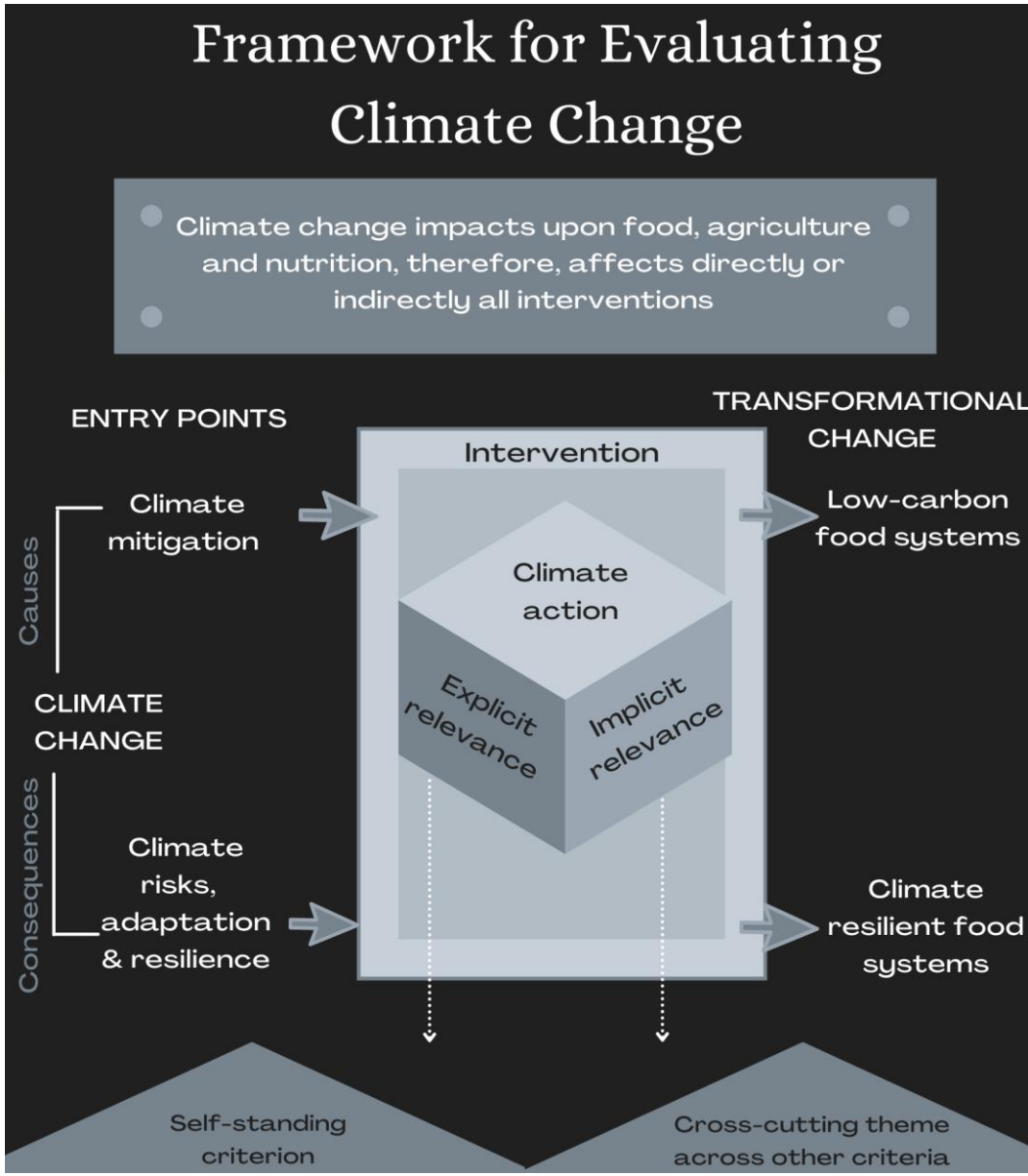
Principles

All interventions related to food, agriculture and nutrition affect and are affected by climate change,

Interventions should pave the way for transformational change of food systems by developing low-carbon pathways in agriculture and building resilient food systems.

Key steps

1. Defining the climate change relevance
2. Understanding the two dimensions of i) mitigation and ii) risk, adaptation and resilience.
3. Decide whether CC is a self-standing evaluation criterion or a cross-cutting theme



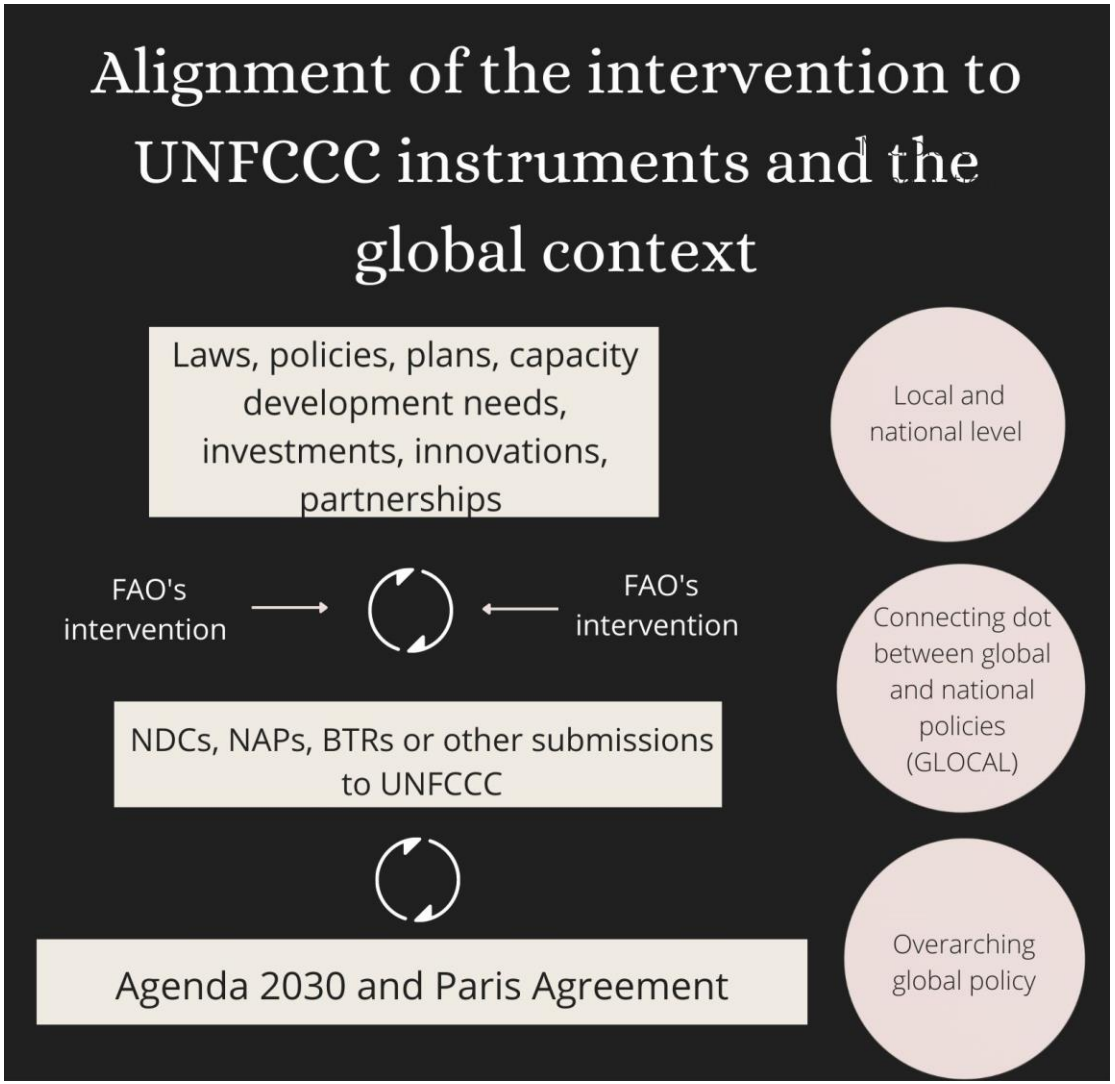
UNEG
United Nations Evaluation Group

UNFCCC INSTRUMENTS TO GUIDE THE EVALUATION

Integration of **UNFCCC instruments** as a key pillar to guide the evaluation of any intervention.

Alignment with and contribution to UNFCCC instruments.

Evaluations should not recommend actions that are opposed to the national pledges of emission reductions and needs for adaptation.



UNEG
United Nations Evaluation Group

GUIDING EVALUATION QUESTIONS

After defining the climate change relevance of the intervention, i.e., how the evaluand is connected to the dual nature of climate change and how deep will the evaluation scope cover climate action and the transformational aspects, the evaluation should consider **the inclusion of climate action-related evaluation questions** and **tools to answer these questions**.

OECD DAC CRITERIA
-Relevance
-Coherence
-Effectiveness
-Efficiency
-Impact
-Sustainability

TRANSFORMATIONAL CHANGE (from the Climate Investment Fund)
-Relevance
-Systemic change
-Scale
-Speed (catalytic effect)
-Adaptive sustainability

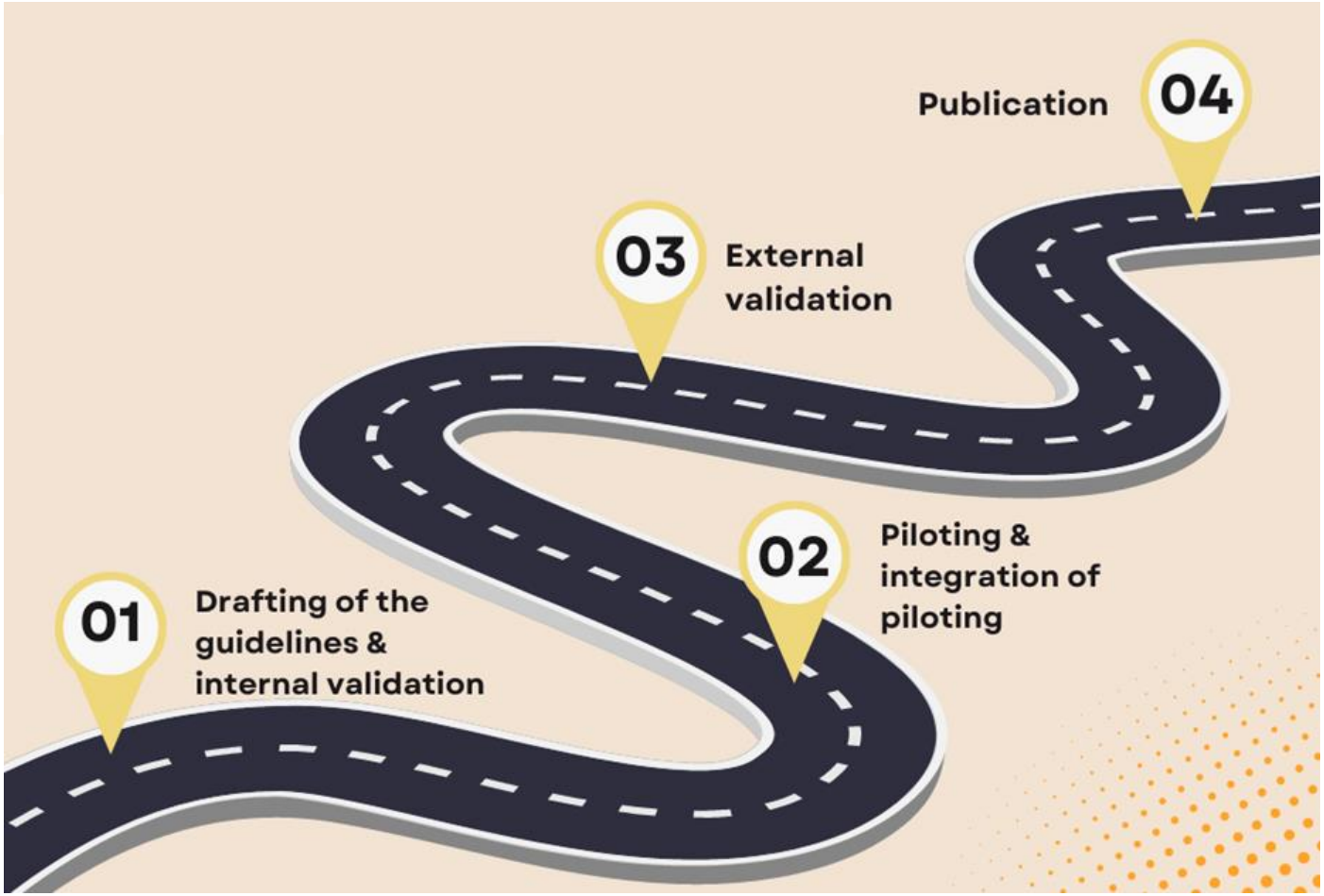
UNEG
United Nations Evaluation Group

PILOTING OF THE GUIDELINES

- Confirms the relevance and utility of the guidelines' framework, general evaluation questions and specific evaluation questions on FAO's thematic areas of work.
- Confirms that UNFCCC instruments provide a useful benchmark to assess FAO's work on climate change
- Suggests interesting improvements (on ToC and questions) to be incorporated into the final version of the guidelines

UNEG
United Nations Evaluation Group

ROADMAP OF THE GUIDELINES



UNEG
United Nations Evaluation Group

Thank you

Luisa.belli@fao.org

Application of Spatial Science to Evaluate Interventions at the Nexus of Climate Change, Environmental Conservation, and Development

Anupam Anand, Senior Evaluation Officer

UNEG
United Nations Evaluation Group

Evaluating Sustainable Pathways to Climate Resilience

Application of Spatial Science to Evaluate Interventions at the Nexus of Climate Change, Environmental Conservation, and Development

Anupam Anand, Senior Evaluation Officer
UNEG EPE – 29th March 2023

UNEG
United Nations Evaluation Group

LEARNING OBJECTIVES

- What is Geospatial Analysis?
- Why use Geospatial science in evaluation?
- Challenges and Lessons
- Resources

UNEG
United Nations Evaluation Group

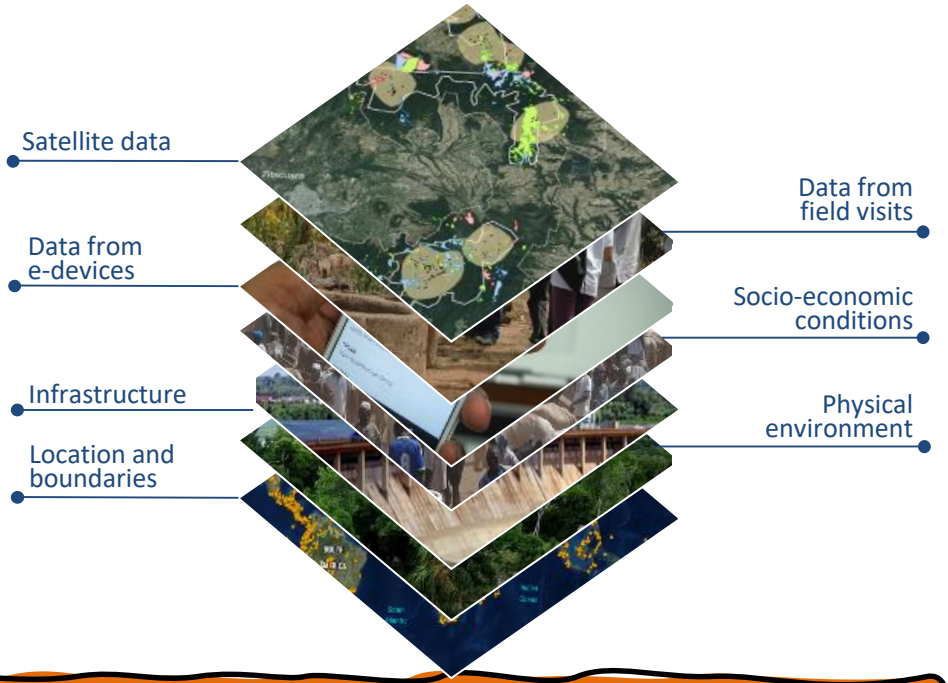
WHAT IS GEOSPATIAL ANALYSIS?

REAL WORLD

Problem-Driven

To assess – Relevance – Impacts – Causes – Trends...

GEOSPATIAL WORLD



Spatial analysis focuses on the statistical analysis of patterns and underlying processes

UNEG
United Nations Evaluation Group

WHY GEOSPATIAL METHODS ?

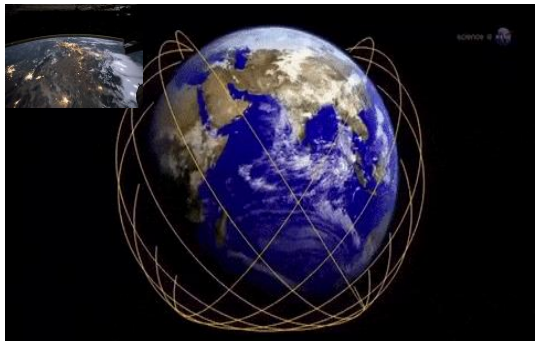
Logistical Challenges

Methodological Challenges

Analysis at different scales

Aiding objectivity and transparency

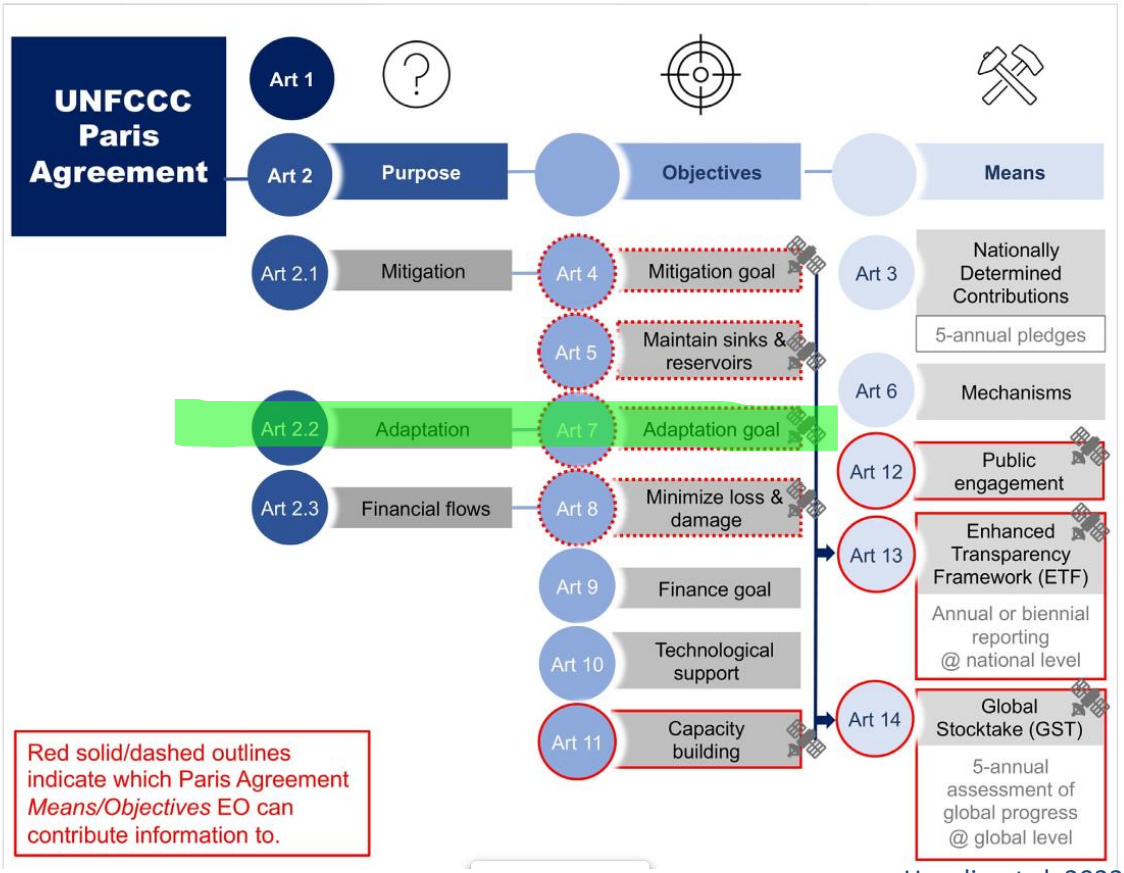
Applicable to variety of evaluation methods and themes



- ~3400 operational satellites
- Unprecedented flow of data
- Rapid advancement in analytics

UNEG
United Nations Evaluation Group

CLIMATE CHANGE AND GEOSPATIAL METHODS

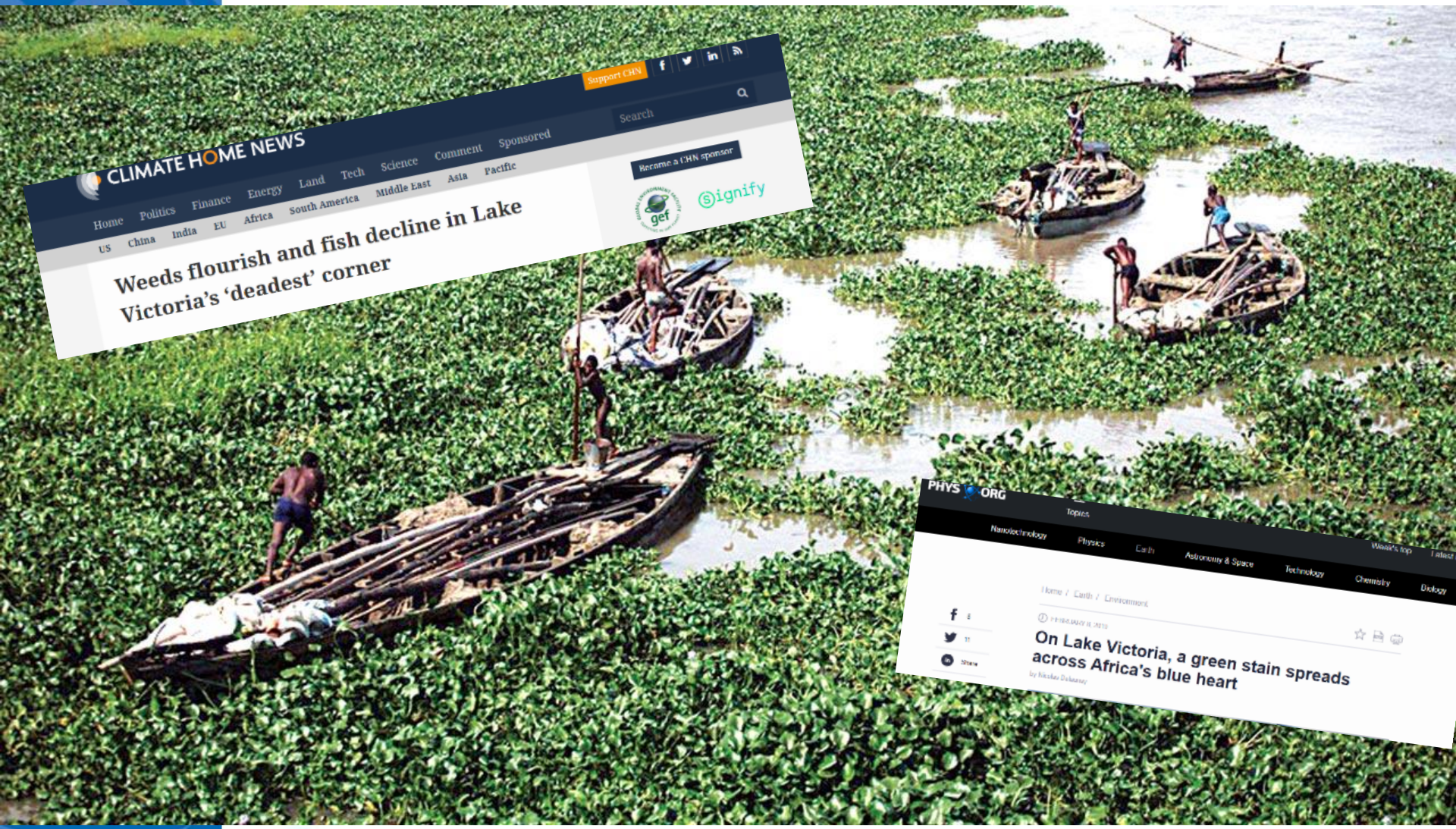


Hegglin *et* al, 2022

Data from satellite imagery and sensor networks make environment and development indicators increasingly measurable

UNEG
United Nations Evaluation Group

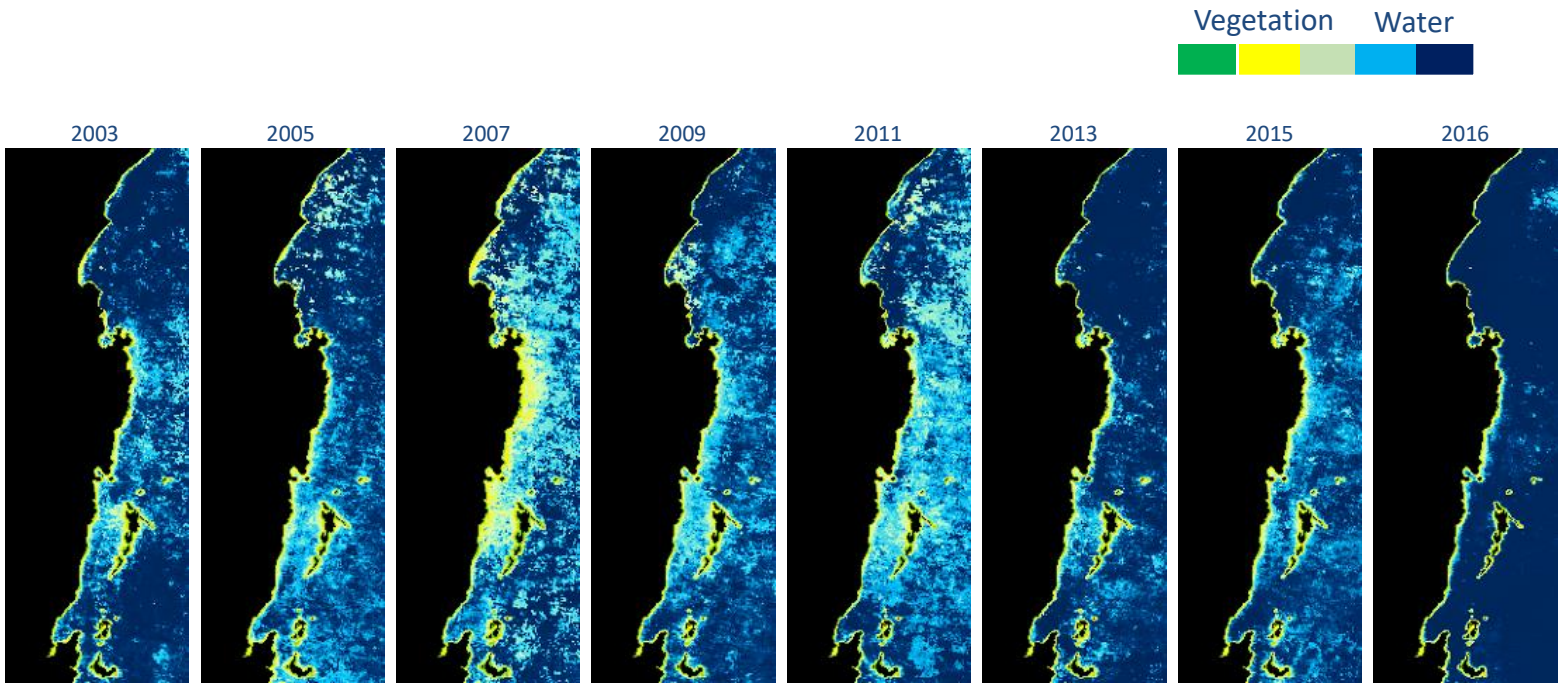
ADDRESSING METHODOLOGICAL CHALLENGES

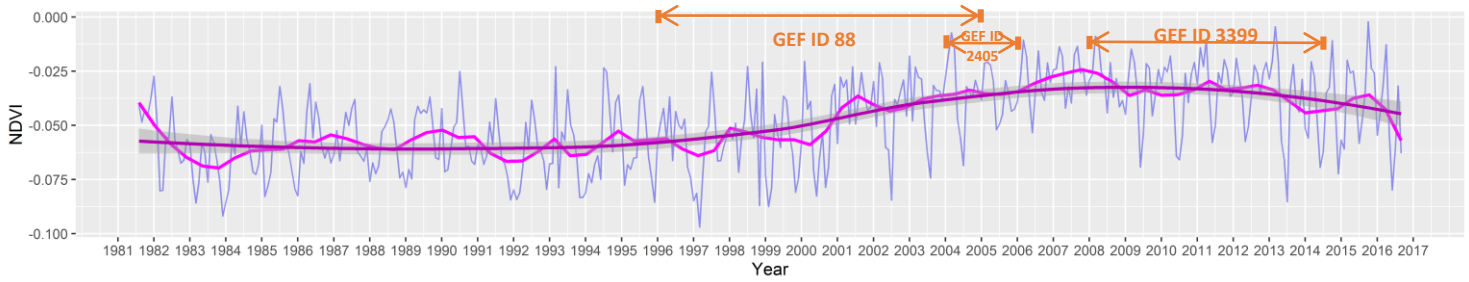


UNEG
United Nations Evaluation Group

UNEG
United Nations Evaluation Group

LAKE VICTORIA: VEGETATION PRESENCE

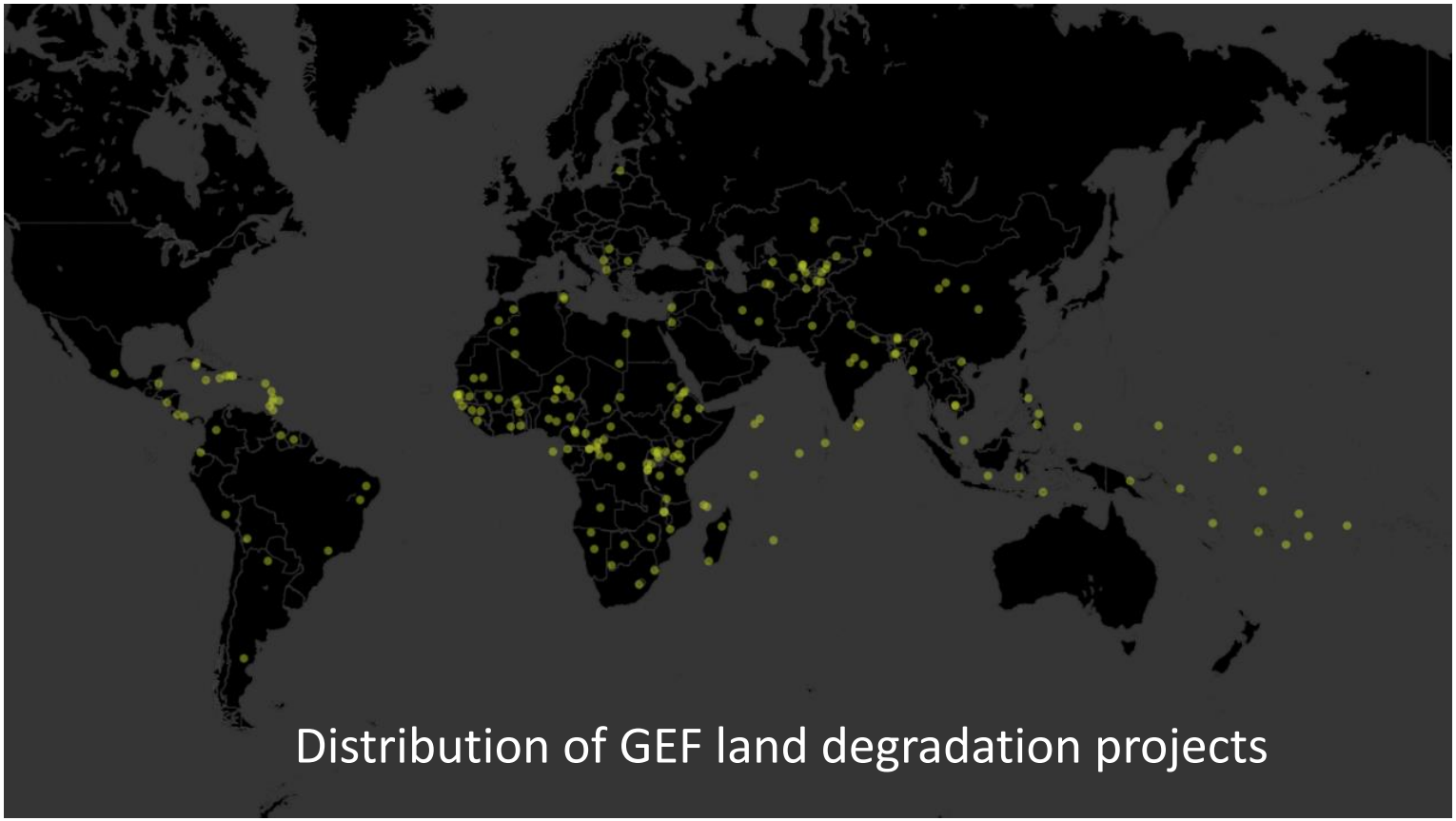




UNEG
United Nations Evaluation Group

Triangulating Across Methods

UNEG
United Nations Evaluation Group



Distribution of GEF land degradation projects

UNEG
United Nations Evaluation Group

METHODOLOGY

ANALYSIS BOTH AT PORTFOLIO LEVEL, AND CASE STUDY AT COUNTRY LEVEL

Precise geolocation

Satellite data

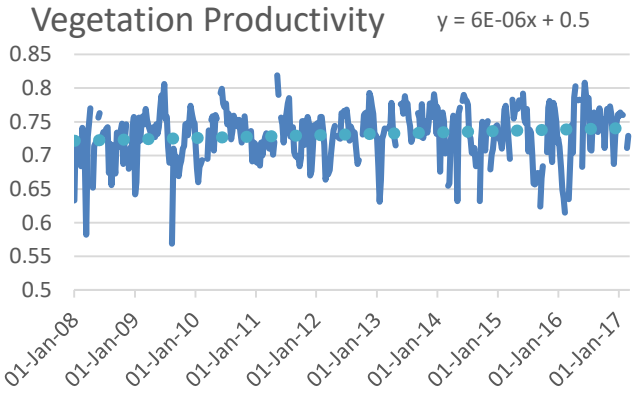
Integration with socioeconomic data (SFM)

Causal trees machine learning

Novel approach to address data gaps through integration of satellite data with local survey data

UNEG
United Nations Evaluation Group

ANALYSIS BOTH AT PORTFOLIO LEVEL, AND CASE STUDY AT COUNTRY LEVEL

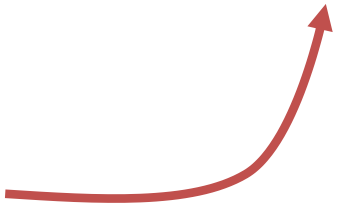


SILVA-PASTORAL PROJECT, COLOMBIA

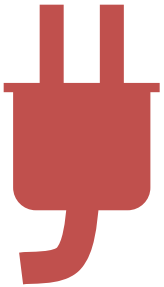
UNEG
United Nations Evaluation Group

IMPACT AND VALUE FOR MONEY

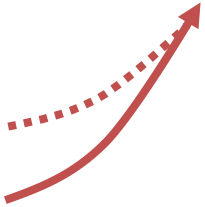
LD VFM
$1:1.08



Lag time of 4.5 to 5.5 years for impacts to be observed



Access to electricity associated with higher impact



Higher impact observed in areas with poor initial conditions

Vegetation productivity

forest loss and land fragmentation

UNEG
United Nations Evaluation Group

RESULTS AND SUSTAINABILITY

REHABILITATION OF LAKE KARAGO, RWANDA

The New Times RWANDA'S LEADING DAILY

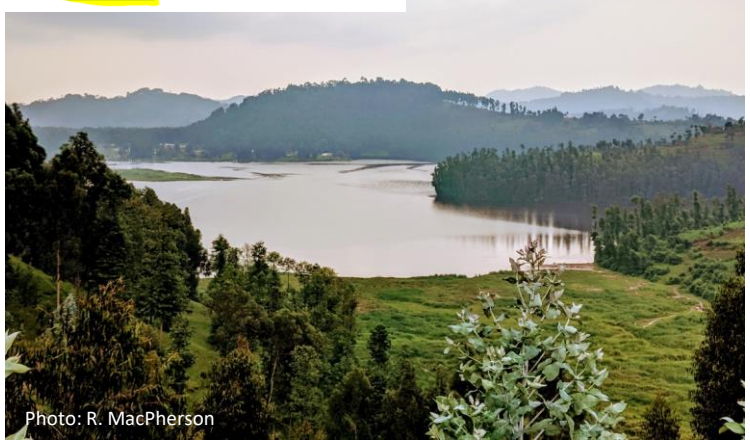
News Opinions Sports Lifestyle TimesTV Cyamunara Jobs & Tenders Weekender

NATIONAL

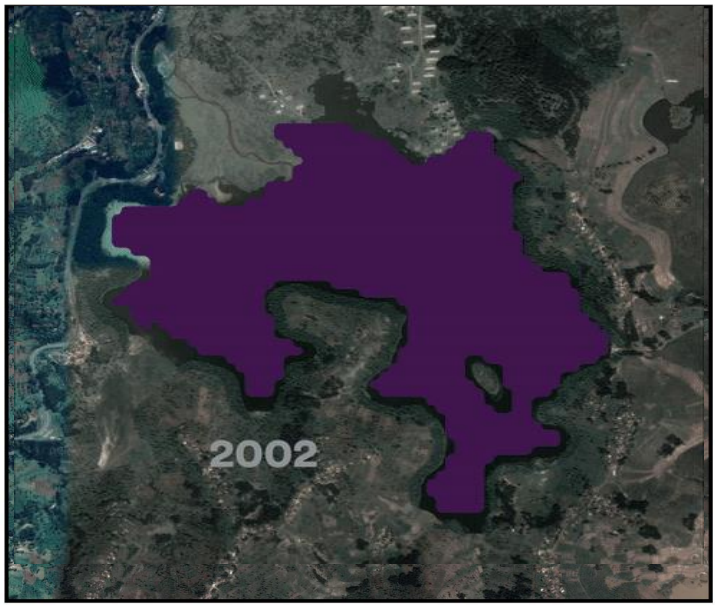
Appeal to save lake Karago

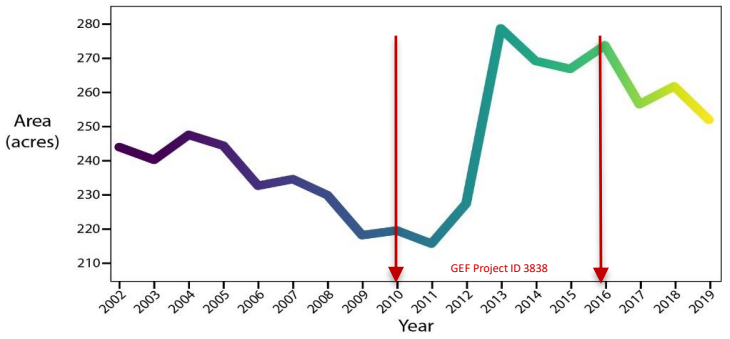
Musanze - Residents of Nyabihu District have been called upon to save Lake Karago which is on verge of extinction, by embarking on environmental protection programmes such as reforestation and terracing.

By Times Reporter Published : April 03, 2012



Lake Karago Lake Shores 2002 - 2019

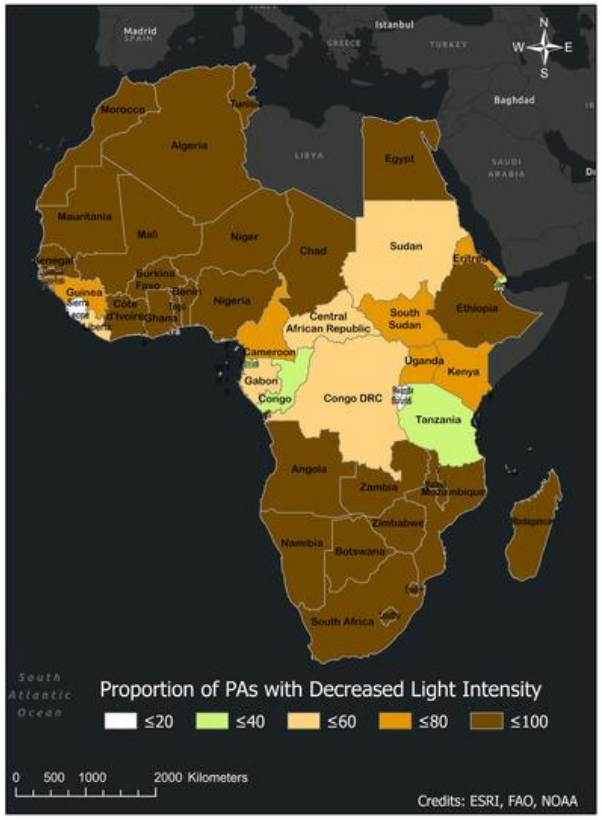




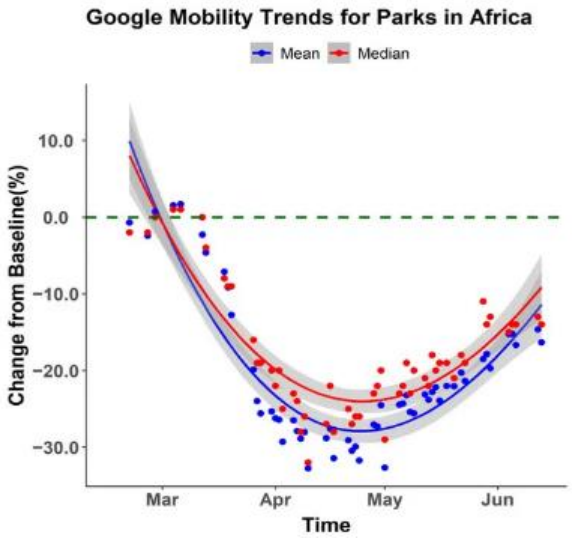
Remote sensing was helpful for assessing
and explaining results

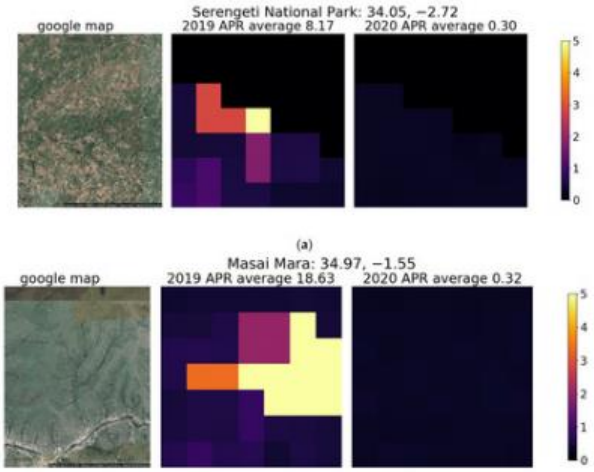
UNEG
United Nations Evaluation Group

RAPID AND EX-ANTE ASSESSMENT



Overall, 75 percent protected areas saw a decrease in light intensity, many of these include GEF supported protected areas.

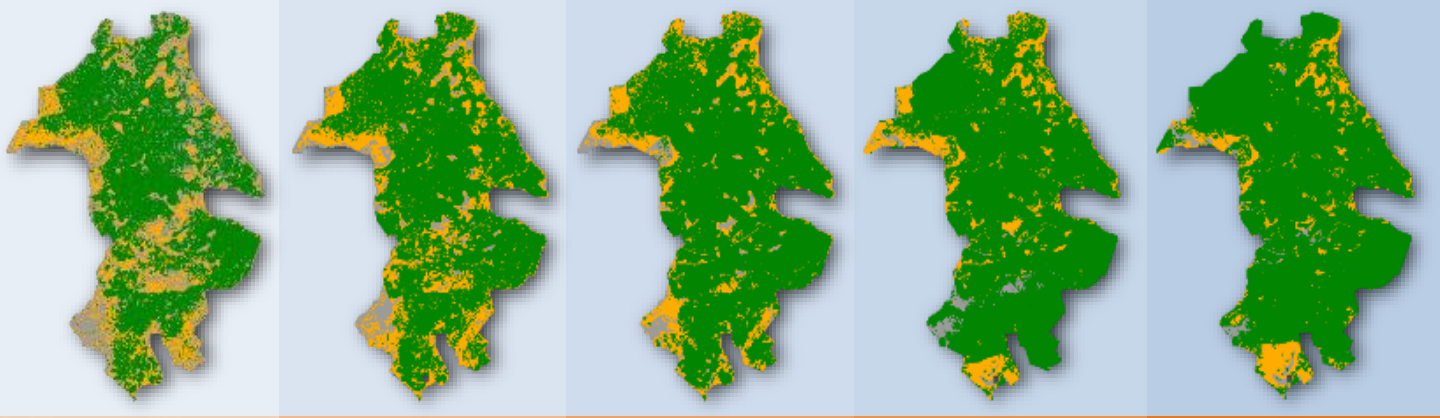




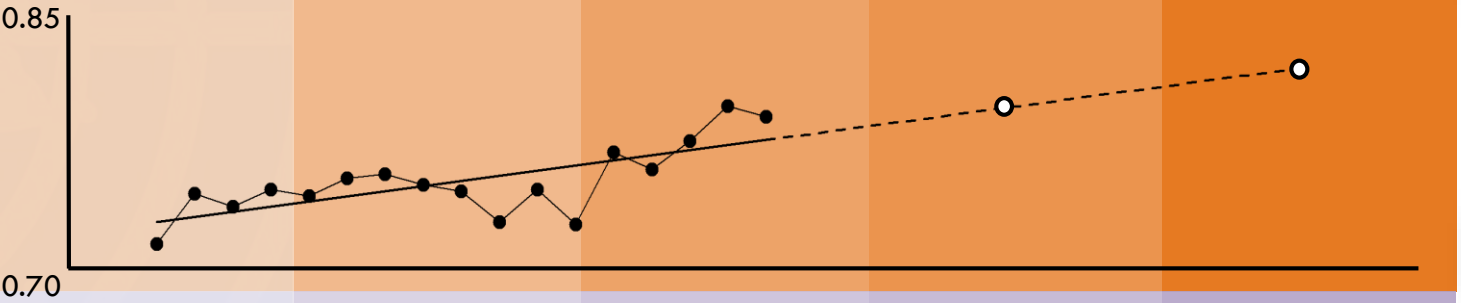
UNEG
United Nations Evaluation Group

Land Cover Change

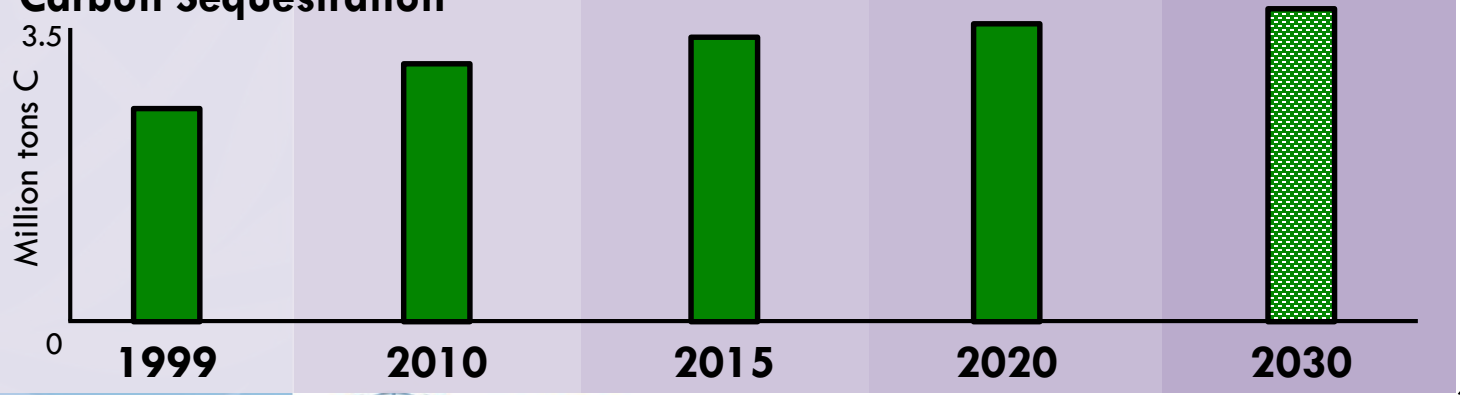
Forest Non-vegetated Shrub



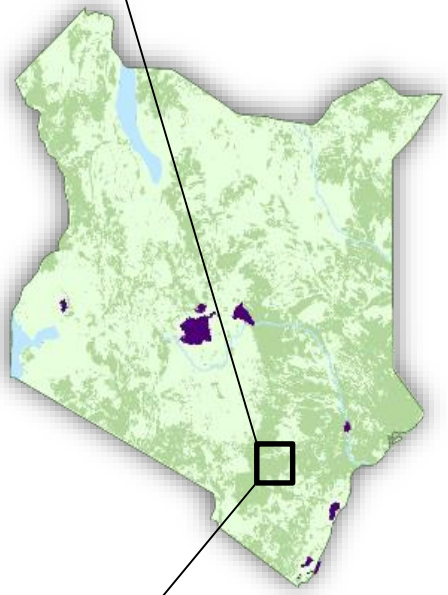
NDVI



Carbon Sequestration



Case Study:
Kakamega Forest Reserve



NASA

UNEG
United Nations Evaluation Group

LESSONS FOR THE FUTURE

Partnerships

Data risk, ethical and legal

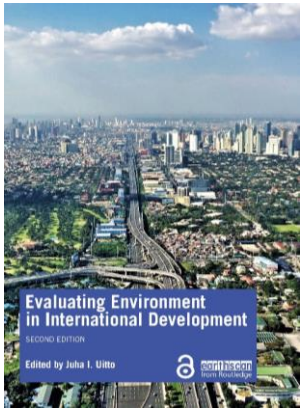
Innovation – a dynamic learning process

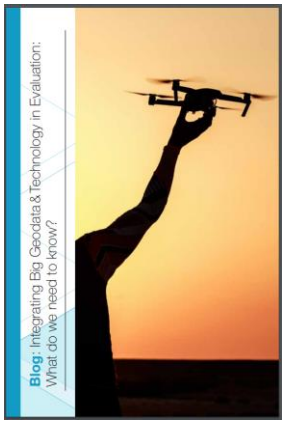
Use mixed approaches and methods

Variable costs

UNEG
United Nations Evaluation Group

RESOURCES AND REFERENCES





A Anand and G Batra, 2022.
Using big data and geospatial approaches in evaluating environmental interventions. In Uitto, Evaluating Environment in International Development

Anupam Anand, DH Kim, 2021.
Pandemic Induced Changes in Economic Activity around African Protected Areas Captured through Night-Time Light Data. Remote Sensing 13 (2), 314

A Thieme, E Glennie, P Oddo, S McCartney, M Ruid, A Anand, 2020.
Application of Remote Sensing for Ex ante Decision Support and Evaluating Impact. AJE

Runfola, G Batra, A Anand, A Way, S Goodman, 2020.
Exploring the Socioeconomic Co-benefits of Global Environment Facility Projects in Uganda Using a Quasi-Experimental Geospatial Interpolation (QGI) Approach.Sustainability 12 (8), 3225

M Lech, JI Uitto, S Harten, G Batra, A Anand, 2018.
Improving international development evaluation through geospatial data and analysis. International Journal of Geospatial and Environmental Research 5 (2), 3

UNEG
United Nations Evaluation Group

Thank you

aanand2@thegef.org

GEF-KWS-IFAD, Kenya

UNEG
United Nations Evaluation Group

Q&A SESSION

What are the key take-aways from this session?

https://www.menti.com/al35yff8h4mw

UNEG
United Nations Evaluation Group