2018 Asian Evaluation Week

Making Evaluation Work at the Country Level

10–14 September 2018 | Chengdu, People's Republic of China

Integrating Big Data in Evaluation

Dr. Juha Uitto, Director, Independent Evaluation Office
 Global Environment Facility (GEF)

Takeaway

Participants will learn the potential applications of big data and geospatial analysis in evaluating environmental and socio-economic impacts of development interventions

What is Big Data?

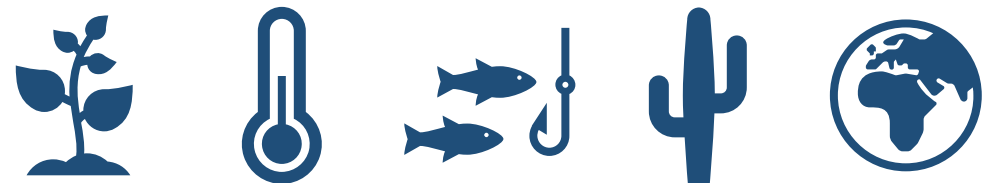**Volume**

Velocity

Variety

Value

Why use Big Data in evaluation?

Scarcer financial resources

Global environmental issues

Sustainable Development Goals and Geospatial Data

TOOLS for evaluators to operationalize large quantities of data

Flowminder Foundation

United Nations Global Pulse
unglobalpulse.org

UN FAO Collect Earth
openforis.org

Climate change

International waters

Chemicals and waste
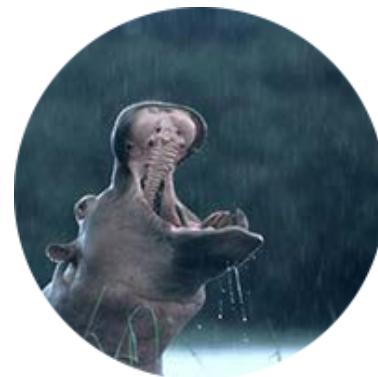
Biodiversity

Forests
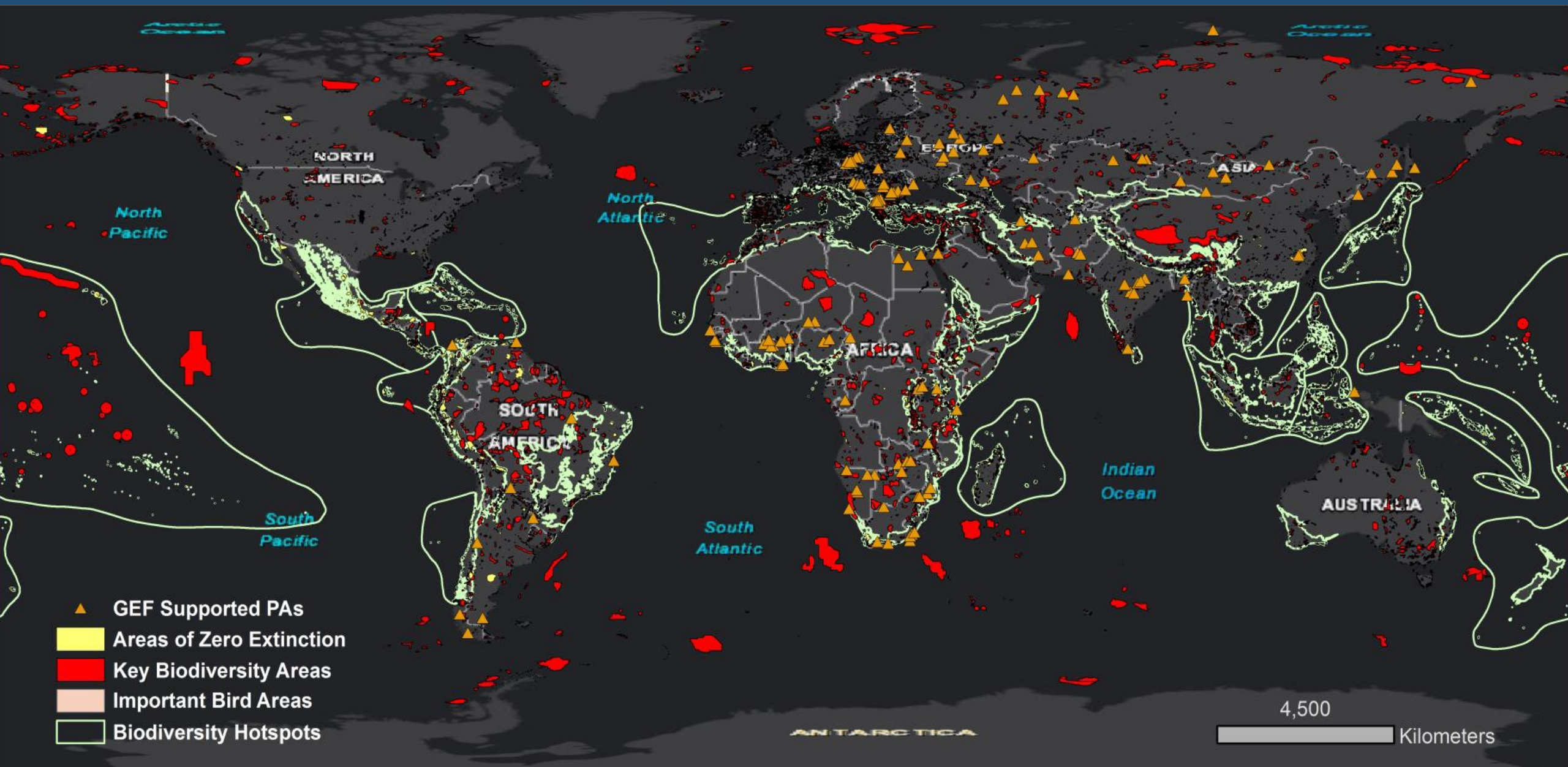
Land degradation

18 AGENCIES

Uses of geospatial data

Visualization and mapping

Statistical modelling

Machine learning

Continuous monitoring

Fragile and crisis context
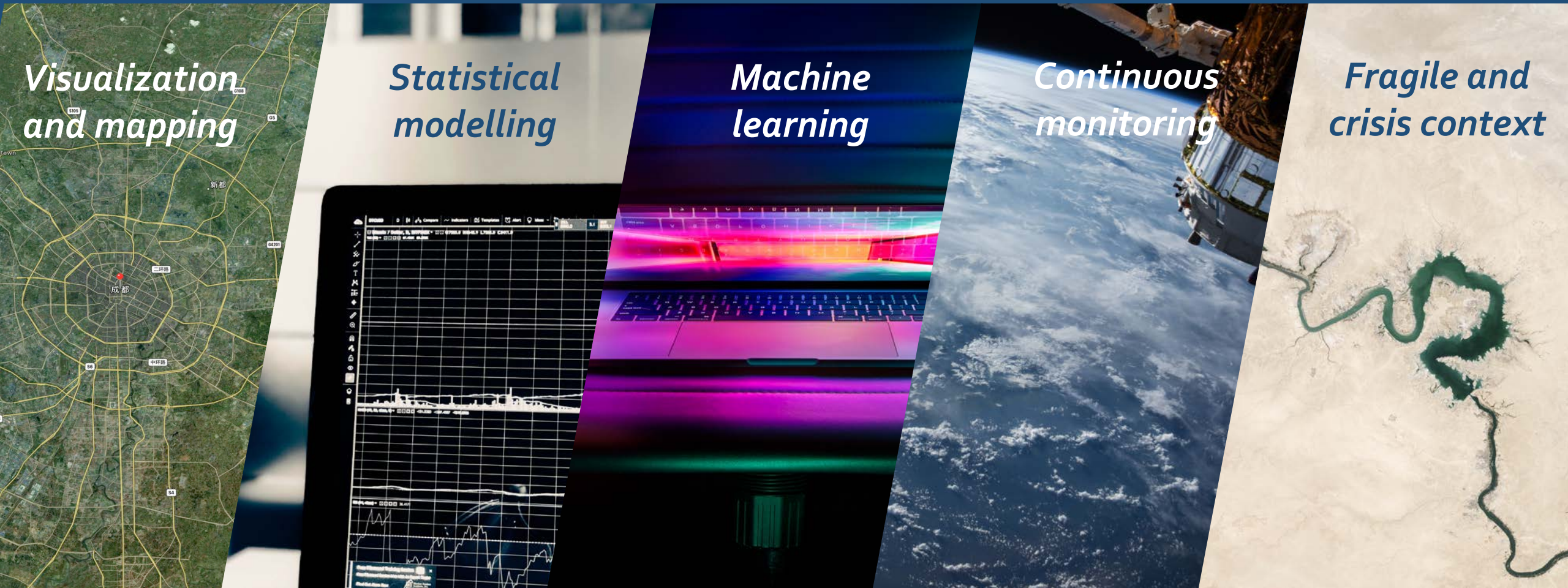
Practical examples from GEF evaluations

Impact evaluation of GEF support to protected areas and protected area systems

GEF Supported PAs
Count: 1292
Area: 2785350 Sq KM

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Legend:
▲ GEF Supported PAs
Areas of Zero Extinction
Key Biodiversity Areas
Important Bird Areas
Biodiversity Hotspots

4,500 Kilometers
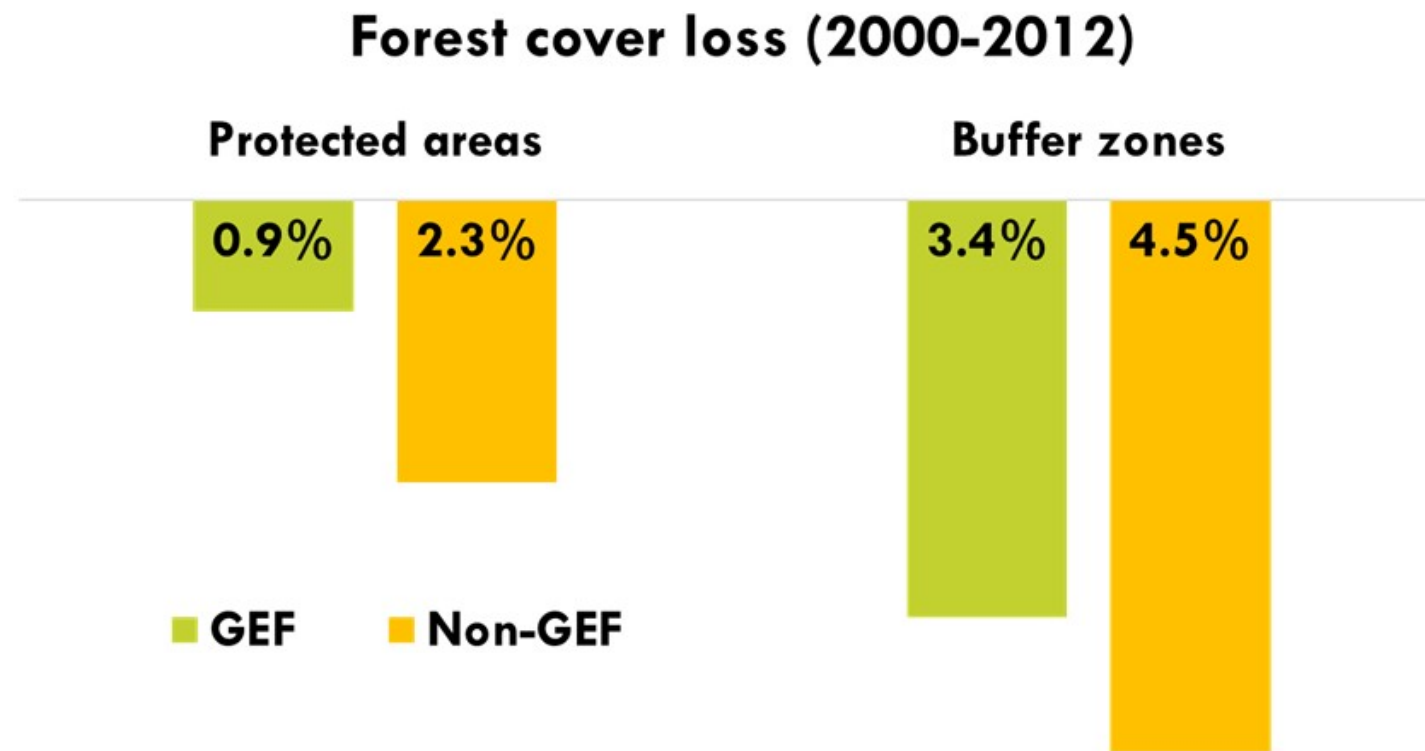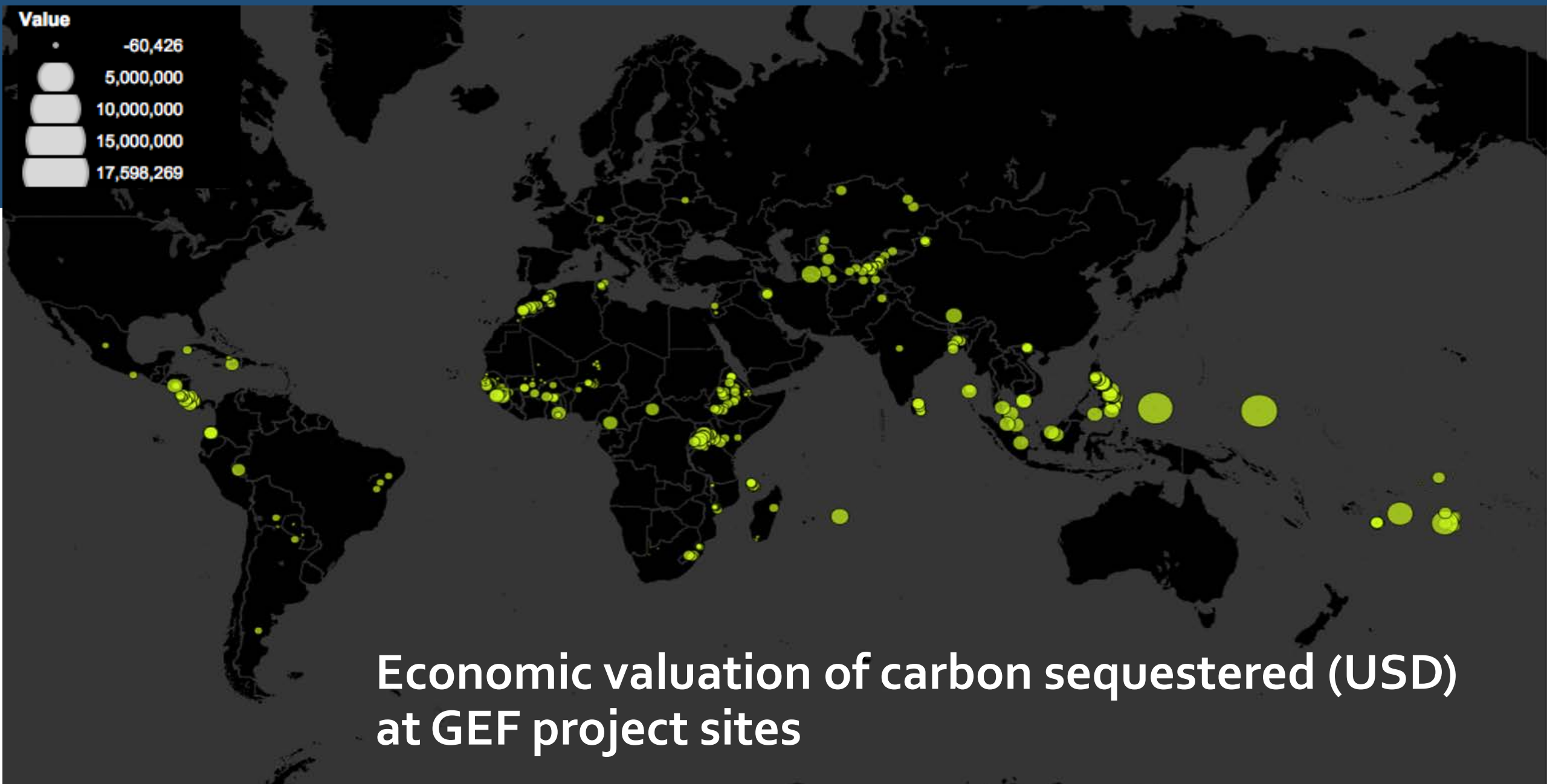
Forest change analysis using satellite data
GEF protected areas compared with non-GEF and adjoining buffer zone

Forest cover loss (2000-2012)

Protected areas

0.9% 2.3%

Buffer zones

3.4% 4.5%

■ GEF ■ Non-GEF

Economic valuation of carbon sequestered (USD) at GEF project sites

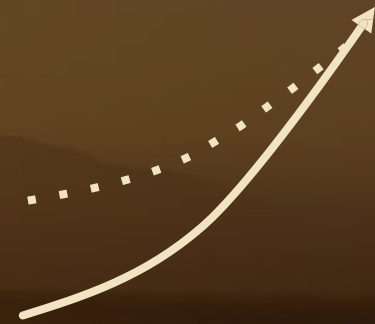# Value for money analysis in land degradation projects in the GEF
Factors driving positive impacts

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

Access to electricity
associated with
higher impact

Higher impact
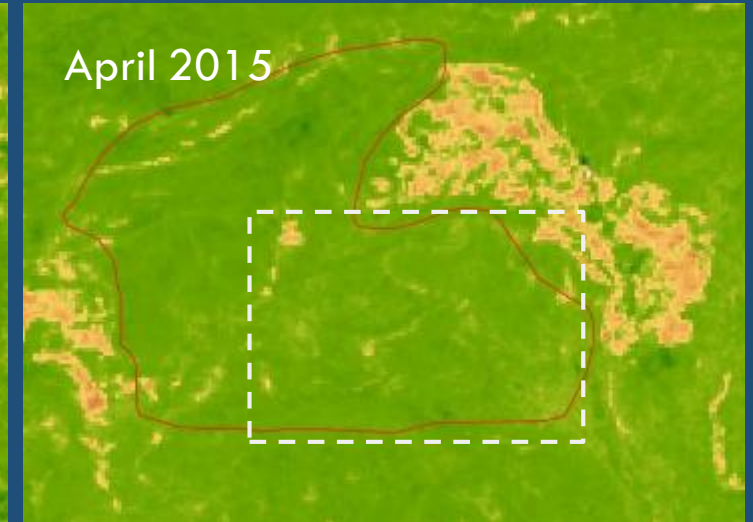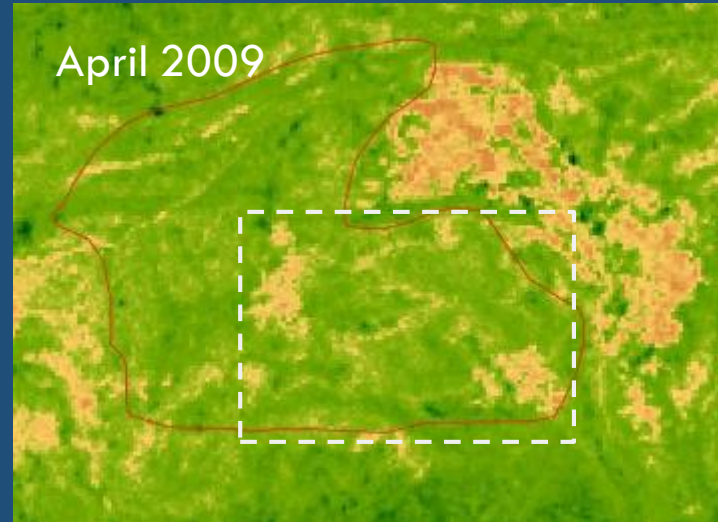observed in areas with
poor initial conditions

Beneficiary survey

Time series analysis using satellite data

April 2009

April 2015

Bamboo Forest

Village

Has the project allowed for creating of new jobs and livelihood?

Yes	17
Not Specified	1

Display options without data

TRIANGULATION ACROSS METHODS
Qualitative methods

- Case study
- Field visits
- Focused group interview
- Stakeholders interview

LESSONS from the use of geospatial data in evaluations

Partner with global institutions

Use mixed approaches and methods

Continue exploring new methodologies and data sources

Approach evaluation as a dynamic learning process

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Geospatial data can

Answer new and complex evaluation questions
Help overcome traditional data-related constraints