

UNICEF Evaluation Office and EVALSDGs are please to announce the webinar

Unintended Consequences and Trade-offs: Evaluating in the Nexus of Environment, Climate and Development

- Moderator: **Evan Green** (Baastel, Canadian Evaluation Society)
- Speakers: **Jyotsna Puri** (Green Climate Fund)
Juha Uitto (Global Environment Facility)

Webinar hosted in partnership with



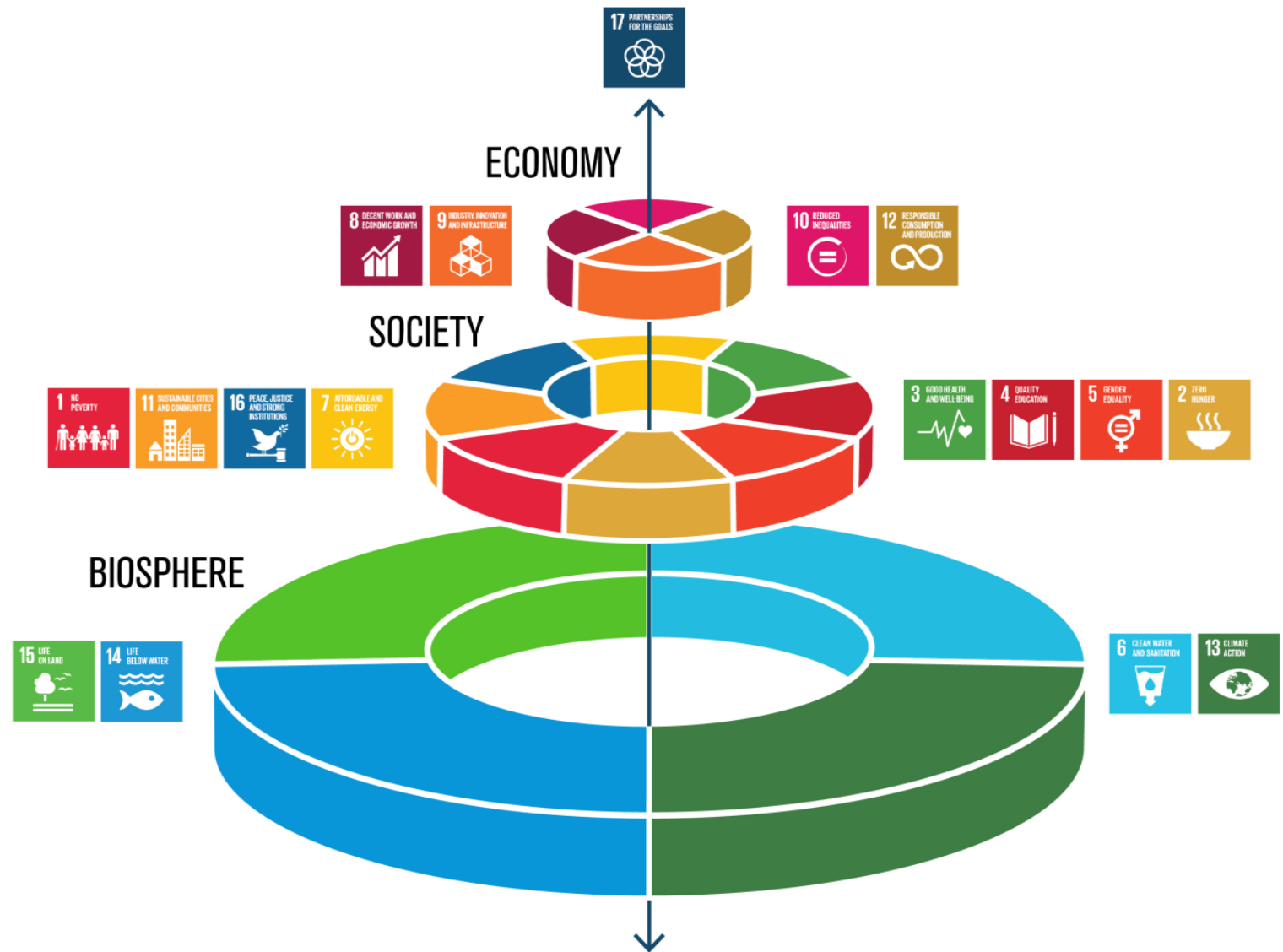
Independent
Evaluation
Unit



Wednesday, December 4, 2019

I. TRADE-OFFS

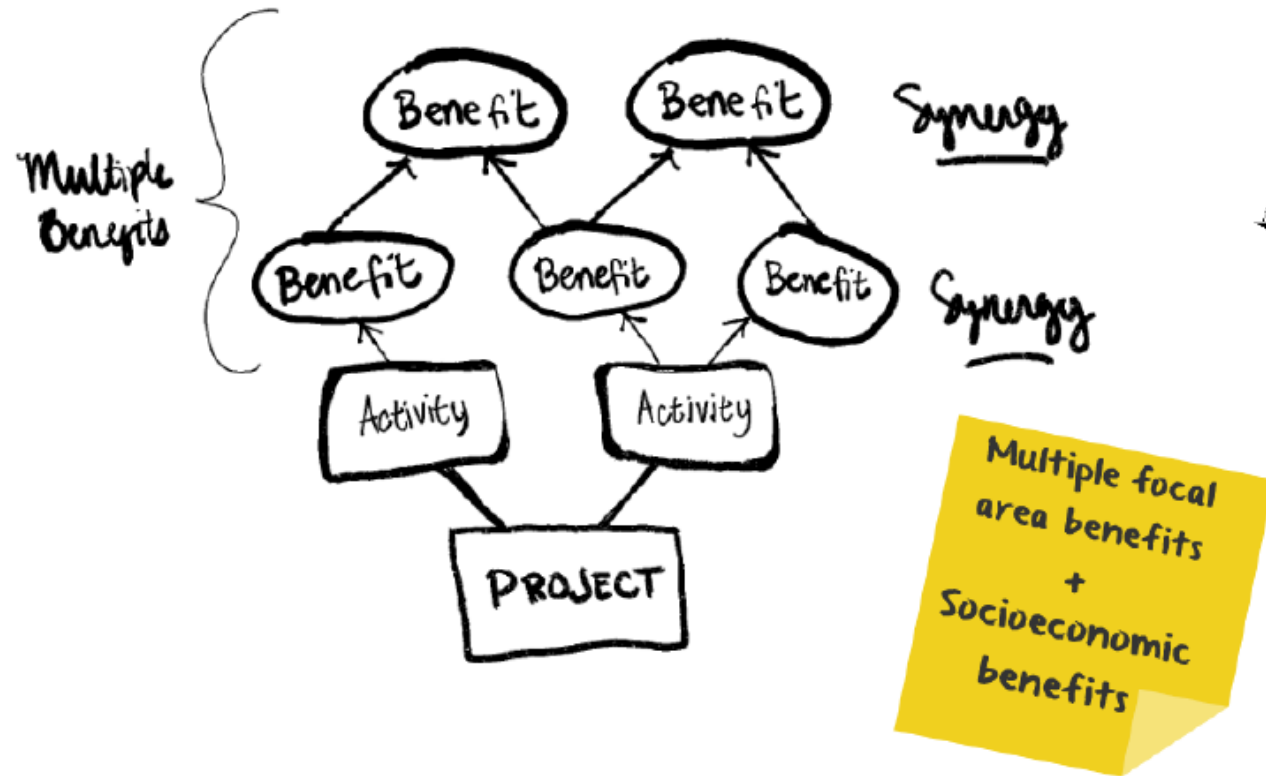
The SDGs





SOURCE: <https://blog.kumu.io/a-toolkit-for-mapping-relationships-among-the-sustainable-development-goals-sdgs-a21b76d4ddao>

Both synergies and trade-offs can occur within the same intervention



TRADE-OFF

A reduction in one benefit in the process of maximizing or increasing another benefit

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

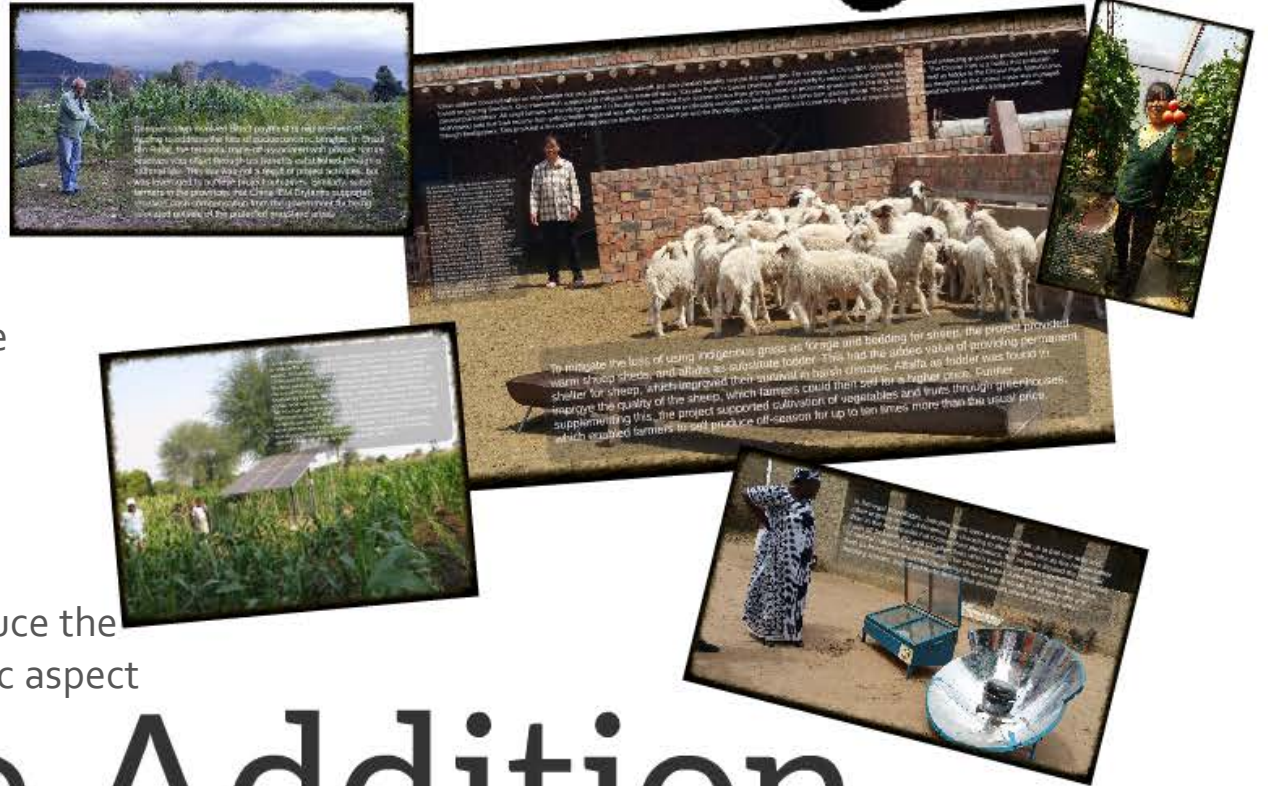
direct payment or replacement of income to address the loss of socioeconomic benefits

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



TRADE-OFF

Short-term agricultural income vs Long-term ecosystem services

COMPENSATION

In Brazil, the temporal trade-off in converting part of farms to private nature reserves is offset through tax benefits established by national law.

TRADE-OFF

Biodiversity protection in forests vs Community access to resources

COMPROMISE

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.

TRADE-OFF

Grassland protection to reduce erosion vs Grassland as livestock fodder

VALUE ADDITION

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.

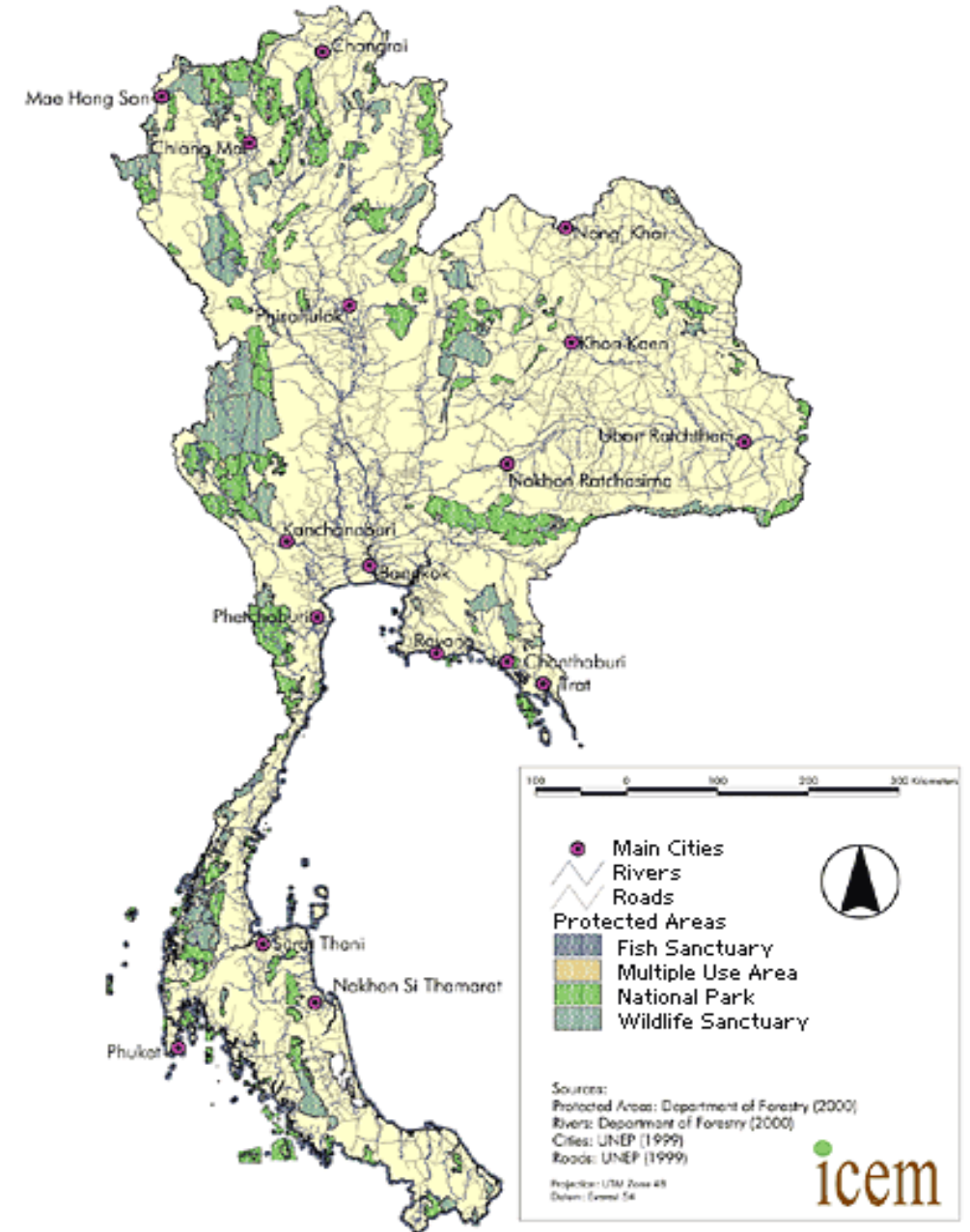
THE ROLE OF
LOCAL BENEFITS IN
GLOBAL ENVIRONMENTAL
PROGRAMS

2006



BENEFITS-COSTS

Does road
construction
always lead to
deforestation?



Main Result

- A 10% reduction in agricultural costs:
 - 4.5% red
 - Incre
- Over
 - In
 - red

Important to
measure sizes of
change



Environmental &
livelihood benefits
are
SIMULTANEOUSLY
possible

II. TOOLS

TECHNOLOGY TOOLS THAT HELP EVALUATIONS

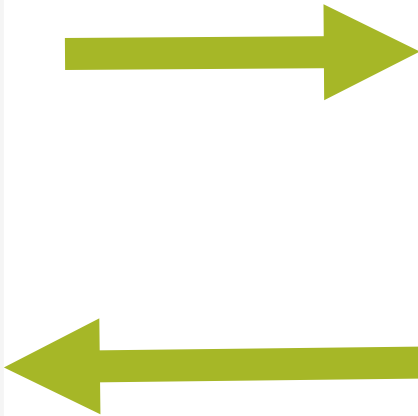
- DEAL WITH BIAS
- PROVIDE OBJECTIVE DATA
- REDUCE COSTS



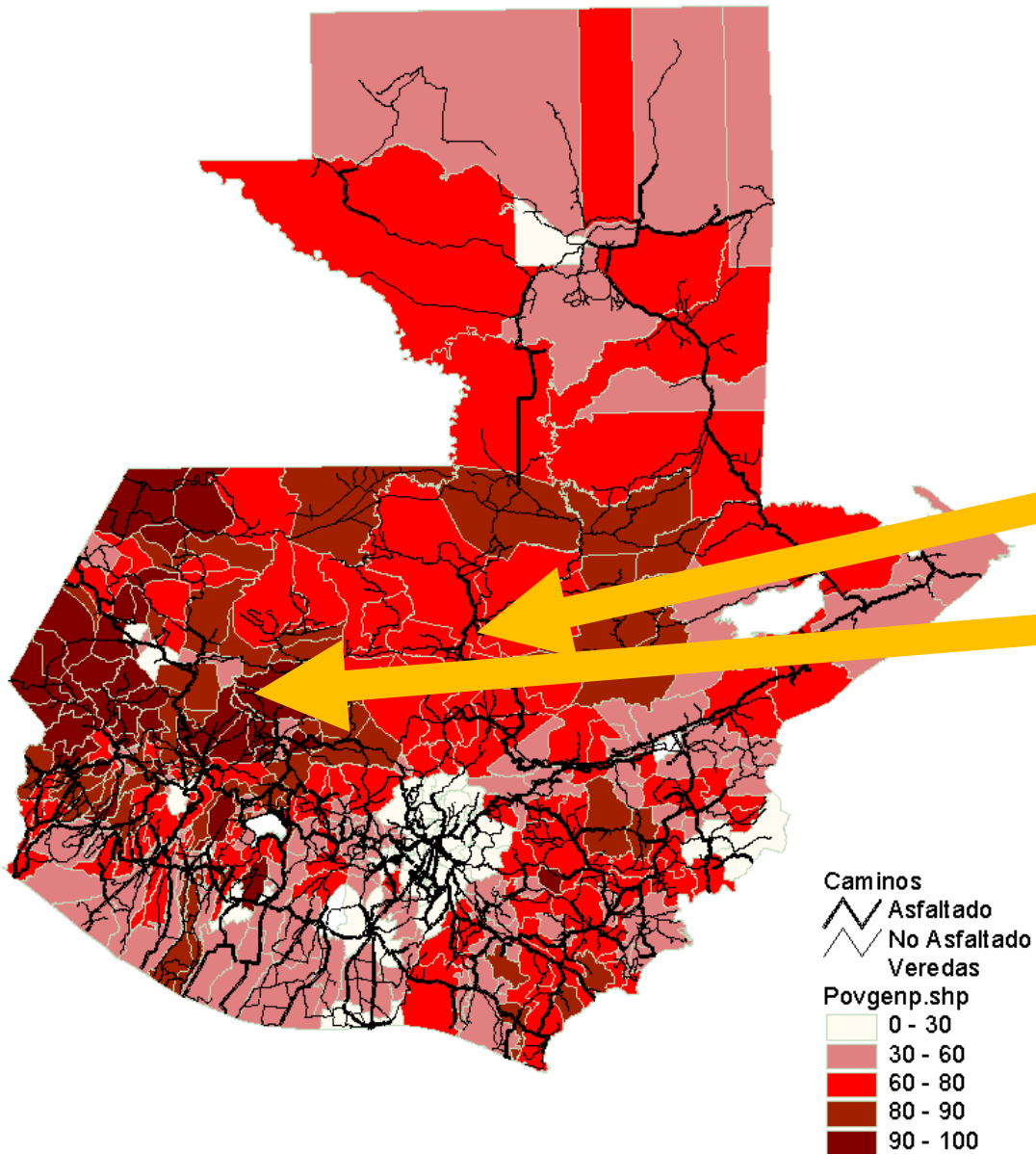
ICTs can help reduce bias



BIAS: How much DID rural roads INVESTMENTS in Guatemala reduce poverty?



Roads: 'Endogeneity' overstates the role of roads.



Bias: GEOGRAPHICALLY EXPLICIT DATABASE

- Administrative jurisdictions
- Roads (types of roads)
- Where did WB investment go (location)
- Poverty (headcount) at the municipio level
- Combined with LSMS data

BIAS: What effect did rural road work in Guatemala have on poverty?

AFTER accounting for 'endogeneity' bias:

- 22% reduction in cost of access to schools.
- 33% reduction in cost of access to health centers.
- 16% reduction in access to markets.



ICTs CAN HELP
PROVIDE
OBJECTIVE AND
EXPLICIT DATA

Objective data: Philippines typhoons and effects on life and health

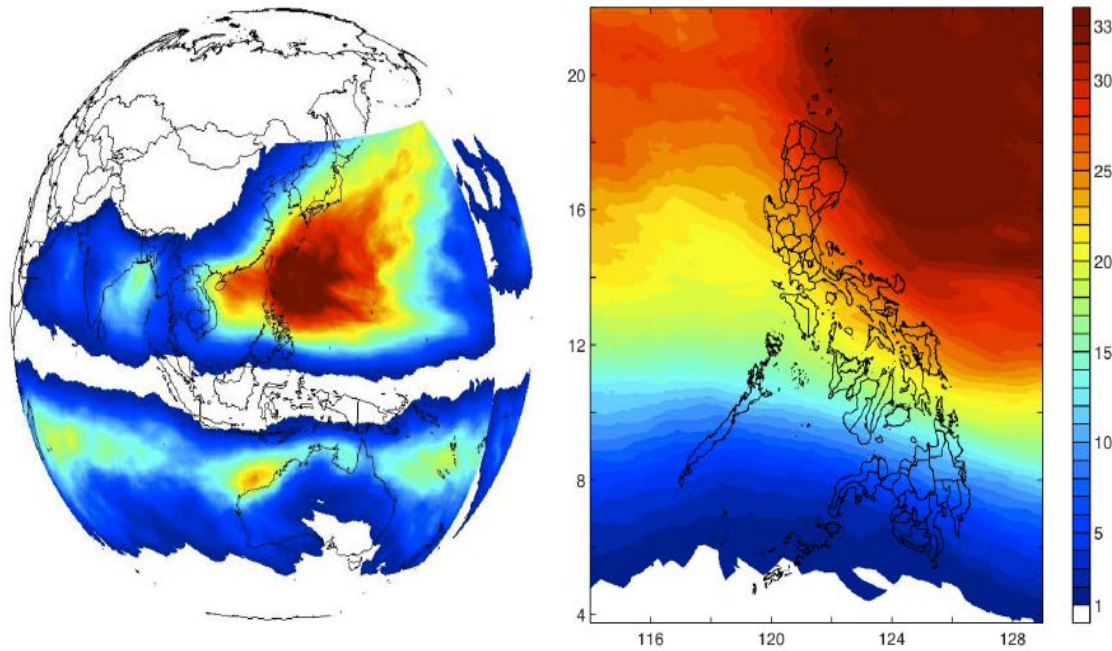
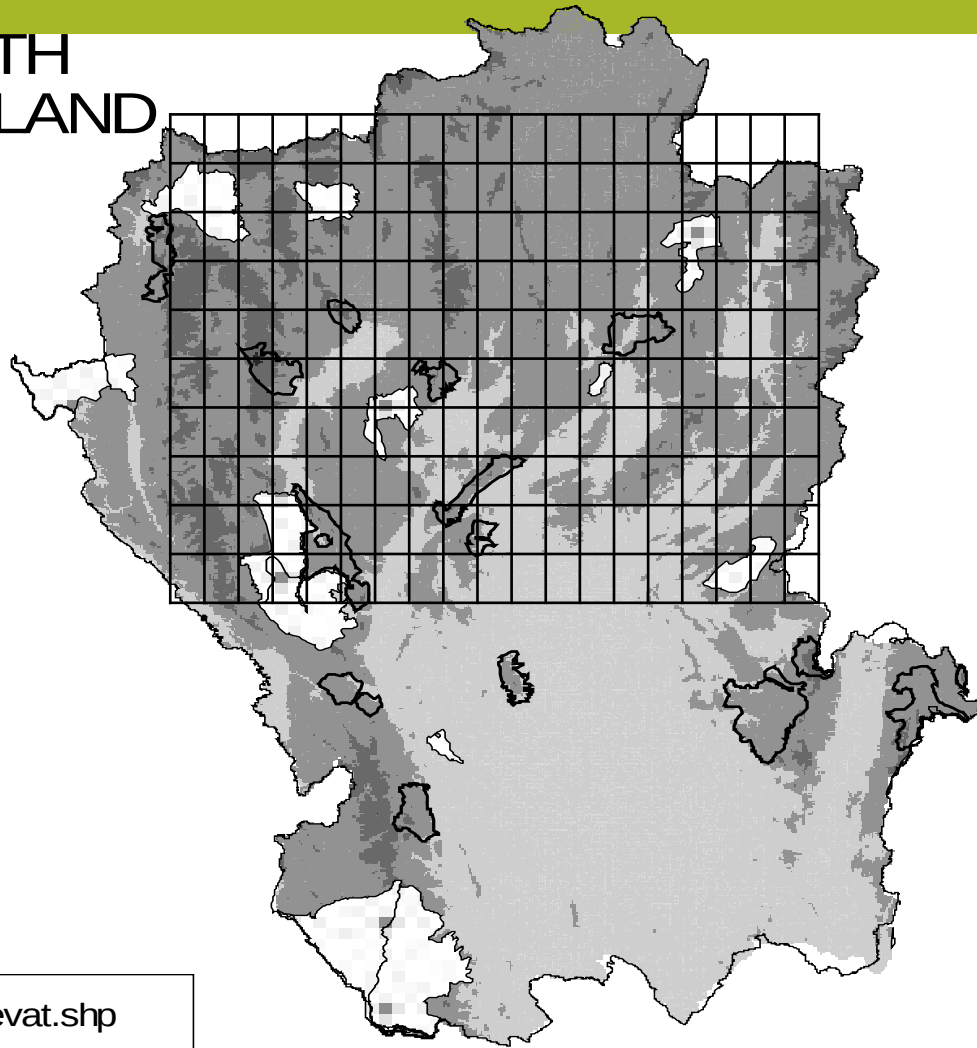


Figure I
Annual maximum wind speed (in meters per second) averaged over 1950-2008. Data: LICRICE.



Damages in the YEAR after typhoons are greater 15:1

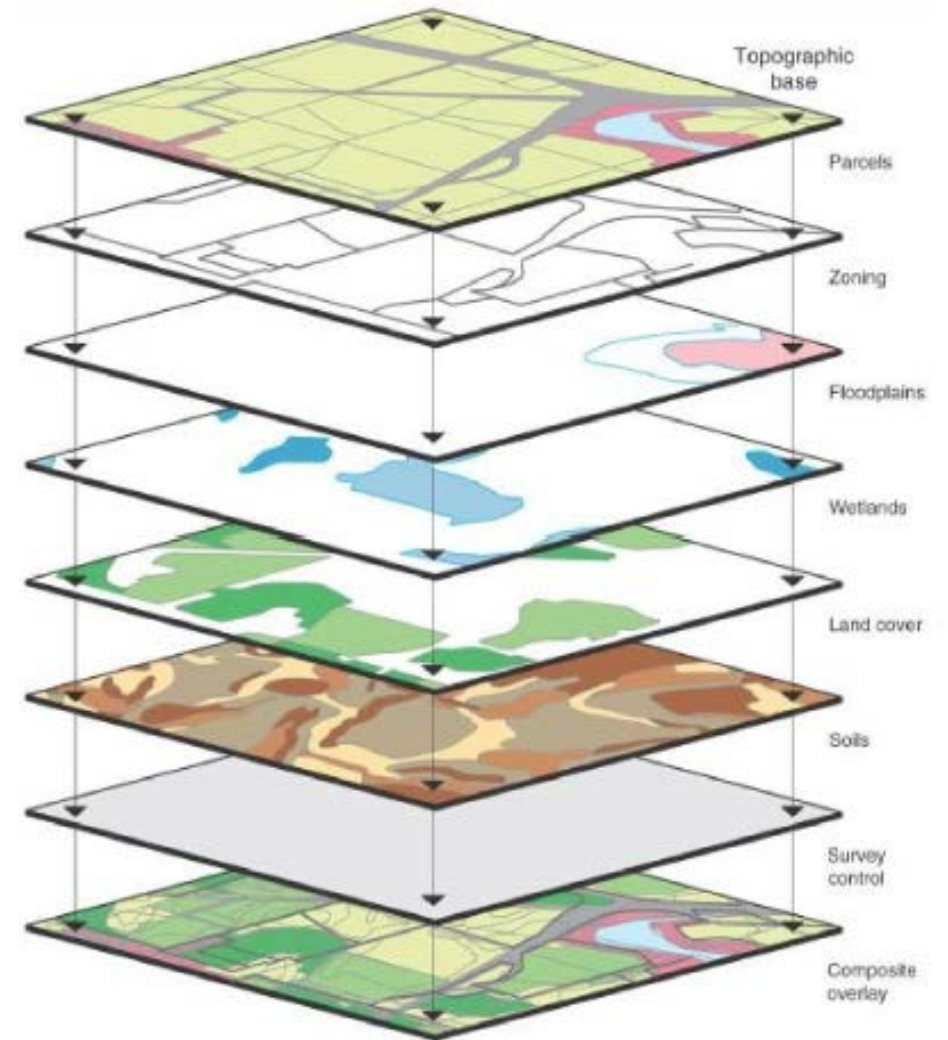
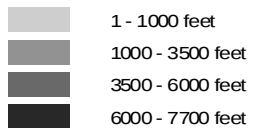
NORTH THAILAND



Elevat.shp

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PROVIDE OBJECTIVE DATA FOR BETTER EVALUATIONS

ICTs HELP REDUCE COSTS OF EVALUATIONS



MOBILE PHONE and wearable DATA

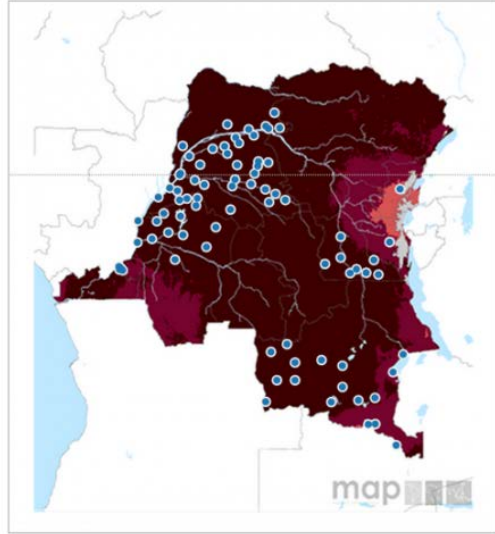


Passive latrine
Use monitor

Savings data



World Bank Malaria Project Locations in The Democratic Republic of the Congo and Estimates of Malaria Prevalence



Water
Malaria free
Negligible Prevalence
Low Prevalence
Medium Prevalence
High Prevalence

Location data



Immunization



Rapid SMS report: patient registers, malnutrition

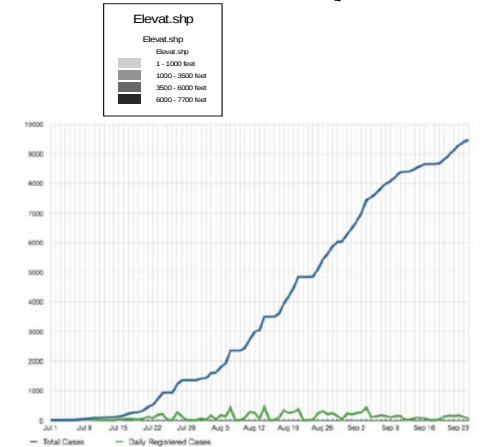
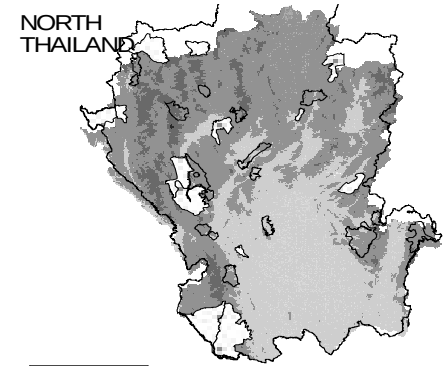
ICTs Improve Data Quality

- **Reliable** data (if we collect again, will it be the same data?)
- **Valid** data (are we measuring what we are saying we are measuring?)
- Data **integrity** (is it free of manipulation?)
- **Accurate** data (it measuring the indicator precisely?)
- **Timely** data (are you getting data on time?)
- **Secure** data (data loss?)



COSTS OF EVALUATIONS

- Thailand: NO data collection cost.
- In the Millennium villages – the time for processing data reduced from 3 YEARS to 3 MONTHS.
- Impact evaluations with GIS cost ONE FOURTH.
- In other cases, reduced the sample size required



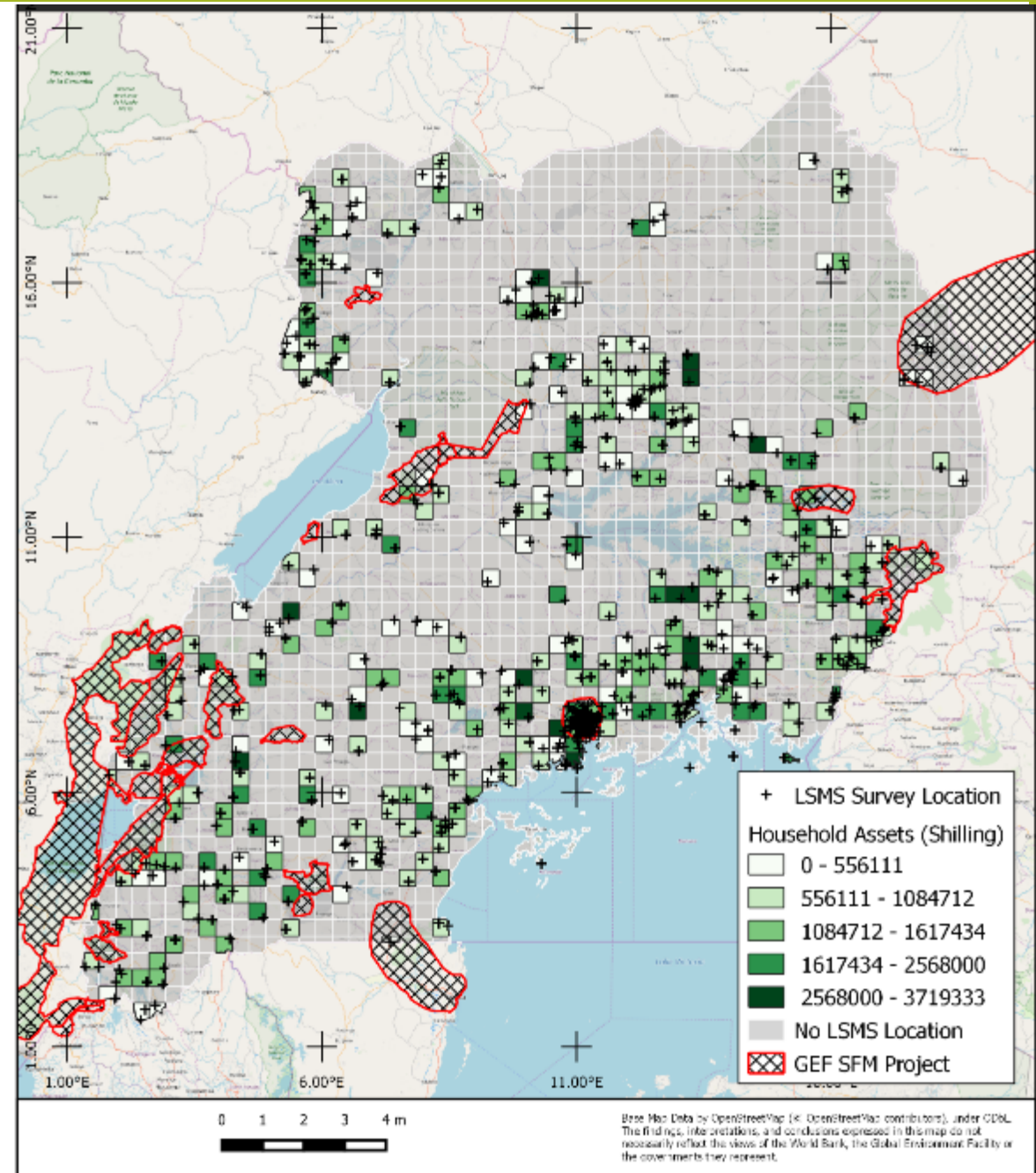
Minimum Detectable Effect Size (MDES), in percentages	Number of women To be surveyed
5%	6,193
10%	1,548
15%	688

Issues addressed through geospatial analysis

- Location of projects
- Relevance of the intervention—is it in the right context?
- Trends in performance and impacts going far back in time...even if we didn't have baseline data?
- Factors influencing the outcomes
- Does the intervention deliver value for money?

- Geospatial data (environmental) combined with **survey data** (socioeconomic)
- Households in proximity to GEF SFM interventions have more in household assets as compared to households further away.

Positive Correlation with GEF,
not causation



Conclusions

ICTs can help

- Deal with **bias**.
- Get **objective** data
- Reduce **costs** of evaluations

But.... we still need to think about standardization, consent, privacy and methods.

