



## LEAVING NO ONE BEHIND: EVALUATION for 2030

2019 National Evaluation  
Capacities Conference

### Using geospatial data in evaluation: Opportunities and challenges

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World Bank IEG

 @undp\_evaluation

#NECdev

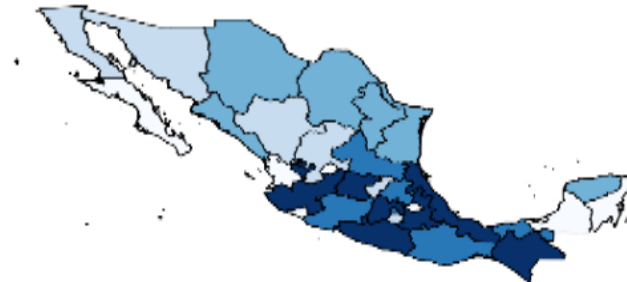
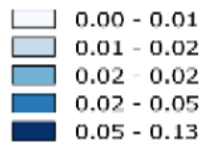
# Geospatial data in evaluation: IEG applications

- What are some of the questions we look at with geospatial data:
  - Targeting
  - Impact
  - Implementation fidelity
- Different levels of abstraction
- Opportunities and challenges

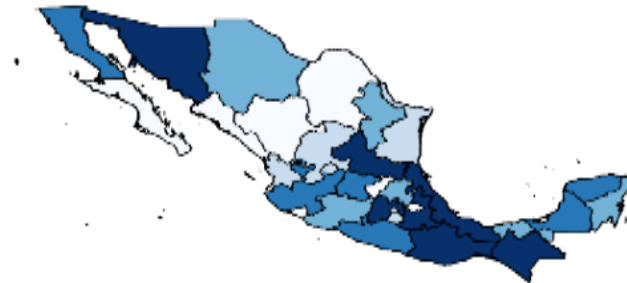
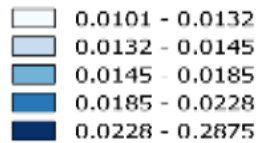
# Mexico Country Program Evaluation

## Share of B40, World Bank project funding (23 projects) and public expenditure per state

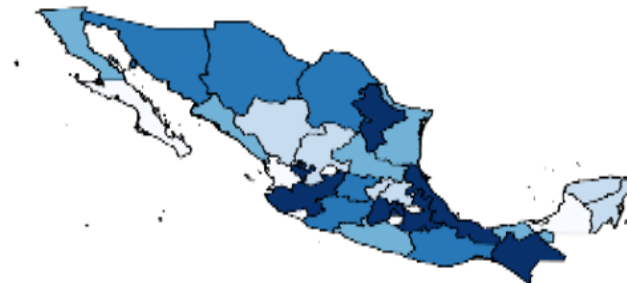
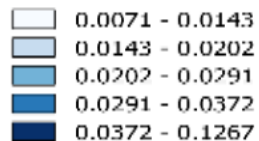
Share of national B40 population



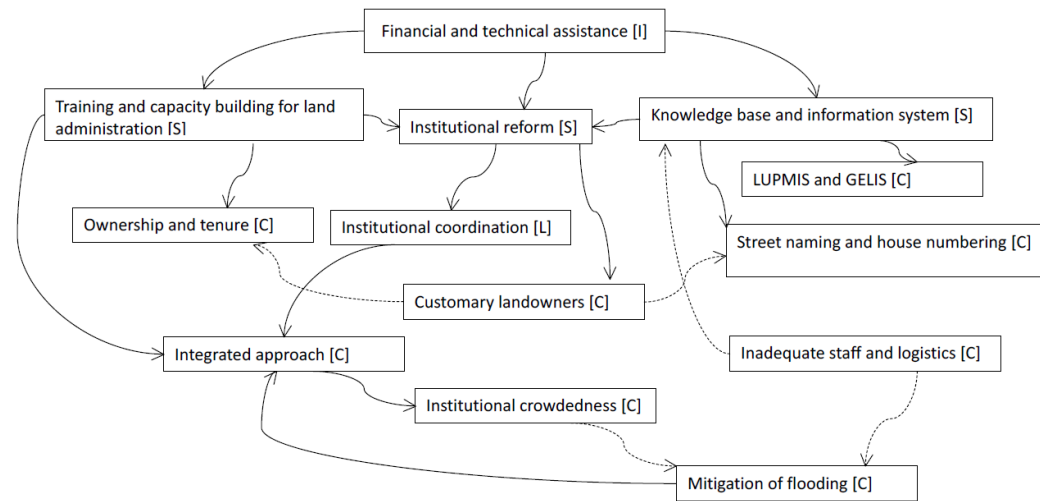
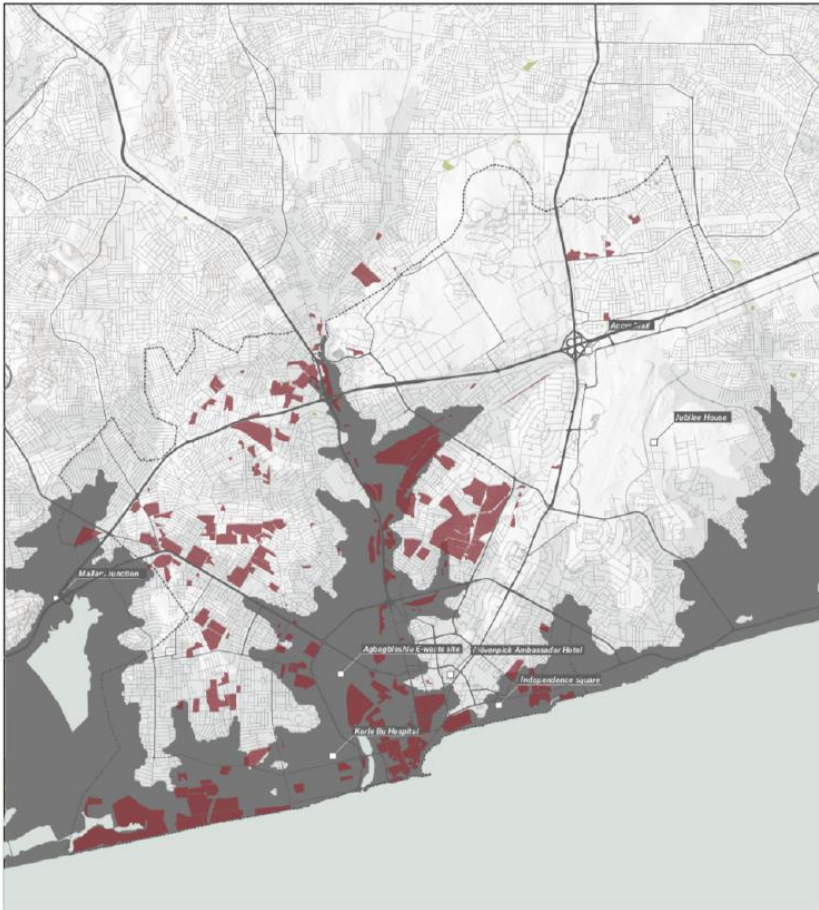
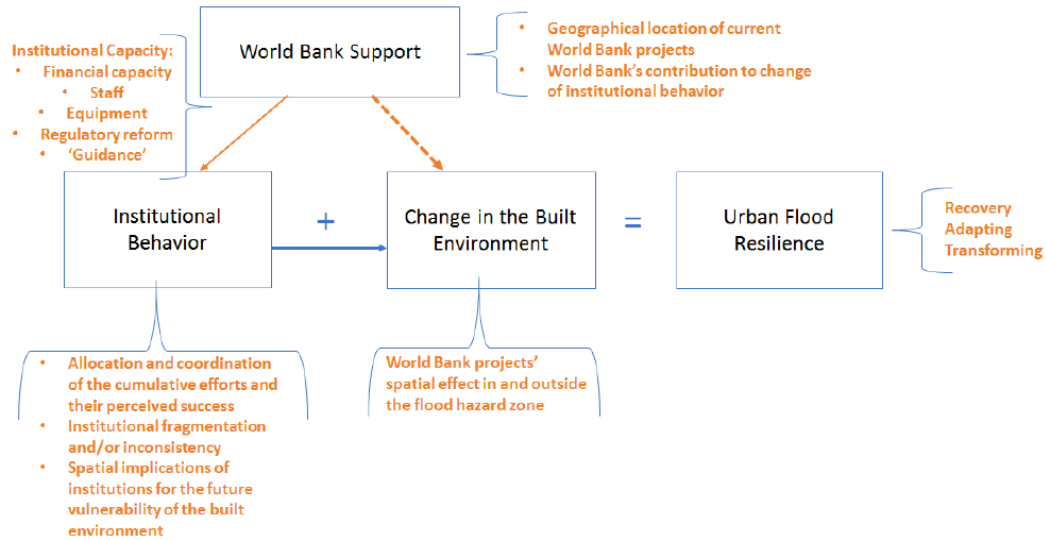
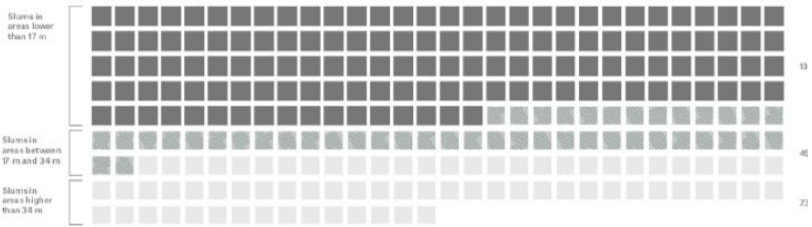
Share of World Bank funding



Share of public expenditure



# Systems analysis: Flood resilience in Accra



World Bank Input [I], Leverage points [L], Systems Intervention [S], Context [C]  
 Positive relationship → Negative relationship -.->

# Evaluability challenge

WBG support (convening power / advisory / TA / funding) for:

- Institutional reform and collaboration
- Systems
- Processes
- Human resources
- Equipment
- Infrastructure
- ...



Awareness, attitudes and behaviors of institutions, their capacities, and their (combined) interventions



Awareness, attitudes and behaviors of businesses, communities, citizens



Land uses and (changes) in the built environment

# How to unpack this causality?

1. Single intervention perspectives (yes, but...)

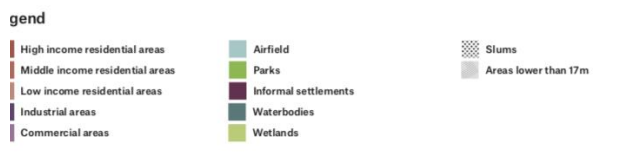
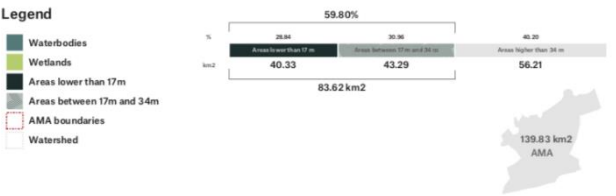
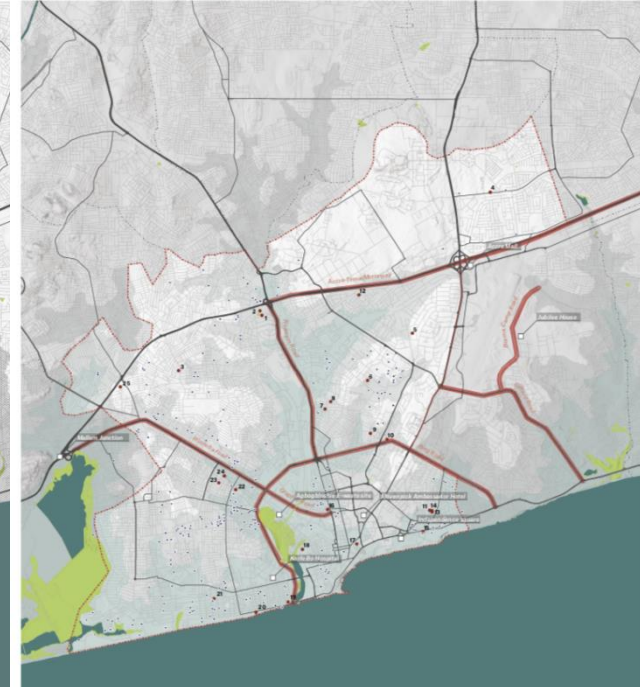
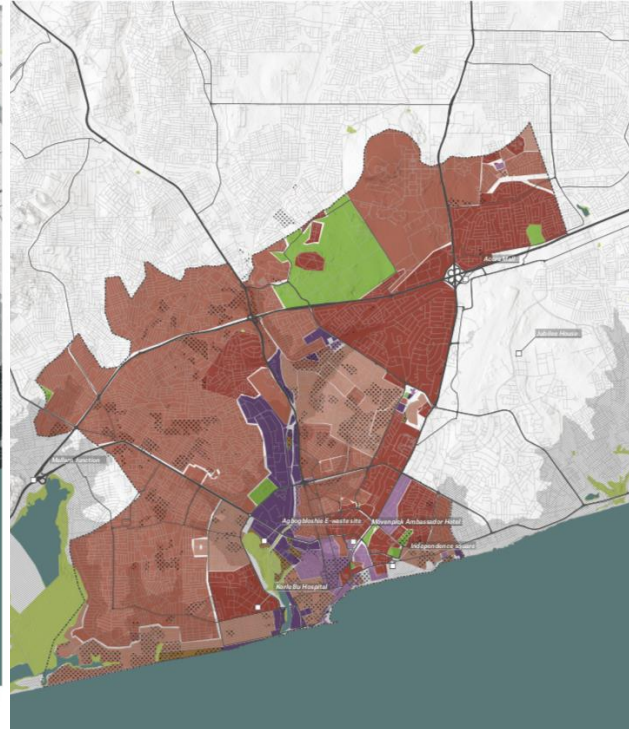
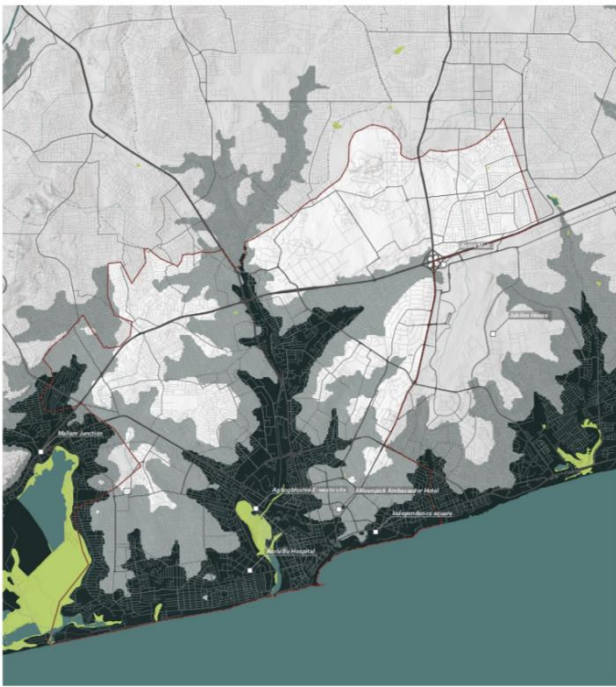
2. Systems perspectives

Scope/delimitation (dimensions)	Feasible?	Big data?
WBG-institutions-citizens-land use-built environment	No	-----
Flood risk-land use-built environment	Possibly	longitudinal geospatial data layering
WBG-institutions	Possibly	text analytics around contribution claims

# Flood risk

# Land use

# Built environment



# Geospatial impact assessment: Road construction in Maputo

Black line – Road Supported by the Bank  
Dotted line – Road not improved  
Red Circle – 2km buffer from the roads





# Av. Julius Nyerere - Land Cover Classification

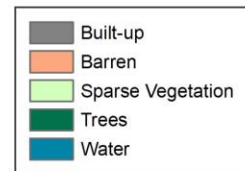
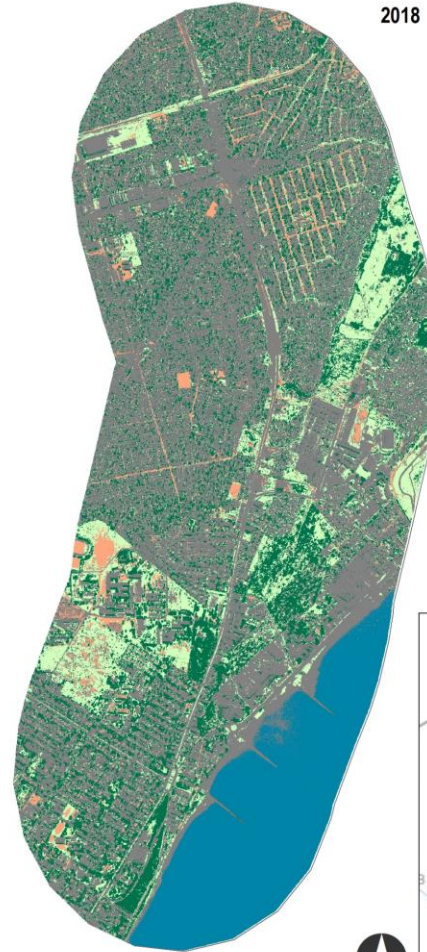
WORLD BANK GROUP Geospatial Operations Support Team (2019)



2009



2018

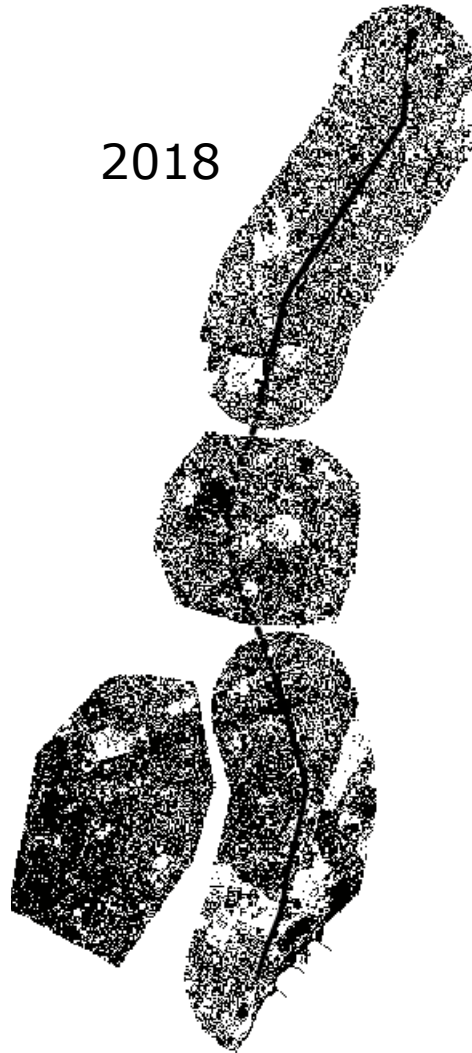


# Built-up Area

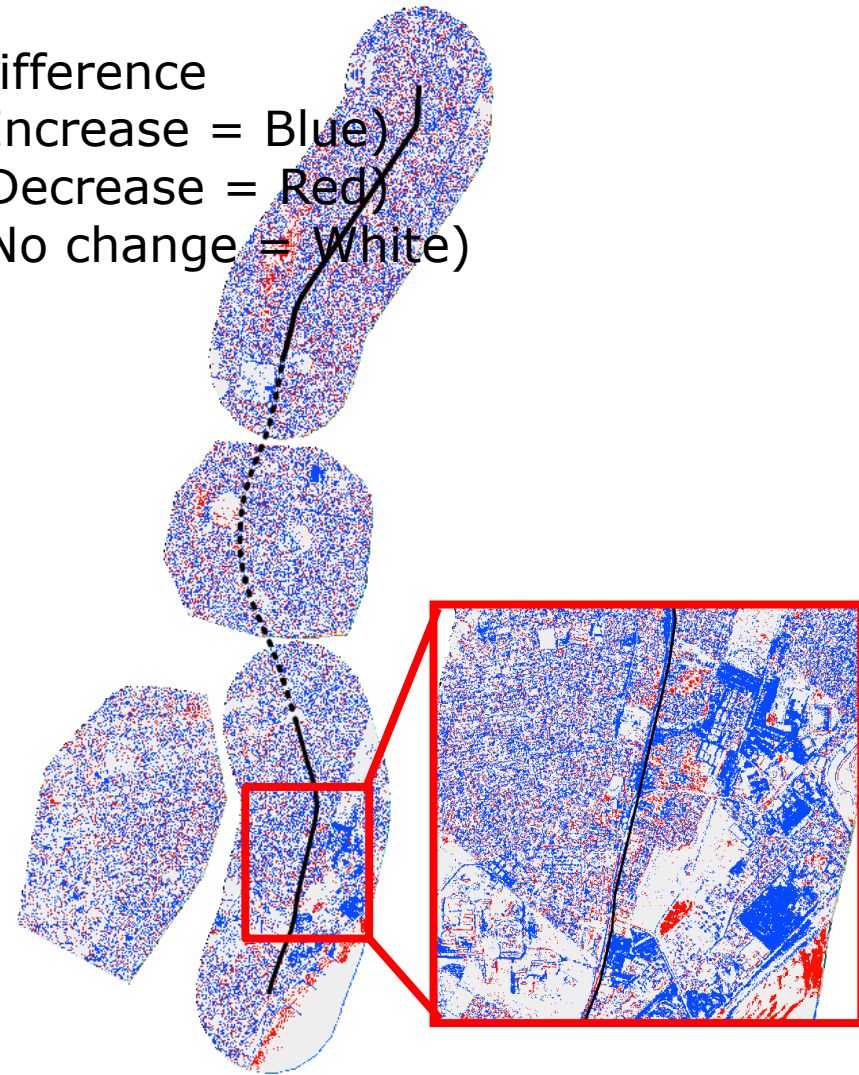
2009



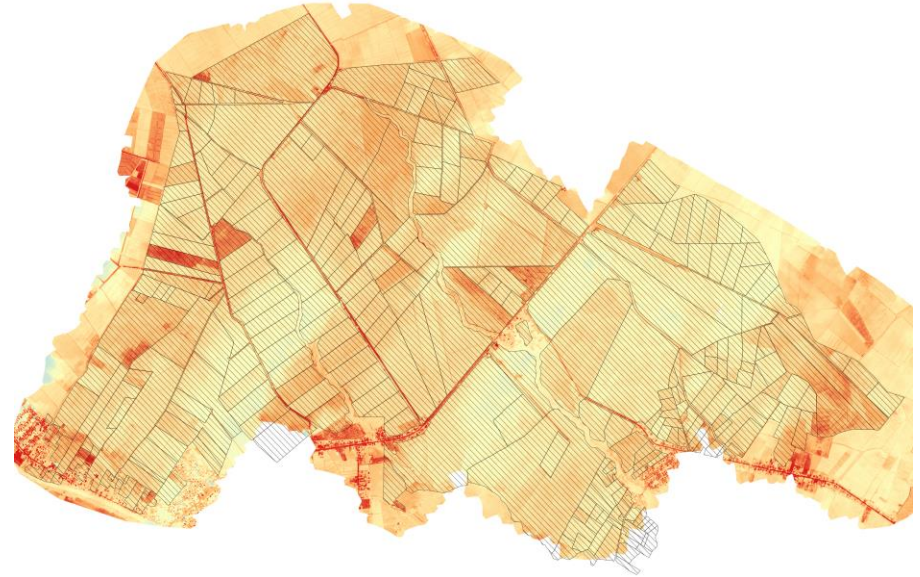
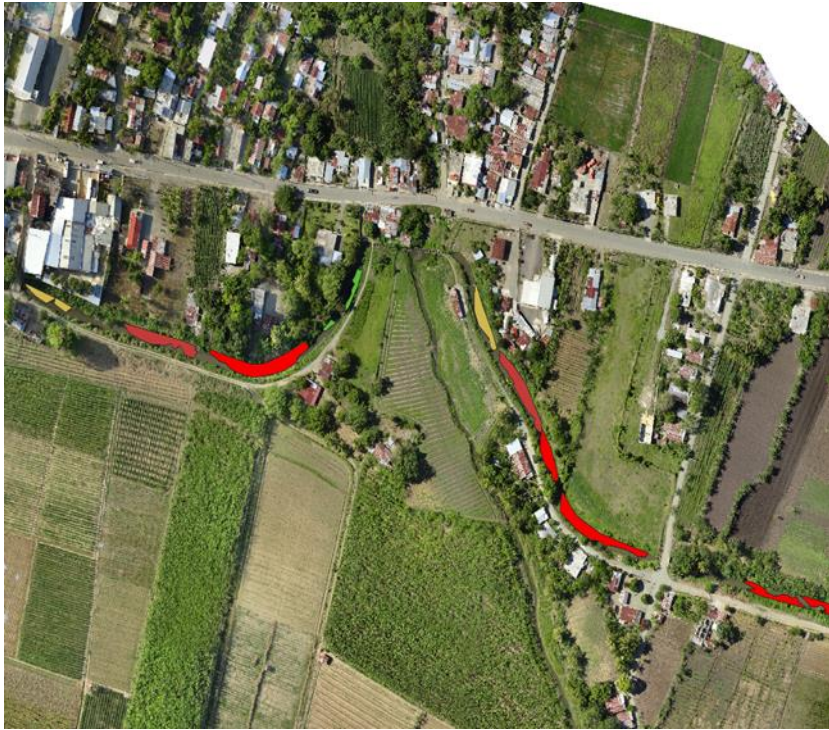
2018



Difference  
(Increase = Blue)  
(Decrease = Red)  
(No change = White)



# Irrigation project in Dominican Republic



# Some conclusions and challenges

- Evolution in geo-referencing (public) WBG support
- Evolution in ground-truthed geospatial data on development objectives
- Increasing opportunities for low(er) cost impact evaluations using geospatial data
- Causal contribution remains challenging