



Best practices for multi-stakeholder decision making:  
**A case study in Morocco using the Economics  
of Climate Adaptation (ECA) approach**

# Key take-home messages

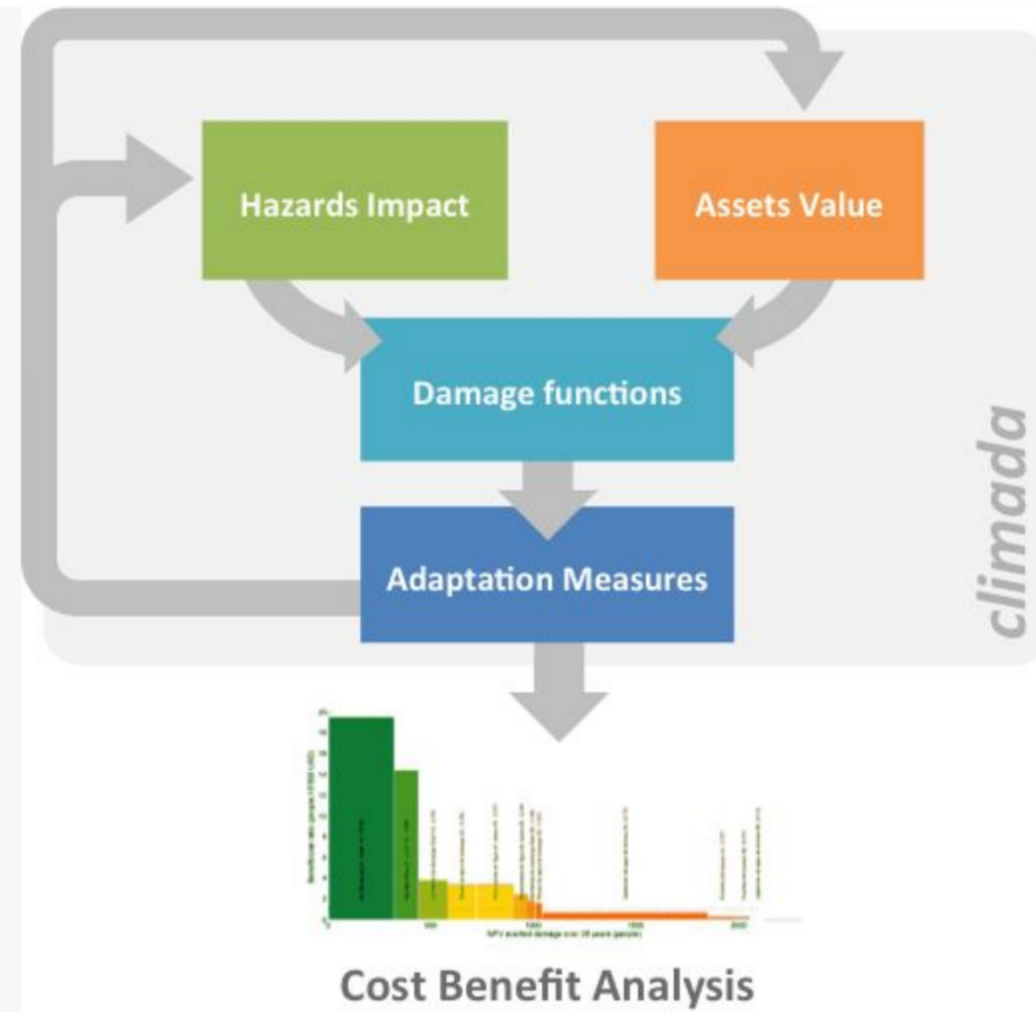
1. **Unlock climate finance: help decision makers design their own climate strategy** “What will be the climate related losses in the future, and what measures are the most efficient, what investments are the most efficient? ”
2. **Smart-mix approach: help promoting comprehensive climate risk management using ECA** “Beyond adaptation measures, when do climate risk transfer make sense for increasing climate resilience”
3. **The bigger picture: strong fact base and visualization for decision makers and stakeholders** “based on scientific facts, scenarios with monetary value can be easily visualized. Benefits of a strategy are easier to understand for a broad audience”

## Key questions faced by decision makers

- 1) What is the potential climate-related damage over the coming decades?
- 2) How much of that damage can be averted, using what type of Climate Change Adaptation measures (including risk transfer)?
- 3) What investments - will be required to fund those measures - and will the benefits of these investment outweigh the costs?
- 4) When does climate risk transfer make sense and when not?

# The Economics of Climate Adaptation approach offers a unique integrated approach

combining climate hazards,  
economics, adaptation  
measures, insurance

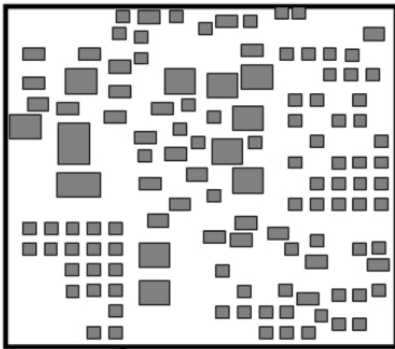




# Combining hazards and economic value

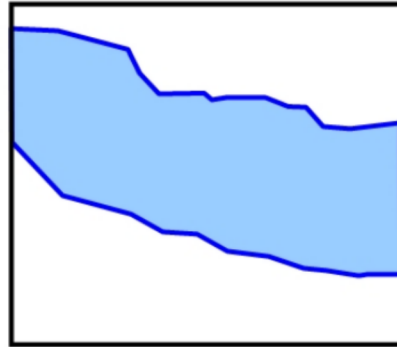
Assets

Monetary values

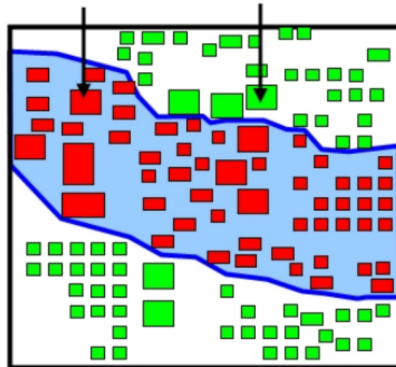


Hazards (including scenarios)

Footprint and intensity

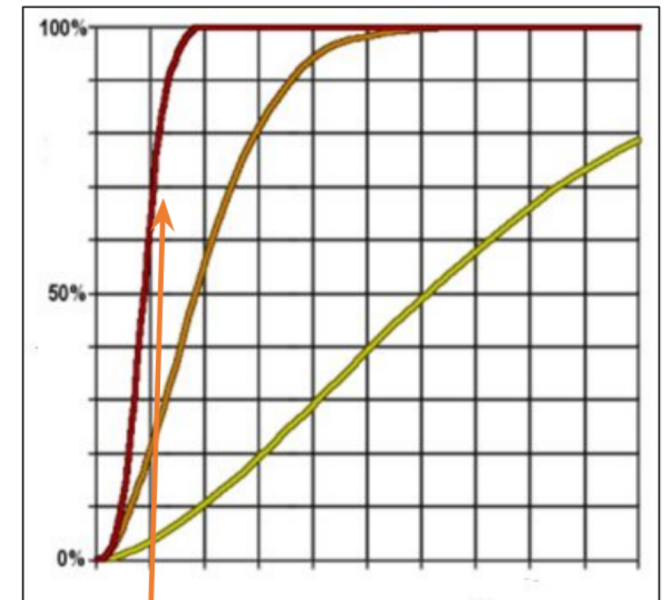


Exposed Non exposed

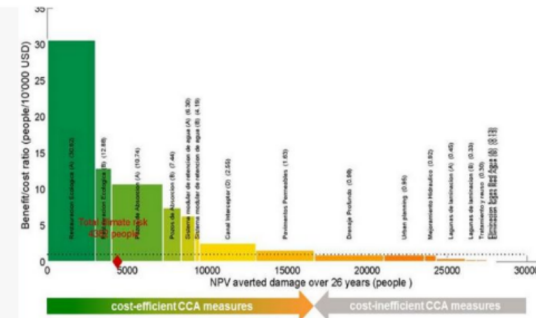
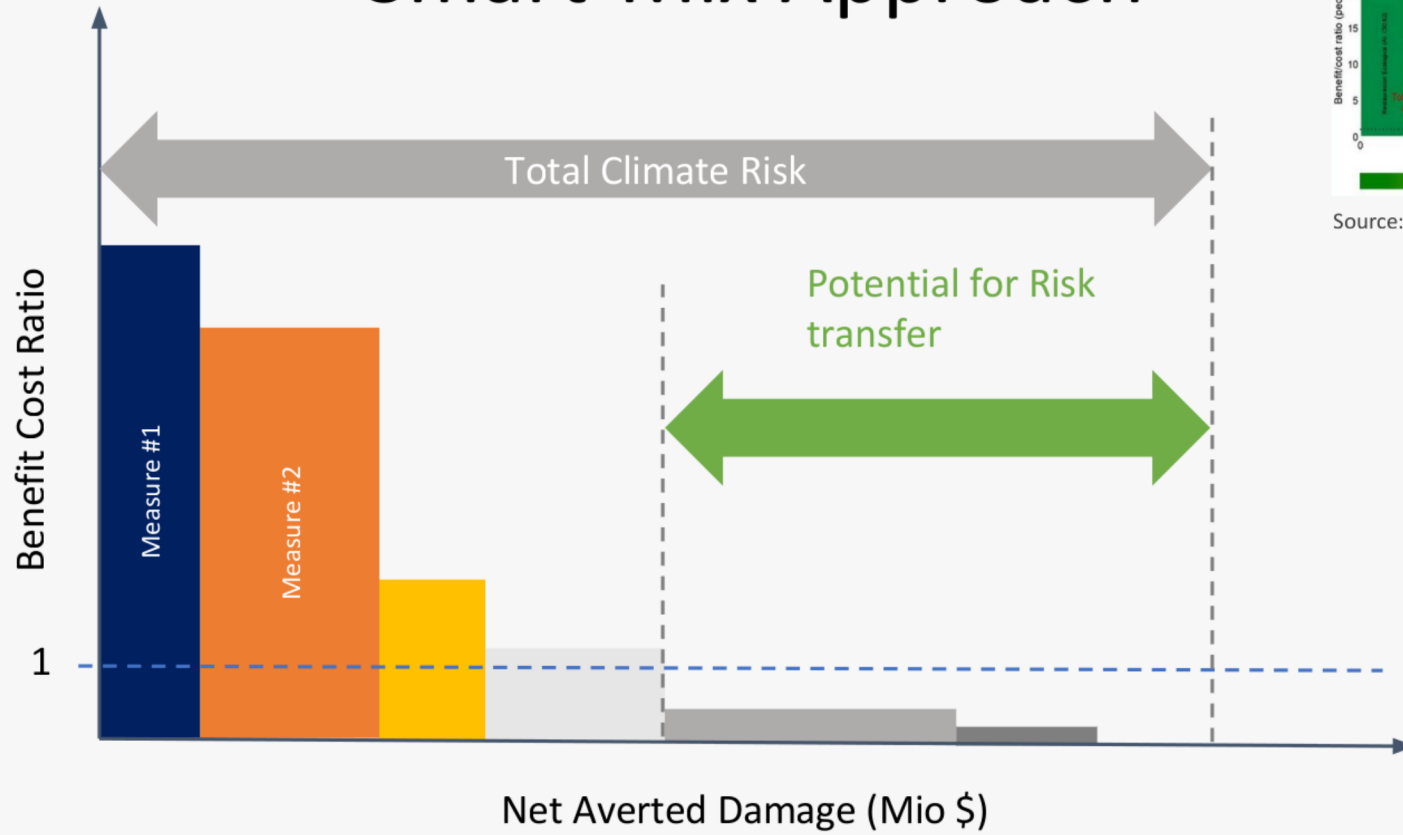


Damage functions

Damage ad hazard intensity



# Smart-Mix Approach

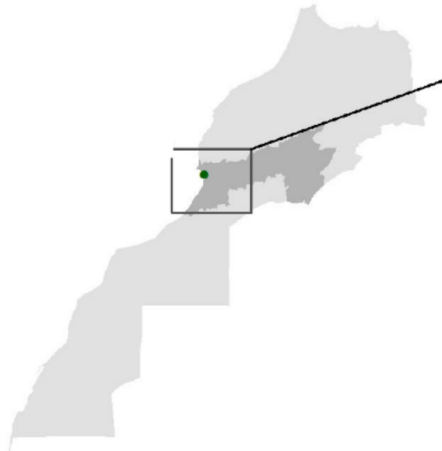


Source: KfW/UNU-EHS (2016)



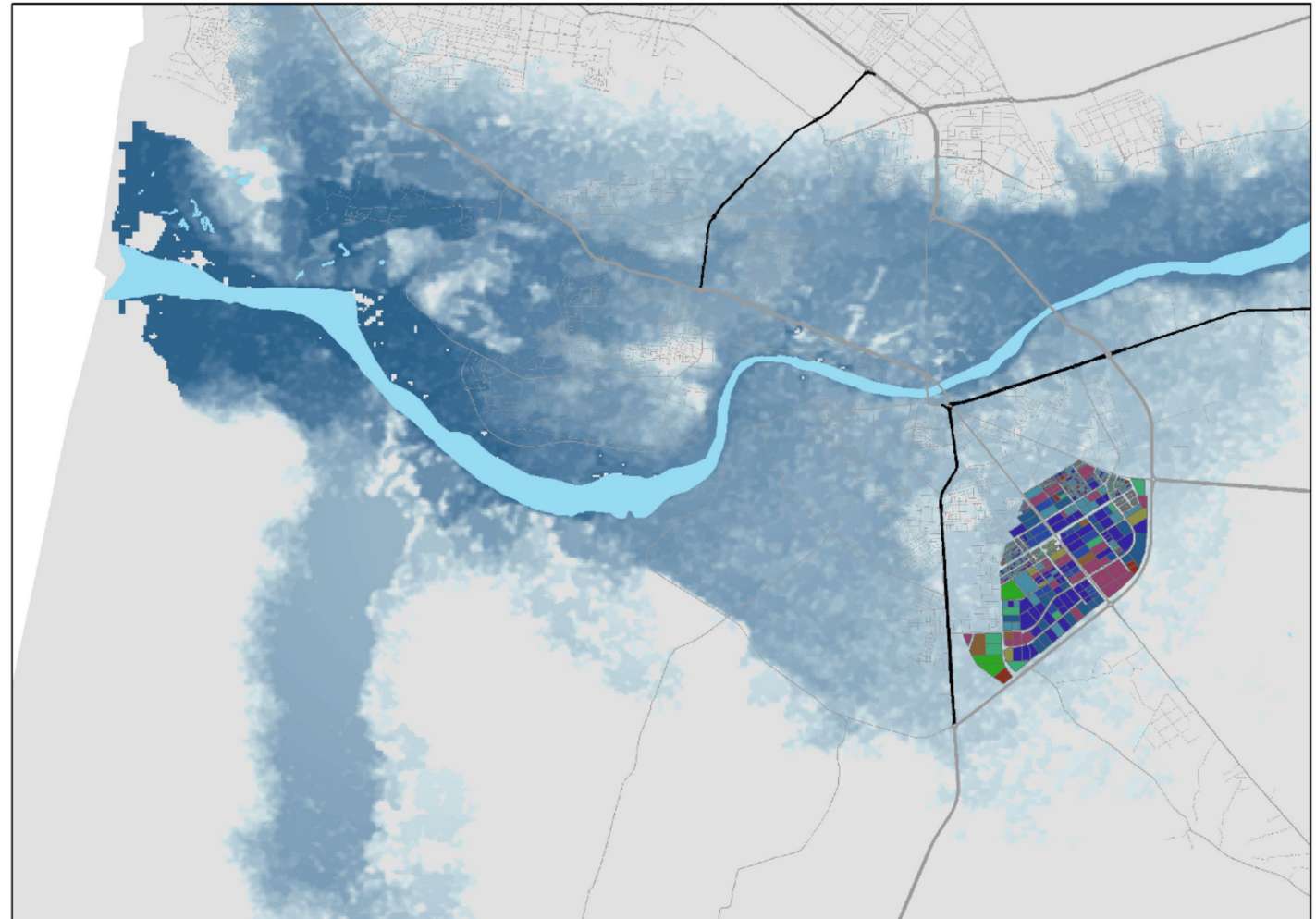
# The smart mix approach: ECA integrated tool - climada GUI

# Increasing resilience of SMEs in Morocco



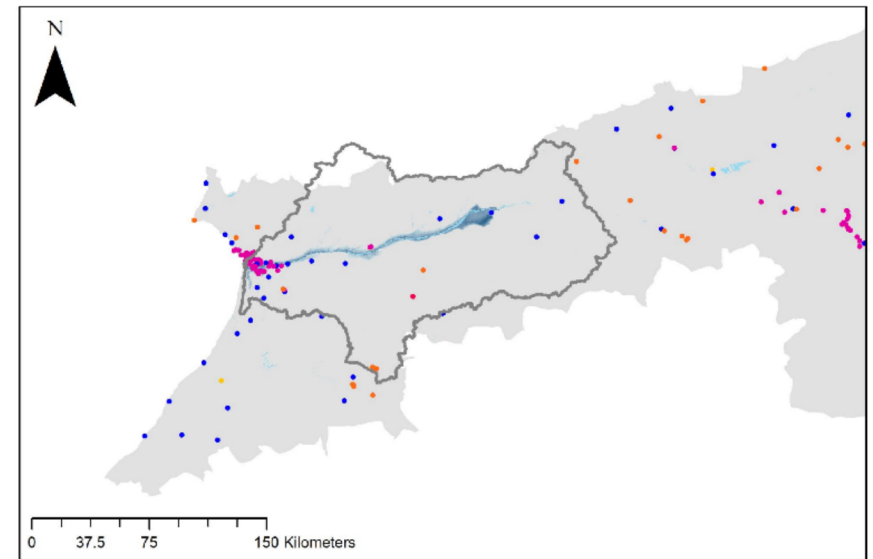
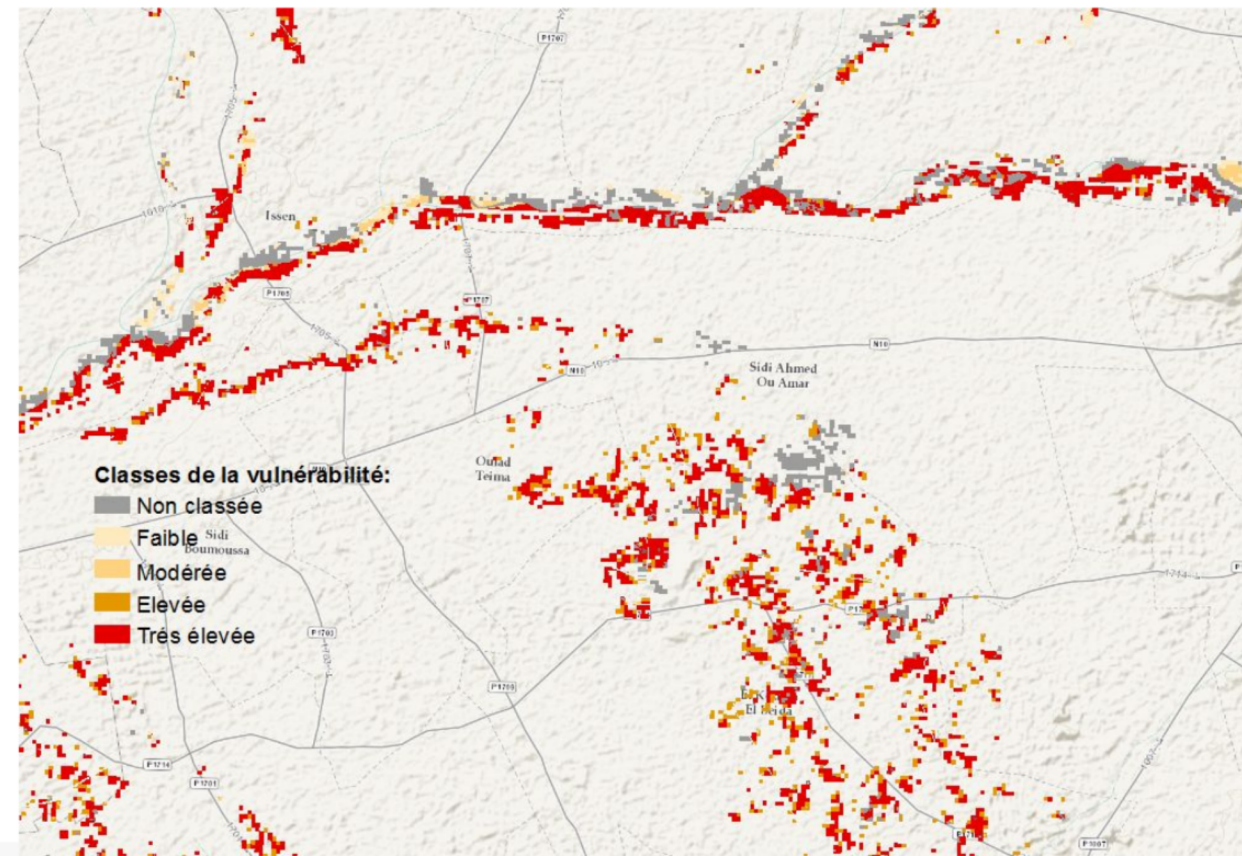
SMEs as a node for  
vulnerability

Inundation hazards for  
SMEs and their value chain

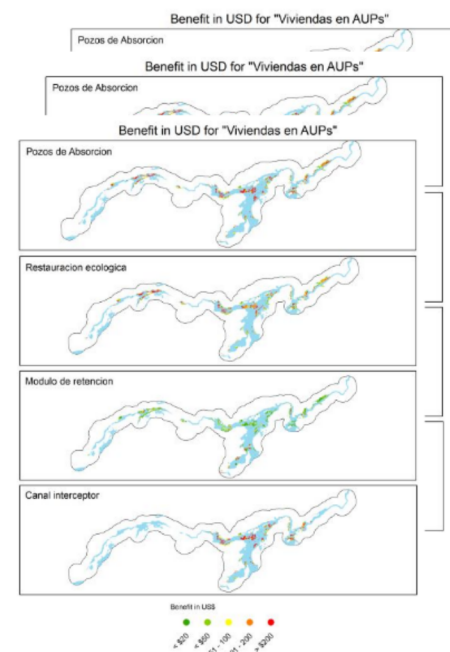
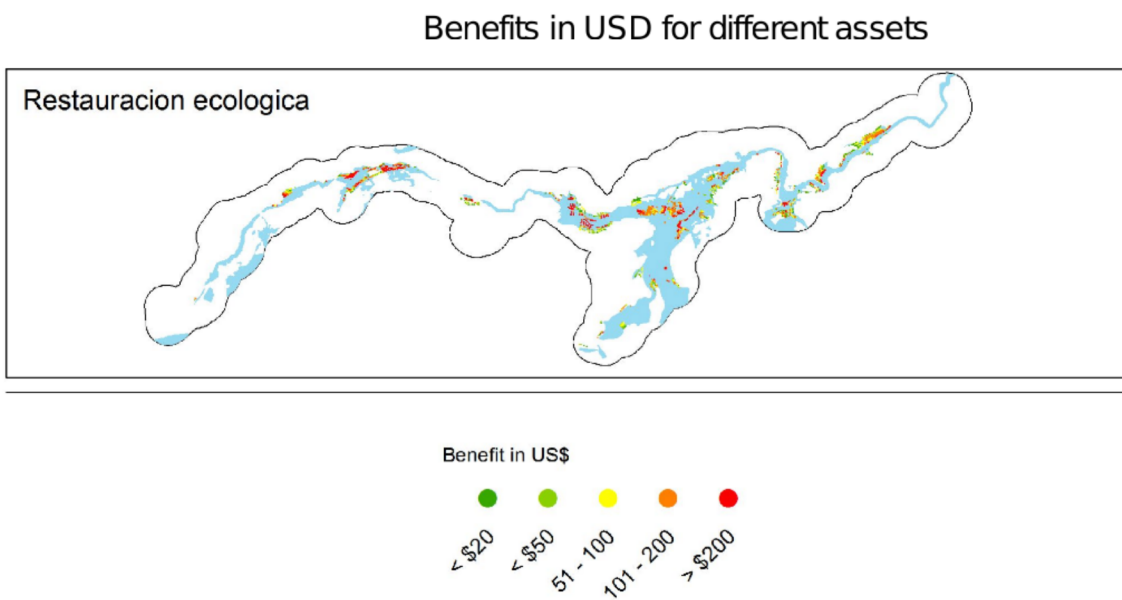




## Visualisation: Spatial distribution of vulnerability and risk



# Visualisation: spatial distribution of benefits from adaptation measures and insurance



(CCAUA Study, El Salvador, KfW,  
2016)

Provides decision-maker with a fact base

Enables the identification of actions to minimize this impact at the lowest cost Allows a large flexibility for integration and further developments:

Additional hazards can be integrated to the original model (such as inundation or landslides for SS)

Spatial and scale flexibility (can be applied everywhere and at different scale)

Excellent visualization of results





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[www.climate-insurance.org](http://www.climate-insurance.org)

Climada and ECA available at  
<https://github.com/davidnbresch/climada>

Use a maximum of 7 slides for your 10 minutes input and rely on the following structure:



Title



3 main thesis, messages or experiences



Input



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Your contact details