

# Providing Landslide Information for Decision-Making in Regional Planning

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GFDRR  
Global Facility for Disaster Reduction and Recovery



Cooperative Governance  
Traditional Affairs



ISDR



- Planning is essential for sustainability
- Existing development
- Future development

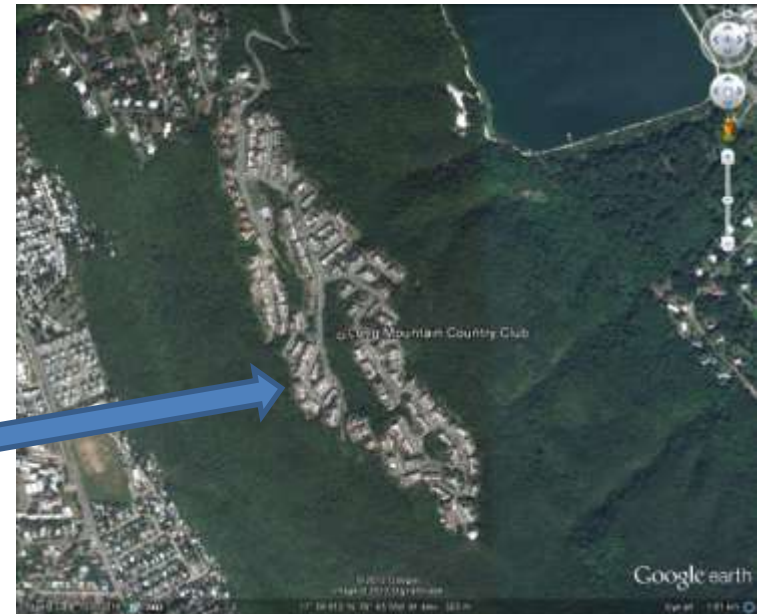


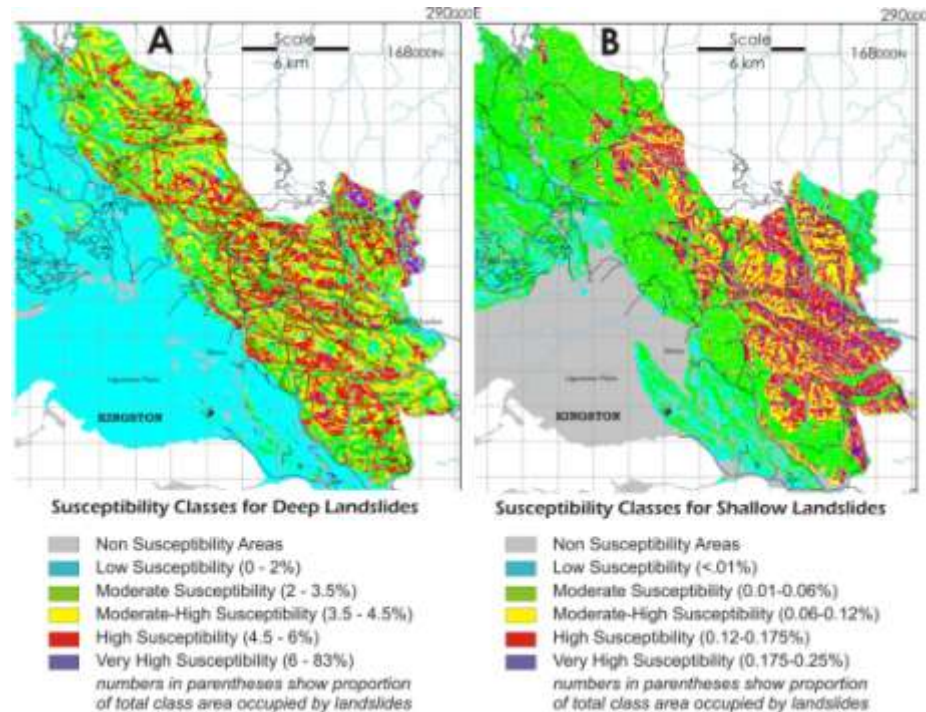
# Levels of Planning

Regional

Local

Site-Specific





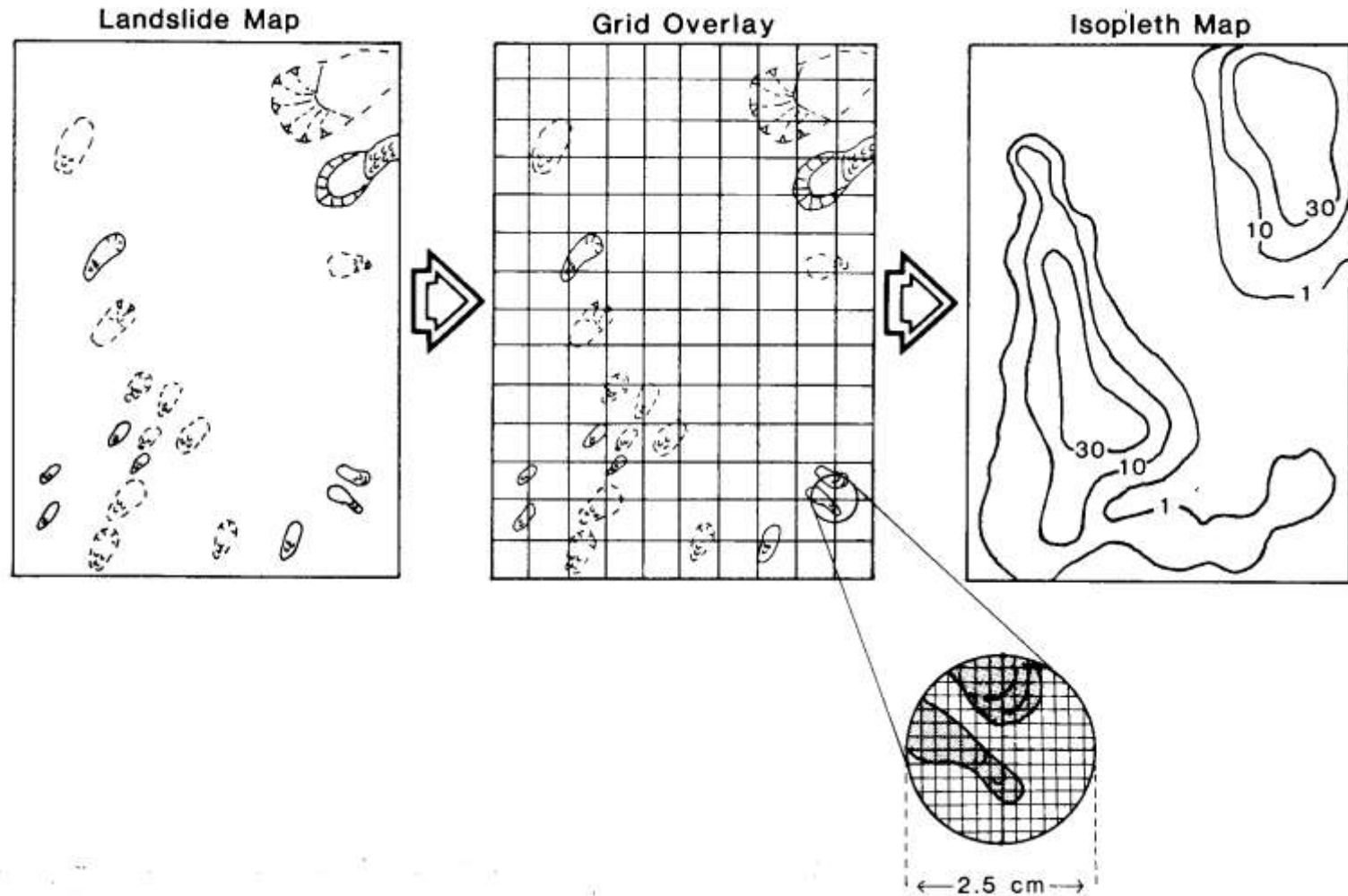
- Offers the widest range of options to avoid or limit landslide impacts
- Requires zonation maps to define those options
- Zonation map communicate hazard information

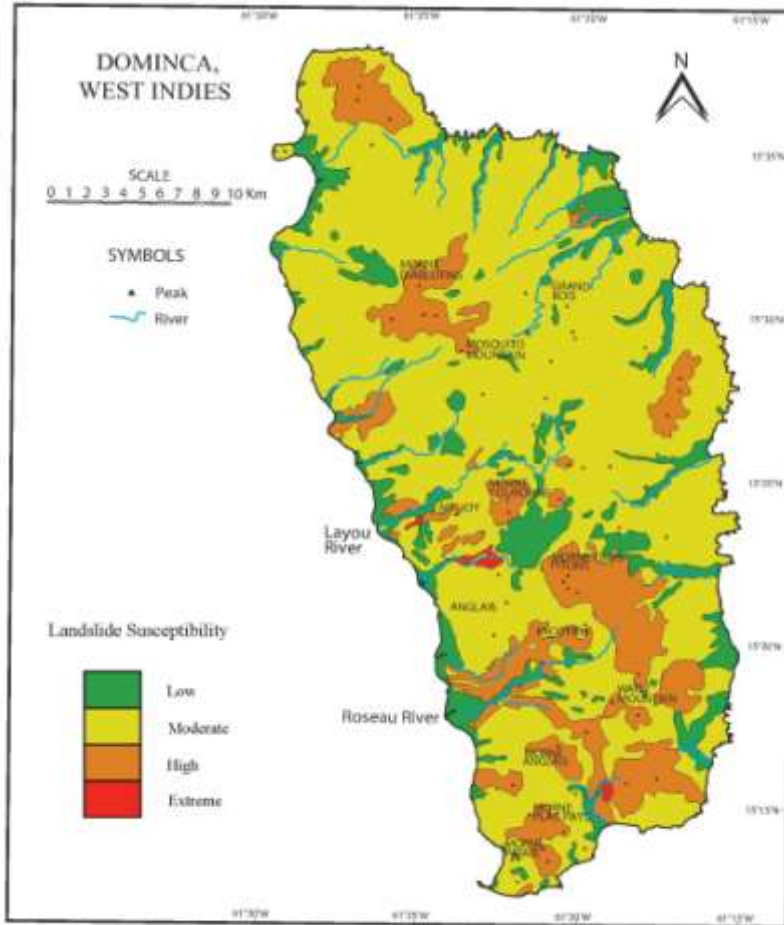
- Produce a landslide-susceptibility map
- A spatial representation of landslide hazard
- First stage in developing landslide hazard or risk zoning



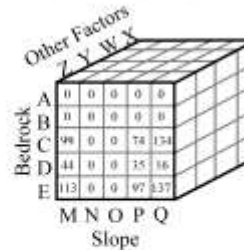
Places where landslides occurred in the past are the most likely places for landslide occurrence in the future

- Map of inventoried landslides
- Maps of conditioning (physical) factors
- Methodology for analyzing and producing the landslide susceptibility map

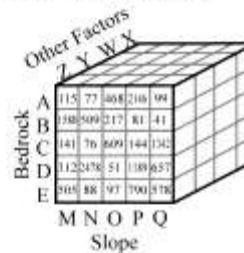




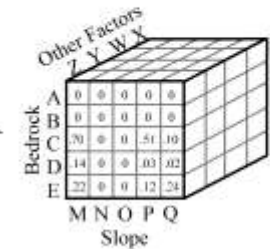
A. Landslide Matrix



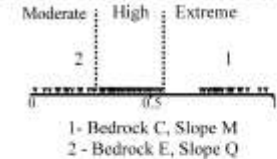
B. Factor Matrix



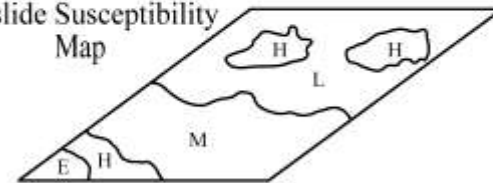
C. Landslide-Suceptibility Matrix



D. k-Means Cluster Analysis



E. Landslide Susceptibility Map



De Graff and Romesburg, 1980

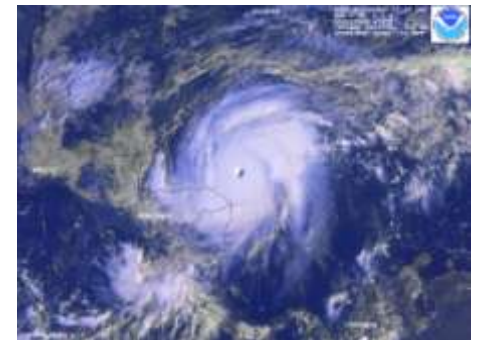




# What Methodology to Use?

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- Geologists strive for ever more accurate representations of landslide hazard information
- Planners need landslide hazard information accurate enough to ensure making the right planning decision
- So the desire for optimal scientific accuracy needs to be balanced with available data, funds, time and available technical expertise



- Are the minimum landslide hazard information for regional planning
- Need to be:
  - Reliable enough to support good planning decisions
  - Be understandable to decision-makers, planners and other stakeholders – not just to technical specialists
  - Seen as a tool for communicating landslide hazard
  - Recognized as a starting point for developing landslide hazard and risk zoning
- Other planning levels will likely require other methods



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