UIBN-Group 5. Hazards and risks:

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ICIMOD & KIU
Types of Hazards UIB

• Geological Hazards
  • Earthquakes
  • Slope instability

• Hydrometeorological Hazards
  • Ice storms
  • Flash and Riverine Floods
  • Debris and Mud Flow
  • Avalanches
  • GLOFS
  • Droughts
  • Glacial retreat/advance

• Hybrid
  • Landslides
  • Landslide Dam Outburst Floods (LDOFs)
  • River Bank erosion
Current Status of Knowledge

• In terms of geological hazards:
  • active faults, past seismicity and seismically vulnerable zones well delineated (French, British Groups in collaboration with GSP, NCEG Pakistan)
  • History of mega landslides, landslide dams known for 200 years and some ever older (Hewitt, Shroder, Owen, Asif Khan). This helpful in delineating megaslide-prone area in UIB.
  • Points with mega-landslide potential identified at least in the Hunza valley (GSP, FOCUS)
• In terms of hydrometeorological hazards:
  • Some historical data available for floods, debris flow, avalanches, glacial retreats/advances.
Missing links

• Lack of detailed systematic morphometric data for various subcatchments/subbasins.
• Aspect ratio maps delineating areas prone to slope instability and hence landslides, avalanches missing.
• Classification of tributary streams in terms of their potential for debris flow vs flood missing.
• Inventories for existing landslides, debris flows, floods, avalanches are missing.
• Zoning of valley sides in terms of expected level of floods missing (flood hazard).
• Lack of coordination between various groups concerned with hazards in UIB.
Major stake holders

• **Research Groups**
  • Landslides & Debris Flows
  • Ken Hewitt (Canada), actively involved until recently.
  • Jack Shroder-Lewis Owen (USA) actively involved until 2001.
  • Geological Survey of Pakistan (on their own but also with the German Geological Survey).
  • Italian Projects in collaboration with KIU.
  • Universities in Pakistan (NCEG-Peshawar; KIU; COMSAT-Abbotabad)
  • FOCUS Humaniterian
  • Met Office, WAPDA on floods.

• **Others**
  • GB Government- disaster management aspects
  • AKRSP and other NGOs- Awareness, Community Preparedness
  • Local Vilage Organizations-Prepardness and other disaster management aspects.
  • KIU-Volunteers Program in rescue and relief.
Required

• Macro-level hazard assessment using satellite images and GIS technologies.
• Ground verification for identification of hot spots.
• Multihazard approach.
• Linking hazard with risk identifying collecting population data threatened by one or more types of hazards leading to risk maps for the entire UIB.
• Providing a scientific base for disaster management
• UIBM to provide clear guidelines how to materialize networking between all stake holders and achieving clearly laid out objectives.