

UIBN-Group 5. Hazards and risks:

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ICIMOD & KIU

Types of Hazards UIB

- Geological Hazards
 - Earthquakes
 - Slope instability
- Hybrid
 - Landslides
 - Landslide Dam Outburst Floods (LDOFs)
 - River Bank erosion
- Hydrometeorological Hazards
 - Ice storms
 - Flash and Riverine Floods
 - Debris and Mud Flow
 - Avalanches
 - GLOFS
 - Droughts
 - Glacial retreat/advance

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 Humanitarian
- Met Office, WAPDA on floods.
- **Others**
- GB Government- disaster management aspects
- AKRSP and other NGOs- Awareness, Community Preparedness
- Local Village Organizations-Preparedness 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.