

User Needs

- Citizen's questions are:
 - What will happen?
 - How? Where?
 - Over what area?
 - When? For how long?
- User's have shared needs:
 - Baseline hazard inventory
 - Ongoing monitoring of a hazard against baseline
 - Rapid information supply during a crisis

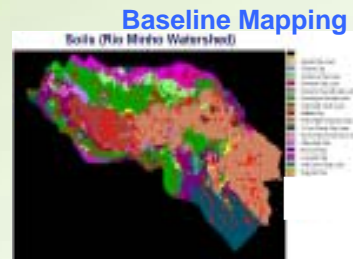
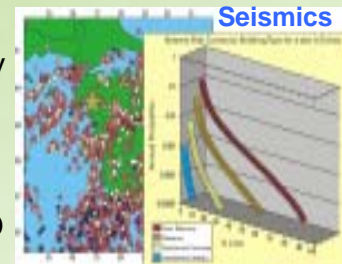
Required Observations

- To meet users' needs we need four main observations:
- **Baseline Topography**
 - Against which to measure change
 - For modelling and visualisation
- **Baseline Mapping**
 - Geology, structure, soils
 - Regional to local scale
- **Deformation Monitoring**
 - Sudden change
 - Gradual processes
- **Seismic Monitoring**
 - Hazard magnitude
 - Depth and location
- Each hazard (e.g. volcanos) needs other observations (thermal)



Key Observation Systems

- **Topography**
 - Stereoscopy & radar interferometry
 - Ground-based surveying tools
- **Mapping**
 - Aerial photography and field work
 - Various airborne & spaceborne EO
- **Deformation**
 - Radar Interferometry (INSAR)
 - GPS, and terrestrial LiDAR/INSAR
- **Seismicity**
 - In-situ networks of seismometers
 - Coverage, density, real time data



Status

- GOS Geohazards Theme Team continues to act, post-approval
- BGS, and now BNSC, support the initiative with the Chair's time
- UNESCO are funding the participation of developing countries
- ESA staff a Secretariat, plan a Bureau and maintain a website: <http://dup.esrin.esa.it/IGOS-Geohazards>
- A Theme Report has been drafted, peer reviewed and approved
- Theme Report published, and implementation starts, in Q1 2004
- A Workshop is planned to launch Geohazard Theme in late 2004

