FACTORS TO CONSIDER

1. **LITHOLOGY** -The character of rock and deposits, stability, porosity.
2. **GEOLOGY** - Structures, faults, chance of earthquakes.
3. **SLOPE ANGLE** - Steeper slopes greater force of gravity. Angle of repose, steepest angle that loose deposits remain stable.
4. **ASPECT** - The direction a slope faces, may influence weathering and rainfall.
5. **VEGETATION TYPE AND COVER** - Influences water content of materials and whether sediments are held by roots.
6. **ELEVATION** - Higher elevations tend to be more exposed, have less vegetation , more rainfall and steeper slopes.
7. **LAND USE** - What use the population is making of the land. Deforestation, intensive farming, villages and settlements, roads and railways, changing water flows. And Anything that might cause vibrations or disturb the sediments (heavy machinery, blasting)

RISK ASSESSMENT

The factors listed are measured and mapped to give an understanding of the risk or likelihood of mass movements and landslides. This allows HIGH, MEDIUM AND LOW risk zones to be designated.

LANDSLIDE PREPARATION, MITIGATION PREDICTION

THE MONITORING DESCRIBED ABOVE ALLOWS PREPARATION, MITIGATION AND PREDICTION

- EMERGENCY PLANS
- EVACCUATION PLANS
- PREPARATION OF MATERIALS FOR FAMILIES
- EDUCATION
- DISSEMINATION PROCEDURES
- SLOPE REINFORCEMENT
- DRAINAGE CONTROL
- WEATHER FORECASTING
- HAZARD MAPPING
- WEATHER FORECASTING

MAPPING PREVIOUS LANDSLIDES

A study of the site and character of previous landslide events allows scientists to see where landslides occur, their type and effect and their frequency.

DATA COLLECTION

Scientists collect data in the following ways to enable them to predict landslides and offer people some warning.

1. **REMOTE SENSING** - Using satellites and aerial photographs to look for potential sites.
2. **WEATHER FORECASTING** - To predict rainfall amounts and intensity, possible snow and ice melt.
3. **TOPOGRAPHICAL ANALYSIS** - Mapping slope angles and landscape features that might indicate instability.
4. **FIELD SURVEYS** - To assess stability of slopes and deposits, water content, and any activity that might promote landslides.
5. **GEOGRAPHICAL INFORMATION SYSTEMS** - GIS can be used to collect data about weather, vegetation, waste flows and land use.