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EARLY PREDICTION OF LANDSLIDING IN MARGALLA HILLS:

RESEARCH:

I live an hour and 30 minutes away from my university. Every day, as I travel home, I often think about national issues. One day, a thought came to mind about mountains, and since I knew about the Margalo Hills in Islamabad, it sparked my idea. According to the research carried out by scientists and archaeologists of the project "Post-Earthquake Explorations of Human Remains in Margala Hills", the formation of the Margala Hills dates to the Miocene epoch.

LOCATION:

The Margala Hills are a hill range within the Margala Hills National Park on the northern edge of Islamabad Capital Territory, Pakistan, just south of Haripur District, Khyber Pakhtunkhwa. They are part of the Himalayan foothills. The

Margalla range has an area of 12,605 hectares. It is a range with many valleys as well as high mountains.

VERTICAL DISTANCE:

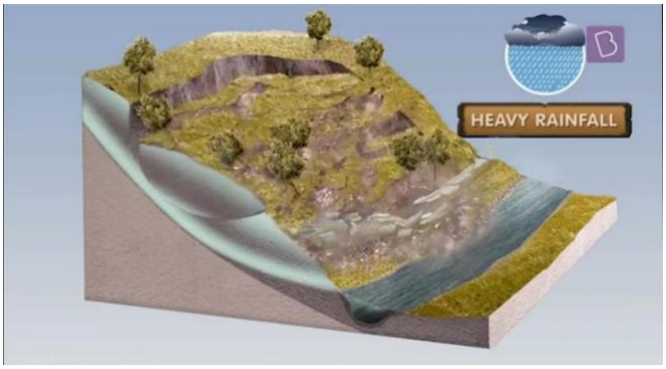
Margala is a 40 km long hill range that covers an area of approximately 12,605 hectares. Highest peak of the range is Tilla Charouni with an elevation of 1604 metres. Murree, known as the 'Queen of Hills, is a top tourist spot in Pakistan, celebrated for its stunning scenery, temperate climate, and beautiful landscapes.

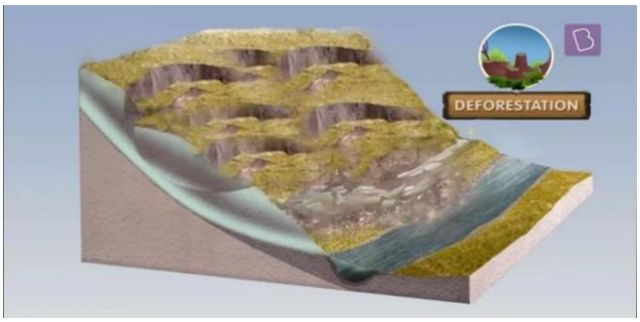
LANDSLIDING:

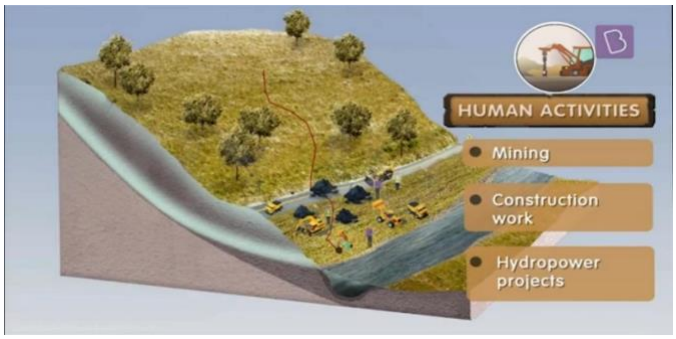
Land- sliding is the downward movement of rock, soil, or debris due to

Gravity, often triggered by factors like heavy rain, earthquakes, or human activities

CAUSES OF LANDSLIDING:







SOLUTION:

1) EWS☹(Early warning system) :

AI utilizes information from satellites and combines it with information received from other sources such as sensors or weather predictors to

enable people to know when and where landsides may take place. This prevents loss of life and gives people enough time to evacuate or take protective measures where possible.

2)AI for Placing Slope Support:

Agriculture and land use activities critically increase the stress on the slopes, thus elevating their instability, AI can assist engineers in devising alternatives that are more efficient in terms of resources in strengthening deficient hillsides.

How can I take action for the problem of solution:

1) **Get Data:** Install sensors to measure related values a precipitation, soil moisture or slope movements Just enough to forecast landslides.

2) **Make Predictions with AI**: Run this data through artificial intelligence software to spot any patterns that might indicate an upcoming landslide. However, the sooner we can predict what will happen next using AI and statistics.