

# Landslides in Western Ghats

September 14, 2020

Prone to frequent floods and extreme meteorological conditions, mountain regions of South India, especially Karnataka and Kerala have been of late rattled by large-scale landslides that have literally washed away villages and towns. Studies have shown that Western Ghats, with its **steep slope and thick soil cover**, makes it **second most landslide-prone region after the Himalayas in the country**.

## Features of Landslides

- According to scientists and geologists, the landslides unlike other catastrophes such as floods and droughts in these parts of peninsular India may appear to be small. However, the **slip of landmass along the valleys can be more fatal** than any other disaster and may **take years for the people from the region to recover**.
- Rapid erosion of natural resources and degradation of soil along the valleys not only cause irreversible environmental damage but also raze down the livelihood of thousands of people.
- While the landslides along the national highway and mountain railway network have come to the fore, **hundreds of landslides deep inside the densely forested region have gone unnoticed**.

## Cause of Landslides in Western Ghats

- While **human intervention is the primary reason**, **varying rainfall patterns** resulting in the **loosening of landmass** has only added considerably to the cause.
- It was often argued that landslides were only reported along the Konkan coast due to railway and road widening, it has begun to strike deep inside remote areas where no works have been taken up in the past 10 years.
- However these areas witnessed **large-scale clearing of**

**forests to raise plantations** and carry out other anthropogenic activities which are now resulting in landslides.

- **Extensive quarrying** in the Ghats, changes in land use, **increase in rubber and other plantations and tourism** where structures are being built on the slopes was also responsible for landslides.
- In the initial stage, the natural stability of the slope along a valley gets affected due to varied anthropogenic activities. The instability could be due to deterioration of soil resistance and change in land use causing slope instability.
- These **cracks begin to widen and slide when water (rain) collects in the ground** and results in a surge of water-soaked rock, earth and debris resulting in the final movement of the landmass.
- The trend of increasing incidences of landslides is expected to continue in the next decades due to urbanization, continued human activities, deforestation for various infrastructure projects and **increased regional precipitation** in landslide-prone areas due to changing climatic patterns.