



Impact of Landslides in Uttarakhand | Uttarakhand | 28 Sep 2024

Why in News?

The **Badrinath National Highway (NH-7)** in **Chamoli district** has been repeatedly blocked due to **heavy rainfall**, causing [landslides](#) and **debris accumulation**.

Key Points

- The **India Meteorological Department (IMD)** has predicted more **isolated heavy rainfall** in **Uttarakhand** which could potentially cause further disruptions.
- **Landslide:**
 - A **landslide** is a geological phenomenon involving the downward movement of a mass of rock, soil, and debris on a slope.
 - Landslides can occur on both **natural and man-made slopes**, and they are often triggered by a combination of factors such as **heavy rainfall, earthquakes, volcanic activity, human activities** (such as construction or mining), and **changes in groundwater levels**.
 - Landslides are classified into several types based on their movement characteristics:
 - **Slides:** These are movements of soil or rock along a rupture surface or a zone of weakness. They can be further divided into rotational slides, where the rupture surface is curved, and translational slides, where the rupture surface is planar.
 - **Flows:** These are movements of soil or rock that contain a large amount of water, which makes the mass flow like a fluid. They can be further divided into earth flows, debris flows, mudflows, and creep, depending on the material and the rate of movement.
 - **Spreads:** These are movements of soil or rock that involve lateral extension and cracking of the mass. They are usually caused by liquefaction or plastic deformation of the material.
 - **Topples:** These are movements of soil or rock that involve forward rotation and free-fall of the mass from a vertical or near-vertical cliff or slope.
 - **Falls:** These are movements of soil or rock that detach from a steep slope or cliff and descend by free-fall, bouncing, or rolling.