



Char Dham Yatra 2024 | Uttarakhand | 11 May 2024

Why in News?

Recently, The ritualistic commencement of the [Gangotri shrine](#) began, as the idol of [goddess Ganga](#) was transported from her winter abode in **Mukhba village to Gangotri**.

Key Points

- As per tradition, the ceremony began with prayers of goddess Ganga before placing her on a palanquin and parading her out of the temple.
- The initial group of pilgrims departed from Rishikesh. Various groups were also sent off from different places by religious figures and political leaders.
- The gates of [Kedarnath](#), [Gangotri](#), and [Yamunotri](#) will open on Akshay Tritiya (10th May, 2024) , with the **Badrinath Dham** set to open on 12th May 2024.



Char Dham

- **Yamunotri Dham:**
 - **Location:** Uttarkashi district.
 - **Dedicated to:** Goddess Yamuna.
 - River Yamuna is the second-most sacred river in India after River Ganga.
- **Gangotri Dham:**
 - **Location:** Uttarkashi district.
 - **Dedicated to:** Goddess Ganga.
 - Considered the most sacred of all Indian rivers.
- **Kedarnath Dham:**
 - **Location:** Rudrapur district.
 - **Dedicated to:** Lord Shiva.
 - Situated on the bank of the **Mandakini River**.
 - One of the **12 Jyotirlingas** (divine representations of Lord Shiva) in India.

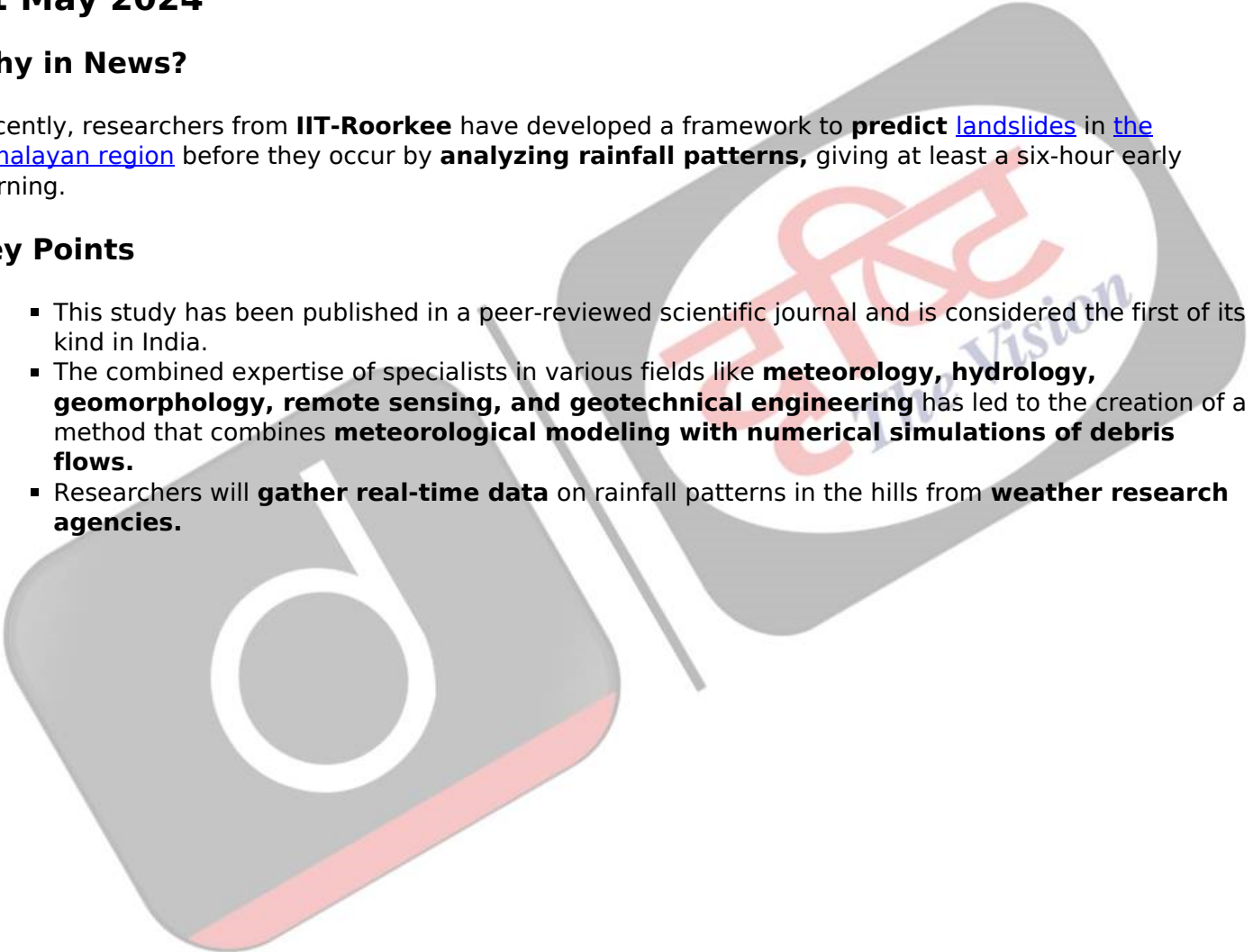
- **Badrinath Dham:**
 - **Location:** Chamoli district.
 - Home to the sacred **Badrinarayan Temple**.
 - **Dedicated to:** Lord Vishnu.
 - One of the holy shrines for **Vaishnavites** .
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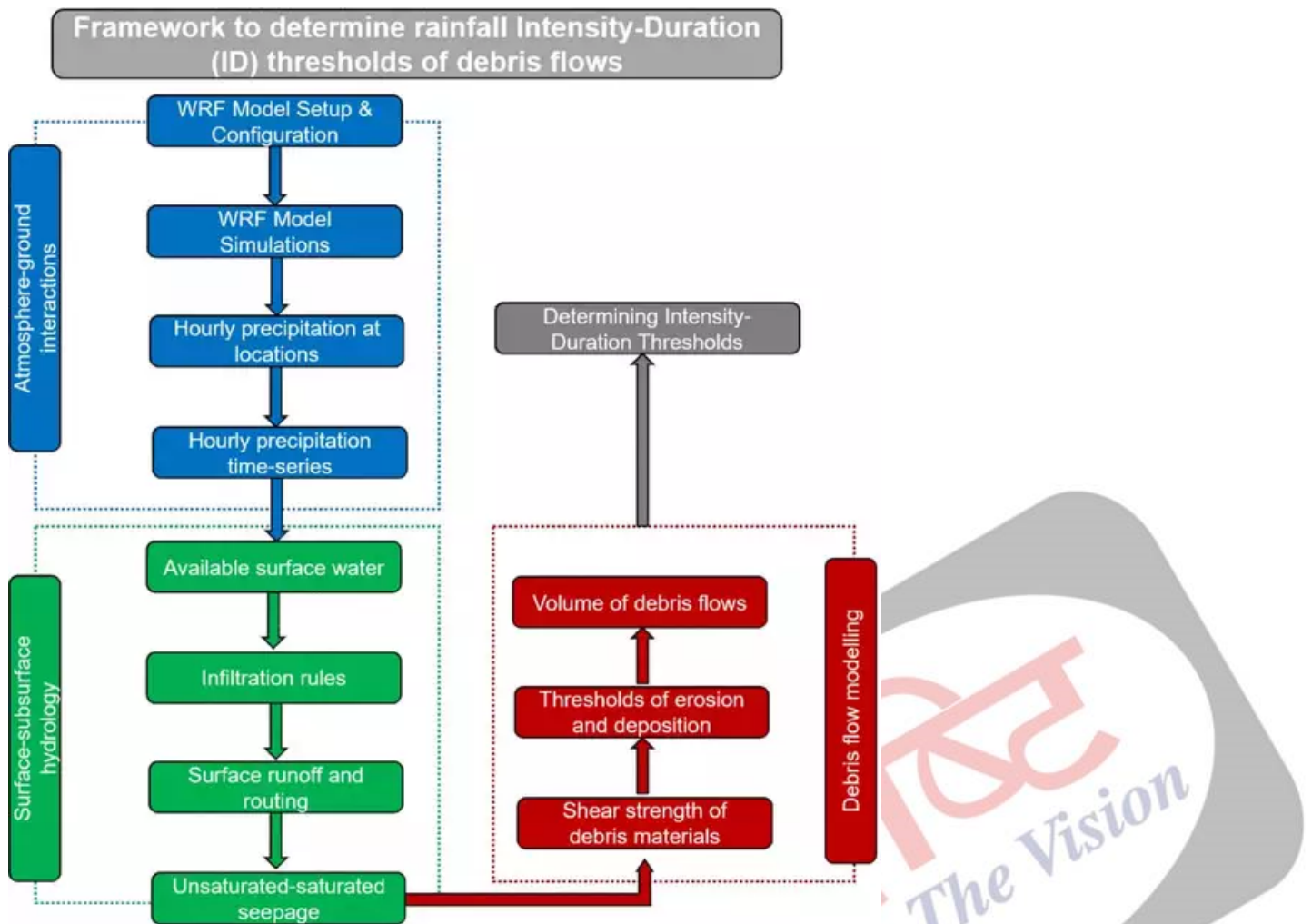
Early Warning System by IIT-Roorkee Researchers | Uttarakhand | 11 May 2024

Why in News?

Recently, researchers from **IIT-Roorkee** have developed a framework to **predict** [landslides](#) in [the Himalayan region](#) before they occur by **analyzing rainfall patterns**, giving at least a six-hour early warning.

Key Points

- This study has been published in a peer-reviewed scientific journal and is considered the first of its kind in India.
 - The combined expertise of specialists in various fields like **meteorology, hydrology, geomorphology, remote sensing, and geotechnical engineering** has led to the creation of a method that combines **meteorological modeling with numerical simulations of debris flows**.
 - Researchers will **gather real-time data** on rainfall patterns in the hills from **weather research agencies**.
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Landslides

- These are **natural disasters occurring mainly in mountainous terrains** where there are conducive conditions of soil, rock, geology and slope.
- A **sudden movement of rock, boulders, earth or debris down a slope** is termed a landslide.
- **Causes:**
 - Natural causes that trigger it include **heavy rainfall, earthquakes, snow melting and undercutting of slopes** due to flooding.
 - They can also be caused by **anthropogenic activities such as excavation, cutting of hills and trees**, excessive infrastructure development, and overgrazing by cattle.
 - Some of the main factors that influence landslides are **lithology, geological structures like faults, hill slopes, drainage, geomorphology**, land use and land cover, soil texture and depth, and weathering of rocks.
 - All these are factored in when a **landslide susceptibility zone is earmarked for planning and making predictions.**