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Current Affairs - 09 August 2025

BHARAT FORECAST SYSTEM



- It is an indigenously built **advanced weather forecasting system**.
- It is based on the newly implemented **Triangular Cubic Octahedral (TCO)** dynamical grid that enables the **model to operate at 6 km horizontal resolution**, surpassing its predecessor (GFS T1534 ~ 12km) and typical global operational models having horizontal resolution of 9–14 km.
- **Supercomputing facilities Arka (IITM-Pune) and Arunika (NCMRWF-Noida)**, enabled the model to be used for real-time weather prediction.
- The BharatFS was developed with the objective of **generating forecasts at the cluster of panchayats level** and improving the prediction of extremes.
- In research mode, it has demonstrated significant improvement in the rainfall forecast over the **core monsoon region and 30% better accuracy** for the extreme rainfall forecast compared to the previous operational model.
- It has demonstrated significant improvement in the **skill of predicting the core monsoon region rainfall**, with a 30% improvement in the accuracy for the forecasting of extreme rainfall events.
- The BharatFS was developed by a team of scientists from Indian institutions like IITM-Pune, with support from the NCMRWF-Noida and the India Meteorological Department (IMD).
- The development and launch of BharatFS has enabled India to upgrade its meteorological services and support neighboring countries, reinforcing regional leadership and self-reliance.
- **Significance:** This allows the **capturing of local weather features**, thus enabling the forecasts to cater to a cluster of panchayats/villages.
- Localized forecasts help **farmers with crop planning, irrigation, and harvesting**. Additionally, water authorities can **better manage reservoirs during monsoons**, reducing flood risk and improving yield resilience.



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MERITE SCHEME



- It is a 'Central Sector Scheme' which will be implemented in government engineering institutions and Polytechnics in all States/ UTs.
- This scheme has been formulated in collaboration with the World Bank.
- **Objective:** To improve the quality, equity and governance in technical education covering all States/UTs by implementing interventions aligned with the National Educational Policy-2020 (NEP-2020).
- **Funding:** Total financial implication of Rs.4200 crore for a period from 2025-26 to 2029-30. Out of Rs.4200 crore, there will be an external assistance of Rs.2100 crore from World Bank as loan.
- It will have the facility of funds transfer from the Central Government to participating entities through a Central Nodal Agency.
- Eminent educational institutions like the IITs and IIMs and regulatory bodies in the higher education sector such as the AICTE, NBA etc. will also play a significant role in the scheme implementation.
- The initiative emphasizes enhancing students' skills to improve their employability through a comprehensive, multi-faceted approach.
- Key interventions include offering internship opportunities, updating curricula to align with industry requirements, organizing faculty development programs, and setting up research hubs.
- Additionally, support will be provided to incubation and innovation centers, skill and maker labs, and language workshops.

Benefits of MERITE Scheme

- An estimated 275 Government/ Government-aided technical institutions are expected to be selected and supported under the scheme.



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- This will include selected National Institutes of Technology (NITs), State Engineering Institutions, Polytechnics and Affiliating Technical Universities (ATUs).
 - Apart from this, the State/ UT departments handling the technical education sector will also be supported through the MERITE.
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STEEL IMPORT MONITORING SYSTEM 2.0 PORTAL



- **Steel Import Monitoring System (SIMS) 2.0 Portal** was launched by the **Union Ministry of Steel**, Government of India.

- **SIMS was introduced in 2019**, and has played a crucial role in providing detailed steel import data to the domestic industry.

Features of SIMS 2.0 Portal

- It provides advanced **information about steel imports** to both the government as well as relevant stakeholders.
- It features **API integration with multiple government portals**, enhancing quality control and streamlining processes for improved efficiency and effectiveness.
- The portal **boasts a robust data entry system**, ensuring consistent and authentic data, which promotes transparency and accountability.
- Integration of various databases enables stakeholders to locate areas of risk and, thereby, permit better risk management.
- Based on industry feedback, the Ministry has revamped the portal to develop a more effective SIMS 2.0, a significant step forward in monitoring steel imports and promoting the growth of the domestic steel industry.

Significance: Availability of such detailed data not only provides input for policy making but also signals areas for production and growth to the domestic steel industry



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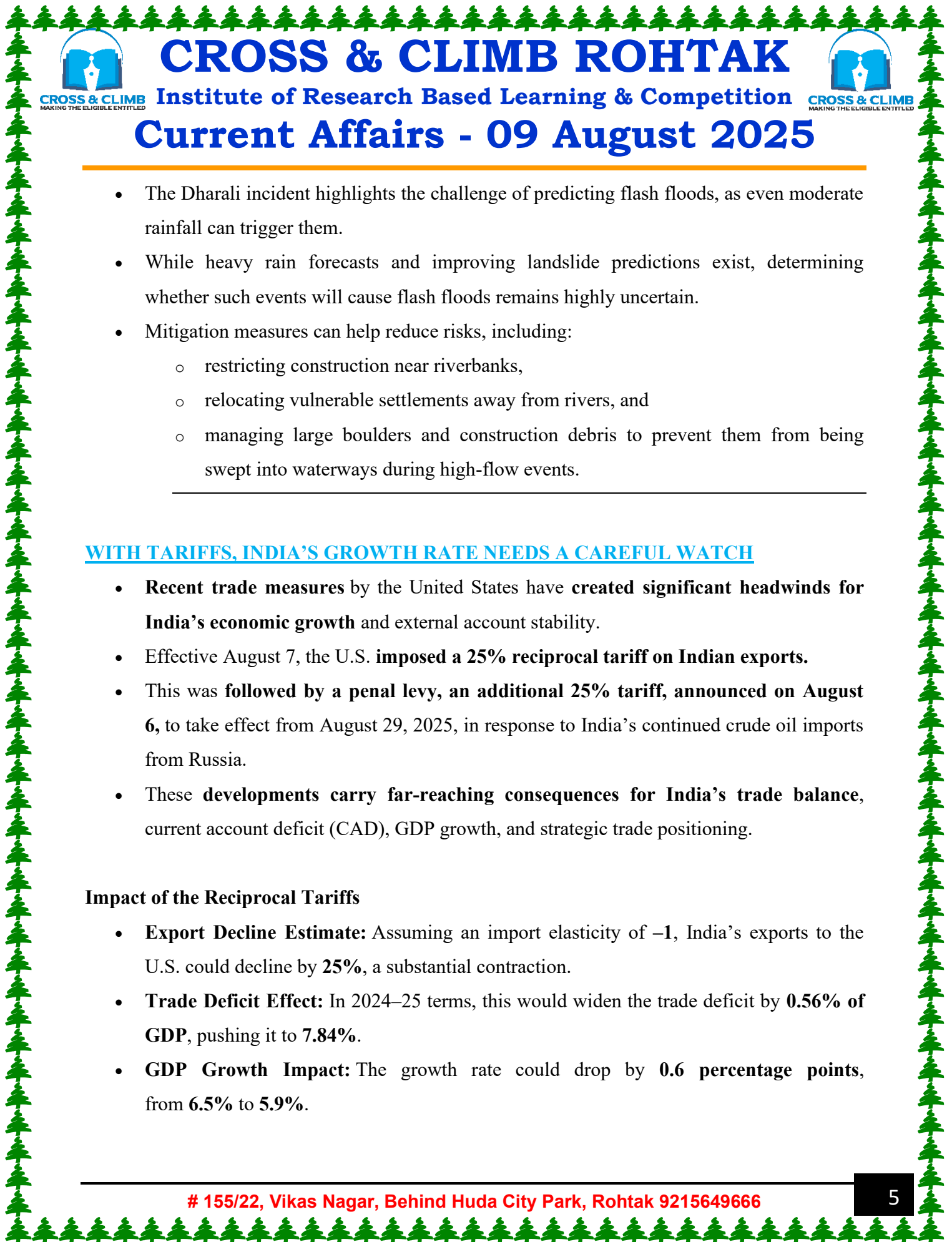
RAIN, LANDSLIDES, AND FLASH FLOODS: RISING RISKS

- Flash floods, often triggered by extreme rainfall causing landslides or mudslides, sweep debris into rivers, destroying everything in their path.
- The exact cause of the August 5 Dharali flood remains uncertain, though a glacial lake breach is a possibility yet to be confirmed.
- Despite normal monsoon levels in the area, the incident underscores growing disaster risks in ecologically fragile regions and the increasing difficulty of establishing effective early warning and mitigation systems.

Multiple Triggers Behind Flash Floods in the Himalayas

- Flash floods in the Himalayas are rarely caused by a single factor and do not always result directly from heavy rainfall or cloudbursts.
- Such events typically require a combination of conditions, such as
 - intense rain leading to landslides
 - or mudslides that channel debris into rivers, steep slopes that facilitate rapid water flow,
 - or sudden glacial breaks releasing large volumes of water, as seen in Chamoli in 2021.
- In fragile terrains with eroding slopes and saturated soil, even low-intensity rainfall can trigger landslides or floods.
- The Himalayas, being young, geologically weak, and earthquake-prone, are inherently more vulnerable compared to older ranges like the Aravalis.
- Added to this natural fragility, large-scale construction and heavy vehicular traffic further heighten the risk during extreme rainfall events.

Early Warning Limitations and Mitigation for Flash Floods



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- The Dharali incident highlights the challenge of predicting flash floods, as even moderate rainfall can trigger them.
 - While heavy rain forecasts and improving landslide predictions exist, determining whether such events will cause flash floods remains highly uncertain.
 - Mitigation measures can help reduce risks, including:
 - restricting construction near riverbanks,
 - relocating vulnerable settlements away from rivers, and
 - managing large boulders and construction debris to prevent them from being swept into waterways during high-flow events.
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WITH TARIFFS, INDIA'S GROWTH RATE NEEDS A CAREFUL WATCH

- **Recent trade measures** by the United States have created **significant headwinds for India's economic growth** and external account stability.
- Effective August 7, the U.S. **imposed a 25% reciprocal tariff on Indian exports**.
- This was **followed by a penal levy, an additional 25% tariff, announced on August 6**, to take effect from August 29, 2025, in response to India's continued crude oil imports from Russia.
- These **developments carry far-reaching consequences for India's trade balance, current account deficit (CAD), GDP growth, and strategic trade positioning**.

Impact of the Reciprocal Tariffs

- **Export Decline Estimate:** Assuming an import elasticity of -1 , India's exports to the U.S. could decline by **25%**, a substantial contraction.
- **Trade Deficit Effect:** In 2024–25 terms, this would widen the trade deficit by **0.56% of GDP**, pushing it to **7.84%**.
- **GDP Growth Impact:** The growth rate could drop by **0.6 percentage points**, from **6.5% to 5.9%**.



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- **Current Account Deficit:** CAD could rise from **0.6%** to **1.15%**. For 2025–26, given that four months have already elapsed before implementation, the GDP impact might be – **0.4%**, with a correspondingly smaller CAD increase.

Mitigating Factors and Caveats

- **New Trade Agreements:** India's trade deal with the United Kingdom, along with ongoing negotiations with the European Union and other partners, may partially offset export losses.
- **Competitor Tariffs:** U.S. tariff hikes on other exporting nations could shift some demand back to Indian products.
- **Exchange Rate Adjustment:** The rupee's depreciation to around ₹87.5 per U.S. dollar could enhance export competitiveness.
- However, even after considering these buffers, India's GDP growth in 2025–26 is expected to be **0.5% lower than the base forecast**, and the CAD could widen by a similar margin.
- A **forced shift from Russian to U.S. crude imports could further strain the CAD**, weaken the rupee, and fuel inflation, especially if global oil prices rise.

Policy Options for India

- **Negotiation with the U.S.:** The current trade deal is not finalised, providing an opportunity to seek compromise while safeguarding sensitive sectors such as agriculture, allied industries, and MSMEs.
 - **Export Market Diversification:** While challenging in the short term, expanding into alternative markets remains a long-term necessity.
 - Additionally, **domestic tariff reform** could boost export competitiveness. Empirical evidence shows that India's own import tariffs negatively affect exports, with an **estimated elasticity worse than –1**.
 - **Reducing tariffs on inputs** that feed into export production **could strengthen manufacturing and trade resilience**.
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EV POLICY SHIFT - FOR A CLEANER TRANSPORT FUTURE

- India's electric mobility strategy is undergoing a significant pivot. While earlier policy efforts focused on promoting electric cars, the government is now prioritising the electrification of trucks.
- This change aims to tackle the disproportionate share of emissions from heavy-duty vehicles, which make up just 3% of India's vehicle fleet but contribute over a third of transport-related carbon emissions.
- The new focus is backed by a **500-crore subsidy to support 5,600 electric trucks under the PM E-DRIVE scheme.**

Background - From Electric Cars to Electric Trucks

- The turning point came in September 2024 when the PM E-DRIVE scheme was launched without subsidies for electric four-wheelers, unlike the earlier **FAME programme.**
- In August 2025, NITI Aayog reinforced this shift, noting that measuring India's EV progress solely through car adoption is not suitable for a country where two-wheelers dominate and cars constitute only 13% of the vehicle fleet.
- While EV adoption in the two-wheeler segment has reached 6%, electric cars accounted for just 2% of total four-wheeler sales in 2024.
- This figure lags far behind global leaders such as **China (47%), Europe (23%),** and the US (10%).

The Case for Electrifying Trucks

- Heavy-duty trucks are the backbone of India's road transport system, but are also major polluters.
- They emit 34% of the transport sector's CO₂ emissions and over half of particulate pollution, despite being only a small fraction of the fleet.
- Long-haul trucks, in particular, have been identified as critical for achieving significant reductions in greenhouse gases.



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- Electric truck penetration is currently negligible, just 0.7% in 2024.
- Of the 8.34 lakh trucks sold that year, only 6,220 were electric, and just 280 had capacities above 3.5 tonnes.

Policy Measures and Incentives

- Under the PM E-DRIVE scheme, the Ministry of Heavy Industries is offering incentives of up to Rs. 9.6 lakh per heavy-duty e-truck to offset high capital costs.
- A special allocation is being made for 1,100 trucks registered in Delhi to address severe air pollution.
- In May 2025, the Office of the Principal Scientific Adviser identified 10 high-potential zero-emission trucking routes, including:
 - Chandigarh-Delhi-Jaipur
 - Dhanbad-Kolkata-Haldia
 - Bengaluru-Chennai-Villupuram
 - Salem-Coimbatore-Kochi

Global Context - Learning from China

- China's experience demonstrates the potential of electrifying freight. With 9% of heavy-duty trucks now electric, it is displacing over 1 million barrels of oil demand per day.
- India aims to replicate such impact, reducing both oil imports and urban air pollution.

Future Outlook - Building EV Infrastructure for Freight

- The success of India's truck electrification drive will depend on:
 - Rapid deployment of high-capacity charging stations along industrial corridors
 - Financial incentives for fleet operators to transition
 - Strengthening domestic manufacturing of e-trucks and batteries
 - Policy support for green freight logistics under public-private partnerships
 - If implemented effectively, this shift could position India as a leader in sustainable freight transport, delivering significant climate, health, and energy security benefits.
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KEY FACTS ABOUT SHRI BANKE BIHARI TEMPLE



• It is a **Hindu temple** dedicated to **Lord Krishna** in the holy city of Vrindavan in the **Mathura District of Uttar Pradesh**.

- **'Banke'** means bent, and **'Bihari'** refers to Vihari, or enjoyer.
 - In this temple, the **principal deity stands in the 'tribhanga' posture**, which is tilted at **three angles**. Hence, Lord Krishna, who is bent at three places, got the name "Banke".
 - It was **established by Swami Haridas**, a **guru of the famous singer Tansen**.
 - The **present temple complex** housing 'Banke Bihari' was **constructed in 1864** and is a unique example of Indian craftsmanship.
 - Architecture of the temple is **influenced by the Rajasthani style**, with **arches and pillars** adding to its magnificence.
 - In this temple, from the walls to the ceiling, the **pictures of the deities** have been **painted through oil paintings**.
 - One unique feature of the Banke Bihari temple is that there are **no bells or conchs on the premises**.
 - **In the freedom struggle**, this temple was the **main center of revolutionary activities**; from here, the **revolutionary newspaper "Bundelkhand Kesari"** was published secretly.
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