

DAILY CURRENT AFFAIRS

16 NOVEMBER, 2023

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S.NO.TOPIC1.UTTARAKHAND TUNNEL COLLAPSE2.ASIA-PACIFIC ECONOMIC COOPERATION (APEC)3.PRELIMS POINTERS

UTTARAKHAND TUNNEL COLLAPSE

SOURCE: INDIAN EXPRESS

WHY IN NEWS?

Recently, an **under-construction tunnel on the Yamunotri National Highway in Uttarakhand's Uttarkashi district collapsed at dawn**, trapping 40 workers inside. Manoj Garnayak, a former project director at L&T and an expert in underground construction, **sheds light on the potential causes of the collapse and preventive measures.**

KEY DETAILS ABOUT THE SILKYARA-DANDAL GAON TUNNEL:

- Total Length: The tunnel's overall length measures 4.5 km.
- Purpose: The tunnel is designed to establish a connection between Silkyara and Dandal Gaon in Uttarkashi district.
- Project Significance: Positioned as one of the lengthiest tunnels within the Char Dham all-weather road project, it is anticipated to significantly shorten the travel distance from Uttarkashi to Yamunotri Dham by 26 kilometers.



Construction Progress: As of the latest update, construction progress involves 2.3 km completed from the Silkyara side, complemented by 1.6 km from the Barkot end. However, a segment spanning approximately 400 meters is yet to undergo construction.

CAUSES OF TUNNEL COLLAPSE:

Rock Instability:

- ✓ A loose patch of rock, possibly fractured or fragile, could have contributed to the collapse.
- ✓ The weakness in the rock structure might not have been visible during construction.

Water Seepage:

- Seepage of water through a loose patch may have eroded rock particles over time, creating a hidden void.
- Rapid Infrastructure Development:
 - ✓ The rapid drive for infrastructure expansion, exemplified by projects like Char Dham Yatra in Uttarakhand, tends to disregard environmental and safety considerations.

Environmental Ignorance:

- ✓ Projects frequently ignore the distinctive environmental conditions of the Himalayas, as illustrated by the damage in Joshimath linked to extensive construction.
- Climate Change Impact:
 - ✓ The rise in occurrences of flash floods, such as the impact on the Chungthang Dam, is partially a result of climate change influencing the region.
- Geological Considerations:
 - ✓ The Himalayas, geologically young, are still growing due to tectonic plate collision.
 - ✓ Some areas may have fragile rock, but it's not universal.

METHODS OF TUNNEL EXCAVATION:

- Drill and Blast Method (DBM):
 - \checkmark Involves drilling holes into rock and using explosives for fragmentation.
 - ✓ Economical but less safe compared to TBM.
- Tunnel-Boring Machines (TBMs):

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- ✓ More expensive but safer method.
- ✓ TBMs bore through rock while supporting the tunnel behind with precast concrete segments.

Terrain Dependency:

- ✓ TBMs suitable for up to 400 meters tall rock covers.
- ✓ Himalayan regions often use DBM due to tall mountains.

INITIATIVES FOR HIMALAYAN ECOSYSTEM RESTORATION:

> National Mission on Sustaining Himalayan Ecosystem:

- Launched in 2010, the National Mission on Sustaining Himalayan Ecosystem spans 11 states and 2 UTs, including Himachal Pradesh, Uttarakhand, Sikkim, all northeast states, West Bengal, J&K, and Ladakh.
- ✓ This initiative is part of the National Action Plan on Climate Change (NAPCC).
- Mishra Committee Report 1976:
 - ✓ In 1976, the Mishra Committee recommended imposing limitations on substantial construction activities, explosive operations, and tree cutting in the Himalayan region.
- SECURE Himalaya Project:
 - A component of the Global Wildlife Program, the SECURE Himalaya Project, funded by the Global Environment Facility (GEF), advocates for sustainable management of alpine pastures and forests in the elevated Himalayan ecosystems.

KEY ASPECTS OF BUILDING A STABLE TUNNEL:

> Thorough Investigation:

- Seismic waves and boreholes used to analyse rock stability.
- Petrographic analysis helps assess mineral content and strength.
- Continuous Monitoring:
 - Instruments like stress and deformation meters used to monitor rock behaviour.
 - ✓ Regular checks ensure stability after excavation.
- Support Structures:
 - ✓ Various support types, including shotcrete, rock bolts, steel ribs, and tunnel pipe umbrellas.
 - ✓ Adequacy of supports must be regularly tested.
- Geological Oversight:
 - Independent geologists examine the tunnel, predict rock stability duration, and identify potential failures.
- Pre-Construction Studies:
 - ✓ Emphasizes spending more time on studies before starting construction.
 - ✓ Currently, design and construction often occur simultaneously.

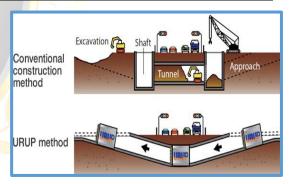
WAY FORWARD: ENSURING SAFETY AND SUSTAINABILITY

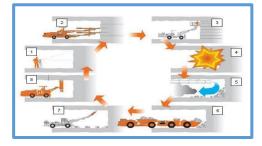
- Stringent Geological and Environmental Scrutiny:
 - ✓ Infrastructure projects, especially in ecologically sensitive areas like the Himalayas, must undergo thorough environmental impact assessments.
 - ✓ This scrutiny **aims to preempt incidents similar to the structural damage witnessed in Joshimath**.
- Comprehensive Risk Assessment:

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- Prior to project approval, there should be a meticulous risk analysis, encompassing the resilience of structures and potential vulnerabilities.
- ✓ The Uttarakhand tunnel collapse serves as a poignant reminder of the imperative nature of such risk assessments.

Balancing Development with Safety Standards:

- ✓ While infrastructure development is crucial for progress, it should not come at the expense of compromising safety standards.
- Recent incidents, such as the damage to the Chungthang Dam, underscore the necessity of maintaining a delicate equilibrium between development and safety.

>Addressing Climate Change Impacts:

- Incorporating climate change considerations into project planning is essential to anticipate and mitigate events like flash floods.
- Proactive measures against climate change impacts should be integral to the blueprint of every major project.

Prelims Specific

Chardham Project Overview: Enhancing Pilgrimage Connectivity

Project Objective:

- > Aim:
 - ✓ The CharDham Pariyojana aspires to enhance connectivity to the revered Chardham pilgrimage centers—Badrinath, Kedarnath, Gangotri, and Yamunotri—in the Himalayas.

> Enhanced Connectivity Goals:

✓ The project seeks to make journeys to these pilgrimage sites safer, faster, and more convenient.

Infrastructure Improvement:

 The focus includes widening nearly 900 km of highways connecting the pilgrimage sites and enhancing the Tanakpur-Pithoragarh stretch of National Highway (NH) 125, an integral part of the Kailash Mansarovar Yatra route.

Implementing Agencies:

> Uttarakhand State Public Works Department (PWD):

✓ Involved in the state's infrastructure development, particularly in the context of the CharDham Project.

Border Roads Organisation (BRO):

- Renowned for its role in constructing and maintaining roads in challenging terrains, contributing to border connectivity.
- National Highway & Infrastructure Development Corporation Limited (NHIDCL):
 - ✓ A fully owned company under the Ministry of Road Transport & Highways, playing a pivotal role in executing the project.

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ASIA-PACIFIC ECONOMIC COOPERATION (APEC)

SOURCE: INDIAN EXPRESS

WHY IN NEWS?

The Asia-Pacific Economic Cooperation (APEC) grouping is meeting in San Francisco in the United States for the Leaders' Week which began on November 11 and will conclude with the Economic Leaders' Retreat on November 17.

APEC Background:

Founding and Purpose:

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- ✓ Established in 1989, the Asia-Pacific Economic Cooperation (APEC) serves as a regional economic forum.
- ✓ The primary goal is to enhance regional economic integration and foster prosperity across the Asia-Pacific region.

Member Economies:

- Comprising 21 economies, APEC includes nations like the United States, China, Japan, Russia, and others.
- Unique to APEC, Taiwan and Hong Kong participate as distinct entities, emphasizing its economic focus.
- APEC's Role Over the Years:
 - ✓ Advocacy of Free Trade: APEC has consistently championed free trade, tariff reduction, and economic liberalization.



APEC Member Economies (21)

The Seoul Declaration in 1991 highlighted the ambition to establish a liberalized free trade area around the Pacific Rim.

Economic Impact:

- APEC initiatives contributed significantly to dynamic growth, fostering a growing middle class in the Asia-Pacific.
- ✓ APEC economies represent 60% of global GDP and 48% of global trade.

HIGHLIGHTS OF APEC SUMMIT 2023:

Biden-Xi Meeting:

- ✓ US President Joe Biden and China's President Xi Jinping's inperson meeting amid US-China tensions takes centre stage.
- Focus on Trade Relations:
 - ✓ With US-China relations strained, trade-related issues are major points of discussion, reflecting the prolonged tensions.



- > Indo-Pacific Economic Framework (IPEF):
 - ✓ President Biden aims to highlight progress on the IPEF, initiated after the US withdrawal from the Trans-Pacific Partnership. India and APEC: Membership Dynamics

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INDIA AND APEC:

India's aspirations for APEC membership have been met with several considerations and developments:

- Membership Request:
 - ✓ India formally requested APEC membership, garnering initial support from key economies like the United States, Japan, Australia, and Papua New Guinea.
- Geographical Constraint:
 - India's bid faced a hurdle as APEC traditionally consists of economies bordering the Pacific Ocean.
 - ✓ This geographical constraint led to reservations about India's eligibility for full membership.

> Observer Status:

✓ Despite not securing full membership, India was granted observer status in 2020, marking its increased engagement with the forum.

Benefits for India:

- ✓ Joining APEC would offer India enhanced integration with the global economy, given APEC's status as a crucial trading bloc.
- ✓ It could empower India in negotiations and collaborations within the Asia-Pacific region.

Potential Benefits for APEC:

- ✓ APEC, in accepting India, would gain access to a significant market for labour, consumers, and investments.
- India's inclusion could provide a counterbalance to unilateral economic ambitions in the region and align APEC with the evolving concept of the 'Indo-Pacific.'

India's Presence:

 Piyush Goyal's Attendance: India's Union Minister for Commerce and Industry, Piyush Goyal, participates in the forum despite India not being a member, showcasing active engagement.

Way Forward for India and APEC Membership:

> Diplomatic Engagement:

- India should continue diplomatic efforts to showcase the strategic and economic benefits of its APEC membership.
- Engaging with member economies and addressing concerns about geographical constraints can strengthen its case.

Regional Collaboration:

✓ Emphasizing the shared goals of regional stability, economic growth, and inclusive development can enhance India's appeal as a valuable partner within the APEC framework.

Customized Cooperation:

Proposing specific areas of collaboration where India can contribute significantly to APEC objectives, such as technology, innovation, and sustainable development, can make its inclusion more compelling.

Trade and Economic Reforms:

- Undertaking internal reforms to align with APEC's principles of free and open trade can demonstrate India's commitment to the forum's core values, making it a more attractive candidate for membership.
- Observer Participation:
 - Actively participating as an observer, India can leverage this status to showcase its commitment to APEC's goals, build rapport with member economies, and gradually pave the way for full membership.
- Strengthening Indo-Pacific Relations:

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- ✓ Given the increasing focus on the Indo-Pacific region, India should intensify efforts to align its foreign policy with the evolving dynamics, demonstrating how its inclusion in APEC contributes to the broader Indo-Pacific narrative.
- > Public Diplomacy:
 - Engaging in public diplomacy campaigns to raise awareness about the benefits of India's APEC membership can garner support from within the country and showcase the positive impact on India's economic and strategic interests.



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PRELIMS POINTERS:

Торіс	Details		
TRISHAKTI PRAHAR	 WHY IN NEWS? 'Trishakti Prahar' recently began near the western border of Rajasthan in Jaisalmer. Joint military exercise involving Indian Army, Navy, and Air Force. Objectives: Enhance mutual coordination and operational efficiency. Create new strategies and assess operational capabilities. Live practice sessions simulating real war scenarios with complete coordination. Involves long-range attacks, diverse military assets. Highlights operational capability of Pune-based Southwestern Command of Indian Air Force. 		
INDIA-OPEC ENERGY DIALOGUE	 WHY IN NEWS? 6th High-Level Meeting in Vienna, Austria. Focus on oil and energy markets, emphasizing availability, affordability, and sustainability. Mutual commitment to enhanced cooperation, next meeting in 2024 in India. ABOUT OPEC (Organization of the Petroleum Exporting Countries): 		
	Aspect Details		
	Formation Permanent, intergovernmental organization. Created at the Baghdad Conference on September 10–14, 1960. Founding Members: Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. 		
	Headquarters Vienna, Austria		
	Membership Algeria, Angola, Congo, Equatorial Guinea, Gabon, Libya, Nigeria, and the United Arab Emirates. Image: Standing of the United Arab Emirates. It is a group of 23 oil- Image: Standing of the United Arab Emirates. It is a group of 23 oil- Image: Standing of the United Arab Emirates. It is a group of 23 oil- Image: Standing of the United Arab Emirates It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Image: Standing of the United Arabia It is a group of 23 oil- Ima		
	Objectives Coordinate and unify petroleum policies among Member Countries. Secure fair and stable prices for petroleum producers. Ensure an efficient, economic, and regular supply of petroleum to consuming nations. Provide a fair return on capital to those investing in the industry. Objectives		

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	Importance	 Holds 79.5% of the world's proven oil reserves. Produces 39.7% of global oil production. 	
	India's Relationship with OPEC	 India is the world's 3rd largest importer of crude oil (after the United States and China). 60% of India's total crude imports come from OPEC countries. The relationship is pivotal for global energy security, energy affordability, and emissions reduction efforts worldwide. 	
ASIAN DEVELOPMEN T BANK (ADB)	Development Bank delivery, and promo ABOUT ADB: • Multilateral • Mission: Fo • Functions: F • Members: 6 • Headquarter	ia signed a \$400 million policy-based loan agreement with the Asian (ADB) to create high-quality urban infrastructure, improve service one efficient governance systems. I development bank since 1966. ster economic growth and cooperation in Asia-Pacific region. Provides loans, technical assistance, grants, equity investments. 58, 49 from Asia-Pacific, 19 outside. ers: Manila, Philippines. unding: Member contributions, retained earnings, loan repayments.	
ONE STATION ONE PRODUCT SCHEME	 WHY IN NEWS? successful 15-day pilot project the One Station One Product scheme Indian Railways initiative to promote 'Vocal for Local'. Uniquely designed sale outlets for local products nationwide. Launched on March 25, 2022. Aims to showcase and promote indigenous manufacturing products. Allotment done on a rotational basis. Provides welfare to local artisans, potters, weavers, tribals, etc. 		
IGLA-S	 WHY IN NEWS? Russia recently signed a contract to supply Igla-S hand-held anti-aircraft missiles to India and has allowed the production of the Igla under license. Igla-S is a Russian-manufactured MANPADS (man-portable air defence system), also known as SA-24 Grinch. Its capabilities extend to identifying and neutralizing various air threats, including cruise missiles and drones. With a range of up to 6 km, the system can effectively destroy targets up to an altitude of 3.5 km. The 2.5 kg warhead is classified as high-explosive fragmentation (HE-FRAG). Guidance is facilitated through homing via infrared technology. 		

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