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1. Study Recommends 179 Communities for SC, ST, OBC Inclusion GS 2 (Governance)

- Why in News:** In one of the **largest ethnographic studies** conducted by the **Anthropological Survey of India (AnSI)** in collaboration with Tribal Research Institutes (TRIs), **268 denotified, semi-nomadic, and nomadic tribes** have been comprehensively categorized for the first time.
- Key Findings:**
 - This study, initiated in 2020 and completed by August 2022, was commissioned by a panel formed by **NITI Aayog**. The research aimed to address the long-standing issue of these tribes not being classified under the **Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC) categories**, and propose appropriate classifications.
 - Recommendations for Inclusion:** The study has recommended the inclusion of 179 communities in SC, ST, or OBC lists across 26 states and union territories.
 - Out of these, 85 are fresh additions
 - 46 for OBC status,
 - 29 for SC status,
 - 10 for ST status
 - Uttar Pradesh had the highest number of additions (19 communities), followed by Andhra Pradesh, Tamil Nadu, Madhya Pradesh, and Rajasthan (8 each)
 - Corrections and Partially Classified Communities:** Nine communities' categorization was recommended for correction. Many communities, while studied, were found to have already been partially categorized in state lists or central lists for specific states.
 - "Not Traceable" Communities:** The study found 63 communities (over 20%) as "not traceable". These are communities that have either assimilated into larger groups, changed their names, or migrated to other states or territories.
- Who Are the Scheduled Castes (SCs)?**
 - Scheduled Castes (SCs) refer to communities in India that have historically faced severe oppression, discrimination, and social exclusion, primarily due to the Hindu caste system.
 - These communities were once known as "untouchables" and continue to experience marginalization, though affirmative actions have been introduced to improve their social and economic conditions.
 - According to the **Constitution Order of 1950**, only marginalized Hindu communities can be categorized as SCs.
 - They were traditionally outside the four main varnas (**Brahmins, Kshatriyas, Vaishyas, and Shudras**) in the Hindu social hierarchy and were often referred to as "avarnas" (those who don't fit into the varna system).
- Who Are the Scheduled Tribes (STs)?**
 - Scheduled Tribes (STs) are indigenous communities that have historically faced oppression, marginalization, and struggle. Like SCs, STs are also categorized as "**avarnas**" but their identity is rooted in their distinct cultural practices, geographical isolation, and social structure.
 - STs, also known as **Adivasis**, are the original inhabitants of India, often living in remote and isolated areas. They have distinct languages, customs, and cultures, and are often considered to be at a lower level in the social hierarchy due to their isolated way of life.

Abhinav Lakshman

NEW DELHI

In one of the largest ethnographic studies of its kind, the Anthropological Survey of India (AnSI) and Tribal Research Institutes (TRIs) across the country have, for the first time, comprehensively categorised 268 denotified, semi-nomadic, and nomadic tribes that previous commissions believed had never been classified.

The three-year-long study commissioned by a NITI Aayog panel has recommended the inclusion of 179 of these communities on Scheduled Castes, Scheduled Tribes, and Other Backward Classes (Central) lists of 26 States and Union Territories. At least 85 of



People waiting for caste certificates in Sangareddy district, Telangana. FILE PHOTO

them are being recommended as fresh additions to these lists.

Among the fresh additions, 46 communities have been recommended for OBC status, 29 for SC status, and 10 for ST status. The greatest number of fresh additions were recommended for Uttar Pradesh (19), followed by Andhra Pradesh, Tamil Nadu, Madhya Pradesh, and Ra-

jasthan at eight each. Apart from the fresh additions, the study recommended correcting the categorisation of nine communities, and found that many of the 268 communities had already been categorised, albeit partially, either in State lists or mentioned in Central lists but only of some States.

'Report pending' Top officials of the Social Justice Ministry told *The Hindu* that the report was "pending" with the NITI Aayog panel, which was "scrutinising" the AnSI and TRI findings. But the Union Ministry of Tribal Affairs revealed in a Parliament reply last year that the Social Justice Ministry had received this report in

August 2022. The study also concluded that 63 communities (more than 20%) studied were "not traceable" anymore.

Multiple researchers associated with the study explained that "not traceable" was a classification for communities that had likely assimilated into larger communities, changed their names, or migrated to other States/UTs.

This report's recommendations to add entries to the SC, ST, OBC lists, which will consequently swell their populations, comes as uncertainty grows over the next Census and whether caste will be enumerated in it, with the clamour for increasing quota percentages to match with latest proportions on-

ly growing in the absence of a population count.

While the Social Justice Ministry waits for the "finalised" report from the NITI Aayog panel, sources told *The Hindu* that voices have now emerged within the Development and Welfare Board for DNT, NT, SNT communities that are calling into question the premise of classifying DNTs, NTs and SNTs as SC, ST, and OBC.

Their argument is that being a DNT, NT or SNT, adds a layer of discrimination to their lives, because of which the only fair classification would be to create a quota category just for these communities – either a separate vertical or a sub-quota for them within each category.

- **What Are Other Backward Classes (OBC)?**

- Other Backward Classes (OBC) is a term introduced by the **Mandal Commission in 1980**.
- These are castes that fall between the higher varnas (Brahmins, Kshatriyas, Vaishyas) and the marginalized groups (SCs and STs).
- OBCs benefit from affirmative action programs like reservations in education, government jobs, and political representation, but not to the same extent as SCs and STs.

2. Mullaperiyar Dam Safety **GS 2 (Governance)**

- **Why in News:** The Supreme Court of India has recently intervened in the **long-standing dispute between Tamil Nadu and Kerala** over the safety of the **Mullaperiyar dam**, which has been in existence for 129 years. The court has asked both states to address whether the safety of the dam should be overseen by a committee formed by the court itself or a new statutory committee established under the **Dam Safety Act, 2021**.

- **What is the issue?**

- The Mullaperiyar dam, located in Kerala but managed by Tamil Nadu, is a major point of contention between the two states.
- Kerala has raised concerns about the safety of the dam, citing risks such as **climate change, heavy rainfall, and potential floods**. Kerala has even proposed building a new dam, as it believes the existing one is deteriorating.
- **The Legal Dispute:** In previous years, the safety of the dam was supervised by a committee formed by the Supreme Court. The dispute escalated when Kerala accused Tamil Nadu of obstructing necessary repairs and maintenance to ensure the dam's safety.
- Tamil Nadu countered by claiming that Kerala was deliberately delaying approvals for maintenance work and was not cooperating in the process.
- **Supreme Court's Intervention:** The Supreme Court has asked Tamil Nadu and Kerala to address the effectiveness of these two committees—whether the current one formed by the court or the statutory one under the **Dam Safety Act, 2021**—would be better suited to oversee the dam's safety.
- **Positions of the States:**
 - **Tamil Nadu's Position:** Tamil Nadu has criticized Kerala for raising concerns about the dam's safety while obstructing the necessary works and approvals to maintain it. Tamil Nadu has accused Kerala of delaying even routine maintenance work, which has hindered efforts to strengthen the dam.
 - **Kerala's Position:** Kerala, on the other hand, has pushed for the decommissioning of the dam and constructing a new one, citing safety risks posed by the aging structure and environmental factors like climate change.

- **Mullaperiyar Dam**

- The Mullaperiyar Dam, located in Kerala but operated by Tamil Nadu, is situated within the **Periyar Tiger Reserve**.
- **Constructed between:** 1887 and 1895
- **Objective:** to divert water of the west-flowing Periyar river to arid regions of the east.
- The Mullaperiyar Dam, 155 feet high and 1,200 feet long, was constructed between 1887 and 1895 under the supervision of the **British Corps of Royal Engineers**.
- Its purpose was to divert the waters of the west-flowing **Periyar River** eastward to arid regions of Tamil Nadu, specifically the districts of **Theni, Madurai, Sivaganga, and Ramanathapuram**.

Which panel is better for Mullaperiyar, SC asks States

Court asks TN and Kerala whether the supervisory committee formed by it or a statutory committee under the new Dam Safety Act of 2021 will be more effective in taking care of the dam

The Hindu Bureau
NEW DELHI

The Supreme Court on Monday orally asked the States of Tamil Nadu and Kerala to address it on whether the supervisory committee formed by the court would be more effective in taking care of the 129-year-old Mullaperiyar dam or the job must be given to a statutory committee envisaged under the new Dam Safety Act of 2021.

"Which one of these committees would be more effective? If it is the statutory committee under the 2021 Act, then we can avoid overlaps and avoid unnecessary problems," Justice Surya Kant, heading a Bench, observed orally.

The court listed the case for hearing detailed sub-



Next sitting: The Supreme Court listed the case for hearing detailed submissions on February 19. (SPECIAL ARRANGEMENT)

Section 5 of the 2021 Act mandates the constitution of the National Committee on Dam Safety.

Committee's functions
The committee would be chaired by the Central Wa-

ter Commission Chairperson and have representatives from the Centre and States and include three specialists in the field of dam safety and allied fields.

The committee's crucial functions under Section 6

include evolving policy, guidelines and standards to prevent disasters related to dam failures and maintain safety standards. Senior advocate Shekhar Naphade for Tamil Nadu said if there was an "honest desire to work out" on the part of both States, things would be resolved. Mr. Naphade said the intent of Kerala was to obstruct.

Senior advocate Jideep Gupta, for Kerala, said Tamil Nadu was owning a dam in Kerala and "they do not want to take care of it". Justice Kant said this issue was already resolved and the question now was on whether the supervisory committee of the Supreme Court or the statutory committee of the 2021 Act was the right entity to ensure the safety of the Mullaperiyar dam.

- **The Dam Safety Act, 2021:**

- The Dam Safety Act, 2021, mandates the creation of a **National Committee on Dam Safety**, which is responsible for establishing safety policies, guidelines, and standards for dams across India.
- This new statutory committee is led by the Chairperson of the **Central Water Commission** and includes specialists in dam safety.
- The Supreme Court, however, questioned if the existing supervisory committee it created earlier was sufficient, or if the statutory committee under the new law would be more effective in managing the dam's safety.

3. **Prioritising IMEC is in America's Best Interest** **GS 2 (International relations)**

- **Why in News:**

- The **United States-India relationship** has evolved into a **cornerstone of modern geopolitics**, underpinned by shared democratic values, economic interests, and regional security priorities.
- Since the Clinton administration redirected bilateral ties in the 1990s, **this partnership has matured into a vital strategic alliance**.
- Today, as global dynamics undergo significant shifts, **this relationship gains prominence, offering substantial opportunities for collaborative growth**, exemplified by the ambitious **India-Middle East-Europe Economic Corridor (IMEC)**.

- **The Strategic Imperative of IMEC: A Transformative Vision**

- **A Gateway to Economic Integration**
 - **IMEC offers a unique opportunity to create seamless trade routes** by integrating railways, shipping networks, and other transportation systems across the participating nations.
 - **This connectivity is expected to reduce transportation costs significantly**, enhance supply chain efficiency, and facilitate faster movement of goods and services.
 - **By establishing direct links between major economic hubs, the corridor could unlock untapped trade potential, particularly for inland regions** and underdeveloped markets within participating countries.
 - **By decentralising trade routes and reducing overreliance on traditional chokepoints** such as the Suez Canal, **IMEC could emerge as a cornerstone of a more stable global trading system**.
- **A Strategic Alternative to China's BRI**
 - **Unlike the state-controlled model of the Belt and Road Initiative (BRI)**, which has drawn criticism for creating debt dependency in participating nations, **IMEC aims to promote economic growth based on democratic principles, market-driven investments, and equitable partnerships**.
 - **This approach appeals to nations seeking infrastructure development without compromising their sovereignty**.
 - **For India, the corridor's success holds particular significance**. By reducing trade costs and enhancing maritime logistics, IMEC strengthens India's ability to compete in the global economy.
 - **It also positions India as a central player in a rules-based international economic order**, furthering its ambitions as a global power.

The United States-India relationship has evolved into an increasingly vital strategic partnership over since the Clinton administration laid the foundation for a new direction in the 1990s. Today, broad bipartisan consensus supports building upon these ties even further, driven by converging interests in economic growth, regional security, and democratic values. As global dynamics shift, the importance of this relationship for the Trump administration becomes even more pronounced.

The India-Middle East-Europe Economic Corridor (IMEC) agreement presents a tremendous opportunity for President Donald Trump to solidify this multilateral partnership while advancing both the strategic interests of the U.S. and India. By leading the effort to secure cooperation among the participating nations, the U.S. can help create a robust economic corridor to ensure free and open trade routes, with enhanced energy security and technological innovation, which, in turn, will also benefit American companies.

More conceptual now
Announced in 2023, IMEC represents an ambitious vision to forge an integrated network spanning three vital regions through advanced physical and digital infrastructure. The corridor must develop efficient transportation routes, including railways, shipping networks, and maritime connections, while also establishing cross-border electricity and data pipelines and digital communication cables. The end goal should be to enhance trade connectivity and reduce transportation costs, while diversifying global supply chains and promoting deeper economic ties between the U.S., the United Arab Emirates, Saudi Arabia, Italy, France, Germany, and the European Commission.

At the moment, it is reasonable to suggest that IMEC is more conceptual than concrete. Meeting its lofty goals requires extensive planning and cooperation. The Trump administration's leadership on this matter could enhance his legacy on the international stage. By supporting IMEC, the U.S. and India can establish a

compelling alternative to China's Belt and Road Initiative (BRI), creating a more balanced global economic architecture that aligns with western democratic values and market principles.

IMEC was never destined to be a straightforward endeavor. Each participating nation faces a complex calculus of investment, political will and economic strategy. The corridor demands substantial infrastructure investments that directly compete with other national priorities. Moreover, private sector engagement introduces another layer of complexity. Corporate investors require clear pathways to return on investment and without active engagement from the private sector, it is unlikely that the project could succeed.

Several countries, such as Greece and Italy, have shown substantial interest in IMEC. France has distinguished itself by appointing a special envoy to Grand Moutier, who is not a traditional diplomat. France's President Emmanuel Macron has shown a proven business leader from France to lead this geopolitical and economic initiative, as he recognizes its economic potential for France. The U.A.E. and Saudi Arabia appreciate the role IMEC can play in advancing relationships with the West, and have spearheaded efforts for its implementation. Without regular, strategic engagement, there is a significant risk of creating an uneven economic landscape that could breed tension and political friction among participating nations. The corridor offers transformative economic opportunities not just for coastal regions and primary ports but also for inland areas that could become crucial nodes in this expansive trade network. Even within the region, we have already seen countries such as Iran and Turkey pursue trade agreements to complement IMEC.

As an alternative to China's BRI
IMEC promises substantial economic advantages for India by dramatically reducing trade costs and transforming maritime logistics. This strategic network reduces vulnerability to potential disruptions such as those that might occur in the Suez Canal, but also creates compelling opportunities for increased foreign direct

investment. By positioning itself as an alternative to the BRI, the corridor allows India to strengthen diplomatic ties with West Asian and European countries.

Better for the environment
There are implications to this deal that could impact the earth's climate health. India has emerged as a significant player in green hydrogen development, positioning itself as a potential global leader in this emerging clean energy technology. The country has launched ambitious initiatives to develop green hydrogen as a strategic component of its energy transition and decarbonization efforts.

India is collaborating with international partners such as Germany and Japan, and developing infrastructure for green hydrogen production, storage, and transportation. This will help reduce carbon emissions, decrease dependence on fossil fuel imports and create new job opportunities in emerging green technology sectors.

The Trump administration's role in facilitating the Abraham Accords proved instrumental in creating the diplomatic conditions that made IMEC possible. Former U.S. President Joe Biden has been a strong proponent of IMEC. Looking ahead, questions remain about IMEC's future under potential new U.S. leadership. One mitigating factor is the Trump's warm personal relationship with Indian Prime Minister Narendra Modi. This rapport could prove significant to ongoing relations. Now that there is a peace agreement between Israel and Hamas, both leaders could facilitate the much needed land required meeting of IMEC participants to discuss this endeavor transcends traditional infrastructure development; it represents a fundamental reimagining of regional economic cooperation that requires unprecedented levels of coordination among diverse stakeholders. The U.S. and India, as key architects of the corridor, must work closely to shepherd this project to completion, recognizing both its economic significance and environmental implications for all participating countries.

- **Energy and Technological Innovation**
 - The corridor envisions developing cross-border pipelines for hydrogen and electricity, which could pave the way for a sustainable energy future.
 - These efforts align with global initiatives to reduce carbon emissions and transition to renewable energy sources.
 - By integrating energy infrastructure into the corridor, IMEC not only supports economic development but also contributes to the global fight against climate change.
 - Additionally, the inclusion of digital communication infrastructure within IMEC reflects its forward-looking approach to technological advancement.
 - High-speed data networks, fibre-optic cables, and other digital assets integrated into the corridor could facilitate innovation, enhance connectivity, and enable collaboration in emerging industries such as artificial intelligence, fintech, and cybersecurity.
- **Geopolitical Implications**
 - By developing closer ties between the United States, India, and other participating nations, the corridor has the potential to realign regional geopolitics.
 - For the Middle East, IMEC provides a framework for deeper integration with the West, helping nations like Saudi Arabia and the UAE diversify their economies and modernise their infrastructure.
 - For Europe, the corridor strengthens ties with South Asia, creating opportunities for greater economic and technological collaboration.
- **A Vision for Shared Prosperity**
 - Ultimately, the strategic imperative of IMEC lies in its capacity to transform the global economic landscape.
 - By integrating economies across three continents, focusing on innovation, and addressing energy security, the corridor serves as a beacon of collaborative progress.
 - Its potential to reduce trade barriers, promote sustainability, and enhance regional stability underscores its importance as a visionary project for the 21st century.
 - The successful implementation of IMEC would not only reshape global trade dynamics but also reinforce the shared values of its participants, offering a compelling alternative to unilateral approaches in an increasingly interconnected world.
- **Challenges and Collaborative Opportunities in IMEC's Realisation**
 - **Investment and Financial Viability**
 - Constructing the corridor's physical and digital infrastructure, comprising railways, shipping networks, pipelines, and data communication systems, demands billions of dollars.
 - Governments must allocate resources for IMEC while balancing domestic priorities such as healthcare, education, and existing infrastructure needs.
 - Private-sector participation is critical to closing the investment gap.
 - However, attracting corporate investors requires the development of clear financial frameworks, incentives, and risk-sharing mechanisms.
 - **Political Coordination and Willpower**
 - Each nation has unique economic priorities, strategic goals, and domestic challenges, which could lead to conflicting agendas.
 - For instance, countries in the Middle East, like Saudi Arabia and the UAE, may focus on diversifying their economies beyond oil, while European nations might prioritise environmental sustainability and technological innovation.
 - India and the U.S. may emphasise strategic counterbalances to China's Belt and Road Initiative (BRI), requiring alignment with the broader goals of other participants.
 - However, this challenge also creates a platform for unprecedented diplomatic engagement.
 - Regular summits, multilateral negotiations, and mechanisms like working groups can provide a forum to reconcile differences and develop mutually beneficial strategies.

- **Infrastructure Development Complexities**
 - **Building efficient railways, maritime hubs, and pipelines across multiple countries demands meticulous planning and execution.**
 - **Disparate regulatory standards, varying levels of existing infrastructure, and bureaucratic red tape in different nations can create bottlenecks.**
 - **Additionally, ensuring that all participating countries adhere to uniform construction and safety standards adds another layer of complexity.**
 - **The opportunity here lies in creating collaboration among the world's leading engineering firms, technology providers, and infrastructure experts.**
- **Balancing Sustainability and Economic Growth**
 - **IMEC's vision of integrating green energy solutions, such as hydrogen pipelines and renewable energy sources, aligns with global sustainability goals.**
 - **However, balancing this environmental commitment with economic growth can be challenging, particularly for nations heavily reliant on fossil fuels.**
 - **Transitioning to clean energy infrastructure requires significant investment, technological innovation, and policy changes.**
 - **Countries like India, already a leader in green hydrogen, can play a pivotal role in advancing sustainable practices within IMEC.**
 - **International partnerships with nations like Germany and Japan can further accelerate the adoption of renewable energy technologies, reducing the environmental impact of the corridor.**
- **The Importance of U.S. Leadership in the Realisation of IMEC**
 - **The United States' leadership is pivotal in steering IMEC towards success.**
 - **Under the Trump administration, diplomatic milestones like the Abraham Accords laid the groundwork for initiatives like IMEC by fostering cooperation in the Middle East.**
 - **As the U.S. seeks to consolidate its strategic partnerships, the corridor offers a platform to reinforce its alliances with India and other participants.**
 - **Moreover, the rapport between Donald Trump and Indian Prime Minister Narendra Modi could serve as a catalyst for strengthened collaboration, particularly in convening stakeholders to define IMEC's future trajectory.**
- **Conclusion**
 - **The India-Middle East-Europe Economic Corridor symbolises a bold reimagining of regional economic cooperation.**
 - **By creating integration across diverse nations, the project has the potential to reshape global trade, bolster energy security, and drive technological innovation while addressing environmental challenges.**
 - **The United States and India, as key architects, bear the responsibility of shepherding IMEC to completion.**

4. UGC vs State Government GS 2 (Governance)

- **Why in News:** Six state universities in Tamil Nadu have been without **Vice Chancellors (VCs)** for several months to over a year. The delay in appointing new VCs is due to a disagreement between the **Governor** (acting as the ex-officio Chancellor) and the **Tamil Nadu State Government** regarding the **composition of the search committee** that selects VCs.
- **The Core Disagreement**
 - **Governor's Stance:** The Governor insists that a nominee from the **University Grants Commission (UGC)** must be included in the VC search committee. This is based on the **UGC Regulations, 2018**, which mandate such a nomination.

- ### UGC regulations or State university laws?

The crux of the dispute is whether UGC regulations framed by the UGC's Chairman, Vice-Chairman and 10 other members can supersede provisions of State University Acts which are ordinary laws passed by State legislatures and assented to by the Governor or President.

- **What Needs to Happen Next?**
 - To resolve this issue, the matter needs to be clarified by the **Supreme Court**. The Court must decide
 - That **UGC regulations** are **advisory** for State universities unless adopted by the State.
 - That **Article 254(1)** of the Constitution applies only to conflicts between **plenary laws**, not **subordinate legislation**.
 - That **UGC regulations** do not automatically become part of the UGC Act just by being laid before Parliament.
- **University Grants Commission (UGC)**
 - The University Grants Commission (UGC) is a **Statutory Body** under **Ministry of Education, Department of Higher Education**.
 - UGC came into existence on 28th December, 1953 by an Act of Parliament in 1956.
 - The functions of the UGC are:
 - Planning and coordination of university education
 - Allocation of funds to higher educational institutions (HEIs)
 - Maintenance of academic standards
 - Regulation of the administration of HEIs
 - Regulation of admission of students to HEIs

5. US withdraws from Paris Climate Agreement GS 2 (International Relations)

- **Why in News:** President **Donald Trump** signed an executive order to withdraw the United States from the **Paris climate agreement** once again, marking the second time he has made this move. This came on the same day he was sworn in for a **second term**.
- **What is the Paris Climate Agreement?**
 - The **Paris climate agreement**, established in **2015**, is an international treaty aimed at fighting climate change by limiting global warming.
 - The primary goal is to keep global temperatures from rising **more than 1.5 degrees Celsius (2.7°F)** above pre-industrial levels, with an upper threshold of **2°C (3.6°F)**.
 - The agreement is **voluntary**, meaning countries set their own targets for cutting greenhouse gas emissions, which are primarily caused by the burning of fossil fuels such as **coal, oil, and natural gas**.
 - The Paris agreement aims for countries to make **progressively more stringent commitments** over time, with the next major deadline being **February 2025**, when nations are required to submit new plans to cut emissions. The **Biden administration** had proposed a **60% reduction in U.S. greenhouse gas emissions by 2035** before Trump's action to withdraw.
 - Trump's decision mirrors his **2017 announcement** when he first stated the U.S. would exit the landmark climate deal.

U.S. to withdraw from Paris agreement, expand drilling

The Republican leader vows to declare a 'national energy emergency' to expand drilling in the country; it would take a year to leave the agreement after submitting a formal notice to the UN

Agence France-Presse
WASHINGTON

US. President Donald Trump's administration on Monday announced the United States' intention to withdraw from the Paris climate accord for a second time, a defiant rejection of global efforts to combat planetary warming as catastrophic weather events intensify worldwide.

The Republican leader also said his administration would declare a "national energy emergency" to expand drilling in the world's top oil and gas producer and scrap upcoming stringent pollution standards for cars and trucks, which he has derided as an "electric vehicle mandate."



Step back: Donald Trump is sworn in as the 47th President of the U.S. in the Rotunda of the U.S. Capitol in Washington on Monday. AP

"President Trump will withdraw from the Paris Climate Accord," the White House said in a statement shortly after the Republican was sworn into office, without providing a specific timeline.

It would take a year to leave the agreement after submitting a formal notice to the United Nations framework that underpins global climate negotiations.

Critics warn it could embolden other major polluters like China and India to scale back their own commitments.

It comes as global average temperatures over the past two years surpassed the critical 1.5°C warming threshold for the first time, underscoring the urgency of climate action.

"The inflation crisis was caused by massive over-spending and escalating energy prices, and that is why today I will also declare a national energy emergency. We will 'Drill, baby, drill!'" Mr. Trump said. "We will be a rich nation again, and it is that liquid gold under our feet that will help to do it," he added.

7. Understanding HMPV - A Well-Known but Recently Spotlights Virus GS 2 (Health)

- **Why in News:** As anxieties about respiratory disease outbreaks like HMPV are understandable in the wake of the Covid19 pandemic, science-based communication and response become even more critical for all sections of society.
- **Introduction - HMPV in Context:**
 - **Discovery and prevalence:**
 - Human Metapneumovirus (HMPV), first detected in **2001**, has been circulating in human populations for decades.
 - It is **well-known to the medical community** for its characteristics, prevention, and management.
 - **Current situation in India:** Recent media attention has brought HMPV into focus, though detected cases remain within expected seasonal ranges and do not pose a significant threat.
- **Transmission and Symptoms of HMPV:**
 - **Spread mechanism:** HMPV spreads via droplets, infected surfaces, and physical contact such as handshakes.
 - **Incubation and symptoms:**
 - **Symptoms appear within 3-6 days of infection** and include nasal congestion, sneezing, cough, breathlessness, fever, sore throat.
 - **Severe cases, though rare, may affect infants, the elderly, and immunocompromised individuals.**
- **Prevention and Management of HMPV:**
 - **Precautionary measures:** Key flu-season precautions:
 - Wearing masks.
 - Hand hygiene and avoiding face-touching.
 - Avoiding crowded areas, especially for vulnerable groups.
 - **Treatment:** Symptomatic management includes:
 - Hydration, rest, warm fluids, paracetamol for fever.
 - Monitoring for severe symptoms like difficulty breathing or incessant coughing in high-risk groups.
- **India's Preparedness and Surveillance to Deal with HMPV:**
 - **Health infrastructure:** The Indian healthcare system is equipped to manage HMPV using **RT-PCR** (Real-Time Reverse Transcription – Polymerase Chain) tests, though testing is generally unnecessary for mild cases.
 - **Indian Council of Medical Research's (ICMR) role:** Surveillance reveals HMPV caused approximately 3% of Influenza-Like Illness (ILI) and Severe Acute Respiratory Illness (SARI) cases this season.
 - **Virus trends:** Seasonal trends in virus circulation are monitored; there is no evidence of mutations in HMPV.
- **Key Comparisons - HMPV vs. SARS-CoV-2:**
 - **Differences:**
 - HMPV, unlike the novel SARS-CoV-2 (first detected in 2019), is well-studied with decades of global exposure.
 - HMPV (**Pneumoviridae family**) and SARS-CoV-2 (**Coronaviridae family**) belong to two very different virus families with fundamentally different characteristics and epidemiology.
 - Unlike SARS-CoV-2, **strong seasonality is seen for HMPV.**
 - **Severity:** HMPV generally causes milder illness with minimal long-term effects, unlike SARS-CoV-2.

A virus in perspective

Anxieties about HMPV are understandable after Covid. But it has been in circulation since 2001, our health system is equipped to deal with it



Soumya Swaminathan
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JANDU

FIRST DETECTED IN 2001, HMPV (Human metapneumovirus) is a virus from the family called Pneumoviridae and has been in circulation even earlier in human populations. Hence HMPV is well known to the medical community in terms of its characteristics, illness caused, prevention, detection and management. Further, many people in India would have been exposed to HMPV because it is a common virus. The virus just happens to now be picked up by the media. The few cases of the HMPV detected in India during the current flu season are within the expected range and not a cause for alarm.

HMPV usually spreads from infected people through droplets, infected surfaces, and contact such as handshakes. The typical period between infection and appearance of symptoms is three to six days. Symptoms can include nasal congestion, sneezing, cough, breathlessness, fever, and sore throat; similar to the ones caused by common cold or flu. In almost all cases, HMPV causes only mild symptoms that resolve in a few days. Like most respiratory viruses that affect humans, HMPV can cause more severe respiratory illnesses especially in infants, young children, the very elderly, and those who have weakened immune systems.

HMPV can be prevented by following the usual precautions of the flu season. These include wearing masks, avoiding coughing the face, frequently washing hands, avoiding crowded places, especially by the very young and the elderly. In fact, routinely wearing masks could help reduce many high-burden diseases in India including seasonal flu, pneumonia, and tuberculosis.

The health system in India is fully equipped to deal with HMPV. The virus can be detected through a routine RT-PCR test of the kind used for detecting the Covid19 virus, though this is not needed for most cases. Management of HMPV is similar to that of other respiratory viruses and principally revolves around symptomatic management including hydrating, taking warm fluids, resting, and taking paracetamol for managing high fever. It is important to keep an eye out for warning signs, particularly in infants and the elderly. These include breathing fast, difficulty in breathing, persistent high fever, incessant coughing, vomiting, and infants being unable to feed. One should seek medical attention from a doctor if these symptoms appear.

We can say with a high degree of confidence that the handful of cases of HMPV that have been detected so far in India originate not from outside the country but from within, as is expected during the winter months.

Using its country-wide lab-based surveillance network, the Indian Council of Medical Research (ICMR) has found that

HMPV has caused approximately 3 per cent of the cases of Influenza Like Illness (ILI) and Severe Acute Respiratory Illness (SARI) in the current season. The vast majority of cases have been caused by SARS-CoV-2 (that caused the Covid19 pandemic and is still circulating in the country). Influenza A, Influenza B, RSV and other pathogens. This distribution typically changes month-on-month. Of course, the more we test the more we will detect. For an infection like HMPV, the absolute numbers of cases are not important and need not be counted – only overall trends in virus circulation in the country are of interest to know.

Further, there is no data to suggest that the circulating HMPV has mutated in any way that is of public health concern. ICMR and its institutes continue to track this aspect as well.

Anxieties about respiratory disease outbreaks are understandable in the wake of the Covid19 pandemic. Hence, science-based communication and response become even more critical for all sections of society.

When SARS-CoV-2 was first detected in 2019, it was a truly novel virus for the world. At the time, no one in the world had been exposed to SARS-CoV-2 or had specific immunity against it. In contrast, people across the world have been exposed to HMPV for decades and the virus is well studied. HMPV and SARS-CoV-2 belong to two very different virus families with fundamentally different characteristics and epidemiology, with strong seasonality seen for HMPV unlike SARS-CoV-2. Both viruses cause different severity of symptoms particularly over the long-term and the affected population segments do not fully overlap. HMPV in general causes milder illness with deaths being very rare and no long-term post-viral symptoms.

India's Ministry of Health & Family Welfare has taken prompt actions during this flu season, keeping in mind the sensitivities around HMPV. Learning from the Covid19 pandemic, ICMR and the National Centre for Disease Control (NCDC) are closely monitoring surveillance data across the country. The national and state governments are also communicating proactively. We should use this period to our surveillance and risk communication systems, to learn and refine processes in anticipation of an actually virulent outbreak in the future.

The NITI Aayog published its framework report on future pandemic preparedness and emergency response in August 2020. The recommendations of this report should be implemented on priority along with increased investments in R&D for vaccines and counter measures against pathogens of concern, which have been identified by the World Health Organisation. This will help India to be fully prepared for future outbreaks, epidemics from known and emerging infections.

Finally, air pollution significantly exacerbates respiratory illnesses, including ILI and SARI, and is one of the leading drivers of mortality globally. It's time we swiftly and effectively act on air pollution across the country through a multi-sectoral and all-of-government approach.

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- **Lessons from the Pandemic:**

- **Government action:** Proactive surveillance by the Ministry of Health, ICMR, and National Centre for Disease Control (**NCDC**) builds confidence in handling outbreaks.
- **Preparedness goals:**
 - Recommendations from NITI Aayog's 2024 report stress pandemic readiness through **investments in R&D for vaccines and strengthening emergency response mechanisms**, which have been identified by the WHO.
 - This will help India to be fully prepared for future outbreaks, epidemics from known and emerging infections.
- **Environmental considerations:** Air pollution exacerbates respiratory illnesses like ILI and SARI, highlighting the urgency for a national, multi-sectoral response.

- **Conclusion - Stay Alert, Not Alarmed:**

- HMPV cases in India are no cause for panic, given the virus's well-understood nature and manageable impact.
- **Proactive communication, robust surveillance, and addressing environmental drivers** like air pollution remain critical for public health.

