



**Mains Marathon**  
**Compilation**

**2<sup>nd</sup> to 7<sup>th</sup> October, 2023**

## Mains Marathon Compilation for the Month of October, (First Week) 2023

1. What are the potential consequences of focusing solely on visible mega-infrastructure as symbols of development? How can the environmental and fiscal implications of such projects be addressed effectively?
2. How has the economic compulsion behind the formation of BRICS influenced its trajectory and objectives? How does BRICS differentiate itself from other global alliances like NATO in terms of its goals and functions?
3. Elaborate on the significance of mRNA research conducted by Katalin Kariko and Drew Weissman. How does their work challenge the conventional understanding of mRNA's role in medicine?
4. Define circular migration and differentiate it from other forms of migration. Discuss its historical evolution and the factors that have contributed to its rise in India.
5. Analyze the significance of academic freedom in the context of India's higher education system. How does it impact the quality of education and research?
6. Analyze the challenges faced by states that have effectively controlled their population in terms of political representation and fiscal transfers. How can the federal system ensure equitable representation and financial allocation for such states?
7. Evaluate the challenges and opportunities for India in maintaining its strategic ties with the Maldives, especially in light of the "India Out" campaign.
8. Compare the measures taken by countries like South Africa, Norway, and Mexico in regulating the food industry with the steps taken by India. Suggest measures that the Indian government can adopt to ensure the health and well-being of its citizens.
9. Critically analyze the feasibility and environmental implications of hydropower projects in the seismologically vulnerable Himalayan region.
10. Analyze the implications of Russia's potential decision to revoke the ratification of the global nuclear test ban. How might this impact global nuclear disarmament efforts?

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### 1. What are the potential consequences of focusing solely on visible mega-infrastructure as symbols of development? How can the environmental and fiscal implications of such projects be addressed effectively?

**Introduction:** Give brief context to the question.

**Body:** Consequences of such big projects & fiscal, and environmental implications.

**Conclusion:** Way forward

Political parties usually focus on visible mega-infrastructure as symbols of development as it offers long-term benefits in comparison to populist schemes which have short-term benefits and pose financial stress on the economy.

#### Potential consequences of such mega infrastructure projects:

- **Environmental Impact:** Mega-infrastructure projects often lead to significant environmental damage, including deforestation, habitat destruction, and pollution. Addressing these impacts requires careful planning, mitigation measures, and adherence to environmental regulations. E.g., the Char Dham Yatra project in Uttarakhand.
- **Fiscal Burden:** Large infrastructure projects can be financially burdensome, potentially leading to budget overruns and debt accumulation.
- **Economic Growth:** High-profile infrastructure projects can stimulate economic growth by creating jobs and increasing investment in the region.
- **Improved Connectivity:** Mega infrastructure can enhance transportation networks, reduce congestion, and improve access to markets, benefiting businesses and individuals.
- **Prestige and Image:** These projects can enhance a nation's prestige and image on the global stage, attracting foreign investment and tourists. Iconic projects like the Delhi Metro or the Mumbai-Pune Expressway have already garnered international attention.

#### How to address the environmental & fiscal implications of such projects?

- **Comprehensive Environmental Impact Assessment (EIA):** Before project commencement, the need is to conduct a thorough EIA to assess potential environmental impacts. The focus should be on implementing measures to mitigate these impacts and ensure adherence to environmental regulations.
- **Green Infrastructure:** Invest in sustainable and green infrastructure designs that minimize environmental harm, such as using renewable energy sources, eco-friendly construction materials, and preserving natural ecosystems.
- **Financial Planning:** Implement robust financial planning and risk management practices to prevent budget overruns and unsustainable debt.
- **Inclusive Development:** Design policies that prioritize inclusive development, targeting marginalized communities to ensure they benefit from infrastructure investments.
- **Public Consultation and Participation:** Involve local communities and stakeholders in the decision-making process to ensure that infrastructure projects address their needs and concerns.
- **Inclusive Development:** Design policies that prioritize inclusive development, targeting marginalized communities to ensure they benefit from infrastructure investments.
- **Multi-Modal Approach:** Consider a multi-modal transportation approach that includes public transportation, cycling, and pedestrian infrastructure alongside large-scale projects to reduce congestion and pollution.

#### Conclusion:

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India's pursuit of mega-infrastructure projects as symbols of development should be accompanied by a comprehensive and balanced approach. This approach should prioritize environmental sustainability, fiscal responsibility, inclusive development, and social services to ensure that the benefits of infrastructure development are widespread and long-lasting.

### 2. How has the economic compulsion behind the formation of BRICS influenced its trajectory and objectives? How does BRICS differentiate itself from other global alliances like NATO in terms of its goals and functions?

**Introduction:** Give a brief idea of BRICS.

**Body:** How economics affects BRICS formation & its comparison with NATO.

**Conclusion:** Way forward

Recently, six new members Argentina, Iran, UAE, Saudi Arabia, Ethiopia, and Egypt were inducted into BRICS in August in South Africa. The recent expansion of BRICS's membership collectively wields significant economic influence within the enlarged organization. With the proposed expansion, BRICS will represent 46% of the world's population. Its share of global GDP will rise from 31.5% in PPP terms to 37%.

#### How has economic compulsion affected the formation of BRICS?

- **Counterbalance Western dominance:** The goal to balance out the economic hegemony of Western nations, especially the United States and the European Union, is one of the primary economic drivers behind BRICS. With combined GDP projected to be 36% of the global GDP and the population of its members projected to be 47% of the world population by 2050, BRICS could pose a serious challenge to the dominance of the G7 comprising Canada, France, Germany, Italy, Japan, the U.K., and the U.S.
- **Reduce dependency on the dollar:** India and China both are trying to reduce their dependency on the dollar & are pushing for more trade, investment, and business in their currencies and together, through BRICS, so they can push their currencies as alternative currencies to the dollar.
- **New Cold War:** Many nations have been concerned about ongoing issues between the US & China that obstruct their economic development & so are eyeing India, Brazil & South Africa to provide a counterweight to China's dominance.
- **Reform of Global Financial Institutions:** BRICS has called for reforms in international financial institutions like the IMF and the World Bank to give emerging economies greater representation and decision-making power.

#### How is BRICS different from NATO?

- **Focus on economic development:** BRICS primarily focuses on economic cooperation and development rather than military or security concerns which is the core mandate of NATO highlighted in its principle of collective defense.
- **Diverse Membership:** BRICS includes countries from different continents and regions with diverse political systems, making it distinct from alliances like NATO, which are often region-specific and focused on security.
- **Soft Power and Economic Leverage:** BRICS countries often use their economic clout and soft power to influence global affairs, while NATO relies on military strength and security deterrence.
- **Multilateral Approach:** BRICS generally takes a more multilateral approach to global issues, advocating for a multipolar world order and greater inclusivity in international

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decision-making. NATO, on the other hand, is a Western-led alliance with a specific focus on transatlantic security.

### Conclusion:

BRICS-Plus should be based on rule-based order and the forum should not leave any room for 'economic hegemony' and 'anti-West agenda'. India must find creative ways of blunting Chinese strategy in BRICS-Plus to ensure equitable distribution of power in the group.

### 3. Elaborate on the significance of mRNA research conducted by Katalin Kariko and Drew Weissman. How does their work challenge the conventional understanding of mRNA's role in medicine?

**Introduction:** Give brief context to the question.

**Body:** Significance of their research and how is it different from conventional research.

**Conclusion:** Way forward

Katalin Karikó and Drew Weissman have been honoured with the 2023 Nobel Prize in Physiology or Medicine for their pioneering work in the development of mRNA vaccine technology, which served as the cornerstone for the rapid creation of vaccines during the COVID-19 pandemic, marking one of the swiftest vaccine development efforts in history.

#### What is the significance of their research on mRNA?

- **Vaccine development:** The groundbreaking work of both scientists centred on the modification of mRNA paved the way for a novel approach to vaccine development during Covid 19. This approach dramatically sped up vaccine development, as seen with the COVID-19 vaccines.
- **Future research:** Their work will further inspire scientists to research & innovate in the field of mRNA therapeutics and vaccines. This opens up immense possibilities for personalized medicine and targeted therapies for pharmaceutical companies.
- **Reduce logistics challenge:** The stability of mRNA vaccines eliminates the need for ultra-cold storage conditions, a logistical hurdle commonly faced by traditional vaccines. This feature enhances accessibility in the distribution and administration of mRNA vaccines, particularly in resource-limited environments.

#### How is their work different from the conventional understanding of mRNA?

- **Boost immunogenicity:** The adjustments pioneered by Karikó and Weissman not only boost mRNA stability but also amplify its immunogenicity, thereby rendering it more efficient in triggering the immune system. This breakthrough holds particular significance in situations where conventional vaccines may struggle to elicit a robust immune response.
- **Medical Applications:** Although their research garnered global recognition during the pandemic, the scope of mRNA technology extends far beyond this health crisis. It holds the potential for developing vaccines against various infectious diseases, such as influenza, HIV, and malaria. Furthermore, beyond the realm of vaccines, mRNA technology is under exploration for treatments targeting cancer, genetic disorders, and autoimmune ailments. This adaptability challenges the conventional perception of mRNA as solely a courier for protein synthesis.
- **Fast & flexible process:** The conventional process of developing vaccines is known for its sluggish pace, often spanning several years for research and testing. Karikó and Weissman's work, in contrast, greatly accelerated this timeline. When the COVID-



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19 pandemic emerged, scientists were able to promptly conceptualize and produce mRNA vaccines targeting the SARS-CoV-2 virus. The flexibility of mRNA technology allows for swift adaptations in the event of new virus variants, a critical capability, especially during rapidly evolving pandemics.

### Conclusion

Katalin Karikó and Drew Weissman's research on mRNA has transformed the landscape of medicine and vaccine development. It has not only played a pivotal role in the global response to the COVID-19 pandemic but also holds promise for addressing a wide range of health challenges in the future.

### 4. Define circular migration and differentiate it from other forms of migration. Discuss its historical evolution and the factors that have contributed to its rise in India.

**Introduction:** Describe circular migration.

**Body:** How does it differ from other forms of migration. What factors contributed to its rise?

**Conclusion:** Way forward

Circular migration is temporary & usually repetitive movement of migrant workers between home & host areas, mainly for employment. Unlike permanent migration, where individuals or families move to a new location to settle there permanently, circular migration involves returning to the place of origin after a period of work or other activities at the destination. It is a phenomenon mostly among low-income groups who migrate to avail of seasonally available jobs in another country, city, place, etc.

#### How does it differ from other forms of migration?

- **Permanent migration:** In the case of permanent migration, individuals or families relocate to a new destination with the firm intention of making it their permanent place of residence. Their reasons for this move could include pursuing employment opportunities, educational pursuits, or seeking an improved quality of life.
- **Seasonal migration:** It exhibits resemblances to circular migration, yet it is typically constrained to particular seasons or time frames. Seasonal migrants temporarily relocate to a destination for work that corresponds with specific seasons, such as engaging in agricultural labour during planting or harvest periods, and subsequently return to their original place of residence upon completion of the work.
- **Rural-Urban Migration:** Rural-urban migration entails a unidirectional shift from rural regions to urban centres, where individuals or families make a permanent move in pursuit of improved economic prospects and enhanced living standards. This type of migration does not typically include a cyclical return to the original place of origin.

#### Evolution & Factors contributing to the rise of circular migration in India

- **Historical reasons:** Circular migration in India has a deep-rooted historical background that stretches back to ancient times when it was common practice for laborers and skilled artisans to traverse various regions in pursuit of diverse work prospects, including seasonal agricultural labour, trade activities, or craftsmanship. Under the dominion of British colonial rule, circular migration patterns assumed a more organized and institutionalized character. Laborers were frequently enlisted to work in mines, plantations, and various industries located in far-flung regions within the Indian subcontinent.

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- **Economic disparity:** In India, the uneven development post-liberalization, has led to a lot of circular migration, with States like West Bengal, Odisha, and Bihar having some of the highest rates of out-migration to Delhi, Mumbai & southern States.
- **Seasonal nature of jobs:** India's labour-intensive industries, including agriculture, construction, and brick-making, often exhibit seasonality in their operations. This phenomenon acts as a catalyst for both seasonal and circular migration, as workers migrate to locations where job opportunities are present during particular seasons.
- **Lack of permanent housing:** Certain circular migrants may find themselves lacking the necessary resources or legal status needed for permanent settlement in urban areas. Consequently, they return to their place of origin, primarily due to their restricted access to housing, social services, or formal employment opportunities.

### Conclusion

There is an urgent need to formulate policy to ensure migrant rights are protected & their issues are addressed to integrate them physically, socially, culturally, and politically in destination states.

### 5. Analyze the significance of academic freedom in the context of India's higher education system. How does it impact the quality of education and research?

**Introduction:** Define academic freedom.

**Body:** What is the significance of academic freedom & its impact on quality and research?

**Conclusion:** Way forward

Academic freedom encompasses the liberty to explore, teach, and investigate a wide range of perspectives. It safeguards the rights of both students and educators to delve into, impart, and pursue knowledge and research without undue interference, legal limitations, institutional constraints, or peer influence. India's poor score on the Academic Freedom Index reflects the issues troubling the country's education system with a score of 0.352, which is closely followed by Saudi Arabia (0.278) and Libya (0.238).

#### Significance of Academic Freedom in higher education system

- **Promotes critical thinking:** Academic freedom empowers students and scholars to delve into a broad array of ideas and perspectives, fostering critical thinking and intellectual growth by inspiring individuals to question, scrutinize, and potentially contest established knowledge.
- **Scientific temper:** The advancement of scientific research hinges on the principles of academic freedom. Researchers must possess the liberty to interrogate existing theories, venture into unexplored domains, and introduce innovations without facing limitations. This unrestricted environment is vital for fostering scientific progress and promoting innovation.
- **Cultural and Academic Diversity:** India is a diverse nation with a rich cultural heritage. Academic freedom ensures that the country's educational institutions can explore and celebrate this diversity, providing a platform for the study of different languages, cultures, and traditions.

#### How does it impact the quality of education & research?

- **Global competitiveness:** In an era of growing globalization, academic freedom stands as a pivotal factor in India's ability to compete on the international platform. It serves

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as a magnet for highly skilled faculty and students from across the globe, fostering collaborations and forging partnerships with prestigious institutions worldwide.

- **Quality Research:** Academic freedom ensures that researchers can pursue rigorous and unbiased investigations. When researchers are free from external pressures or constraints, they can produce high-quality research that is not influenced by political, ideological, or commercial interests.
- **Attracting Talent:** Institutions that uphold academic freedom tend to attract talented educators and researchers. Scholars are more likely to work in environments where they can freely explore their areas of interest. This talent pool contributes to the overall quality of education and research.

### Conclusion:

Academic freedom plays a vital role in enhancing the quality of education and research in India by promoting critical thinking, innovation, diversity, and ethical conduct. It is a cornerstone of a vibrant and dynamic educational ecosystem.

### 6. Analyze the challenges faced by states that have effectively controlled their population in terms of political representation and fiscal transfers. How can the federal system ensure equitable representation and financial allocation for such states?

**Introduction:** Give brief context of the question.

**Body:** Highlight challenges faced by southern states in terms of political representation & fiscal transfers.

**Conclusion:** Way forward

The southern states have made notable progress in various areas of social development & economic growth, thanks to their strong linguistic identities and regional resurgence in politics and society. Within the federal political system, shifts in population distribution have enduring effects on both the political landscape and economic geography.

#### Challenges faced by states in terms of political representation & fiscal transfers:

- **Reduced political representation:** In India's parliamentary system, the seats in the Lok Sabha are allocated based on population size. As a result, southern states with controlled populations might experience a relative underrepresentation in the Lok Sabha, which could translate to reduced political influence at the national level.
- **Fiscal transfer:** In India, fiscal transfers like revenue-sharing and grants often hinge on criteria linked to population & suggested by the Finance Commission. As a consequence, southern states that have managed to control their populations may receive comparatively fewer financial resources, potentially affecting their capacity to deliver essential services and pursue development initiatives. The high per capita of southern states also acts as a determining factor for less share of the state from Union tax revenue.
- **Allocation of Resources:** These states may also face challenges in securing a fair share of national resources, including infrastructure development, educational institutions, healthcare facilities, and other central government-funded projects.

#### How can the federal system ensure equitable representation and financial allocation for each state?



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- **Periodic revision of seats:** Periodic revision & review of Lok Sabha seats under the framework of the Constitution taking into account factors beyond population, such as land area, economic contributions, or development indicators can help balance political representation.
- **Decentralization of functions:** The need is to promote decentralization by granting states greater control over their revenue generation and expenditure. Empower states to raise funds through local taxes and allocate resources based on their specific priorities and needs.
- **Cooperative federalism:** Encourage cooperative federalism, where states work together on projects and initiatives that benefit the entire nation. This can facilitate resource sharing and cooperation among states, regardless of their population.
- **Special Grants and Assistance:** Introduce special grants and financial assistance programs for states that have successfully controlled their population. These grants can support development initiatives and compensate for reduced fiscal transfers.

### Conclusion

Any step towards changing political representation in Lok Sabha must be based on National Consensus and the fears of the southern states must be addressed. The finance commission must evolve a formula to reward the states that have controlled their population financially.

### 7. Evaluate the challenges and opportunities for India in maintaining its strategic ties with the Maldives, especially in light of the “India Out” campaign.

**Introduction:** Give recent context to the question.

**Body:** Challenges and opportunities for India in dealing with Maldives

**Conclusion:** Way forward

Recently, President-elect Mohamed Muizzu spearheaded the “India Out” campaign & is perceived to be too close to the Chinese administration which could raise concern in India as both nations share geographical proximity, convergent security interests, and cultural affinities

#### Challenges for India in maintaining its strategic ties with Maldives

- **Increase Chinese influence:** China has been increasing its engagement in the Indian Ocean region, including in the Maldives, by undertaking infrastructure projects and making significant economic investments. India encounters competition in preserving its influence in the face of China's expanding presence. Maldives administration has endorsed China's Belt & Road Initiative raising concern in India about Maldives' role as an important strategic partner of India.
- **"India Out" Campaign:** The "India Out" campaign, which advocates for a reduction in Indian influence in the Maldives, presents a significant challenge. It reflects the sentiments of some sections of the Maldivian population that are concerned about perceived Indian interference in domestic affairs.
- **Protecting India's investments:** The “India out” campaign poses a challenge for India to secure its investments in infrastructure like the Greater Male connectivity project, development assistance in education & health & finally concern for expatriate workers working in Maldives.

#### Opportunities for India to maintain its strategic ties with Maldives

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- **Respect Maldives sovereignty:** India should be sensitive to Maldivian concerns about sovereignty and interference, emphasizing its commitment to respecting the Maldives' independence and supporting its development goals.
- **Strategic partnership:** Maldives' proximity to the west coast of India and its position at the hub of commercial sea lanes running through the Indian Ocean imbues it with strategic importance for India.
- **Neighbourhood First policy:** Under the Neighbourhood First policy and Security and Growth for All in the Region (SAGAR), security cooperation between the two countries has grown. India has reinforced its credentials to be the first responder for Maldives during times of crisis like COVID-19, tsunami crisis, and water scarcity.
- **Increase development assistance:** India needs to increase its development assistance in Maldives which estimates suggest was over 1100 crore during 2018-22. India has invested heavily in projects like water and sanitation, an Addu development project, a cancer hospital, a port project, a cricket stadium, two airport development projects, the Greater Male connectivity project with bridges, causeways, and roads, social housing projects, renovation of a mosque, building the national college for police, among others.

### Conclusion:

The India-Maldives relationship is built on a strong foundation, marked by India's historical support during various crises and people-to-people ties. India needs to actively strengthen its ties with the Maldives while remaining sensitive to the Maldivian perspective and concerns.

### 8. Compare the measures taken by countries like South Africa, Norway, and Mexico in regulating the food industry with the steps taken by India. Suggest measures that the Indian government can adopt to ensure the health and well-being of its citizens.

**Introduction:** Give brief context of the question

**Body:** Highlight measures taken by different countries to regulate food industry.

**Conclusion:** Way forward

The regulation of the food industry is a critical aspect of public health & various nations employ various measures to ensure the safety and well-being of their citizens. As per a recent study by the Madras Diabetes Research Foundation, it is revealed that 11.4% of India's population or 10.13 crore people are living with diabetes and 15.3% of the population, or an additional 13.6 crore people are pre-diabetic.

#### Measures taken by different countries to regulate food industry

- **South Africa:** Comprehensive food labelling is required in South Africa, and this includes information on ingredients, allergens, nutritional value, and place of origin. In order to fight obesity and encourage healthier beverage options, the nation imposed a sugar tax on sugar-sweetened beverages. For several food categories, South Africa adopted salt reduction targets to reduce the amount of salt in processed foods.
- **Norway:** To help people choose healthier products, Norway uses a traffic light system on food labels to show the nutritional quality of products. Norway has outlawed the use of trans fats from industrial production in food goods. The Norwegian government encourages a healthy diet in schools by limiting the kinds of food and drink that are available to children.
- **Mexico:** To combat the obesity problem, Mexico imposed a charge on sugar-sweetened beverages. Front-of-pack warning labels were implemented in the nation to identify

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unhealthy food items with a high sugar, salt, or saturated fat content. Mexico limits the promotion of unhealthy meals in schools and during children's programming.

- **India:** India has established FSSAI to regulate and monitor food safety and standards. FSSAI sets food safety standards and regulations. India has implemented mandatory food labelling regulations, including allergen information and nutritional labelling. The Indian government has taken steps to limit trans fats in food products.

### Measures taken by India to regulate food industry

- **Reducing consumption of ultra-processed foods:** Scientific evidence shows that diets heavy with ultra-processed food and beverages or high in sugar, fat, and salt are risky and can lead to diabetes & cardiovascular disease.
- **Advertising restrictions:** Government needs to protect people's choice of a healthy diet by regulating manipulative strategies of the food industry-defining 'healthy food', a warning label on unhealthy food, and restrictions on the promotion and marketing tactics of unhealthy food and beverages.
- **Awareness Campaigns:** Launch public awareness campaigns to educate citizens about the importance of a balanced diet and the risks associated with excessive consumption of unhealthy foods.

### Conclusion

Effectively regulating the food industry necessitates a comprehensive approach that engages the government, the industry, and consumers. India can benefit from the experiences of other nations while customizing its strategies to align with its distinctive socio-economic and cultural landscape, all to safeguard the health and welfare of its populace.

## 9. Critically analyze the feasibility and environmental implications of hydropower projects in the seismologically vulnerable Himalayan region.

**Introduction:** Give brief context to the question

**Body:** Analyse the feasibility and environmental impact of hydropower projects in the Himalayan region.

**Conclusion:** Way forward

The Glacial Lake Outburst Flood in Sikkim has once again raised questions regarding the impact of hydropower projects in the seismologically vulnerable Himalayan region. The incident happened as heavy precipitation led to the bursting of South Lhonak Lake a glacial lake that caused the rise of water levels in Teesta River that flooded at least four districts.

### Feasibility of hydropower projects in the Himalayan region

- **Hydropower potential:** The Himalayan region's abundance of water resources presents a promising opportunity for the generation of hydroelectric power, owing to its steep slopes and a multitude of rivers that provide substantial hydroelectric potential.
- **Energy Demand:** The region's economic development must meet its rising energy needs. Projects utilizing hydropower can contribute to this objective while lowering reliance on fossil fuels.
- **Economic benefits:** Hydropower projects have the potential to boost local economies and create jobs. Through the sale of electricity, they can also help generate income.

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- **Technological Advances:** Even in seismically active places, safer dams and hydropower infrastructure can now be designed and constructed thanks to modern engineering techniques and technologies.

### Environmental Implications of hydropower projects in the Himalayan region

- **Climate Change:** In the Himalayas, climate change has caused glacial melt and erratic rainfall patterns. These modifications may have an impact on the long-term viability of hydropower projects.
- **Habitat Disruption:** Building dams and building reservoirs can destabilize local ecosystems, displacing wildlife and reducing biodiversity. This is a problem in the biologically diverse Himalayan region.
- **Deforestation:** Land clearing for transmission lines and reservoirs can lead to deforestation, which not only has an impact on the local flora and wildlife but also increases carbon emissions.
- **Sedimentation:** Himalayan rivers contain a huge amount of silt as a result of mountain erosion. Dams can collect sediment, causing erosion downstream and lowering the quality of the water.
- **Seismic Risks:** The Himalayan region is prone to earthquakes, and building large dams and infrastructure in seismically active areas raises concerns about the safety and integrity of these structures.

### Conclusion

The dangerous pro-glacial lakes like Lhonak need careful observation & to siphon water from these lakes in a controlled manner as done in Peru & Nepal. India could set up high-elevation meteorological stations for better forecast & capacity building in the field of glaciology & remote sensing. Careful planning is required to set up an early warning system to raise alarms and help in the evacuation of communities living downstream in nearby villages/towns. The government should allow new projects in the Himalayan region only after careful assessment of its impact on the environment.

### 10. Analyze the implications of Russia's potential decision to revoke the ratification of the global nuclear test ban. How might this impact global nuclear disarmament efforts?

**Introduction:** Give brief context to the question.

**Body:** Impact of Russia's decision on nuclear disarmament efforts.

**Conclusion:** Way forward

Russia's potential decision to revoke the ratification of the global nuclear test ban, which refers to the Comprehensive Nuclear Test Ban Treaty (CTBT), could have significant implications for global nuclear disarmament efforts.

### Impact of such decision on nuclear disarmament efforts

- **Undermine norms of nuclear ban on testing:** Russia's exit from the CTBT would make the international prohibition against nuclear testing more vulnerable. This would lead other nations to think about starting up their testing again, possibly starting a new arms race and raising concerns about global security.
- **Erosion of confidence:** Such an action by Russia would undermine confidence between nuclear-armed and non-nuclear-armed governments, increasing the



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difficulty of upcoming negotiations on arms control and disarmament. Measures to foster confidence would be compromised.

- **Escalation of Arms Race:** The United governments, China, and other nuclear-armed governments may respond similarly to Russia's decision to resume nuclear testing. This might lead to a new period of nuclear rivalry, which would undermine international security.
- **Impact on Non-Proliferation Efforts:** If the CTBT were to become weaker, the overall nuclear non-proliferation regime would be put at risk, making it more difficult to stop the spread of nuclear weapons to new nations or non-state actors.
- **Weakening of Verification:** The CTBT has a global surveillance system that can detect covert nuclear tests. The efficiency of this system may be hampered and it may become more difficult to confirm treaty compliance if Russia withdraws.
- **Diplomatic Backlash:** The international community may criticize Russia's departure and experience diplomatic backlash. Increased isolation and sanctions against Russia could occur, further putting strain on relations with other nations.
- **Effect on Current Arms Control Arrangements:** Russia's decision to leave the CTBT may raise questions about the viability of other arms control arrangements, such as New START, which would make attempts to reduce nuclear arsenals much more difficult.
- **Environmental Concerns:** Nuclear testing has significant environmental consequences, including radioactive contamination. Resuming tests can have long-lasting and far-reaching ecological impacts.

### Conclusion

The prospective decision by Russia to withdraw its ratification of the CTBT would have significant repercussions for international efforts to reduce nuclear weapons. It might start a domino effect of unfavourable outcomes, such as more nuclear testing, a fresh arms race, and heightened international unrest. The CTBT must continue to be supported and strengthened to maintain international peace and security.