



**Mains Marathon**  
**Compilation**

**1<sup>st</sup> Week January, 2024**

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**Evaluate the need for India and Korea to transcend bilateral cooperation and embrace a global strategic approach in defence. How can this shift impact the regional power dynamics in the Indo-Pacific?**

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

**Body:** Highlight factors to transcend the bilateral relationship in global strategic approach in defence.

**Conclusion:** Way forward

The need for India and Korea to transcend bilateral cooperation and embrace a global strategic approach in defence is influenced by various geopolitical and security factors.

**Some key factors that warrant both countries to transcend cooperation**

- **Indo-Pacific's Changing Geopolitical Landscape:** With China emerging as a key actor, the Indo-Pacific area is seeing notable changes in power relations. Maintaining a balance of power in the region is a concern shared by Korea and India, which is why they must work together more broadly.
- **Economic and Trade Interests:** India and Korea have expanded their economic connections with nations outside of their borders. Given the significance of the Indo-Pacific region for international trade, bolstering defense cooperation on a worldwide scale can safeguard shared economic interests and guarantee essential sea lanes for trade.
- **Security Issues:** Terrorism, maritime conflicts, and non-traditional security threats are just a few of the security issues that the Indo-Pacific region must deal with. By working together on defense matters, India and Korea will be better able to handle these issues jointly and promote stability in the area.

**How does this shift impact regional power dynamics in the Indo-Pacific?**

- **Balancing Power:** Collaborative efforts on a global scale can contribute to balancing power in the region, countering any potential dominance by a single nation. India and South Korea, drawing on their UN peacekeeping expertise, can collaborate to enhance regional stability. Sharing insights into peacekeeping and best practices in disaster relief showcases their joint commitment to global peace and security.
- **Regional security:** Both India & Korea could cooperate on matters of regional security by strengthening the alliance structure AUKUS (the U.S., the United Kingdom, Australia), the Quad (India, Japan, Australia, the U.S.), or CHIP 4 Alliance (the U.S., Japan, Taiwan, and South Korea).
- **Technological collaborations:** India and South Korea plan a defense tech collaboration, leveraging their technological strengths. Focused on innovation and self-reliance, the partnership addresses future conflicts, including space and information warfare. Korea's digital capabilities offer security measures against emerging threats. Coordinated efforts to counter terrorism and joint maritime security initiatives in the Indian Ocean align with shared concerns for efficiency and common interests.

**Conclusion**

A strategic, balanced approach, coupled with adaptability to the evolving geopolitical landscape is key to unlocking a robust and enduring defence collaboration, in turn creating a partnership that fosters peace, stability, and prosperity in the Indo-Pacific region.

**Evaluate the transformative impact of radiocarbon dating technology on various fields of science. How has it changed our understanding of the natural universe and human history?**

**Introduction:** Define radiocarbon dating technology.

**Body:** Impact of technology on various field of science and how it changed our understanding of universe and history.

**Conclusion:** Way forward

Radiocarbon dating is a method for determining the age of an object containing organic material by using the properties of radiocarbon, a radioactive isotope of carbon. Radiocarbon dating technology has had a

transformative impact on various fields of science, significantly altering our understanding of the natural universe and human history.

### Impact of dating technology on various fields of Science

- **Earth Sciences:** Radiocarbon dating is a useful tool for dating ancient organic materials like tree rings and ice cores in geology and paleoclimatology. Understanding Earth's geological past, researching historical climate variations, and honing models of environmental changes over millennia have all benefited from this.
- **Paleontology:** The dating of fossils and ancient remains, made possible by radiocarbon dating, has been essential in helping paleontologists reconstruct the evolutionary timelines of different species. It has aided in establishing the historical background of extinct species and clarifying how they relate to living things today.
- **Astrophysics:** To date celestial objects and comprehend cosmic processes, astrophysics has used radiocarbon dating. It is not useful for very far-off celestial bodies, but it has proven useful for dating some kinds of meteorites and cosmic dust.

### How has it changed our knowledge about the natural universe and human history?

- **Archaeology and Anthropology:** By offering a trustworthy way to ascertain the age of organic materials, radiocarbon dating has completely transformed study in these fields. Through the establishment of chronological sequences, reconstruction of ancient cultures, and refinement of timelines, scholars have been able to augment our comprehension of human evolution and migration patterns.
- **Earth Sciences:** Radiocarbon dating is a useful tool for dating ancient organic materials like tree rings and ice cores in geology and paleoclimatology. Understanding Earth's geological past, researching historical climate variations, and honing models of environmental changes over millennia have all benefited from this.
- **History and Art History:** Historical documents, artwork, and artifacts have all been dated using radiocarbon dating in historical studies. This technique helps to create a more accurate historical narrative by enabling a more precise chronological understanding of historical events and the dating of culturally significant objects.
- **Study on Climate Change:** By assisting scientists in reconstructing historical climate fluctuations, radiocarbon dating offers useful data for climate change studies. Understanding the effects of human activity on the environment and projecting future climatic patterns are made easier with the help of this historical viewpoint.

### Conclusion

The use of radiocarbon dating technologies has revolutionized a number of scientific fields. It is a vital instrument in scientific research because of its accuracy in dating organic materials, which has greatly increased our understanding of Earth's natural processes, human history, and the wider universe.

### Examine the implications of the Maldives' decision to revoke the agreement with India for joint hydrographic surveys, in the context of India's regional security and strategic interests.

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

**Body:** Highlight the impact of the response on regional security and strategic interests of India

**Conclusion:** Way forward

The Maldives' recent move to annul the agreement with India for collaborative hydrographic surveys in Maldivian waters has stirred disappointment within Indian media and strategic circles. Signed during Prime Minister Narendra Modi's 2019 visit to the islands, the accord was viewed as a significant symbol of the robust defence ties between India and the Maldives.

### Implications for regional security and strategic interests

- **Geopolitical Implications:** The choice could affect the balance of power in the Indian Ocean region and have wider geopolitical ramifications. It might have an impact on India's capacity to sustain stability and security as well as its strategic outreach, especially in light of conflicting influences from other regional and international actors.
- **Strategic Importance of Hydrographic Surveys:** The growth of blue economies, navigation, and maritime security all depend on hydrographic surveys. The revocation might make it more difficult for India to compile in-depth information about the maritime environment in the area, which could impair its capacity for strategic planning and response.
- **Effect on Defence Ties:** The agreement's annulment suggests that India and the Maldives' defence ties may be put under stress. Joint hydrographic surveys were seen as a cooperative endeavour, and the decision would erode confidence and coordination in defence cooperation.
- **Effect on Regional Security Architecture:** There may be a wider regional security architecture affected by the revocation. India is crucial to the upkeep of maritime security in the Indian Ocean, and any pressure on its relations with its neighbours might have an impact on international efforts to tackle shared security issues.
- **Economic and Development collaboration:** India and the Maldives' collaboration in several areas may be affected by the decision. Hydrographic survey collaboration is frequently linked to larger programs for sustainable development and resource management in marine areas.
- **Concerns about Navigational Safety:** Hydrographic surveys help ensure safe navigation, particularly in areas vulnerable to natural disasters. Joint surveys are lacking, which could affect both domestic and foreign marine traffic by raising questions about the safety of navigation in Maldivian seas.

## Conclusion

The best option for the Maldives is to enhance maritime awareness and security in partnership with India. The new administration must recognize that it is not India but China that seeks to weaponize ocean surveys. India would need to carefully navigate these challenges to safeguard its strategic interests and maintain stability in the Indian Ocean region.

## Analyze the factors that have contributed to the strain in the global nuclear order since the Cold War, with a focus on the changing geopolitical landscape and the role of major powers.

**Introduction:** What is the global nuclear order?

**Body:** Highlight factors that have led to a strain on the global nuclear order

**Conclusion:** Way forward

The Global Nuclear Order was created in the shadow of the Cold War, with the U.S. and the U.S.S.R., leading the Western and the Socialist blocs, respectively. The need to create a new order was felt as two nuclear superpowers needed bilateral mechanisms to prevent tensions from escalating to the nuclear level & as nuclear weapons are dangerous their spread should be curbed.

### Factors that have contributed to strain in nuclear order

- **Power Shifts and Multipolarity:** The post-Cold War era saw the emergence of several power centres, which resulted in the world becoming multipolar as opposed to bipolar. Establishing standards and conventions have been challenged by the comeback of Russia as a significant role and the rise of new nuclear-armed states like North Korea, complicating the global nuclear picture.
- **Arms Control Agreement Erosion:** The tension has been exacerbated by the deterioration of important weapons control accords, including the Open Skies Treaty and the Intermediate-Range Nuclear Forces (INF) Treaty. Fears that the nuclear arms control system may fall apart have increased as a result of key powers, particularly the US, pulling out of these accords.
- **Modernization and Technological Advancements:** To improve their nuclear arsenals, major nations like the United States, Russia, China, and others have conducted modernization programs.



Concerns about an arms race and the possibility of upending the international nuclear order have been raised by the development of new and more advanced nuclear technology.

- **Regional conflicts and challenges to proliferation:** The global nuclear order has been stressed by ongoing regional wars and the proliferation of nuclear weapons in some regions, most notably North Korea and Iran. The inability to effectively handle these issues has raised international tensions and created a sense of unease.
- **Geopolitical Rivalries and Strategic Competition:** The possibility of nuclear weapons being used in regional conflicts has become more pressing due to geopolitical rivalries and strategic competition among major powers, especially the United States, Russia, and China. The efforts to promote international collaboration on nuclear disarmament have been hampered by the return of great power competition.
- **Changes in US Nuclear Policy:** Other nuclear-armed governments are becoming concerned about changes in US nuclear policy, which include a greater focus on low-yield nuclear weapons and a more accommodating attitude to nuclear deterrence. The stability and perceived credibility of the international nuclear order are affected by this change.
- **Diplomatic deadlocks and trust deficits:** The advancement of nuclear disarmament measures has been hampered by diplomatic deadlocks and trust deficits among major states. Tensions are increased by a lack of communication and collaboration, which makes it more difficult to reach an agreement on non-proliferation and arms control measures.

### Conclusion

The fundamental shift in US domestic policy with a focus towards “inwards” rather than acting as a security guarantor to its allies has raised questions in the minds of its allies about its ‘extended deterrence’ guarantees, especially in East Asian nations like Japan, South Korea, and Taiwan. Addressing these factors requires renewed diplomatic efforts, commitment to arms control agreements, and a multilateral approach to foster a more stable and secure global nuclear order.

### Analyze the implications of the International Monetary Fund’s observations on India’s debt sustainability and its exchange rate regime. Discuss the challenges and strategies for India in managing its long-term debt sustainability in the context of global economic trends.

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

**Body:** Highlight implications, challenges, and strategies on debt sustainability and exchange rate regime.

**Conclusion:** Way forward

IMF in its latest report has raised concerns about the long-term sustainability of India’s debts that could be 100% of GDP under adverse circumstances by fiscal 2028.

### Implications of such observations

- **Creditworthiness:** India's creditworthiness in the international financial markets may be greatly impacted by the IMF's observations on the sustainability of its debt. Unfavourable evaluations could result in increased borrowing expenses for the nation.
- **Investor Confidence:** Investor confidence may be impacted by the IMF's analysis. While unfavourable assessments can cause capital withdrawals, favourable ones might draw in foreign investment.
- **Competitiveness:** The exchange rate regime affects the competitiveness of India's exports. A flexible regime allows for adjustments to changing economic conditions, but it can also lead to volatility.
- **Inflation Management:** The exchange rate is crucial in managing inflation, especially in an import-dependent economy like India. Fluctuations can impact the cost of imported goods and services.

### Challenges for India in managing its long-term debt sustainability

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- **High Fiscal Imbalance:** Historically, India has struggled to control its fiscal imbalance. An ongoing budget deficit is a result of high government spending and subsidies, which may make debt sustainability difficult.
- **External Debt:** Foreign currencies make up a sizable amount of India's debt. Variations in exchange rates may raise the cost of debt payments.
- **Volatility:** A floating exchange rate can lead to short-term volatility, impacting businesses and complicating long-term planning.
- **External Shocks:** Sudden external shocks, such as global economic downturns or geopolitical events, can lead to currency depreciation, affecting the overall economic stability.

### Strategies for India in managing its long-term debt sustainability

- **Sustainable Development:** Debt sustainability can be achieved by coordinating debt with sustainable development objectives and concentrating on long-term economic benefits investments.
- **Accountability and Transparency:** Trust is developed with creditors and investors when public finances are transparent and accountable debt management policies are upheld.
- **Examining Global Economic Trends:** It is easier to adjust policy to reduce external risks and take advantage of opportunities when one is aware of and sensitive to global economic trends.
- **Debt Restructuring:** If a prudent debt restructuring plan is in line with the nation's long-term economic goals, it may be explored in the face of difficulties.

### Conclusion

The management of India's long-term debt sustainability is reliant on prudent fiscal management, effective policy initiatives, and tactical reactions to international economic developments. To guarantee sustainable and inclusive development, India must strike a balance between the requirement for economic growth and responsible debt management in compliance with the Fiscal Responsibility and Budget Management Act (FRBMA).

### Suggest policy reforms for the selection and training of top-level officers in CAPFs. How can these reforms contribute to the operational efficiency and effectiveness of these forces?

**Introduction:** Describe the role of CAPF in India.

**Body:** Highlight reforms in CAPF to enhance the efficiency and effectiveness of these forces

**Conclusion:** Way forward

The Central Armed Police Forces (CAPFs) play a crucial role in maintaining internal security in India. Policy reforms in the selection and training of top-level officers in CAPFs can significantly enhance operational efficiency and effectiveness. The administration has not given several important issues enough attention, such as the ad hocism in the appointment of chiefs of central armed police forces, which is negatively affecting their battle readiness, discipline, and morale.

### Reforms that can be considered

- **Selection Process:** The government ought to establish regulations for the promotion of officials to the position of CAPF Director General. Thus, it might be established that an officer should not be considered for elevation to the position of Director General in any CAPF unless he has held charge of the armed police formation in the state for at least two years or served as DIG/IG in the field for at least two years in any of the CAPFs.
- **Delay in the posting of the head of CAPF:** A major concern is the delay in posting a successor to the top post after the retirement of an incumbent. Considering the vital role of these forces the position of the top post should not remain vacant & it requires planning and timely decisions at the highest level.
- **Personnel Reforms:** Regular stress management workshops should be held, and yoga and meditation should be incorporated into the daily workout regimen for CAPF staff members. In

addition, it may be investigated to provide housing close to the force's deployment point so that employees can visit their families.

### How can these reforms increase the efficiency and effectiveness of these forces?

- **Increase State's capacity:** States should establish armed police units and supplement them with sufficient equipment and training to lessen the workload on the CAPF. The federal government need to support state governments in their endeavours by offering financial support and other forms of aid required by the states to strengthen their armed forces.
- **Modernization of CAPFs:** The Ministry of Home Affairs (MHA) must identify and address bottlenecks in the procurement process. Additionally, considering the evolution of hybrid warfare, training content should encompass a blend of traditional aspects and cutting-edge technologies like Information and Communication Technology (ICT) and cybersecurity.

### Conclusion

Finally, the Centre must appoint a commission to look into multiple issues faced by personnel of CAPF and suggest short-term and long-term measures to maintain their performance at a high level.

## Evaluate the role of non-governmental organizations (NGOs) in shaping India's socio-political landscape, especially in the context of secularism and citizen well-being. How has the recent state approach towards NGOs influenced this role?

**Introduction:** What are NGOs?

**Body:** Highlight the role of NGOs in shaping India's socio-political landscape and recent state approach towards NGOs.

**Conclusion:** Way forward

NGOs are voluntary organizations, that work toward a social cause and social justice. They have assumed a significant space in civil society. Non-governmental organizations (NGOs) play a significant role in shaping India's socio-political landscape, particularly in the realms of secularism and citizen well-being.

### Role of NGO in the context of secularism and citizen well being

- **Minority Rights Advocacy:** In India, a large number of non-governmental organizations (NGOs) strive to safeguard the rights of ethnic and religious minorities. Their promotion of tolerance, understanding, and equal rights for all citizens, regardless of their religious or cultural roots, is a vital part of their advocacy for secularism.
- **Religious Harmony and Dialogue:** To promote religious harmony and understanding, many non-governmental organizations (NGOs) organize interfaith dialogues and community-building events.
- **Social Welfare Programs:** Through the implementation of social welfare programs in areas like women's empowerment, healthcare, education, and poverty alleviation, NGOs actively contribute to the well-being of citizens. Their community-based efforts frequently close the gaps left by government measures, particularly in isolated and underprivileged areas.
- **Human Rights Advocacy:** In India, NGOs are essential for keeping an eye on and promoting human rights. They strive to guarantee that people may access the legal system, are shielded from prejudice, and are protected from violations by both state and non-state entities.

### Recent State approach towards NGOs

- **Increased Monitoring and Regulation:** Citing worries about NGOs' funding sources, transparency, and suspected meddling in domestic issues, the Indian government has been monitoring and regulating them more closely in recent years. There are now more restrictions on foreign funding for non-governmental organizations (NGOs) under the Foreign Contribution (Regulation) Act (FCRA), which makes their operations more difficult.
- **Effect on Allocation:** Tighter restrictions on foreign funding have affected many NGOs' ability to maintain a stable financial position, which has limited their ability to implement programs and



operations. This has primarily impacted institutions that get a large portion of their money from foreign donors.

- **Strict laws:** Recently amendments have been made to laws like the Prevention of Money Laundering Act, 2002, Foreign Contribution (Regulation) Act, 2010 (FCRA) which has made it difficult for NGOs & political parties to access foreign funds. Domestic funding is also affected through amendments to the Income-Tax Act making renewals certificates mandatory.

### Conclusion

The balance between necessary regulation and preserving the autonomy of NGOs is crucial for fostering a vibrant civil society that contributes positively to India's socio-political landscape.

### Examine how advancements in Artificial Intelligence (AI) are redefining the concept of sovereignty in the global context. Discuss the implications for international law and governance.

**Introduction:** Describe AI technology briefly.

**Body:** Implication of AI for international law and governance.

**Conclusion:** Way forward

Artificial intelligence (AI) refers to the simulation of human intelligence in machines. These are programmed to think like humans and mimic their actions. Advancements in Artificial Intelligence (AI) have significant implications for the concept of sovereignty in the global context, challenging traditional notions and necessitating a redefinition of international law and governance.

#### How AI is redefining sovereignty and its implications?

- **Data Sovereignty and Ownership:** AI's training and decision-making processes mostly rely on enormous volumes of data. Data ownership and control become essential components of sovereignty. The idea of "data sovereignty" emerged as a result of countries claiming more and more of their right to manage and control the flow of data inside their borders. The ability of states to regulate data within their borders and cross-border data flows is affected by this.
- **AI-Driven Self-Sustaining Systems:** The creation and application of autonomous systems challenge established ideas of territorial sovereignty. One example of this is the military's use of AI. The application of AI in cyberwarfare, drones, and autonomous vehicles raises concerns about states' abilities to regulate and control technologies that can function outside of national borders.
- **Cyberthreats and Security:** Artificial intelligence (AI) presents security hazards in addition to being a useful instrument for progress. The distinction between accountability and responsibility is muddled by the use of AI in cyberattacks and by the possibility of AI acting offensively on its own. To build rules and regulations that prevent misuse, worldwide cooperation is necessary to address these security concerns.

#### Implications for international law and governance

- **Ethical and Legal Challenges:** Conventional legal frameworks are put to the test when AI is used in decision-making processes, particularly those with important social and ethical ramifications. AI systems that make decisions that affect people or societies raise issues of transparency, accountability, and responsibility. It becomes imperative to modify legislative frameworks to tackle these obstacles to maintain the values of equity and justice.
- **AI in International Relations:** AI is being utilized more and more in international negotiations, policy analysis, and diplomatic endeavours. Massive volumes of data may be analyzed by automated systems to support decision-making, which could have an impact on diplomatic tactics. Within the context of established diplomatic procedures, new dynamics brought about by the application of AI to international relations must be taken into account.
- **International Cooperation and Standards:** International cooperation between academics, businesses, and governments is frequently necessary for AI progress. The idea of sovereignty is put to the test by the global character of AI research and development, which calls for international

collaboration to set norms, standards, and ethical principles that will govern AI technologies. Different standards and regulatory problems could result from the absence of a consistent global approach.

### Conclusion

The prevalence of disinformation, misleading content, and hate speech is a pressing concern. The key challenge is finding effective measures to prevent these negative influences in governance and development, ensuring truthfulness and accountability in the process.

### Evaluate the economic benefits of removing lead from petrol, as seen in the United States. How can such environmental policies contribute to the overall economic growth of a nation?

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

**Body:** What are the benefits of unleaded petrol?

**Conclusion:** Way forward

The removal of lead from petrol in the United States has been associated with several economic benefits, as well as positive environmental and public health outcomes.

#### Benefits of removing lead from petrol

- **Healthcare Cost Savings:** The removal of lead from petrol has resulted in a notable drop in the general public's lead exposure, particularly among youngsters. A lower incidence of lead poisoning and related health problems has been associated with this decrease in lead exposure. Lower incidences of lead-related health problems result in reduced healthcare costs for treating conditions such as developmental delays, learning disabilities, and behavioural issues.
- **Enhanced Workforce Productivity:** It is well established that exposure to lead can harm children's cognitive development. People are more likely to reach their full cognitive potential when lead exposure is reduced, which creates a workforce that is more talented and productive. Improved overall economic performance, greater productivity, and enhanced innovation are all influenced by a workforce that is healthier and more capable.
- **Benefit to Property Values:** Communities with reduced lead contamination levels are probably worth more money. Lower levels of lead exposure make communities safer and healthier, which increases their appeal as locations to live and invest. Rising property values can boost the economy by bringing in more tax money for local governments and encouraging real estate development.

#### How can such policies contribute to overall economic growth?

- **Regulatory Compliance and Global Trade:** Putting rules in place to lower lead emissions shows a dedication to safeguarding the environment and the general public's health. This can improve a nation's standing abroad and compliance with international environmental requirements. By removing trade barriers relating to environmental concerns, meeting or exceeding environmental rules can have a favourable impact on international trade partnerships.
- **Jobs in Alternative Industries:** Developing and implementing alternative technologies, including electric cars and unleaded fuels, is a common step in the process of moving away from petrol. This shift may lead to the creation of new jobs in the sustainable transportation and clean energy sectors. Long-term economic growth can be facilitated by investing in environmentally friendly technologies, which can also position the nation as a leader in developing markets and encourage innovation.
- **Environmental Cleanup and Restoration:** By keeping lead out of the air, soil, and water, the extraction of lead from petrol helps to protect the environment. In doing so, natural resources, wildlife, and ecosystems are all protected. Through the preservation of biodiversity, the guarantee of sustainable resource use, and the reduction of expenses related to environmental deterioration, environmental conservation initiatives can result in long-term economic advantages.

## Conclusion

India's fuel quality standards have been gradually tightened since the mid-1990s & in 2000 unleaded gasoline was mandated nationwide to protect the health of our citizens.

## Evaluate the role of healthcare professionals in exacerbating or controlling the spread of antimicrobial resistance. What measures can be taken to ensure rational prescription of antibiotics?

**Introduction:** Describe Antimicrobial resistance.

**Body:** Highlight the role of healthcare professionals in limiting or exacerbating the spread of antibiotics & measures to limit the overprescription of antibiotics.

**Conclusion:** Way forward

Antimicrobial resistance occurs when microbes (bacteria, viruses, fungi, and parasites) become resistant to antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics). Healthcare professionals play a crucial role in either exacerbating or controlling the spread of antimicrobial resistance (AMR).

### Role of healthcare professionals in controlling or exacerbating the spread of AMR

- **Overprescription of Antibiotics:** In cases where antibiotics are ineffective, medical practitioners may give antibiotics for viral infections unnecessarily or inappropriately. Antibiotic resistance develops as a result of this behaviour.
- **Inadequate Diagnostic Procedures:** Before administering antibiotics, medical professionals occasionally neglect to carry out comprehensive diagnostic testing to pinpoint the precise source of an infection. This can result in the prescription of broad-spectrum antibiotics when more appropriate treatment is focused.
- **Incomplete Treatment Courses:** Patients may not finish the entire course of antibiotics that are given, which could expose bacteria to medicines in part. Resistant strains may survive as a result of this insufficient treatment.
- **Lack of Surveillance and Monitoring:** There may be inadequate monitoring of antibiotic use and resistance patterns in healthcare settings, making it challenging to identify and address emerging resistance issues promptly.

### Measures to ensure rational prescription of antibiotics

- **Better Diagnostics:** Promoting the use of quick diagnostic tests can assist medical practitioners in more precisely determining the exact source of infections. This decreases the need for needless antibiotic prescriptions and enables targeted treatment.
- **Incentives for Responsible Prescribing:** Healthcare systems can put in place incentive programs that pay medical practitioners for administering antibiotics appropriately and responsibly. This could be awards, cash incentives, or chances for career advancement.
- **International Cooperation:** As AMR is a worldwide concern, international cooperation is crucial. To effectively address antibiotic resistance, healthcare professionals and policymakers should collaborate to exchange information, best practices, and resources.
- **Regulatory Measures:** Governments and regulatory bodies can enforce policies that regulate the sale and distribution of antibiotics. This may include requiring prescriptions for antibiotic medications, limiting over-the-counter availability, and monitoring antibiotic usage in healthcare facilities.

## Conclusion

The recent report of the Health Ministry '*First Multicentric Point Prevalence Survey of Antibiotic Use at 20 NAC-NET Sites India 2021-22*' conducted by the National Centre for Disease Control has made startling observations regarding overprescription of antibiotics in India. It is essential that doctors, government & WHO establish systems that strictly regulate the use of antimicrobials and promote and fund research on newer antibiotics to curb misuse and overuse of antimicrobials.