

INTERNATIONAL RELATION

❖ **Have there been changes in India's foreign policy?**

➤ **CONTEXT:** By all standards, 2022 was a difficult year on the geopolitical and diplomatic stage, especially after Russia's invasion of Ukraine in February. For India, the choices grew more difficult, given its strategic ties with the U.S. and Europe and traditional ties with Russia.

- The most significant defence of India's foreign policy was made by External Affairs Minister S. Jaishankar, who won accolades back home for calling out western "hypocrisy" on Russian oil flows to India. However, the government continues to take criticism over its China policy and the stand-off at the Line of Actual Control.

➤ **How did India handle the Ukraine crisis?**

- The war in Ukraine saw the government spell out its version of "non-alignment", as it sought to keep a balance in the growing polarisation between the U.S. and the European Union on one side, and Russia on the other. In the past 10 months, the war has led to thousands of deaths, and nearly 8 million refugees fleeing the country. Meanwhile, a slew of sanctions by the West meant to target the Russian economy led to food and fuel shortages and price increases, which worried India.

- The government's stand through the year was a tough tight-rope walk: with the Prime Minister making his discomfort with the war clear directly to Russian President Vladimir Putin with the words "This era is not for war", that became a catchphrase for the West, but at the same time refusing to accept western sanctions, growing military and oil trade with Russia, and seeking rupee-based payment mechanisms to facilitate them.

- Most significantly, in more than a dozen resolutions at the UNSC, UNGA, IAEA, Human Rights Commission, and other multilateral platforms seeking to censure Russia for the invasion and humanitarian crisis, India chose to abstain. India's stand was guided by its national interests.

➤ **What were the other highlights in foreign policy this year?**

- The year was marked in many ways for Indian diplomacy, which will be at the forefront in 2023, during India's presidency of the G-20 and chairship of the Shanghai Cooperation Organisation (SCO), which will bring all the major leaders of the world to Delhi for summits.

- In 2022, India returned to Free Trade Agreements, after a hiatus of several years when the present government had called for a review of all FTAs, scrapped all Bilateral Investment Treaties (BITs) and walked out of the 15-nation Asian Regional Comprehensive Economic Partnership (RCEP).

- In 2022, India signed trade agreements with the UAE and Australia, and hopes to progress on talks with the EU, Gulf Cooperation Council and Canada for others.

- India also joined the U.S.-led Indo-Pacific Economic Forum (IPEF), although it later decided to stay out of trade talks.

- At the G-20, India is expected to highlight climate change transitions, "women-led" development and multilateral reform, among other key issues.

➤ **What about ties with neighbours?**

- In the neighbourhood, India's foreign policy was marked by economic assistance to Sri Lanka in the midst of its collapse, and regional trade and energy agreements with Bangladesh, Bhutan, and Nepal that could see a South Asian energy grid emerge.

- India has also strengthened ties with Central Asian countries on connectivity. The government kept channels open with repressive regimes like Afghanistan's Taliban and the Myanmar Junta, opening a "technical mission" in Kabul and sending the foreign secretary to Nay Pyi Taw to discuss border cooperation.

- Recently, India abstained on a UNSC vote calling for Myanmar to end violence and release political prisoners. With Iran too, where protests against the killing of activist Mahsa Amini have brought thousands onto the streets, India has steered clear of any criticism.

- However, with Pakistan, ties remain flat-lined, with a big showdown at the UN in December 2022, between India and Pakistan foreign ministers.

➤ **Has there been any progress on the LAC stand-off with China?**

- Despite a visit to Delhi by China's Foreign Minister Wang Yi, and disengagement at some stand-off points, India-China tensions at the Line of Actual Control remained high, and the year ended with an unsuccessful Chinese PLA attempt to take Indian posts at Yangtse in Arunachal Pradesh, signalling more such violent clashes could follow in 2023.

- The government took some criticism from the Opposition over its failure to hold an open debate in Parliament to discuss the LAC stand-off that has been ongoing since April 2020, especially after Prime Minister Modi meeting with Chinese President Xi Jinping at the Bali G20 meet in November 2022.

- Regardless of the fraught state of ties, India is due to host Mr. Xi twice in 2023, at the G-20 and SCO summits, which could create opportunities for talks to end the stand-off.

HEALTH

❖ **The emerging Omicron sublineages across the world**

➤ **CONTEXT:** Since the initial outbreak in 2019 in Wuhan, China, the world has seen multiple repeated waves of COVID-19 infections over the past few years, largely driven by the emerging variants of concern (VOCs) of the causative virus, SARS-CoV-2.

- However, until recently, China remained successful in containing the spread of the disease owing to its zealous "zero-COVID" policy, which included mass quarantines, lockdowns, and early vaccination programmes. As a result of the abrupt lifting of the policy, the country is now facing a surge of COVID-19 cases.

➤ **What are the SARS-CoV-2 lineages circulating in China?**

- Over the course of the pandemic, genome sequencing of the virus and rapid sharing of data has been key to tracking the evolution of SARS-CoV-2 and early identification of emerging variants.

- SARS-CoV-2 sequencing data previously submitted from China to GISAID, a globally accessible repository of SARS-CoV-2 genome sequences, shows that over the months, the country has seen isolated cases linked to multiple variants of the virus seen previously. These include Delta and its sublineages in 2021, and Omicron and its sublineages in 2022.
- Only 30 sequences of SARS-CoV-2 collected between October-December 2022 are available on GISAID from China. These belong to 14 different lineages of SARS-CoV-2, all of which are Omicron sublineages, including BA.5.2, BQ.1.1, BF.7, BF.5, BA.2.75 and the recombinant lineage XBB.
- Of the 14 genomes from China available on GISAID for the month of December 2022, two genomes each belong to the Omicron sublineages BF.7, BF.5 and BA.2.75, while one genome belongs to the recombinant lineage XBB.
- Lineages BF5 and BF.7 of SARS-CoV-2, while first detected in January 2022 in France, have also been previously detected in India in May and July 2022, respectively, while lineage BA.2.75 was first detected in India as early as December 2021.
- The recombinant lineage XBB has also been previously detected in early 2021 in multiple countries in Asia, including India and Singapore. With the limited number of genomes available corresponding to the ongoing outbreak, we are still in the dark about the variants driving the wave in China.
- **Which Omicron sublineages are under monitoring?**
- Owing to the large-scale spread of Omicron and its sublineages across the world, the World Health Organisation (WHO) has added another category of variants referred to as 'Omicron subvariants under monitoring'.
- Currently, the Omicron subvariants being monitored under this category include BA.2.75, BA.4.6, XBB, BA.2.3.20 and sublineages of BA.5 including BF.7 and BQ.1.
- The first sample belonging to lineage BA.4.6 dates back to December 2021, lineage BA.2.3.20 was detected in multiple countries recently in August 2022.
- **What is the XBB lineage?**
- The SARS-CoV-2 virus has the potential to evolve by exchanging large fragments of the genome, called recombination.
- First detected in January 2022, the XBB lineage of SARS-CoV-2 resulted from recombinant between Omicron sublineages BA.2.10.1 and BA.2.75.
- The lineage was largely detected in genomes from Singapore and India, with the largest number of genomes on GISAID belonging to the U.S. and India.
- Although detected in over 30 countries, there has been no observed association of the lineage with a sustained increase in new cases in India but has become now the dominant variant in many countries seeing an uptick in infections. Monitoring the prevalence of XBB and its sublineages will therefore be essential in the days to come.
- Although BA.5 was first detected in November 2021, certain BA.5 sublineages having mutations at key antigenic sites in the virus have emerged over the months, including BF.7, BF.14 and BQ.1. Lineage BQ.1 is a BA.5 sublineage having the mutations K444T and N460K in the spike protein of the virus.
- Accounting for over 5% of global cases, the variant has been seen to have a growth advantage over other lineages in highly vaccinated regions including Europe and the U.S., thus making it important to monitor the spread and evolution of this sublineage.
- With waning immunity to vaccination and prior Omicron waves leading to reinfections, genomic surveillance will be the key to understanding the continuing evolution of Omicron. Being immune-naive to Omicron, an overwhelming surge of cases in a populous country such as China will not only cause massive loss to life but will also allow the virus to mutate with the potential to create new variants.
- Wide-ranging efforts are thus urgently required to monitor the COVID-19 situation in China and other countries, including genomic surveillance and the use of time-tested methods with significant scientific evidence.

PRELIMS

1. **Why Antarctica's emperor penguins could be extinct by 2100**
- **CONTEXT:** A new research has found that Greater conservation efforts are needed to protect Antarctic ecosystems, and the populations of up to 97 per cent of land-based Antarctic species could decline by 2100. The study, also found just USD 23 million per year would be enough to implement ten key strategies to reduce threats to Antarctica's biodiversity.
- **Vulnerability of Antarctica**
- This relatively small sum (USD 23 million) would benefit up to 84% of terrestrial bird, mammal, and plant groups.
- The study identified climate change as the biggest threat to Antarctica's unique plant and animal species. Limiting global warming is the most effective way to secure their future.
- Threats to Antarctic biodiversity Antarctica's land-based species have adapted to survive the coldest, windiest, highest, driest continent on Earth.
- The species includes two flowering plants, hardy moss and lichens, numerous microbes, tough invertebrates and hundreds of thousands of breeding seabirds, including the emperor and Adélie penguins.
- Antarctica also provides priceless services to the planet and humankind. It helps regulate the global climate by driving atmospheric circulation and ocean currents, and absorbing heat and carbon dioxide. Antarctica even drives weather patterns in Australia.
- Some people think of Antarctica as a safe, protected wilderness. But the continent's plants and animals still face numerous threats. Chief among them is climate change. As global warming worsens, Antarctica's ice-free areas are predicted to expand, rapidly changing the habitat available for wildlife. And as extreme weather events such as heatwaves become more frequent, Antarctica's plants and animals are expected to suffer.

- What's more, scientists and tourists visiting the icy continent each year can harm the environment through, for example, pollution and disturbing the ground or plants. And the combination of more human visitors and milder temperatures in Antarctica also creates the conditions for invasive species to thrive.
- **What study found**
- Study involved working with 29 experts in Antarctic biodiversity, conservation, logistics, tourism and policy. The experts assessed how Antarctica's species will respond to future threats.
- Under a worst-case scenario, the populations of 97% of Antarctic terrestrial species and breeding seabirds could decline between now and 2100, if current conservation efforts stay on the same trajectory.
- At best, the populations of 37% of species would decline. The most likely scenario is a decline in 65% of the continent's plants and wildlife by the year 2100.
- The emperor penguin relies on ice for breeding, and is the most vulnerable of Antarctica's species. In the worst-case scenario, the emperor penguin is at risk of extinction by 2100.
- Climate change will also likely wreak havoc on other Antarctic specialists, such as the nematode worm *Scottinema lindsayae*. The species lives in extremely dry soils, and is at risk as warming and ice-melt increases soil moisture.
- Climate change won't lead to a decline in all Antarctic species – in fact, some may benefit initially. These include the two Antarctic plants, some mosses and the gentoo penguin. These species may increase their populations and become more widely distributed in the event of more liquid water (as opposed to ice), more ice-free land and warmer temperatures.
- **What to do?**
- Clearly, current conservation efforts are insufficient to conserve Antarctic species in a changing world.
- The experts identified ten management strategies to mitigate threats to the continent's land-based species.
- Unsurprisingly, mitigating climate change (listed as the "influence external policy" strategy) would provide the greatest benefit. Reducing climate change to no more than 2 degrees Celsius of warming would benefit up to 68% of terrestrial species and breeding seabirds.
- The next two most beneficial strategies were "managing non-native species and disease" and "managing and protecting species". These strategies include measures such as granting special protections to species, and increasing biosecurity to prevent introductions of non-native species.
- **How much would it all cost?**
- The United Nations' COP15 nature summit concluded in Canada recently. Funding for conservation projects was a core agenda item.
- In Antarctica, at least, such conservation is surprisingly cheap. Research found implementing all strategies together could cost as little as USD 23 million per year until 2100 (or about USD 2 billion in total).
- By comparison, the cost to recover Australia's threatened species is estimated at more than USD 1.2 billion per year (although this is far more than is actually spent).
- However, for the "influence external policy" strategy (relating to climate change mitigation) included only the cost of advocating for policy change. It did not include the global cost of reducing carbon emissions, nor did it balance these against the much greater economic costs of not acting.
- As Antarctica faces increasing pressure from climate change and human activities, a combination of regional and global conservation efforts is needed. Spending just USD 23 million a year to preserve Antarctica's biodiversity and ecosystems is an absolute bargain.
- **Emperor Penguin**
- The emperor penguin is the tallest and heaviest of all living penguin species and is endemic to Antarctica.
- Like all penguins, it is flightless.
- Its diet consists primarily of fish, but also includes crustaceans.
- While hunting, the species can remain submerged around 20 minutes.
- It is the only penguin species that breeds during the Antarctic winter.
- The lifespan is typically 20 years in the wild, although observations suggest that some individuals may live to 50 years of age.
- The IUCN status is near threatened
- 2. **Good Governance Day**
- **CONTEXT: On 25th December nation observed Good Governance Day on the occasion of former Prime Minister Atal Bihari Vajpayee's birth anniversary**
- In 2014, the then government announced that December 25 would be celebrated as "Good Governance Day." Marking the birth anniversary of former Prime Minister, the day is meant to foster awareness among citizens about government accountability and administration.
- At the time of its announcement, the date chosen (December 25) drew criticism due the occasion clashing with Christmas.
- **Atal Bihari Vajpayee**
- Atal Bihari Vajpayee was born on December 25, 1924 in Gwalior, present-day Madhya Pradesh. A poet-politician, he joined the Rashtriya Swayamsevak Sangh (RSS) in 1939, becoming a pracharak (full-time worker) in 1947. Due to his literary prowess, he began working under Sangh Parivar head Deen Dayal Upadhyaya on various publications.
- After Upadhyaya's passing, in 1968, he became the national president of the Jana Sangh, RSS's new political outfit. He was the most eloquent speaker that the Hindu right had at that time and soon proved himself to be a capable administrator as well.
- He held his first major national position as the External Affairs Minister in Morarji's post Emergency government in 1975. While that government soon fell (in 1977), Vajpayee had earned major plaudits for his tenure, with his UN General Assembly speech in Hindi drawing praise from all quarters.

➤ **An able administrator**

- While he first became Prime Minister in 1996 (for 16 days) it was his 1998-1999 and 1999-2004 terms that left a lasting impact on the nation.
- Vajpayee expertly toed a line between hardline Hindutva and moderate Hindu nationalism while governing efficiently.
- Under his tenure, India formally became a nuclear power despite significant criticism from the West, ably faced war and peace with Pakistan, undertook massive public welfare projects including Sarva Shikshya Abhiyaan and PM Gramin Sadak Yojana, and ushered in a new era of foreign investment and international relations, especially with the US.

➤ **Good Governance through e-Governance**

- To use the day as a way to increase awareness of government services and accountability among people and inculcate “good governance” as a habit for civil servants.
- The day is celebrated to ensure that the country’s residents are treated fairly by the government and they receive advantages of various government services.
- A major push, in this regard, was to promote “e-Governance” with the official slogan for the event being “Good Governance through e-Governance.”
- According to the Good Governance Day Report published in 2014 by the Ministry of Communication and Information Technology, “Highlighting the key achievements and activities of the ministry that have played an instrumental role in furthering the cause of Good Governance and showcasing of technologies and solutions by the government and the industry, instrumental in the Digital India programme” are two crucial objectives for the day.
- In 2019, the government launched the Good Governance Index on this occasion. The GGI is a scientifically prepared tool based on various parameters of good governance which assess the level of any state at a given point of time and help in shaping future development.

3. Citing damage to ancient rock carvings, experts red-flag mega oil refinery project

➤ **CONTEXT: The site proposed for a mega oil refinery in Barsu village of Maharashtra’s Ratnagiri district is at the centre of a row over whether it might damage ancient rock carvings found in the area.**

- The rock art, or petroglyphs, estimated to be 20,000 years old and classified as protected monuments and have been added to the tentative list of UNESCO’s world heritage sites.
- More than 250 petroglyphs have been identified in the area where the petrochemical refinery will be built.
- If the project starts at Barsu, the rock carvings will get destroyed due to construction and chemical reaction at the site.
- A committee of experts appointed by the Union Ministry of Science and Technology visited Ratnagiri to inspect and study the petroglyphs scattered across several villages, and propose measures for conserving them.
- The initial discovery of these sites was done in 2012, though the locals had known about some of these petroglyphs as something cultural left by their ancestors.
- Now these Konkan petroglyphs find themselves in the tentative list of UNESCO World Heritage Sites.
- The largest among all Konkan petroglyphs, the one of an elephant found at Kasheli (Maharashtra) has some 70 to 80 other animals carved inside the elephant carving.
- Some of the carvings are of sharks, sting rays, tigers, rhino and birds. One can only imagine the kind of biodiversity the region must have enjoyed back then.

➤ **Petroglyphs**

- Petroglyphs are rock carvings (rock paintings are called pictographs) made by pecking directly on the rock surface using a stone chisel and a hammerstone.
- When the desert varnish on the surface of the rock was chipped off, the lighter rock underneath was exposed, creating the petroglyph. Archaeologists have estimated there may be over 25,000 petroglyph images along the 17 miles of escarpment within the monument boundary.

➤ **The Petroglyphs found in the region:**

- They are also called katal shilpa, spread across 70 sites in Ratnagiri district.
- The carvings are in the shape of human figures, birds, animals and geometric forms, though they vary in shape and size from site to site.
- Seven sites in Ratnagiri district (Ukshi, Jambharun, Kasheli, Rundhe Tali, Devihsol, Barsu and Devache Gothane), Kudopi village in Sindhudurg district, and nine sites at Pansoimol in Goa have been added to the tentative list of UNESCO’s world heritage sites.

4. New Artificial Nanostructures for Infrared Absorption Technologies can be useful in Defense, Imaging & Sensing

➤ **CONTEXT: A new method to confine and absorb infrared (IR) light with GaN nanostructures can help develop highly efficient infrared absorbers, emitters, and modulators that are useful in defense technologies, energy technologies, imaging, sensing, and so on.**

- This is the first time that infrared light-matter interactions are demonstrated in GaN.
- Researchers have utilized a scientific phenomenon called surface polariton excitations in GaN nanostructures that lead to light-matter interactions at IR spectral range.
- This can help develop highly efficient infrared absorbers, emitters, and modulators that are useful in defence technologies, energy technologies, imaging, sensing, and so on.
- Polaritonic technologies have attracted a wide range of applications, such as secure high-speed light-based communication (LiFi), next-generation light sources, solar energy converters, quantum computers, and waste-heat converters.

- **Gallium Nitride (GaN)**
 - One of the most advanced semiconductors.
 - It is a widely used material for blue light emission.
 - Advantages: Reliable, compact size, high efficiency, fast switching speed, low on-resistance, and high thermal conductivity.
 - GaN Technology is of strategic importance with its application to 5G, space and defence applications.

ANSWER WRITING

Q. Discuss the role of interest groups for agenda-setting in public policy, with the help of examples.

Interest groups are groups of individuals or organizations that attempt to influence public policy in its favour on the basis of one or more shared concerns through lobbying the members of the government. Agenda setting describes the "ability to influence the importance placed on the topics of the public agenda". E.g., often associations such as FICCI, ASSOCHAM helps setup agenda of reforms for public policy.

Role of Interest groups in Agenda Setting:

- As an agent of citizen empowerment- Interest groups help highlight lacunas, educate people about the laws, compile data and provide relevant insights into the public policies to the citizens. Thus, helping in progressive agenda setting.
 - ✓ For instance, Narmada Bachao Andolan, a social movement led by Medha Patkar to fight for the rights of the displaced helped public policy come out with better rehabilitation and displacement related policies (Land acquisition Act 2013)
- Machinery of the government- associations like ASSOCHAM, FICCI, CII, etc. that consists of professionally employed people in their board try to exert their influence over public policies. They act as the machinery of the government to aid in formulating laws e.g. related to economic agenda for the country.
- Interest articulation- the main function of any interest group is to protect and promote the interest of its people. They play a key role in bringing the social evils of the society to the surface and demand for appropriate laws that assist in uprooting such menace. Thus helping in setting social agenda for policy makers.
 - ✓ In August 2020, All India Kisan Sabha (AIKS) led the Milk Farmers Struggle in Maharashtra to bring attention to the downturn in milk prices, and in 2019, AIKS was a part of Bhoomi Adhikaar Andolan which was working for the rights of Adivasis and forest dwellers.
- Political Socialization- it is a process in which people develop their political base and ideology, political socialization tends to develop a belief in the virtues of democracy in which interest groups play an important role.

For E.g. Dalit group like Bhim Army helps set socio-political agendas for their development.

Democratic politics involves taking decisions through consultation, debate, discussions etc. Pressure groups can form good channel of communication between citizen and government but at the same time their vested interests if any needs to be checked so that true meaning of democracy can be fulfilled i.e. "participative democracy".

MCQs

1. Which of the following trade barriers are part of non-tariff trade barrier
 1. Carbon emission norms
 2. Labour and gender balance standards
 3. Local Content Requirement
 4. Quota

Select the correct answer using the code given below

- a) 1, 2 and 4 only
 - b) 2 and 3 only
 - c) 1 and 2 only
 - d) **1, 2, 3 and 4**
2. With reference to Gallium Nitride (GaN) which was in news recently, consider the following
 1. GaN, a widely used material for blue light emission and is one of the most advanced semiconductors.
 2. Visible and ultraviolet light applications of GaN have already been realized.

Which of the above statement/s is are correct?

- a) 1 only
 - b) 2 only
 - c) **Both 1 and 2**
 - d) Neither 1 nor 2
3. Consider the following pairs
 1. Petroglyphs: These are painted onto the surface
 2. Pictographs: These are carved into the rock surface
 3. Earth figures: These are formed on the ground

How many above pairs is/are correctly matched?

- a) **Only one pair**
 - b) Only two pairs
 - c) All the three pairs
 - d) None of the pairs
4. With reference to Governance, consider the following statements:
 1. Good Governance Index is prepared by the Department of Administration Reforms and Public Grievances (DARPG).
 2. First District Good Governance Index was launched in Gujarat.

Which of the above statements are incorrect?

- a) Only 1
- b) Only 2**
- c) Both 1 and 2
- d) Neither 1 nor 2

5. Consider the following statements about Antarctica.

- 1. The Antarctic continental region represents 90 per cent of the world's wilderness area
- 2. It has a limited terrestrial life and a highly productive marine ecosystem
- 3. The Antarctic plays an important role in maintaining climatic equilibrium, and deep ice cores provide an important source of information about greenhouse gas concentrations
- 4. The whole Indian Antarctic program is managed by the National Centre for Polar and Ocean Research (NCPOR)

Which of these statements are correct?

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only**
- c) 1 and 3 only
- d) All of the above

6. With reference to "Scottinema lindsayae" a species recently seen in news, consider the following statements

- 1. It is a species of roundworms
- 2. It is endemic to Arctic and Antarctica

Which of the above statement/s is /are not correct?

- a) 1 only
- b) 2 only**
- c) Both 1 and 2
- d) Neither 1 nor 2

7. Genomic sequencing important because

- 1. Characterize the virus
- 2. Estimate a particular variant's prevalence in a population
- 3. Evaluate how effective medical treatments, such as monoclonal antibodies, are against variants
- 4. Investigate the spread of a virus in outbreaks

Choose the correct answer using the codes given below

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 and 4 only
- d) All of the above**

8. Which of the following can be threats to the biodiversity of a geographical area?

- 1. Global warming
- 2. Fragmentation of habitat
- 3. Invasion of alien species
- 4. Promotion of vegetarianism

Select the correct answer using the codes given below :

- a) 1, 2 and 3 only**
- b) 2 and 3 only
- c) 1 and 4 only
- d) 1, 2, 3 and 4

9. Which of the followings are submarines?

- 1. Kalvari
- 2. Vagir
- 3. Vagsheer
- 4. Vela

Choose the correct answer using the codes given below

- a) 1, 2, 3
- b) 2, 3, 4
- c) 1, 3, 4
- d) 1, 2, 3, 4**

10. With reference to "Mission Karmayogi" consider the following statements

- 1. iGoTKarmayogi Portal has been launched by Karmayogi Bharat aimed at creating professional, well trained and future ready civil service for India.
- 2. Karmayogi Bharat is Special Purpose Vehicle (SPV) for effective rollout of mission Karmayogi

Which of the above statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2**
- d) Neither 1 nor 2