

INTERNATIONAL RELATION

Enriched Uranium Stockpile by Iran

Recently, Iran's atomic agency said that its stockpile of 20% enriched uranium has reached over 210 kilograms.

- In April 2021, the International Atomic Energy Agency (IAEA) said Iran had begun the process of enriching uranium to 60% fissile purity at an above-ground nuclear plant at Natanz.
- Under the historic 2015 nuclear deal between Iran and the World Powers, Iran was not meant to enrich uranium above 3.67%. Enriched uranium above 90% can be used for nuclear weapons.

Key Points

Uranium Enrichment:

- Natural uranium consists of two different isotopes - nearly 99% U-238 and only around 0.7% of U-235. U-235 is a fissile material that can sustain a chain reaction in a nuclear reactor.
- Enrichment process increases the proportion of U-235 through the process of isotope separation (U-238 is separated from U-235).
- For nuclear weapons, enrichment is required upto 90% or more which is known as weapons-grade uranium.
- Low-enriched uranium, which typically has a 3-5% concentration of U-235, can be used to produce fuel for commercial nuclear power plants.
- Highly enriched uranium has a purity of 20% or more and is used in research reactors.

Associated Concerns:

- The tricky process of enrichment becomes far easier and requires fewer centrifuges as it moves into the higher purities.
- In other words, getting to 90% purity is much easier starting from 20%, and easier still starting from 60%.



2015 Nuclear Deal:

- In 2015, Iran with the P5+1 group of world powers - the USA, UK, France, China, Russia, and Germany agreed on a long-term deal on its nuclear programme.
1. The deal was named as Joint Comprehensive Plan of Action (JCPOA) and in common parlance as Iran Nuclear Deal.
 2. Under the deal, Iran agreed to curb its nuclear activity in return for the lifting of sanctions and access to global trade.
 3. The agreement allowed Iran to accumulate small amounts of uranium for research but it banned the enrichment of uranium, which is used to make reactor fuel and nuclear weapons.
 4. Iran was also required to redesign a heavy-water reactor being built, whose spent fuel would contain plutonium suitable for a bomb and to allow international inspections.
- In May 2018, the USA abandoned the deal criticising it as flawed and reinstated and tightened its sanctions. Since sanctions were tightened, Iran has been steadily breaking some of its commitments to pressure the remaining signatories to find a way to provide sanctions relief.
 - After months of delays, the European Union, Iran and the US have recently announced that indirect talks to resuscitate the deal would resume on 29th November 2021 in Vienna.

2. India's De-Hyphenated Policy: Israel and Palestine

Recently, on the sidelines of the COP26 summit in Glasgow, the Prime Minister of Palestine called for India's support to play a stabilising role in West Asia by maintaining cooperation with all related parties.

- This statement is significant in the context of India's External Affairs Minister visit to Israel, whereby he excluded a trip to the Palestinian territory.
- India in the recent year has been following a dehyphenation policy between Israel and Palestine.

Key Points

India's Policy Towards Israel and Palestine:

- The Israeli-Palestinian conflict dates back to the end of the nineteenth century. It is linked to the age-old tussle over identity and land starting with Jerusalem.
 1. In 1947, the United Nations (UN) adopted Resolution 181, known as the Partition Plan, which sought to divide the British Mandate of Palestine into Arab and Jewish states.
 2. This led to unresolved conflict between Israel and Palestine.
- Traditionally, India's foreign policy towards Israel and Palestine has been a hyphenated foreign policy.
 1. However, hyphenating the ties with Israel – linking them to ties with the Palestinian Authority – essentially prevented India from pursuing a pragmatic policy of what was in India's best interests.
 2. In recent times, India is being seen shifted towards a Dehyphenation of Policy.

Dehyphenation of Policy:

- India's policy on the longest running conflict in the world has gone from being unequivocally pro-Palestine for the first four decades, to a tense balancing act with its three-decade-old friendly ties with Israel. In recent years, India's position has also been perceived as pro-Israel.
- In 2017, in an unprecedented move, India's PM visited only Israel and not Palestine. Then, the recent visit of the Prime Minister to Palestine, Oman and the UAE is again a continuation of similar policy.
 1. It means India's relationship with Israel would stand on its own merits, independent and separate from India's relationship with the Palestinians.
 2. The de-hyphenation is actually a careful balancing act, with India shifting from one side to another as the situation demands.
- As India moves towards becoming a larger player in global politics and economics, these pre-existing policies are increasingly in need of review, and de-hyphenating Israel and Palestine was a process long past its due date.
 1. In recent years, India has broken the tradition of supporting Palestine at the UN.
 1. In 2019, India voted in favour of Israel at the ECOSOC (Economic and Social Council) to deny observer status to a Palestinian organisation named Shahed.
 2. Further, India abstained during the voting on a resolution calling for investigation into Israeli actions in the Gaza Strip at the Human Rights Council.

Palestine Call For India:

- India had a historic tradition of supporting the rights of the Palestinian people. Palestine wants India's technical support to be "parallel to the political support".
- It wants India to reaffirm supporting the Palestinian people's right to self-determination and the establishment of an independent State of Palestine, with Jerusalem as its capital.

Way Forward

India's role in multilateral organisations requires "strenuous efforts in cooperation with all related parties to achieve security and stability in the Middle East and West Asia".

India is currently serving as a non-permanent member of the United Nations Security Council for 2021-22 and was re-elected to the Human Rights Council for the 2022-24. India should use these multilateral forums to act as a mediator to resolve the Israel-Palestine issue.

BIODIVERSITY & ENVIRONMENT

Increased Risk of Extinction: Leopards

According to a study published in the journal *Global Ecology and Biogeography*, the leopard faces an 83% increased risk of extinction in North India due to roadkill.

Key Points**Findings of the Study:**

- The leopard population of North India is at highest risk among four animal populations identified as being the most vulnerable to extinction in the next 50 years if observed roadkill levels persist. Leopard is followed by the maned wolf and the little spotted cat, both of Brazil, and the brown hyena of southern Africa.
- At an 83% increased risk, the study estimates the time to the North Indian leopard population's extinction at 33 years.
- Other populations found highly vulnerable include the lion-tailed macaque (*Macaca silenus*) and sloth bear (*Melursus ursinus*) in South India.
- The study brings attention to Sub-Saharan Africa and south-eastern Asia as regions where roads can lead to loss of mammalian biodiversity and thus, areas where future road development and road mitigation need to be carefully considered.

Leopard:

- **Scientific Name: *Panthera pardus***

About:

- The leopard is the smallest of the Big Cats (Of genus *Panthera* namely the Tiger, Lion, Jaguar, Leopard, and Snow Leopard), and known for its ability to adapt in a variety of habitats.
- A nocturnal animal, the leopard hunts by night.
- It feeds on smaller species of herbivores found in its range, such as the chital, hog deer and wild boar.
- Melanism is a common occurrence in leopards, wherein the entire skin of the animal is black in colour, including its spots. A melanistic leopard is often called black panther or jaguar, and mistakenly thought to be a different species.

Habitat:

- It occurs in a wide range in sub-Saharan Africa, in small parts of Western and Central Asia, on the Indian subcontinent to Southeast and East Asia. The Indian leopard (*Panthera pardus fusca*) is a leopard widely distributed on the Indian subcontinent.

Population in India:

- As per a recent report 'Status of leopards in India, 2018' released by the Ministry of Environment, Forest and Climate Change, there has been a "60% increase in the population count of leopards in India from 2014 estimates". The 2014 estimates placed the population of leopards at nearly 8,000 which has increased to 12,852.
- The largest number of leopards have been estimated in Madhya Pradesh (3,421) followed by Karnataka (1,783) and Maharashtra (1,690).

Threats:

1. Poaching for the illegal trade of skins and body parts.
2. Habitat loss and fragmentation
3. Human-Leopard conflict

Conservation Status:

1. IUCN Red List: Vulnerable
2. CITES: Appendix-I
3. Indian Wildlife (Protection) Act, 1972: Schedule-I

IMPORTANT FACTS FOR PRELIM**Adi Shankaracharya**

Recently, the Prime Minister has unveiled a 12-foot statue of Adi Shankaracharya at Kedarnath (Uttarakhand).

Key Points**About:**

- Known as Adi Shankara, born 11th May 788 AD, at Kaladi near Kochi, Kerala. Took Samadhi at the age of 33, at Kedar tirth.
- He was a devotee of Shiva.
- Propounded the Doctrine of Advaita (Monism) and wrote many commentaries on the Vedic canon (Upanishads, Brahma Sutras and Bhagavad Gita) in Sanskrit.

- He was opposed to Buddhist philosophers.

Major Work:

1. Brahmasutrabhasya (Bhashya or commentary on the Brahma Sutra).
2. Bhajagovinda Stotra.
3. Nirvana Shatakam.
4. Prakaran Granths.

Other Contributions:

- Was responsible for reviving Hinduism in India to a great extent when Buddhism was gaining popularity.
- Established four Mathas in the four corners of India at Shingeri, Puri, Dwaraka and Badrinath–for propagation of Sanathana Dharma.

Advaita Vedanta:

- It articulates a philosophical position of radical nondualism, a revisionary worldview which it derives from the ancient Upanishadic texts.
- According to Advaita Vedantins, the Upanishads reveal a fundamental principle of nonduality termed 'brahman', which is the reality of all things.
- Advaitins understand brahman as transcending individuality and empirical plurality. They seek to establish that the essential core of one's self (atman) is brahman.
- The fundamental thrust of Advaita Vedanta is that the atman is pure non-intentional consciousness. It is one without a second, nondual, infinite existence, and numerically identical with brahman.

DAILY ANSWER WRITING PRACTICE

Qns. Analyse the growing impacts of climate change on India. Are the steps taken so far adequate enough to tackle the climate change? 250 words)

Ans:

Introduction

Climate Change is a periodic modification of Earth's climate brought about due to the changes in the atmosphere as well as the interactions between the atmosphere and various other geological, chemical, biological and geographical factors within the Earth's system.

Indisputably, the climate of the planet is undergoing changes. The tragedy is that while the vulnerable sections experience the tragic consequences of climate change, the politically and economically powerful ostriches still pretend that everything is fine.

Body

Impacts of Climate Change upon India:

- One of the major areas that will be extremely vulnerable to climate change in the future is South Asia.
- India especially will be vulnerable to climate change due to its diverse terrain, rapid use of natural resources due to the current trend of precipitous urbanisation, industrialisation and economic growth.
- Currently, India, in its effort to protect its fast-diminishing natural resources, is facing environmental and socio-economic challenges.
- Water and air quality are worsening each day due to environmental pollution.
- Those that are especially susceptible to climate change are the country's coastal ecosystems, biodiversity and agricultural productivity.
- The natural disasters' increasing frequency and intensity are causing negative effects to the already struggling Indian economy.
- The adverse effects of such disasters range from poverty, vulnerability to diseases, loss of income and livelihoods.
- According to the World Bank, an increase of 2°C in the world's average temperature in the next few decades will only make India's monsoon more unpredictable.
- The changing rain patterns in India are predicted to leave many areas flooded and others without water scarcity.
- More than 60% of India's agriculture is dependent on rain and the majority of the population are dependent on the agriculture sector for survival. This makes India more vulnerable to climate change.

- It is estimated that by the 2050s, with a temperature increase of 2-2.5°C, water in the river basins of Indus, Ganges and Brahmaputra will be reduced. This may threaten the food security of about 63 million people.
- The poverty reduction rate will also be slowed down due to the rise in the atmospheric temperature.
- Poor will be more vulnerable to climate change since many of them are dependent on the rain-dependent agriculture.
- An increase of 2°C by the 2040s is going to affect crop production and will reduce the crop output by 12%, requiring more imports to meet the domestic demands.
- Furthermore, the decreasing availability of food can give rise to considerable health issues especially among women and children.
- The melting glaciers and loss of snow can pose a risk to reliable water resources in India.
- Main rivers like Ganges, Indus, and Brahmaputra mostly depend on snow and glacial melt water. This makes them vulnerable to global warming.
- Climate change can further increase the risk of flooding of low areas and threatens agriculture.

Measures taken by the Indian government to combat climate change

- **Nationally Determined Contribution:** India is currently setting up voluntary targets in the international forums to commit itself to the mission to combat climate change. It is also playing a major role in climate change mitigation.
- **National Action Plan on Climate Change (NAPCC):** The Action plan covers eight major missions on Solar, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining the Himalayan Ecosystem, Green India, Sustainable Agriculture and Strategic Knowledge on Climate Change.
- **International Solar Alliance (ISA):** ISA was jointly launched by the Prime Minister Narendra Modi, and the then President of France, Francois Hollande in Paris on the side-lines of CoP 21 in 2015. The vision and mission of the alliance is to provide a dedicated platform for cooperation among solar resource rich countries that lie completely or partial between the Tropics of Capricorn & Cancer.
- **State Action Plan on Climate Change (SAPCC):** State governments have drafted climate strategies aligned with the eight National Missions under the NAPCC. The strategies focus on issues ranging from climate mitigation, energy efficiency, and resource conservation to climate adaptation.
- **FAME Scheme for E-mobility:** Union Government in April 2015 launched Faster Adoption and Manufacturing of Hybrid and Electric vehicles (FAME) – India Scheme with an aim to boost sales of eco-friendly vehicles in the country. It is a part of the National Mission for Electric Mobility.
- **Atal Mission for Rejuvenation & Urban Transformation (AMRUT) for Smart Cities.**
- **Pradhan Mantri Ujjwala Yojana:** The scheme provides LPG connections to five crore below-poverty-line beneficiaries. The connections are given in the name of women beneficiaries to reduce their dependence on fossil fuels and conventional fuel like cow dung for cooking food, thus reducing air pollution.
- **UJALA scheme:** The scheme was launched by the Prime Minister Narendra Modi in January 2015 with a target of replacing 77 crore incandescent lamps with LED bulbs. The usage of LED bulbs will not only result in reducing electricity bills but also help in environment protection.

Limitations of Government initiatives

- From the recent cases of natural disasters like the Chennai Floods, 2015, 2016 drought, 2019 Kerala floods, etc., it is evident that there are no adequate arrangements made to mitigate them.
- For instance, in the case of Uttarakhand or the Chennai rains, the arrangements weren't adequate to allow the flow of rainwater due to the illegal constructions.
- From the 2016 drought, there were increased deaths, most of them were economically poor and the underprivileged.
- The government failed to ensure long-term mitigation and the big corporate houses that contribute to large-scale pollution of air and water escape with a mere "corporate social liability" clauses. These are some of the major causes of the devastating impact of these natural disasters.

- India does not have stringent laws to ensure protection against climate change.
- The authorities will not be prosecuted for their negligence of duty and the cases that manage to reach the Supreme Court through the public interest litigation were only able to bring about small changes in averting the future crisis.
- Each year, India is facing the negative impact of climate change and the government is taking measures to address it. Yet the measures taken will not be enough to solve the issue due to poor implementation and lack of accountability.

Conclusion

A democracy truly matures when superficial posturing that conceals the real issues and self-styled celebrations of hypnotising myths fail to impress. Climate change is happening. This should be accepted and not politicised. International cooperation to address climate change is vital to mitigate the adverse impact. Additionally, mitigation must be complemented with climate change-related adaption since mitigation alone cannot address the adverse effects we are facing right now.

DAILY QUIZ

Q1. In which one of the following groups are all the four countries members of G20?

- Argentina, Mexico, South Africa and Turkey**
- Australia, Canada, Malaysia and New Zealand
- Brazil, Iran, Saudi Arabia and Vietnam
- Indonesia, Japan, Singapore and South Korea

Q2. Consider the following statements:

1. The Indus river dolphin is classified as endangered by the International Union for the Conservation of Nature (IUCN).
2. The Indus river dolphin was declared the State aquatic animal of Punjab in 2019.
3. In 2007, a remnant but viable population of Indus dolphins was discovered in Punjab's Harike wildlife sanctuary and in the lower Sutlej River.

Which of the statements given above is/are correct?

- 1 and 2 only**
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Q3. Which one of the following statements best describes the term 'Social Cost of Carbon'? It is a measure, in monetary value, of the

- long-term damage done by a tonne of CO2 emissions in a given year.**
- requirement of fossil fuels for a country to provide goods and services to its citizens, based on the burning of those fuels.
- efforts put in by a climate refugee to adapt to live in a new place.
- contribution of an individual person to the carbon footprint on the planet Earth.

Q4. With reference to solar water pumps, consider the following statements:

1. Solar power can be used for running surface pumps and not for submersible pumps.
2. Solar power can be used for running centrifugal pumps and not the ones with piston.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2**

Q5. "The crop is subtropical in nature. A hard frost is injurious to it. It requires at least 210 frost-free days and 50 to 100 centimeters of rainfall for its growth. A light well-drained soil capable of retaining moisture is ideally suited for the cultivation of the crop." Which one of the following is that crop?

- Cotton**
- Jute
- Sugarcane
- Tea