

BIODIVERSITY & ENVIRONMENT

Marine Heatwaves

According to a study, marine heatwaves — or the ones that form on oceans — have been on the rise in the waters around India. Emerging studies have reported their occurrence and impacts in the global oceans, but are little understood in the tropical Indian Ocean.

Also, according to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6), the sea surface temperature over the Indian ocean is likely to increase by 1 to 2 °C when there is 1.5°C to 2°C global warming.

What are the Findings of the Study?

- The Western Indian Ocean region experienced the largest increase in marine heatwaves at a rate of about 1.5 events per decade, followed by the north Bay of Bengal at a rate of 0.5 events per decade.
- The marine heatwaves in the Western Indian Ocean and the Bay of Bengal increased drying conditions over the central Indian subcontinent.
- Correspondingly, there is a significant increase in the rainfall over south peninsular India in response to the heatwaves in the north Bay of Bengal.
 1. From 1982 to 2018, the Western Indian Ocean had a total of 66 events, while the Bay of Bengal had 94 events.
 2. These changes are in response to the modulation of the monsoon winds by the heatwaves.
 3. This is the first time that a study has demonstrated a close link between marine heatwaves and atmospheric circulation and rainfall.

What are Marine Heatwaves?

- Marine heatwaves are periods of extremely high temperatures in the ocean.
- These events are linked to coral bleaching, seagrass destruction, and loss of kelp forests, affecting the fisheries sector adversely. Study showed that 85% of the corals in the Gulf of Mannar near the Tamil Nadu coast got bleached after the marine heatwave in May 2020.
- The most common drivers of marine heatwaves include ocean currents which can build up areas of warm water and air-sea heat flux, or warming through the ocean surface from the atmosphere. Winds can enhance or suppress the warming in a marine heatwave, and climate modes like El Niño can change the likelihood of events occurring in certain regions.

What are the Impacts of Marine Heatwaves?

Affect Ecosystem Structure:

- Marine heat waves affect ecosystem structure, by supporting certain species and suppressing others.
- It has been associated with the mass mortality of marine invertebrates, and may force species to change behaviour in a way that puts wildlife at increased risk of harm.

Change Habitat Ranges of Certain Species:

- Marine heatwaves can change the habitat ranges of certain species, such as the spiny sea urchin off southeastern Australia which has been expanding southward into Tasmania at the expense of kelp forests which it feeds upon.

Economic Losses:

- Marine heatwaves can cause economic losses through impacts on fisheries and aquaculture.

Affect Biodiversity:

- Biodiversity can be drastically affected by marine heatwaves. In 2016, marine heatwaves across northern Australia led to severe bleaching of the Great Barrier Reef.

Increase the Risk of Deoxygenation and Acidification:

- Often they occur alongside other stressors such as ocean acidification, deoxygenation, and overfishing.
- In such cases, MHWs not only further damage habitats, but also increase the risk of deoxygenation and acidification.

Way Forward

- Since the frequency, intensity, and area covered by the marine heatwaves are increasing, it is needed to enhance the ocean observational arrays to monitor these events accurately, and update our weather models to skillfully predict the challenges presented by a warming world.

- Effective responses to MHWs require action from a broad range of stakeholders: policymakers, researchers, the private sector (fisheries, aquaculture, ecotourism), conservationists, and civil society. Local management agencies should therefore raise awareness across all stakeholders and implement forecast systems to help achieve a coordinated response.
- National and sub-national governments should design and implement measures to protect communities and build regional ocean resilience.

INTERNATIONAL RELATION

China and Russia Relations

Recently, in a joint statement, China and Russia affirmed that their new relationship is superior to any political or military alliance of the Cold War era. The statement comes amid Russia's standoff with North Atlantic Treaty Organisation (NATO) on Ukraine.

What are the Historical Dynamics of China- Russia Relations?

- Despite being together in rejecting US unipolarity, the relationship between Russia and China is complex and layered. Each has its distinct worldview and specific interests in its geographical region, and its own battles to fight.
- Relations between China and the former Soviet Union were frosty, marked by mistrust and doctrinal differences for most of the Cold War decades.
- The change came in 1989, when Mikhail Gorbachev became the first Soviet leader to visit China since Nikita Khrushchev in 1958.
- Russia and China declared "mutual respect for sovereignty and territorial integrity, mutual nonaggression, noninterference in each other's internal affairs, equality and mutual benefit, and peaceful coexistence" as the basis of their bilateral relations.
- A decade after the Soviet Union broke up, disappointed and humiliated by the way the West had downgraded it, and deep in economic crisis, Russia turned to China.
- In 2001, the two countries signed the Treaty of Good-Neighbourliness and Friendly Cooperation, paving the way for expanding economic and trade ties, including sales of defence equipment and energy by Russia to China, and Russia's backing for China's position on Taiwan.
- In June 2021, the two countries extended the treaty at a virtual meeting where Russia claimed that "Russian-Chinese coordination plays a stabilising role in world affairs".

What are the Current Developments in China- Russia Relations?

- Russia's 2014 annexation of Crimea in Ukraine led to a sharp downturn in Russia's ties with the US, NATO, and European Union (EU). This was also the turning point in Russia's ties with China, which revealed the possibilities, potential, and the limits of the relationship.
- When the US, EU, and Australia imposed sanctions on Russia, Russia turned reflexively to China.
- Russia opened its doors wide for Chinese investments, and struck a USD 400 billion deal for Gazprom, the Russian state monopoly gas exporter, to supply 38 billion cubic metres (bcm) annually to China for 30 years from 2025.
- Earlier in January 2022, the two countries signed a deal for another pipeline, Power of Siberia 2, which will add 10 bcm of gas to the annual supply for 30 years.
- Since 2016, trade between the two countries has gone from USD 50 bn to over USD 147 bn.
- China is now Russia's largest trading partner. Towards a modus vivendi in Central Asia, the two countries agreed to work towards speeding up the linking of the Russia-led Eurasian Economic Union and the Chinese Belt and Road Initiative.
- With their ties closer than ever before, the crisis in Ukraine has been an opportunity for each country to express solidarity with the other's grievance against the US. Should the West impose financial and banking sanctions on Russia, China is expected to assist Russia, perhaps with alternative payment methods.
- The recent joint statement backed the Russian opposition to any expansion of the Western military alliance in Europe.
- Russia reaffirmed support for the One-China principle, and opposed any form of independence for Taiwan.

- The statement also hit out “against the formation of closed bloc structures and opposing camps in the Asia-Pacific region” and “the negative impact” of the US’s Indo-Pacific strategy.

How is Russia & China’s Interest Different?

- As several observers have pointed out, the China-Russia compact is not yet a formal security alliance against the West, nor is it an ideological partnership.
- Back in March 2014, in the vote on UN Security Council resolutions on the referendum in Crimea. China had abstained — and despite the recent bonhomie, has not recognised Crimea’s accession to Russia.
- China’s main security interests lie in Asia; Russia’s are in Europe. From Russia’s demands in ongoing negotiations with the West, it is clear that Russia is seeking the restructuring of European security.
- Russia, which wants to be recognised as a great power once again, has positions independent of China on many issues — including on the relationship with India.
- As the smaller economy — Russia’s Gross Domestic Product (GDP) is a tenth of China’s — but with a strong memory of its lost superpower status, Russia is not willing to become China’s junior partner.
- China drives a hard bargain. Russia is conscious that its gas exports to Germany and the rest of Europe gets much more revenue — and that China anyway has other pipelines to tap. Also, despite talk of Russia-China co-operation in Central Asia, Russia still sees the region as part of its sphere of influence.
- For China, war in Ukraine is the least suitable of options. It would take US military energies away from the South China Sea, but might also stall talks to resolve trade issues.
- China and the EU are each other’s biggest trading partners — China’s trade with Russia is small by comparison. China will not fight the war if it breaks out, but it will nonetheless find it messy and complicated to negotiate.
- As for Ukraine, it is a crucial link in Xi’s BRI project. China is also Ukraine’s biggest trading partner — and its agricultural exports, particularly corn, have sustained China during its trade war with the US.

What Policy Should India Follow?

- India’s best bet would be to treat its relations with both countries and the US separately — or it runs the risk of shrinking its own space.
- India’s relationship with Russia is not what it used to be, but there is much that both sides continue to see as mutually beneficial.
 1. The Russia-China statement did not mention China’s border dispute with India; it only made a reference to developing cooperation among the three countries.
 2. After the Russian-linked Redfish media teased a documentary that drew parallels between Kashmir and Palestine, the Russian embassy clarified that Redfish was not official media, and reiterated that Kashmir was an issue for India and Pakistan to resolve bilaterally.
- The structural constraints posed by the great power dynamic and vastly different appreciation of the regional security environment could be reduced if matters improve between the US and Russia.
 1. A less conflictual relationship between the two will be a huge relief for India.
 2. Also, the US-China quest for power or Russia’s deepening ties with China would have mattered less to India if its relations with China were more peaceful and stable.
- India should also promote mutually beneficial trilateral cooperation between Russia, China and India that could contribute towards the reduction of mistrust and suspicion between India and China. In this context, the BRICS, Shanghai Cooperation Organisation (SCO) and RIC trilateral forum must be leveraged.

2. Falkland Islands Issue

Recently, Britain rejected a statement from China that affirmed it’s support for Argentina’s claim to the Falkland Islands. Earlier, China and Argentina issued a joint statement that said China “reaffirms its support for Argentina’s demand for the full exercise of sovereignty over the Malvinas Islands (Falkland Islands),” using the Argentine name for the territory.

What and Where is Falkland Island?

- Falkland Islands, also called Malvinas Islands or Spanish Islas Malvinas, internally self-governing overseas territory of the United Kingdom in the South Atlantic Ocean.

- It lies about 300 miles northeast of the southern tip of South America and a similar distance east of the Strait of Magellan.
- The capital and major town is Stanley, on East Falkland, there are also several scattered small settlements as well as a Royal Air Force base that is located at Mount Pleasant.
- The two main islands, East Falkland and West Falkland, and about 200 smaller islands. The government of the Falkland Islands also administers the British overseas territory of South Georgia and the South Sandwich Islands, including the Shag and Clerke rocks.

What is the History of the Falkland Islands?

- The British, in 1765, were the first to settle West Falkland, but they were driven off in 1770 by the Spanish, who had bought out the French settlement about 1767.
- The British outpost on West Falkland was restored in 1771 after threat of war, but then the British withdrew from the island in 1774 for economic reasons, without renouncing their claim to the Falklands.
- Spain maintained a settlement on East Falkland (which it called Soledad Island) until 1811.
- In 1820 the Argentina Government, which had declared its independence from Spain in 1816, proclaimed its sovereignty over the Falklands.
- In 1831 the US warship destroyed the Argentine settlement on East Falkland in reprisal for the arrest of three US ships that had been hunting seals in the area.
- In early 1833, a British force expelled the few remaining Argentine officials from the island without firing a shot. In 1841, a British civilian lieutenant governor was appointed for the Falklands, and by 1885 a British community of some 1,800 people on the islands was self-supporting. Argentina regularly protested Britain's occupation of the islands.
- After World War II (1939-45) the issue of sovereignty over the Falkland Islands shifted to the United Nations (UN) when, in 1964, the islands' status was debated by the UN committee on decolonization.
- In 1965, the UN General Assembly approved a resolution inviting Britain and Argentina to hold discussions to find a peaceful solution to the dispute.
- These protracted discussions were still proceeding in February 1982, but in April Argentina's military government invaded the Falklands.
- This act started the Falkland Islands War, which ended 10 weeks later with the surrender of the Argentine forces at Stanley to British troops who had forcibly reoccupied the islands.
- Although Britain and Argentina reestablished full diplomatic relations in 1990, the issue of sovereignty remained a point of contention.
- In the early 21st century Britain continued to maintain some 2,000 troops on the islands.
- In January 2009 a new constitution came into effect that strengthened the Falklands' local democratic government and reserved for the islanders their right to determine the territory's political status. In a referendum held in March 2013, islanders voted nearly unanimously to remain a British overseas territory.

What is the Basis of Different Claims on the Island?

- Argentina based its claim to the Falklands based on an official document of 1493 modified by the Treaty of Tordesillas (1494), by which Spain and Portugal had divided the New World between themselves; on succession from Spain; on the islands' proximity to South America, and on the need to end a colonial situation.
- Britain based its claim on its "open, continuous, effective possession, occupation, and administration" of the islands since 1833 and its determination to apply to the Falklanders the principle of self-determination as recognized in the United Nations Charter. Britain asserted that, far from ending a colonial situation, Argentine rule and control of the lives of the Falklanders against their wishes would in fact create one.

PRELIMS FACT**Nai Roshni Scheme**

Recently, the Ministry of Minority Affairs has informed the Rajya Sabha that the Government has sanctioned Rs 26 crore under the Nai Roshni scheme in the last three years (2018-19 to 2020-21) through which around one Lakh women have been trained.

What is the Nai Roshni Scheme?

- Nai Roshni-a Leadership Development Programme for Minority Women is a Central Sector Scheme for women belonging to minority communities in the age group of 18 to 65 years.
- It was started in 2012-13.
- The objective of the scheme is to empower and instil confidence among minority women, including their neighbours from other communities living in the same village/locality, by providing knowledge, tools and techniques for interacting with Government systems, banks and other institutions at all levels.
- It is run with the help of NGOs, Civil societies and Government Institutions all over the country.
- It includes various training modules like Leadership of women, Educational Programmes, Health and Hygiene, Swachh Bharat, Financial Literacy, Life Skills, Legal Rights of Women, Digital Literacy and Advocacy for Social and behavioral change.

What is the Significance of the Scheme?

- Empowerment of women per se is not only essential for equity, but also constitutes a critical element in our fight for poverty reduction, economic growth and strengthening of civil society.
- Women and children are always the worst sufferers in a poverty stricken family and need support. Empowering women, especially mothers, is even more important as it is in homes that she nourishes, nurtures and molds the character of her offspring.
- It helps embolden minority women to move out of the confines of their home and community and assume leadership roles and assert their rights, collectively or individually, in accessing services, facilities, skills, and opportunities besides claiming their due share of development benefits of the Government for improving their lives and living conditions.

What are the other schemes related to Minority Women?

1. Garib Nawaz Employment Scheme
2. Seekho aur Kamao
3. Begum Hazrat Mahal Girls scholarships
4. Nai Manzil
5. Usttad (Upgrading the Skills and Training in Traditional Arts/Crafts for Development)

DAILY ANSWER WRITING PRACTICE

Qns. WHO has been found lacking in its response to COVID19 Pandemic. In this context, critically examine and suggest measures to democratise global health governance. (150 words)

Introduction

The World Health Organization (WHO) is a specialized agency of the United Nations that is concerned with international public health. It was established on 7 April 1948, and is headquartered in Geneva, Switzerland. The WHO is a member of the United Nations Development Group. It has been at the forefront of coordinating global response against the COVID-19 pandemic. Yet the role and its response were criticized for being inadequate.

Body

Criticism against WHO in handling Pandemic

- **Lack of preparedness:** The WHO already had access to data and years of subsequent research about the SARS outbreak.
 1. A research paper in 2007 had already warned against the mutable nature of the virus coupled with China's rapid urbanisation, proximity to exotic animals and refusal to tackle illegal wildlife trade.
 2. In 2015, the coronavirus family of diseases was selected to be included in a list of priorities requiring urgent research and development.
 3. It was earmarked as a primary contender for emerging diseases likely to cause a major epidemic. This assessment was reiterated in WHO's 2018 annual review of prioritised diseases.
- **Delay in declaration:** WHO has been criticised for its unexplained delay in declaring COVID 19 as a 'public health emergency of international concern' (PHEIC).
 1. Various governments across the world reached out to the WHO for an advisory, but the WHO emergency committee was split on whether to declare a PHEIC.
 2. WHO did not take any decision and stated that "the focus is not so much on the numbers". It finally had to declare once the confirmed cases had increased tenfold across 18 countries.

3. Subsequently, WHO also delayed its declaration as a 'pandemic, especially when the COVID 19 was exhibiting the characteristics of a pandemic, i.e. spreading rapidly around the world.

- **Indecision in visiting China:**The WHO did show any urgency in sending an investigation team to China. A joint WHO-Chinese team went to Wuhan only in mid-February.
- **Exclusion of Taiwan:**Since China acceded to the UN in 1971, it has periodically blocked Taiwan's WHO membership on the grounds that the democratically governed island is part of China.The WHO's continued support to the "One China" principle, which recognizes the government in Beijing as the legitimate Chinese government, became a crucial hurdle in dealing with the pandemic.
- Delay in acknowledging human-to-human transmission of the virus especially, after the first case was announced outside China.
 1. This is despite the fact that Taiwan had warned the WHO of this as early as end of December, 2019.
 2. The recent reports clearly highlight that China stayed silent on its knowledge of human-to-human transmission.
- **Not endorsing the use of trade and travel restrictions:** The explosion of travel restrictions that countries implemented to counter COVID-19 prompted arguments that these restrictions violated the IHR, violations that the WHO did not probe despite having authority to do so.
 1. Rather, the WHO urged the international community to not spread fear and stigma by imposing travel restrictions.
 2. It even criticised early travel restrictions by the US as being excessive and unnecessary.

At the same time,

- WHO's efforts to advance development of coronavirus vaccines and therapeutics have been appreciated.
- The WHO's efforts in sharing of information and its attempts to counter online misinformation and disinformation have earned widespread praise

Measures to democratise global health governance

- Increase the WHO's technical capacities and capabilities– Creating new departments focused on science, antimicrobial resistance and digital health will also broaden the WHO's range of expertise and keep up with the latest public health challenges and opportunities.
- Help focus on the mission of WHO-which does not have the capacity to do everything and has frequently found itself responding to situations rather than setting its own agenda. It may also encourage member states to provide additional resources if they have a better idea of where that money is going.
- Coordinate with other global players– as these reforms do not address how the organization should interact with major global health players like the Bill and Melinda Gates Foundation and Doctors Without Borders.
- Mobilize more resources– WHO's current biennial budget is 4.42 billion, with overwhelming majority dictated by donors and their priorities, which leaves the organization limited control over the funding.
- There are plenty of funds flowing into the health sector but the same is imbalanced in allocation to "big" diseases (vertical) but not to the health system for strengthening (horizontal).
- There is also lack of evaluation, accountability and sustainability, which necessitates the need for major overhaul and shifts with regard to traditional donors and models of funding for optimisation of the existing health resources.

Conclusion

The criticism being faced by the WHO has done great damage to its global reputation and standing. While the politicisation of the WHO remains a serious concern, it also presents an opportunity to rethink the underpinnings of the broader global governance architecture. The WHO reforms announced few months back should be implemented on a war footing. Its donor dependency and weakened capacity should be addressed effectively, to meet its triple billion targets in future.

DAILY QUIZ

Q1. The Global Environment Facility (GEF) serves as a financial mechanism for which of the following conventions?

1. Convention on Biological Diversity (CBD)
2. Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES)
3. UN Convention to Combat Desertification (UNCCD)
4. Montreal Protocol on Substances that Deplete the Ozone Layer

Select the correct answer using the code below:

- a. **1 and 3 Only**
- b. 3 and 4 Only
- c. 1, 2 and 4 Only
- d. 1, 2, 3 and 4

Q2. Consider the following statements about National Commission for Protection of Child Rights (NCPCR):

1. It was set up under the Juvenile Justice (Care and Protection of Children) Act, 2015.
2. It works under the aegis of Ministry of Women and Child Development.
3. It is mandated to monitor and regulate in-country and inter-country adoptions.

Which of the given above statements is/are correct?

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

Q3. Academic Bank of Credit (ABC) was in news recently, is proposed under the

- a. National Policy of Education 1986
- b. Sarva Shiksha Abhiyan
- c. **National Education Policy 2020**
- d. None of the above

Q4. The quadrilateral security dialogue does not include:

- a. Russia
- b. **Germany**
- c. India
- d. Japan

Q5. The 'State of World Population Report' was released by which of the following?

- a) Population Matters
- b) Partners in Population and Development
- c) **United Nations Population Fund**
- d) International Organization for Migration