DAILY CURRENT AFFAIRS 15-10-2024

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Milton Hurricane

Syllabus: GS-1: Physical Geography – Cyclones & GS-3: Climate Change.

Context:

- Hurricane Milton, which made landfall near the city of Siesta Key in Florida on Wednesday night, triggered intense rainfall, flooding, tornadoes, storm surge, and strong winds in the area.

Path and Intensity

- **Formation and Path**:
  - Formed in the Gulf of Mexico, moved eastward, and made landfall on Florida's western coast.
  - Unusual path and landfall trajectory for a hurricane.
- **Rapid Intensification**:
  - Exploded from a **Category 1 (119-153 kmph)** to a **Category 5 (285 kmph)** storm in just 12 hours.
  - Wind speeds spiked by **145 kmph**, a rare occurrence.

Unusual Aspects of Hurricane Milton

- **Rapid Intensification**:
  - Normal storms undergo intensification if winds increase by 56 kmph; Milton's winds increased by 145 kmph within a day.
  - Became one of the strongest hurricanes in the Atlantic within a very short span.
- **Formation in Gulf of Mexico**:
  - The storm followed an atypical path, forming in the Gulf and moving eastward before making landfall in Florida, a rare phenomenon for hurricanes.

Reasons for Milton's Unusual Behavior

- **High Sea Surface Temperatures**:
  - Sea-surface temperatures in the Gulf of Mexico reached **31°C**, significantly above the **26°C** threshold required for hurricane formation.
  - Warmer waters led to increased evaporation and moisture, fueling the storm's rapid intensification.

- **Global Warming and Oceanic Heat**:
  - Climate change has increased the average global sea surface temperature by **0.9°C** since 1850.
  - Oceans absorb much of the excess heat from greenhouse gas emissions, contributing to stronger storms.
- **High Humidity**:
  - The atmosphere's ability to hold moisture increases by **7% for every degree Celsius** rise in temperature.
  - High moisture levels lead to more intense precipitation and storm severity.
- **Lack of Wind Shear**:
  - Wind shear, which typically disrupts hurricanes, was absent, allowing the storm to strengthen without interference.

Link to Climate Change

- **Rising Global Temperatures**: The spike in rapid storm intensification is linked to rising global temperatures and climate change.
- **Recent Examples**: Other rapidly intensifying storms include **Hurricane Otis (2022)**, **Hurricane Idalia (2023)**, and **Hurricane Ian (2022)**.
- **Future Predictions**:
  - Studies predict that as global warming continues, storms will undergo more frequent and severe rapid intensification, particularly before landfall.
  - The frequency of extreme weather events is expected to rise as the climate crisis worsens.

Conclusion

- Hurricane Milton's rapid intensification and unusual path underscore the growing concerns about climate change's role in fueling extreme weather events.
- The event serves as a reminder of the pressing need to address global warming and its impacts on natural disasters.

UNIFIL (United Nations Interim Force in Lebanon)

Syllabus: GS-2; International Institutions

Context

- 34 nations contributing troops to U.N. Lebanon force issue statement condemning attacks
- India, which has 903 personnel serving under the UNIFIL, is not among the 34 countries taking part in the joint statement, but said it 'aligns itself fully' with it

About

- The **United Nations Interim Force in Lebanon (UNIFIL)** is a peacekeeping mission established by the United Nations in 1978 to maintain peace and security in southern Lebanon. It was initially created in response to the Israeli invasion of Lebanon following Palestinian attacks from Lebanese territory. The main objectives of UNIFIL are:

Key Objectives:

- **Restore International Peace and Security**: UNIFIL was tasked with restoring peace and stability in the region, especially in the southern part of Lebanon.
- **Assistance to the Government of Lebanon**: Helping the Lebanese government re-establish its authority in southern Lebanon.
- **Oversee Israeli Withdrawal**: UNIFIL was initially mandated to confirm the withdrawal of Israeli forces from southern Lebanon, which happened in 2000.

Expanded Mandate:

After the **2006 Israel-Hezbollah war**, UNIFIL's mandate was expanded under **UN Security Council Resolution 1701** to include:

- Monitoring the cessation of hostilities.
- Supporting the Lebanese Armed Forces (LAF) in maintaining peace along the **Blue Line**, the border demarcation between Lebanon and Israel.
- Facilitating humanitarian access to civilian populations and ensuring the voluntary return of displaced persons.
- Preventing unauthorized weapons smuggling into southern Lebanon.

Current Role:

- **Peace Monitoring**: UNIFIL continues to patrol the buffer zone between Israel and Lebanon to ensure peace along the Blue Line.
- **Civilian Assistance**: It engages in humanitarian activities, including mine-clearing and supporting local infrastructure.
- **Coordination with Lebanese Armed Forces**: UNIFIL works closely with the Lebanese Army to stabilize the region and ensure compliance with Security Council mandates.

Composition:

- UNIFIL is made up of military personnel from multiple contributing countries. As of the latest reports, it includes approximately **10,000 peacekeepers**, supported by a civilian component. Troop-contributing countries include **Italy, France, Ghana, Nepal**, and several others.

Challenges:

- UNIFIL operates in a complex and volatile region, with recurring tensions between **Israel** and **Hezbollah**. It faces operational difficulties in ensuring compliance from all parties and maintaining a neutral stance amid regional conflicts.

Headquarters:

- UNIFIL's headquarters is in **Naqoura, southern Lebanon**, near the Blue Line.

Why government wants to formulate Standard National Agriculture Code

Syllabus: GS-3: Indian Agriculture – Policies.

Context:

- The **Bureau of Indian Standards** (BIS) is formulating the National Agriculture Code (NAC), an initiative aimed at creating comprehensive standards for the entire agricultural cycle in India.
- This ambitious project is modeled after successful frameworks like the **National Building Code (NBC)** and the **National Electrical Code (NEC).**

- The NAC will establish guidelines for various stakeholders, including farmers, policymakers, and researchers, with the tentative completion date set for October 2025.
- The initiative also includes the establishment of Standardised Agriculture Demonstration Farms (SADF) to pilot and promote these standards.

What is the National Agriculture Code (NAC)?

Purpose:

- The NAC aims to create a structured framework for agriculture that covers everything from field preparation to the storage of produce.
- It seeks to bridge the gap in existing agricultural standards, focusing on practices not currently regulated, such as farming methodologies and crop-specific guidelines.

Scope:

- Covers all agricultural processes like crop selection, land preparation, sowing, irrigation, soil management, harvesting, and storage.
- Sets standards for inputs like fertilizers, pesticides, and weedicides, and addresses modern practices like natural and organic farming, as well as IoT-based farming.

Structure:

- **Part 1**: General principles applicable to all crops.
- **Part 2**: Crop-specific standards for crops like paddy, wheat, oilseeds, and pulses.

Objectives:

- Develop a code that considers agro-climatic zones, socio-economic diversity, and the entire agri-food value chain.
- Encourage a culture of quality in Indian agriculture and assist policymakers in aligning regulations with NAC standards.
- Provide a comprehensive guide for farmers and promote sustainable and traceable agricultural practices.

Guidance for Stakeholders:

- The NAC will serve as a reference for farmers, agricultural universities, and policymakers, helping integrate best practices.

Training and Support:

- After finalisation, BIS will offer training programs for farmers to facilitate implementation of the code.

Challenges in Formulating the NAC

- **Diverse Agricultural Practices**
  - India has varied climates and soil types across 15 agro-climatic zones, making it difficult to create uniform standards.
- **State vs. Central Jurisdiction**
  - Agriculture is a state subject under the Constitution, which could lead to conflicts between central and state regulations.
- **Resource Constraints**
  - Smallholder farmers might lack the infrastructure and resources needed to adopt NAC-recommended practices.
- **Technological Barriers**
  - Limited access to technology among farmers may hinder the code's implementation, especially with regard to modern farming methods.
- **Data and Research Gaps**
  - Comprehensive data on agricultural practices, yields, and trends may be insufficient, posing a challenge to evidence-based policy-making.

Addressing the Challenges

- **Customisation and Flexibility**
  - Develop region-specific guidelines and ensure the NAC is adaptable to different farm sizes and resource levels.
- **Environmental Considerations**
  - Address sustainability issues like land degradation, water scarcity, and climate change while promoting agricultural growth.
- **Capacity Building**
  - Provide hands-on training programs for farmers and develop mobile apps and platforms for real-time advice.
- **Policy and Regulatory Support**
  - Create a supportive legislative framework for the NAC and incentivise farmers for compliance through recognition programs or tax benefits.

Agricultural Policies in Other Countries

- **Common Agricultural Policy (CAP) – EU**: Provides subsidies, direct payments, and support for farmers across the European Union.
- **Growing Forward 2 (GF2) – Canada**: A federal-provincial-territorial policy focused on innovation, competitiveness, and market development in agriculture.

Standardised Agriculture Demonstration Farms (SADF)

- These farms will be established as experimental sites to test and demonstrate NAC-aligned agricultural practices and technologies, supported financially by BIS. They will serve as learning platforms for farmers and professionals.

Bureau of Indian Standards (BIS)

- BIS is India's national standards body, established under the BIS Act 2016, responsible for standardisation, marking, and quality certification of goods.
- It plays a crucial role in enhancing quality assurance and promoting exports and imports. BIS represents India in global standard-setting bodies like the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

Conclusion

- The NAC is a major step towards modernising Indian agriculture by establishing a uniform set of standards. As the formulation process continues, it will be essential to engage all stakeholders—farmers, policymakers, and researchers—to ensure that the code meets India's diverse agricultural needs and is both practical and widely accepted.

Nobel Peace Prize 2024

Syllabus: GS-3; Science and Technology

Context

- The Nobel Peace Prize has been awarded to Nihon Hidankyo, an organisation of survivors of the Hiroshima-Nagasaki bombings. In doing so, the Nobel Committee has highlighted the power of their testimonies and the need for disarmament.

More to know

Efforts Towards a Nuclear-Free World

- The 2024 Nobel Peace Prize was awarded to the Japanese organization **Nihon Hidankyo** for its dedicated efforts to achieve a world free of nuclear weapons.
- Nihon Hidankyo comprises survivors of the 1945 atomic bombings of Hiroshima and Nagasaki by the United States, known as the **Hibakusha**.
- The Nobel Committee highlighted the testimonies of the Hibakusha, which have significantly raised global awareness about the catastrophic humanitarian consequences of nuclear weapons and contributed to the establishment of a global "nuclear taboo."

Nihon Hidankyo: An Overview

- **Nihon Hidankyo** was established on **August 10, 1956**, as the only nationwide organization of A-bomb survivors from Hiroshima and Nagasaki.
- The group's primary goals include:
  - Ensuring the welfare of Hibakusha.
  - Advocating for the **elimination of nuclear weapons**.
  - Seeking appropriate **compensation** for the victims of the bombings.
- Nihon Hidankyo actively engages in spreading the stories of Hibakusha to educate people globally about the aftermath of nuclear warfare and advocates at international platforms such as the **United Nations**.

The Hiroshima and Nagasaki Bombings

- On **August 6, 1945**, the US dropped an atomic bomb called **"Little Boy"** on Hiroshima, killing over **70,000 people** instantly, with the toll rising to more than 100,000 later.
- Just days later, on **August 9, 1945**, another bomb, **"Fat Man"**, was dropped on Nagasaki, killing over **40,000 people** instantly.
- These bombings contributed to Japan's surrender in World War II, with Emperor Hirohito referencing a "most cruel bomb" in his speech on **August 15, 1945**.

Hibakusha's Advocacy for Nuclear Disarmament

- The Hibakusha played a pivotal role in the global movement advocating for nuclear disarmament.
- Their testimonies and activism helped establish the **nuclear taboo**, which has largely prevented the use of nuclear weapons since 1945.
- Nihon Hidankyo works to ensure the **memories of the atomic bombings** are preserved and shared, contributing to the broader disarmament movement.

The Nuclear Arms Race and Current Challenges

- Despite the devastation caused by the bombings, nuclear arms development accelerated post-World War II, with major global powers racing to build their own nuclear arsenals.
- This led to increased tension and the proliferation of nuclear weapons, with countries such as the **US** and **Russia** maintaining large stockpiles even today.
- New advancements in nuclear technology and emerging nuclear states have put the nuclear taboo under pressure, making the advocacy of organizations like Nihon Hidankyo even more critical.

Previous Nobel Peace Prizes for Disarmament

- The 2024 Nobel Peace Prize adds Nihon Hidankyo to a list of at least **10 previous Nobel Peace Prize laureates** recognized for advocating nuclear disarmament since 1901.
- Notable awardees include **Eisaku Sato**, former Japanese Prime Minister, who was honored in **1974** for Japan's policy of not acquiring nuclear weapons.
- The **2017 Nobel Peace Prize** was awarded to the **International Campaign to Abolish Nuclear Weapons (ICAN)**, which has collaborated with Nihon Hidankyo in documenting the impact of nuclear weapons.

Green patches spread in Antarctica

Syllabus: GS-3: Climate Change

Context:

- As green patch spreads in Antarctica, here's what is worrying scientists

Overview

- The Antarctic Peninsula is experiencing rapid changes in plant cover, primarily due to rising temperatures.
- Plant cover has increased more than **10 times** over the past few decades.
- This is seen as the **beginning of a dramatic transformation** in the region.

Study Details

- Published in **Nature Geoscience**.
- Conducted by researchers from the universities of Exeter and Hertfordshire, and the **British Antarctic Survey**.
- Title of the study: *Sustained greening of the Antarctic Peninsula observed from satellites*.

Antarctica's Warming Trend

- **Antarctica** is warming at **0.22°C to 0.32°C per decade**, twice the global average of **0.14°C to 0.18°C per decade** (IPCC data).
- The **Antarctic Peninsula** is warming **five times faster** than the global average, with a temperature increase of almost **3°C** since 1950.
- **Heatwaves**: July 2024 saw ground temperatures **10°C higher** than normal, with spikes of up to **28°C**.
- In **March 2022**, East Antarctica experienced a record heatwave with temperatures **39°C above normal**.

Key Findings of the Study

- **Vegetation Growth**: The extent of vegetation in the Antarctic Peninsula has increased **14 times** from 1986 to 2021.
    - In 1986, vegetation covered less than **1 sq km**, but by 2021 it had spread to **12 sq km**.
- The **rate of greening** accelerated by **30%** between 2016 and 2021.

- Plant types: **Mosses and lichen** dominate the vegetation cover.

Impact of Warming on Sea Ice

- **Sea ice** extent in 2024 was the second smallest recorded, just above the record low set in 2023.
- **Warmer seas** may be contributing to **wetter conditions**, promoting further plant growth.

Concerns About Increased Vegetation

- **Invasive Species**: Increased vegetation may enable the colonization of **invasive species**, threatening native Antarctic ecosystems.
    - Mosses can form soils, which may allow other species to thrive.
    - Risk of invasion from species brought by **eco-tourists** or scientists.
- **Albedo Effect**: Increased plant cover reduces the Peninsula's ability to reflect sunlight, potentially accelerating warming.
    - A **darker surface** absorbs more solar radiation, which could further increase ground temperatures.
- **Global Implications**: The loss of ice mass is speeding up, with Antarctica losing **280% more ice mass** in the 2000s and 2010s compared to the 1980s and 1990s.
    - This will lead to **rising global sea levels**.

Future Projections

- **Continued Warming**: As greenhouse gases continue to rise, **Antarctica will warm further**, leading to an increase in vegetation.
- Ongoing transformation of the region is expected with significant **local and global consequences**.