



**AGRASEN CIVIL SERVICES ACADEMY**

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**15th to 21st June 2023**

# WEEKLY Current Affairs

For

**UPSC / RPSC**

*and All Other Competitive*

**EXAMS**



- ◆ Space Garden
- ◆ Role of Cluster N in Avian Migration
- ◆ Phosphorous Discovered on Enceladus
- ◆ National Time Release Study (NTRS) 2023 Report
- ◆ Rs 500 Crore Contract to Procure Radio Relay Communication
- ◆ Julley Ladakh
- ◆ Uttar Pradesh Formulates Pharmaceutical Industry Policy -2023

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## Current Affairs 15 June to 21 June

- Space Garden
- Role of Cluster N in Avian Migration
- Phosphorous Discovered on Enceladus
- National Time Release Study (NTRS) 2023 Report
- Rs 500 Crore Contract to Procure Radio Relay Communication
- Julley Ladakh
- UNGA Resolution on "Memorial Wall for Fallen United Nations
- Global Mean Temperature Crosses 1.5 Degree Celsius Threshold
- Uttar Pradesh Formulates Pharmaceutical Industry Policy-2023

### Space Garden

In the vast expanse of space, a remarkable development has taken place on the International Space Station (ISS). NASA astronauts have successfully cultivated a space garden, showcasing the potential of growing fresh food beyond the confines of Earth. This groundbreaking endeavor has captured the attention of both scientists and space enthusiasts alike.

### The Veggie System and the Zinnia Blooming Experiment

In 2015, NASA astronauts activated the Veggie system, a specialized plant growth chamber, with zinnia seeds. The blooming of the zinnia flower in the microgravity conditions of the ISS presented scientists with valuable insights into growing plants in space. This challenging procedure allowed researchers to better understand the intricacies of horticulture in microgravity.

### Autonomous Gardening

During the zinnia blooming experiment, astronauts engaged in autonomous gardening, a crucial skill for future deep space missions. This practice prepares them for self-sufficiency in cultivating crops during long-duration space travel, where regular resupply missions may not be feasible.

### The Significance of the Space Garden

Studying plant growth in space provides valuable knowledge on cultivating crops off the Earth. This understanding is critical for developing sustainable food sources during long-term missions to celestial bodies like the Moon, Mars, and beyond. The space garden serves as a stepping stone towards achieving self-sufficiency in space exploration.

### Role of Cluster N in Avian Migration

Migratory birds have long captivated the human imagination with their awe-inspiring journeys across vast distances. How these birds navigate and find their way back to their breeding grounds with such precision has remained a mystery for centuries. However, recent research has shed light on some intriguing aspects of their navigation abilities.

### Magnetic Information and Migratory Birds







One of the intriguing findings is that migratory birds possess the remarkable ability to either ignore or process magnetic information. Researchers have found that they can filter out or utilize the Earth's magnetic field for navigation purposes. This discovery challenges previous assumptions and emphasizes the complexity of avian navigation systems.

## **Understanding the Earth's Magnetic Field**

Scientists have described the Earth's magnetic field as a vital shield that protects the planet and its inhabitants from harmful plasma and cosmic rays. It acts as a guardian, shielding life on Earth from the detrimental effects of space radiation. Migratory birds, in particular, have evolved to utilize this magnetic field as an internal compass, guiding them on their migratory journeys.

## **The Role of Cluster N**

Studies have revealed that birds rely on a specific region in their brain known as Cluster N to detect and process the Earth's magnetic field. This region plays a crucial role in avian navigation and serves as the gateway to their internal magnetic compass. Researchers have extensively studied Cluster N and its functions to unravel the mysteries behind birds' incredible navigation skills.

## **Nighttime Activation of Cluster N**

White-throated sparrows, a species known for their long-distance migrations, activate Cluster N primarily at night when they are motivated to migrate. This finding suggests that the internal magnetic compass plays a crucial role in guiding these birds during their nocturnal journeys. The activation of Cluster N during specific periods emphasizes the time-sensitive nature of avian navigation.

## **Geomagnetic Compass and Navigation**

The primary function of Cluster N is to activate the geomagnetic compass, enabling birds to navigate accurately during migration. By processing the Earth's magnetic field, migratory birds can maintain their heading and navigate along their established routes. This discovery highlights the central role of Cluster N in facilitating successful long-distance migrations.

## **Beyond Magnetic Cues**

While the magnetic field is a crucial cue for migratory birds, researchers have found that they also pay attention to other environmental cues, such as stars and the sun. These celestial cues help birds fine-tune their navigation and adjust their heading. The integration of multiple cues allows them to navigate with precision, even during cloudy or overcast conditions when the magnetic field may be less accessible.

## **Implications for Conservation**

Understanding how animals perceive the world during migration is of utmost importance for conservation efforts. By gaining insights into the mechanisms behind migratory birds' navigation, scientists can develop strategies to minimize human impact on their migration patterns. This knowledge can inform the creation of protected areas and the implementation of measures to safeguard critical stopover sites along migratory routes.

## **Phosphorous Discovered on Enceladus**

In a groundbreaking scientific development, researchers have discovered the presence of phosphorus in icy grains emanating from Saturn's moon Enceladus. This finding opens up new possibilities for understanding the potential habitability of celestial bodies beyond Earth.

Phosphorus is a fundamental unit in the structure of DNA and RNA, making it a crucial element for life as we know it. It plays a vital role in cell membranes and energy-carrying molecules. The discovery of phosphorus on Enceladus suggests that this moon possesses the necessary building blocks for life.





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## Data Collection and Analysis

The data used in this study was collected by NASA's Cassini spacecraft, which extensively explored Saturn, its rings, and its moons from 2004 to 2017. The Cosmic Dust Analyzer instrument onboard Cassini provided valuable insights into the composition of icy grains from Enceladus. Through laboratory experiments and analysis of the collected data, scientists were able to confirm the presence of phosphorus in different water-soluble forms within Enceladus' ocean.

## Implications for Habitability

Enceladus, the sixth largest moon of Saturn, now emerges as a potential candidate for supporting life. While the discovery of phosphorus is a significant step, it does not confirm the presence of life on Enceladus. However, the existence of phosphorus, alongside other key elements necessary for life, increases the potential habitability of this moon.

## National Time Release Study (NTRS) 2023 Report

The recently released National Time Release Study (NTRS) 2023 report by Central Board of Indirect Taxes and Customs (CBIC) is a significant milestone in evaluating the performance of cargo release processes in India. This study aims to provide valuable insights into import and export release times.

The Time Release Study serves as a vital performance measurement tool that assesses the duration of cargo release processes. It measures the time taken from the arrival of cargo at Customs stations to its out-of-charge status for domestic clearance in imports or the departure of the carrier in exports.

## Sample Period and Objectives

The NTRS 2023 report analyzed data collected during the sample period from January 1 to 7, 2023. Its primary objectives include assessing progress towards the targets set in the National Trade Facilitation Action Plan, evaluating the impact of trade facilitative initiatives like the "Path to Promptness," and identifying challenges hindering the reduction of release time.

## Inclusive Port Coverage

The study encompasses a wide range of ports, including seaports, air cargo complexes (ACCs), inland container depots (ICDs), and integrated check posts (ICPs). These ports collectively account for approximately 80% of bills of entry and 70% of shipping bills filed in the country.

## Reduction in Import Release Time

One of the key findings of the NTRS 2023 report is the continued improvement in average import release times. Comparing 2023 to 2022, seaports achieved a 9% reduction, ICDs achieved a remarkable 20% reduction, and ACCs saw an 11% decrease. The import release times for seaports, ICDs, ACCs, and ICPs were recorded as 85:42 hrs, 71:46 hrs, 44:16 hrs, and 31:47 hrs, respectively. Moreover, the measure of standard deviation indicated greater certainty in the timely release of imported cargo.

## The Path to Promptness

The report highlights the significance of the three-fold 'Path to Promptness' framework. It encompasses the advance filing of import documents, risk-based facilitation of cargo, and the benefits of the Authorized Economic Operators. Cargo shipments that successfully incorporate these three features consistently meet the National Trade Facilitation Action Plan's release time targets across all port categories.

## Export Release Time and Distinctions

In line with the Indian government's priority on export promotion, the NTRS 2023 report emphasizes the measurement of export release time. It differentiates between regulatory clearance, which concludes with the grant of Let Export Order (LEO), and physical clearance, which occurs upon the carrier's departure with the goods.





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## **Collaborative Efforts and Trade Efficiency**

The improved release times highlighted in the NTRS 2023 report are the result of collaborative efforts by stakeholders such as Customs, port authorities, Customs Brokers, and Participating Government Agencies (PGAs). The implementation of trade facilitation measures has played a pivotal role in expediting cargo clearance and enhancing trade efficiency. These efforts not only benefit the domestic industry but also foster opportunities for exports to friendly countries.

## **Rs 500 Crore Contract to Procure Radio Relay Communication**

The Ministry of Defence (MoD) has recently signed a significant contract with ICOMM Tele for the procurement of Radio Relay Communication equipment containers. This procurement aims to address the mobile communication detachment requirements of the Indian Army while promoting indigenous manufacturing and self-reliance.

Under the contract, a total of 1,035 numbers of 5/7.5 Ton Radio Relay Communication equipment containers will be procured. The MoD has categorized this contract under the Buy (Indian) Category, demonstrating the government's focus on supporting domestic manufacturing and promoting indigenous products.

## **Value of the Contract**

The approximate value of the contract stands at ₹500 crore. This substantial investment reinforces the government's commitment to strengthening the defence capabilities and infrastructure of the country.

## **Delivery Schedule**

The scheduled delivery of the containers is set to commence from the current Financial Year 2023-24. This timeline underscores the government's emphasis on timely procurement and deployment of essential equipment for the armed forces.

## **Addressing Mobile Communication Detachments**

The Radio Relay Containers play a vital role in meeting the long overdue requirement of mobile communication detachments of the Indian Army. These containers provide a protected environment for communication equipment, ensuring its reliable and failsafe operation. By addressing this requirement, the armed forces will have enhanced capabilities in maintaining effective communication during critical operations.

## **Mounting and Mobility**

The containers will be mounted on authorized specialist vehicles, enabling their efficient movement as per operational requirements. This flexibility ensures that the equipment can be deployed and relocated to different areas as needed.

## **Promoting Indigenous Manufacturing and Self-Reliance**

A notable aspect of this contract is that the containers will be produced with equipment and sub-systems sourced from indigenous manufacturers. This approach not only strengthens the indigenous manufacturing ecosystem but also supports the vision of Aatmnirbhar Bharat (Self-reliant India). The procurement of indigenous equipment contributes to reducing dependence on foreign suppliers while bolstering the domestic defence industry.

## **Boosting Exports and Technological Advancement**

Apart from meeting the requirements of the Indian Army, the development and procurement of such state-of-the-art equipment have broader implications. It promotes technological advancement in the country and enables the Indian defence industry to cater to the needs of friendly nations, thereby boosting exports and enhancing India's position as a reliable defence partner.

## **Julley Ladakh**

The Indian Navy has launched the "Julley Ladakh" outreach programme in Ladakh, aimed at increasing awareness about the service and engaging with the local youth and civil society. A highlight of this initiative is a 5000km Motorcycle







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Expedition, which was ceremoniously flagged off from the National War Memorial by VAdm Sanjay Jasjit Singh, Vice Chief of Naval Staff.

The primary objective of the Indian Navy's outreach programme in Ladakh is to raise awareness among the local population about the opportunities and contributions of the Navy. In line with the celebration of "Azadi ka Amrit Mahotsav," the Navy aims to instil a sense of pride and patriotism among the people of Ladakh.

## **Engaging with Ladakh's Youth and Civil Society**

Through various outreach activities, the Indian Navy seeks to engage with the youth and civil society in Ladakh. The planned initiatives include a Motor Cycle Expedition, a Band Concert at the City Centre featuring the famous Navy Band, a Medical Camp to provide essential healthcare services, and a Football Match between the Navy and the Ladakh Football Club. These events aim to foster a sense of camaraderie, inspire the youth, and showcase the Navy's capabilities.

## **Duration and Participation**

The Motorcycle Expedition embarked on its journey on June 15 and is expected to reach Leh by June 28. A total of 35 Indian Navy personnel, including officers, sailors, and their family members, are participating in this adventurous expedition. Their journey will take them through remote areas and tough terrains, allowing them to interact with students from schools and colleges along the way.

## **Building on Past Success**

The Indian Navy's Ladakh initiative follows the success of similar efforts in the North East region. It reflects the Navy's commitment to connect with different regions of the country, engage with citizens, and strengthen the sense of national unity. Additionally, the Navy had previously undertaken the "Sam No Varunah" car expedition to engage with citizens in coastal states.

## **UNGA Resolution on "Memorial Wall for Fallen United Nations"**

The United Nations General Assembly (UNGA) has recently adopted a resolution titled "Memorial wall for fallen United Nations peacekeepers".

India, with its strong commitment to peacekeeping efforts, took charge of piloting the resolution to establish the memorial wall. The country's proactive role in the United Nations peacekeeping missions has earned it recognition as the third largest contributor worldwide.

## **A Global Sacrifice**

Tragically, a total of 3,500 peacekeepers have lost their lives in various missions across the globe, demonstrating the high stakes and challenges faced in conflict areas. Among these fallen heroes, 178 were Indians, illustrating the significant contribution and sacrifice made by Indian peacekeepers. This somber statistic reinforces the need to commemorate their bravery and service.

## **India's Peacekeeping Contribution**

India's commitment to global peacekeeping efforts is exemplified by its deployment of over 6,000 military and police personnel in missions spanning diverse regions. From Abyei to the Central African Republic, Cyprus to the Democratic Republic of the Congo, and Lebanon to West Asia, Indian peacekeepers have played a crucial role in maintaining stability and security.

## **Global Support and Co-sponsorships**

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The resolution introduced by India received overwhelming support and co-sponsorships from nations worldwide. A record-breaking 190 co-sponsorships were garnered, showcasing the widespread recognition and appreciation for the initiative. This unified backing from the international community underlines the importance of honoring fallen peacekeepers.

## **Global Mean Temperature Crosses 1.5 Degree Celsius Threshold**

According to the European Centre for Medium Range Weather Forecast (ECMWF), the 1.5-degree Celsius threshold for global mean temperatures was breached in the first few days of June. This marks the first time the 1.5-degree threshold has been surpassed during the summer months. The ECMWF highlighted that earlier instances of exceeding pre-industrial averages by more than 1.5 degrees Celsius occurred predominantly in the winter and spring seasons, when deviations from historical trends are more pronounced.

The 2015 Paris Agreement sets a goal to limit the rise in global mean temperatures compared to pre-industrial times to no more than 2 degrees Celsius, with a preference for restricting it within 1.5 degrees Celsius. However, it is important to note that these thresholds refer to long-term warming trends over a period of 20 to 30 years, rather than daily or annual global temperatures.

## **Inevitability of Short-Term Breaches**

Short-term breaches of the Paris Agreement thresholds, even extending over a few years, are considered inevitable at this point. Various climate change projections, including those from the Intergovernmental Panel on Climate Change, indicate that the world is expected to exceed the 1.5-degree threshold before eventually returning to lower levels.

## **World Meteorological Organization's Warnings**

The World Meteorological Organization (WMO) issued a warning that there is a 66% likelihood of annual global temperatures surpassing the 1.5-degree threshold in at least one of the next five years (2023-2027). Last year, global mean temperatures were already 1.15 degrees Celsius higher than pre-industrial levels. The warmest year on record so far is 2016 when global mean temperatures were 1.28 degrees Celsius higher.

## **Implications for Climate Crisis**

These temperature increases and breaches of the 1.5-degree threshold underscore the urgency of addressing the climate crisis. Monitoring the frequency and duration of these breaches is crucial to mitigate the severe consequences of climate change. Efforts to reduce greenhouse gas emissions, transition to renewable energy sources, and implement sustainable practices become increasingly important as the world faces the challenges of rising temperatures.

## **Long-Term Commitment and Collaborative Action**

The thresholds set in the Paris Agreement reflect the long-term commitment to combat climate change. Achieving the agreed-upon goals requires sustained efforts over decades. As global temperatures continue to rise, it is essential for countries, organizations, and individuals to work together, adopt environmentally-friendly practices, and develop innovative solutions to mitigate the impacts of climate change and safeguard the future of our planet.

## **Uttar Pradesh Formulates Pharmaceutical Industry Policy-2023**

The Government of Uttar Pradesh is taking significant strides to establish the state as a prominent hub for pharmaceutical products in India. With this goal in mind, the state government is preparing the draft of the Pharmaceutical Industry Policy-2023. This policy, set to be implemented for the next five years, aims to boost the local pharmaceutical and medical device industry, foster research and development, and improve the accessibility of affordable medicines for the citizens of Uttar Pradesh.





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The primary objective of the Pharmaceutical Industry Policy-2023 is to promote the overall development of the pharmaceutical sector within the state. By focusing on local production, research and development, and ensuring the availability of cost-effective medicines, the policy aims to create a robust ecosystem for growth and innovation.

## Incentives and Support

To propel the growth of the pharmaceutical industry, the policy outlines various incentives and support measures. The government plans to provide subsidies, incentives, and land to encourage the establishment of pharmaceutical companies. Additionally, special attention will be given to the creation of a conducive environment for research and development by collaborating with academic institutions.

## Target Sectors and Manufacturing

The Pharmaceutical Industry Policy-2023 places significant emphasis on the pharmaceutical and medical device sectors. It aims to identify plots and develop dedicated parks for bulk manufacturing of allopathic and AYUSH products, medical devices, and essential ingredients used in drug manufacturing. This focus on manufacturing will facilitate the growth of the industry and generate employment opportunities.

## Loan Interest and Investment

To attract investment and promote industry development, the government offers a notable incentive in the form of loan interest assistance. Under the policy, the State Government will provide a 50% interest subsidy on loans for land purchases, up to a maximum of seven years. This financial support will aid in establishing pharmaceutical facilities and encourage investors to participate in the growth of the industry.

## ONE LINER:

- India to buy 31 armed MQ-9 Reaper Unmanned Aerial Vehicles (UAVs) from General Atomics.
- Karnataka to scrap anti-conversion law in the state.
- Approximately 80 more castes in six States are likely to be added to the Central List of Other Backward Classes (OBCs).
- With 44.22 % Growth, Overall, Coal stock position in India touches 110.58 million tonnes.
- CBIC releases National Time Release Study (NTRS) 2023 report.
- Rajasthan, Gujarat and Tamil Nadu emerge Top Achievers in Wind Energy Adoption.
- Cyclone 'Biparjoy' Landfall started in Saurashtra and Kutch in Gujarat.
- ECONOMY & CORPORATE
- India's merchandise exports fell 10.3% to USD 34.98 billion in May, trade deficit hits 5-month high.
- Assets Under Management (AUM) may cross ₹10 lakh cr. by September: PFRDA
- NaBFID raises ₹10,000 crore via listed bond issue.
- European Central Bank raised borrowing costs to their highest level in 22 years.
- Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) to adopt Bangkok Vision 2030 at next summit.
- U.S. military gets access to Papua New Guinea bases.
- Philip Green to be Australia's new envoy to India
- Kartik Kumar and Gulveer Singh claimed the top two places in men's 10,000m and qualified for the Asian Games.
- ATP Tennis Tournament: Rohan Bopanna and Matthew Ebden of Australia enters the doubles semifinals.

