

Current Affairs search results for: "DRDO"

1. DRDO Successfully Tests Indigenous Cruise Missile at Odisha (April 22, 2024)

On April 18, 2024, the Defence Research and Development Organisation (DRDO) conducted a successful flight-test of the Indigenous Technology Cruise Missile (ITCM) from the Integrated Test Range (ITR) in Chandipur, Odisha.

An Overview of the News

Features of Indigenous Technology Cruise Missile (ITCM):

- **Advanced Avionics:** Equipped with advanced avionics and software to ensure enhanced and reliable performance.
- **Development:** Developed by DRDO's Aeronautical Development Establishment (ADE) in Bengaluru, Karnataka, with contributions from other Indian laboratories and industries.
- **Propulsion System:** The missile features an indigenous propulsion system developed by the Gas Turbine Research Establishment (GTRE) in Bengaluru, Karnataka.

Key Observations during the Test:

- **Range Sensors:** Various Range Sensors including Radar, Electro Optical Tracking System (ETOS), and Telemetry deployed by ITR at different locations to ensure comprehensive coverage of the flight path.
- **Monitoring from Aircraft:** The flight of the missile was monitored from the Su-30-Mk-I aircraft of the Indian Air Force (IAF).

About ADE:

- **Responsibility:** A laboratory of DRDO entrusted with conducting research and development in military aviation.
- **Director:** Y Dilip
- **Headquarters:** Located in Bengaluru, Karnataka.

2. Successful MPATGM Warhead Flight Trials Conducted by Indian Army and DRDO (April 16, 2024)

The Indian Army and DRDO recently conducted successful warhead flight trials of the Man Portable Anti-tank Guided Missile (MPATGM) Weapon System on April 13, 2024, at the Pokhran Field Firing Range in Rajasthan.

An Overview of the News

- Components of the MPATGM Weapon system include the MPATGM itself, Launcher, Target Acquisition System (TAS), and Fire Control Unit (FCU).

- MPATGM was developed domestically by DRDO in collaboration with VEM Technologies Private Limited, based in Hyderabad, Telangana.
- The trials aimed at meeting the operational requirements specified in the General Staff Qualitative Requirements (Infantry, Indian Army), covering the complete operational envelope.
- Successful penetration trials of the Tandem Warhead System of MPATGM were also conducted during these trials.

Key Features of MPATGM:

- The missile is approximately 1.3 meters long with a diameter of around 0.12 meters.
- It has a strike range of 2.5 kilometers and weighs about 14.5 kilograms.
- Equipped with a modern Infrared Imaging Seeker and advanced avionics.

Manufacturing Location:

- Bharat Dynamics Limited (BDL) in Bhanoor, Telangana, is designated for its manufacturing.

About DRDO

- It serves as the Research and Development (R&D) arm of the Ministry of Defence (MoD).
- Chairman - Dr. Samir Venkatpati Kamat
- HQ - New Delhi, Delhi
- Founded - 1958

3. Successful flight test of Agni-Prime missile (April 4, 2024)

Agni-Prime missile successfully flight tested in Odisha.

An Overview of the News

- The test was conducted jointly by the Strategic Force Command (SFC) and Defense Research and Development Organization (DRDO) from Dr APJ Abdul Kalam Island.
- The Defense Ministry said that the Agni-Prime missile met all the test objectives, demonstrating its reliable performance.

Introduction of Agni-P (Agni-Prime):

- Agni-P, also known as Agni-Prime, is a medium-range ballistic missile under development by India's Defence Research and Development Organisation (DRDO).
- It is the sixth missile in the Agni series and is designed to be a two-stage, surface-to-surface, canister-launched, and road-mobile system.

Purpose and Deployment:

- Agni-P is intended to be deployed within the Strategic Forces Command for operational use.
- Its development aims to enhance India's ballistic missile capabilities, particularly in the medium-range segment.

Key Features and Upgrades:

- The missile incorporates significant upgrades compared to its predecessors.
- These upgrades include advancements in the composite motor casing, navigation systems, and guidance systems.

Maneuverable Reentry Vehicle (MaRV):

- Agni-P is equipped with a maneuverable reentry vehicle (MaRV), enhancing its effectiveness in penetrating enemy defenses and accurately hitting targets.

Solid-Fueled Design:

- Agni-P utilizes solid fuel propulsion, ensuring reliability, mobility, and ease of deployment.

Canister Launch Capability:

- Its canister-launch system adds to its mobility and readiness, allowing for rapid deployment and launch from various platforms.

Strategic Significance:

- The development and deployment of Agni-P mark a significant advancement in India's strategic missile program.
- It strengthens India's deterrence capability and provides a credible response to evolving security challenges in the region.

4. DAC gave its approval to the indigenous missile Dhruvastra (Sept. 23, 2023)

The Indian Defense Acquisition Council (DAC) gave its approval to the indigenous short-range air-to-surface missile Dhruvastra.

An Overview of the News

- The Dhruvastra missile is designed **to enhance India's combat capabilities against enemy tanks and armored vehicles and will be deployed on DHRUV MK-IV helicopters.**

- DAC's approval of the Dhruvastra missile represents a significant enhancement to India's military capabilities.
- Developed by the Defense Research and Development Organization (DRDO) as part of the Integrated Guided Missile Development Program (IGMDP), it is a valuable addition to India's military assets.

Dhruvastra Missile:-

- It is a third-generation, fire-and-forget anti-tank guided missile (ATGM) system known for its versatility and advanced features.
- **Dual Engagement Mode:** Dhruvastra can operate in direct hit and top attack modes, increasing its adaptability to various combat scenarios.
- **Effective Range:** Its range ranges from 500 meters to an impressive 7 kilometers, allowing it to engage targets across a wide spectrum.
- **High altitude launch:** Dhruvastra can be launched from altitudes up to 4 kilometers, providing a strategic advantage in mountainous terrain.
- **Effective Target Tracking:** Equipped with an Imaging Infrared-Seeker (IIS), it can track and guide the missile to its target based on the heat signature of the target, ensuring accuracy even in challenging conditions.
- **Penetrating Warhead:** The Dhruvastra's specialized warhead is designed to penetrate various types of armor, including reactive armor found on modern tanks.

5. NITI Aayog released 'Export Preparedness Index (EPI) 2022' report (July 19, 2023)

The ITI Commission released the 3rd edition of 'Export Preparedness Index (EPI) 2022' for the States/UTs of India.

An Overview of the News

- The report was released by Vice President Suman Berry and other officials.
- It aims to promote India as a global export player by leveraging regional competitiveness and diversity.
- The focus is on export performance both at the state and district levels.

Objectives of EPI 2022

- Empowering state governments with sector-specific insights for decision making.
- Identify strengths and address weaknesses to promote comprehensive development.
- To promote competitive federalism among the States/UTs.

Four Pillars of EPI 2022

1. **Policy pillar:** Evaluates the adoption of the export-related policy ecosystem and institutional framework at the state and district levels.
2. **Business Ecosystem:** Assesses the business environment, supporting infrastructure and transport connectivity in the States/UTs.
3. **Export ecosystem:** Focuses on export-related infrastructure, business support and research and development (R&D) to foster innovation.
4. **Export Performance:** Measures the growth, concentration and global market footprint of a state's exports.

Ten sub-pillars - Export Promotion Policy, Institutional Framework, Business Environment, Infrastructure, Transport, Connectivity, Export Infrastructure, Trade Support, R&D Infrastructure, Export Diversification, and Growth Orientation

Top Performing States/UTs

Coastal states including Tamil Nadu, Maharashtra, Karnataka and Gujarat performed well in all categories.

EPI 2022 Rankings

Rank	State	Category	Score
1	Tamil Nadu	Coastal	80.89
2	Maharashtra	Coastal	78.20
3	Karnataka	Coastal	76.36
4	Gujarat	Coastal	73.22
5	Haryana	Landlocked	63.65
6	Telangana	Landlocked	61.36
7	Uttar Pradesh	Landlocked	61.23
8	Andhra Pradesh	Coastal	59.27
9	Uttarakhand	Himalayan	59.13
10	Punjab	Landlocked	58.95

6. India gifts missile corvette INS Kirpan to Vietnam (June 20, 2023)

India-gifts-missile-corvette-INS-Kirpan-to-Vietnam

Defense Minister **Rajnath Singh** on 19 June announced the gift of an indigenous in-service **missile corvette, INS Kirpan**, to the **Vietnam People's Navy**.

An overview of the news

- The announcement is expected to significantly enhance the capabilities of the **Vietnamese Navy**.
- The announcement was made during talks between Defense Minister Singh and Defense Minister of Vietnam General **Phan Van Gang in Delhi**.
- During the meeting, bilateral defense cooperation initiatives between India and Vietnam were reviewed and both sides expressed satisfaction at the progress of the ongoing engagements.
- The Ministers identified opportunities to further enhance cooperation, particularly in areas such as defense industry cooperation, maritime security and multinational cooperation.
- Apart from the talks, the Defense Minister of Vietnam also visited the **Defense Research and Development Organization (DRDO)** headquarters to explore ways to enhance defense industrial capabilities through research and joint production.
- The strengthening of defense ties between India and Vietnam underscores the strategic partnership between the two countries and their shared commitment to regional security and cooperation.

About INS Kirpan

- INS Kirpan is a missile corvette belonging to the **Khukri class** with a displacement of about **1,350 tonnes**.
- It was commissioned into the Indian Navy on **12 January 1991**.
- The length of the corvette is **91 meters** and the beam is **11 metres**.
- It is capable of attaining speeds of over **25 knots**.
- Equipped with a variety of weapons including medium-range cannon, **30 mm close-range gun**, chaff launcher and surface-to-surface missiles, INS Kirpan has the versatility to play multiple roles.
- The roles performed by INS Kirpan include coastal and offshore patrolling, coastal security, surface warfare, anti-piracy operations and Humanitarian Assistance and Disaster Relief (HADR) operations.

7. First Janjatiya Khel Mahotsav (June 16, 2023)

First-Janjatiya-Khel-Mahotsav

Recently, the **first Janjatiya Khel Mahotsav** was organized at the **Kalinga Institute of Social Sciences, Bhubaneswar**, in a collaborative effort between the **Ministry of Culture, the Odisha Government, and KIIT University**.

An overview of the news

- The event brought together **5,000 tribal athletes and 1,000 officials** from **26 states**, showcasing the diversity and richness of indigenous sports in India.
- By organizing such events and supporting the promotion of indigenous sports, the government aims to preserve and revive these traditional games, ensuring their continued relevance and encouraging the younger generation to participate and excel in them.

About Indigenous Sports

- The promotion and development of indigenous sports primarily lie with the respective **State/Union Territory Governments**, as **'Sports' is a state subject**.
- However, the Union Government supports their efforts through initiatives such as the **'Khelo India - National Programme for Development of Sports'** Scheme.
- This scheme includes a specific component dedicated to the development and promotion of rural and indigenous/tribal games across the country.
- It provided an opportunity for athletes from different states to come together, compete, and exchange their experiences, thereby promoting cultural exchange and unity.
- Under this scheme, certain indigenous games have been identified for promotion, such as **Mallakhamb, Kalaripayattu, Gatka, Thang-Ta, Yogasana, and Silambam**.

8. 'Pradhan Mantri Matru Vandana Yojana' as a 'God Bharai' ceremony in Rajasthan (June 13, 2023)

'Pradhan-Mantri-Matru-Vandana-Yojana'-

According to **Jaskaur Meena**, MP from Dausa, Rajasthan, people in Dausa, Rajasthan celebrate **'Pradhan Mantri Matru Vandana Yojana'** as a **'God Bharai' (Baby Shower)** ceremony.

An Overview of the News:

- In this ceremony all the pregnant women of the area come together and they are provided with 'nutritional kits' for the health of their babies.
- According to MP Jaskaur Meena, about 3.5 lakh women have benefited from this scheme during 2022-23 only in Rajasthan.
- Prime Minister Narendra Modi has appreciated the new initiative of celebrating 'Pradhan Mantri Matru Vandana Yojana' as a 'baby shower' ceremony in Dausa, Rajasthan.
- This unique initiative of Dausa will give new energy to 'Pradhan Mantri Matru Vandana Yojana'. This initiative will ensure the health security of not only the mothers but also the babies.

Pradhan Mantri Matru Vandana Yojana (PMMVY):

- PMMVY was launched on January 1, 2017 as a Centrally Sponsored Scheme.
- This scheme, run by the Union Ministry of Child Development, was done for the welfare of pregnant and lactating women across the country.

- Under this, cash benefits are provided to pregnant women directly into their bank accounts to meet increased nutritional requirements and partially compensate for wage loss.
- All pregnant women and lactating mothers who are in regular employment under the Central Government or State Governments or Public Undertakings or who are in receipt of similar benefits under any law.
- Under this, **five thousand rupees** are given to all the eligible beneficiaries in three installments and the remaining amount of one thousand rupees is given after institutional delivery as per the conditions of maternity benefit under **Janani Suraksha Yojana**.
- Thus on an average a woman is given **Rs.6000**.

Rajasthan:

- Capital: **Jaipur**
- Governor: **Kalraj Mishra**
- Chief Minister: **Ashok Gehlot**
- Number of seats in the Legislative Assembly: **200**
- Number of seats in Lok Sabha: **25**
- Number of seats in Rajya Sabha: **10**

9. 'Agni Prime' ballistic missile successfully flight-tested by DRDO (June 8, 2023)

Agni-Prime

Generation Ballistic Missile '**Agni Prime**' was successfully flight-tested by **Defence Research and Development Organisation (DRDO)** from **Dr APJ Abdul Kalam Island** off the coast of Odisha on June 7, 2023.

New

An overview of the news

- DRDO's successful test flight of 'Agni Prime' missile marks a **significant achievement**.
- This was the first pre-induction night launch by the users after three successful developmental trials of the missile, **validating the accuracy and reliability of the system**.
- Range instrumentation such as **radar, telemetry and electro optical tracking systems** were deployed at various locations including two down-range vessels at the terminal point to capture flight data covering the entire trajectory of the vehicle.

About 'Agni Prime' Missile

- The missile is a **two-stage canisterised missile**.
- It is the latest and sixth variant of the Agni series missiles, developed under the **Integrated Guided Missile Development Program (IGMDP)**.
- The missile is equipped with multiple independently targetable re-entry vehicles, enabling it to deliver warheads to separate locations. It has a **range of 1,000 - 2,000 km**.

- The missile has a **diameter of 1.2 m and a height of 10.5 m.**
- It has a payload capacity of up to **1.5 tonnes for carrying warheads.**
- The missile is capable of performing high maneuvers while homing in on its targets.
- After a series of user-associated launches, these missiles will be officially **inducted into the armed forces.**

10. Indian Navy undertakes first combat firing of Varunastra torpedo (June 8, 2023)

The **Indian Navy and the country's Defence Research and Development Organisation (DRDO)** undertook the **first 'combat' test-firing of the Varunastra** heavyweight torpedo on 5 June.

An overview of the news

- It will enhance the **anti-submarine warfare capabilities** of the indigenous Navy and give it a formidable force.
- The torpedo was fired from a submarine and successfully hit the target at a **distance of 40 km.**
- The test was conducted in the **Arabian Sea** in the presence of senior officials from the Indian Navy and the Defense Research and Development Organization (DRDO).

About Varunastra torpedo

- It has been designed and developed by the **Naval Science and Technological Laboratory at Visakhapatnam** under the Defense Research and Development Organisation.
- **Bharat Dynamics Limited (BDL)** is responsible for the **production of the Varunastra missile system.**
- This would become the mainstay of **anti-submarine torpedoes for all Navy warships.**
- It will **replace the old torpedoes** on all naval ships that can fire heavy-weight torpedoes.

Features of the Varunastra

- It is **seven to eight meters long, weighs 1,500 kg** and has a **diameter of 533 mm.**
- When fired it can travel at **40 knots, or 74 kmph.**
- The **operational range is 40 km** and it can carry a warhead weighing 250 kg.
- Varunastra was inducted by Indian Navy **in 2016**

- It can be fired from all **Anti-submarine warfare (ASW)** ships capable of firing heavy-weight torpedoes in an intense countermeasures environment.

Benefits of the Varunastra Torpedo

- It is a powerful and sophisticated weapon that will significantly enhance the **Navy's ability to detect, track, and engage enemy submarines.**
- It is the first indigenously developed heavyweight torpedo that is capable of meeting the Navy's operational requirements.
- This will reduce the Navy's dependence on foreign weapons systems.
- It is a cost-effective weapon that will save the Navy money in the long run.