

UPSC CURRENT AFFAIRS NOTES

22-08-2023

CSIR Prima ET11, the first indigenous e-Tractor developed by the Central Mechanical Engineering Research Institute (CMERI), Durgapur; calls for the adoption of new and AI driven technologies in Agriculture

An increasing number of new Startups venturing into the Agriculture sector, focusing on niche technologies, says Dr Jitendra Singh

Launching the CSIR Prima ET11, the first indigenous e-Tractor developed by the Central Mechanical Engineering Research Institute (CMERI), Durgapur, Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today underlined the role of Agri Startups' in India's economy and called for the adoption of new and AI driven technologies in Agriculture.



The Minister said, an increasing number of new Startups are venturing into the Agriculture sector, focusing on niche technologies including e-Tractor, recycling garbage, drip irrigation, Genome sequenced farming such as Mango and Lotus, he said.

“This is one sector in which India has rather not taken up the pace that was required,” said Dr Jitendra Singh, adding, “This is a huge unexplored resource, which is only exclusive to India. Those countries which had been promoting IT, have been promoting from their point



of view because they have their assets; they don't have the Agri asset that we have. So, we don't have to ape them. If I have plenty of agriculture resource, why not I make use of it... Therefore, this route would be a very important component in India's future economy in the next 25 years.”

Dr Jitendra Singh gave the mantra of 5 S's, - Showcasing, Stakeholders, Startups, Synergizing and Strategizing Industry linkage, for the success of R&D conducted at Government run scientific laboratories.

“Unless we are able to engage all these five components, we will not be able to achieve the optimum results,” he said.

Stockholm Water Week 2023: DG, NMCG Chairs Session On ‘Peer Networking for Integrated River Basin Planning and Management’

The Director General, National Mission for Clean Ganga (NMCG) chaired an online session in Stockholm Water Week today on the theme ‘Peer Networking for Integrated River Basin Planning and Management’ with an interactive discussion on the adoption of the river basin management approach. The five important pillars of – Nirmal Ganga (unpolluted river), Aviral Ganga (unrestricted flow), Jan Ganga (People's Participation), Gyan Ganga (knowledge and research based interventions) and Arth Ganga (people-river connect through the bridge of economy).

The Namami Ganga is among the world's acclaimed river rejuvenation programs and was recognized as one of the top 10 "World Restoration Flagships" on December 13th, 2022, during UN Conference on Biological Diversity (COP 15) in Montreal.



India participates in 20th ASEAN-India Economic Ministers' Meeting in Semarang, Indonesia

Shri Rajesh Agrawal, Additional Secretary, Department of Commerce, Ministry of Commerce and Industry represented India in the 20th ASEAN-India Economic Ministers' meeting held on 21st August 2023 in Semarang, Indonesia and co-chaired the meeting with Dr. Zulkifli Hasan, Minister of Trade, Indonesia.

The Economic Ministers or their representatives from all the 10 ASEAN countries viz. **Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam** participated in the meeting. Democratic Republic of Timor-Leste also joined the Meeting as an observer.



The Ministers reviewed the bilateral trade and investment relations between India and ASEAN and underscored their commitment to strengthen and enhance the economic partnership between India and ASEAN to ensure that the ASEAN-India Comprehensive Strategic Partnership delivers meaningful benefits for both sides, particularly in the post-pandemic era. India and ASEAN registered a bilateral trade of USD 131.5 billion in 2022-23. The trade with ASEAN accounted for 11.3% of India's global trade in 2022-23.

The Ministers also interacted with the ASEAN-India Business Council (AIBC) and took note of the activities undertaken by AIBC in 2023, including the 5th ASEAN-India Business Summit held on 6th March 2023 in Kuala Lumpur. The Ministers noted the Non-



Tariff Barriers (NTBs) flagged by the businesses and appreciated the growing exchanges between the stakeholders from both sides.

The main agenda of this year's meeting was the timely review of ASEAN-India Trade in Goods Agreement (AITIGA) which was signed in 2009. The Economic Ministers' meeting was preceded by AITIGA Joint Committee meeting, which deliberated the roadmap for the review and finalized the Term of Reference and the Work Plan of the AITIGA Review Negotiations.

After constructive discussions, the Ministers endorsed the above review documents, which would pave way for the formal commencement of negotiations with defined modalities. The review of the AITIGA was a long-standing demand of Indian businesses and the early commencement of the review would help in making the FTA trade facilitative and mutually beneficial.

The Ministers agreed to follow a quarterly schedule of negotiations and conclude the review in 2025. The review of AITIGA is expected to enhance and diversify trade while addressing the current asymmetry in the bilateral trade. The decision for review of AITIGA will now be placed in the forthcoming India-ASEAN Leaders' Summit scheduled in early September for further guidance.

EXERCISE MALABAR -23 CONCLUDES

The 27th edition of Exercise MALABAR, concluded on the East Coast of Australia off Sydney on 21 Aug 23.

The exercise saw participation of Ships, Submarines, and aircraft from the Indian Navy (IN), Royal Australian Navy (RAN), Japan Maritime Self Defense Force (JMSDF) and the US Navy (USN).

Exercise MALABAR 23 was conducted in two phases, which included a harbor phase from 11-15 August 2023 and a sea phase from 16-21 August 2023.



The Indian Navy was represented by indigenously built Destroyer **INS Kolkata**, Frigate **INS Sahyadri** and **P8I Maritime Patrol Aircraft**. Other participating units included RAN ships HMAS Choules and HMAS Brisbane, USS Raphael Peralta, JS Shiranui, along with submarines, fighter aircraft, maritime patrol aircraft and shipborne helicopters.

While the ships sailed out for the sea phase from Sydney harbor, the Air assets operated from RAAF Amberley Brisbane, where the P-8I Dets involving IN, RAAF and US P-8 crew were stationed.



Department of Animal Husbandry & Dairying will receive 25 million USD grant under Pandemic Fund for strengthening Animal Health System of India

Pandemic Fund will not only bring additional, dedicated resources for pandemic prevention, preparedness, and response but also incentivize increased investments, enhance coordination among partners, and serve as a platform for advocacy.

Impact of project would be to reduce risk of a pathogen emerging from animals to be transmitted into human population.

The devastating human, economic, and social cost of COVID-19 has highlighted the urgent need for coordinated action to build stronger One-health systems and mobilize additional resources for pandemic prevention, preparedness, and response. In the past few decades, 5 out of the 6 WHO declared public health emergencies of international concern were of animal origin. Consequently, it has become evident that any pandemic preparedness and response (PPR) needs a One Health approach with a focus on animal health security.



The G20 Pandemic Fund has approved the \$25 million proposal submitted by the Department of

The major interventions under the proposal are strengthening and integrating disease surveillance and early warning system, upgrading, and expanding the laboratory network, improving the inter-operable data systems, and building capacity for data analytics for risk analysis and risk communication, strengthening health security for

transboundary animal diseases and India's role in regional cooperation through cross border collaboration.

The Pandemic Fund will not only bring additional, dedicated resources for pandemic prevention, preparedness, and response. It will also incentivize increased investments, enhance coordination among partners, and serve as a platform for advocacy.

The impact of the project would be to reduce the risk that a pathogen will emerge from animals (domesticated and wildlife) to be transmitted into the human population endangering the health, nutritional security, and livelihoods of vulnerable populations. The project will be implemented in collaboration with the Asian Development Bank (ADB) as the lead implementing entity with The World Bank and the Food and Agriculture Organization (FAO).

OFFSHORE DRILLING



Offshore drilling is the process of extracting petroleum and natural gas from the seabed using a fixed or mobile platform located off the coast in the open ocean and deep-water regions.

- Offshore drilling greatly increases the oil production and the amount of oil that we have to use for fuel and energy. This stimulates the economy and keeps our society going.
- Offshore drilling requires many skilled people to operate the equipment.

- It creates an entire world of jobs that benefit thousands of people and their families.
- The oil drilling that happens offshore brings in an abundance of petroleum, a fossil fuel necessary for most everyday functions. We rely heavily on foreign countries to supply us with enough fuel to function.
- With offshore drilling we can gain a better state of independence and not be so vulnerable to outside influences.
- If oil is being produced on home soil, then foreign countries have no say in the prices of the oil, which are often inflated. Transportation costs are also cut drastically with offshore drilling, further lowering the price for oil.

Offshore Drilling Cons

- **Associated with numerous potential environmental hazards.**
- The deep-water horizon incident killed 11 people and exposed more than 45,000 square miles of the Gulf of Mexico to crude oil. Exposure to crude oil in just small amounts is toxic to most forms of marine life.
- In this one incident, 4.9 million barrels of oil spilled into gulf waters. More than 15,000 bird species, 1,200 fish species, 2,900 Mollusca and crustacean species, and 29 marine mammal species were threatened by this incident.





Expensive Facilities

- The equipment and rigs that are necessary to complete the process of offshore drilling is very expensive. It also takes a lot of people and training to run these operations efficiently and safely. These costs are often shifted down to taxpayers.

Creates A Pollution Hazard

- As part of the supply chain that begins with offshore drilling, the oil produced by these activities is a major source of several air pollutants, including **carbon dioxide, carbon monoxide, hydrogen sulfide, particular matter, and sulfur dioxide.**
- Some of the chemicals which are released during the refinement process are known carcinogens.

Creates Health Issues

- Just because offshore drilling platforms are out at sea does not mean they do not impact living conditions on land.
- The various pollutants that are created by these platforms, including the air emissions, are known to aggravate some respiratory conditions, like childhood asthma. They may be responsible for some developmental or reproductive health issues as well.
- The chemicals used in the supply chain can also impact the health of the water around the platform, in groundwater tables, and other access points.

May reduce jobs in other industries

- The presence of offshore drilling may encourage some job development, but it also reduces job development in other industries. The hospitality industry is often the first affected when offshore drilling is developed in a community.
- Platforms create a negative visual impact on the horizon for those looking to enjoy a beach. The effects of pollution can make it difficult to go outside. Some people do benefit with better wages because of this industry. Others can struggle to simply survive.



Oil Spills

- Major oil spillage from offshore drilling is a very real possibility, that has happened before. These spills cause catastrophic damage to the environment and marine life in the ocean.

High Carbon Emissions

- The drills that are used to drill into the seabed cause a very high amount of carbon emissions to be put into the atmosphere. This impacts our environment and further contributes to the growing global warming problem.

High-Risk Job

- Working on an off shore oil rig is very dangerous, there are many risks involved including fires and drowning.
- The rigs are very far from emergency services, making it hard to provide quick assistance to a worker in need.

Food Chain Problems

- It is inevitable that a small amount of oil is spilled into the ocean during drilling, this oil contaminates the water, which in turn contaminates the fish. It may start with the small fish, even plankton, but the fuel remnants will remain in them. As you move up the food chain, the contamination may dwindle, but still be present.

Does not resolve the question of international dependency.

- Just because offshore drilling is authorized does not mean that the platform will become productive. Domestic demand can change over time as well, which means the new platform would not cut into the usage gap being experienced.
- Although offshore drilling can increase overall domestic supplies, it is not a guarantee that foreign dependence on oil will be eliminated. In some instances, foreign dependence may not even be diminished, despite the presence of offshore drilling.



Sustainable Alternatives to Unfettered Offshore Drilling

Support Ocean Planning

- A great way to prevent unfettered offshore drilling is to formulate an ocean management plan to better understand the tradeoffs of offshore development and to help identify locations for renewable energy projects.
- This means taking into account sensitive marine areas and travel routes, beloved recreational areas and surf spots, highly valued fishing spots and economic centers, as well as the multitude of other important uses of our coasts and oceans.
- Documenting this information is the first step in a planning process that takes into account a lot of stakeholder input and the actual conditions of our oceans.

Renewable Energy Sources

- Renewable energy sources such as solar, wind, and geothermal power are another option for offshore drilling. These sources of energy are far less harmful to the environment than oil and gas, and they may be used without drilling.
- To harness the power of the wind, solar panels can be installed on land, and offshore wind turbines can be installed in the ocean. Drilling wells into the earth to tap into the heat energy released by the Earth's core can also be used to generate geothermal power.

Biofuels

- Biofuels are another alternative to offshore drilling. Biofuels are organic resources obtained from crops, algae, and waste items that can be used to power cars and other vehicles. Biofuels, unlike oil and gas, are renewable and do not emit harmful emissions when burned.
- Furthermore, biofuels can be generated locally, reducing the need for oil and gas to be transported over vast distances.

Energy-Saving and Efficiency Initiatives

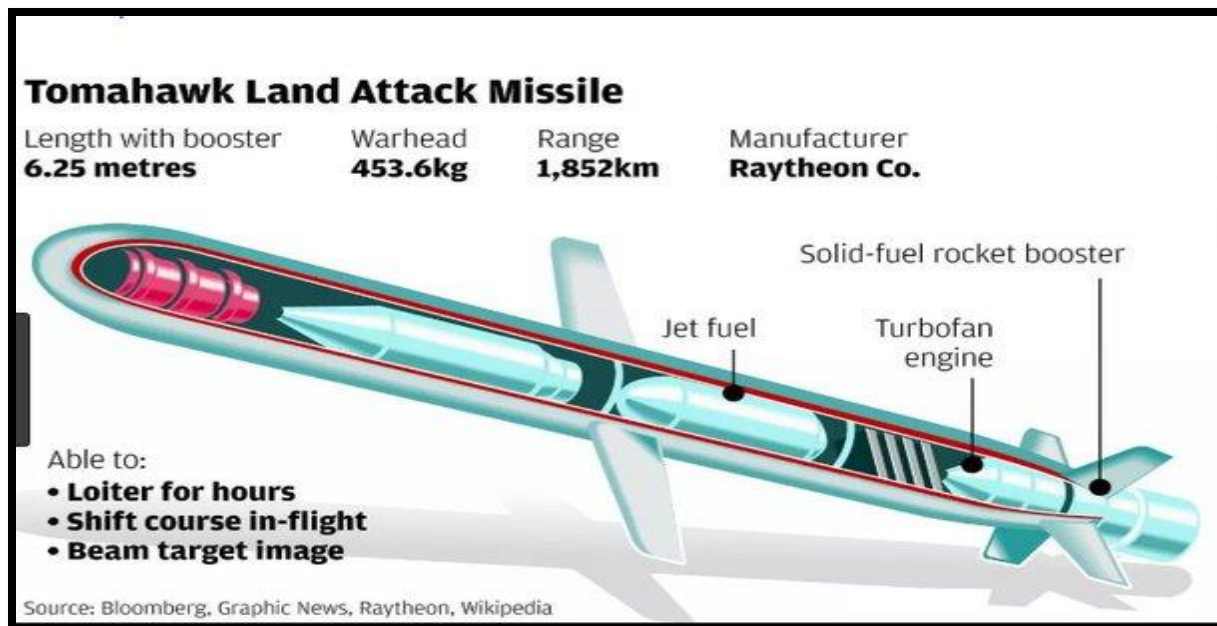
- Finally, energy-saving and efficiency initiatives can help to lessen the need for offshore drilling. We can minimize the demand for oil and gas by consuming less energy and preserving resources, which lessens the need for drilling. Energy-efficient homes and appliances, public transit, and carpooling are all examples of this.

TOMAHAWK CRUISE MISSILE

Australia will buy more than 200 Tomahawk Cruise Missiles for its navy under a \$1.3 billion investment, as concerns mount over China’s military presence in the Indo-Pacific.

The Tomahawk is an intermediate-range, subsonic cruise missile that is launched from U.S. Navy ships and submarines.

It provides a long-range, deep strike capability. The Tomahawk can carry either conventional or nuclear payloads, though policy decisions have phased out their nuclear role.





Tomahawk Design Features

- The Tomahawk is designed to operate at very low altitudes while maintaining high-subsonic speeds. Its modular design enables the integration of numerous types of warheads, guidance and control systems.
- “The Tomahawk is a long-range, all-weather, subsonic cruise missile.”
- The missile carries a nuclear or conventional payload. It can be armed with a nuclear or unitary warhead or a conventional submunitions dispenser with combined-effect bomblets.
- The missile has a 5.56m length, 51.8cm diameter and a 2.67m wingspan. The weight of the missile is 1,315kg. It has a life span of 30 years.

Guidance and control

- The Tomahawk Block IV uses GPS navigation and a satellite data-link to continue through a pre-set course. The missile can be reprogrammed in-flight to a new target.
- The Two-way satellite communications are used to perform post-launch mission changes throughout the flight. The on-board camera provides imagery of the target to the commanders before the strike.
- The guidance system is assisted by Terrain Contour Matching (TERCOM). The GPS provides terminal guidance.
- The Tactical Tomahawk Weapons Control System (TTWCS) integrated within the ship’s systems computes the path to engage targets. The system enables the planning of new missions on board the launch vessel. TTWCS is also used to communicate with multiple missiles for reassigning the targets and redirecting the missiles in flight.
- The Block IV Tomahawk missile is outfitted with Advanced Electronic Support Measure (ESM) seeker in Block IV Tomahawk missile. Its joint multi-effects warhead enables the commander to control the blast.



Propulsion

- The Tomahawk Block IV missile is powered by a Williams International F415 cruise turbo-fan engine and ARC MK 135 rocket motor. The propulsion provides a subsonic speed of 880km/h.

Pak President denies signing controversial bills

- President Arif Alvi denied approving changes to the Official Secrets Act and the Pakistan Army Act, claiming that he was undermined by his own staff.
- The law ministry, however, asked him to take responsibility for his own actions.
- The law ministry is currently functioning on an interim basis till general elections are held later this year.
- The development comes less than two weeks after Alvi dissolved the National Assembly on the advice of then outgoing Prime Minister Shahbaz Sharif – thus paving the way for the next general elections.

Background:

- Few weeks ago, the Pakistan National Assembly and the Senate approved two bills and sent those bills for Presidential assent.
- These bills were - the Official Secrets (Amendment) Bill, 2023 and the Pakistan Army (Amendment) Bill, 2023.
- The two bills that would further enhance the Pakistan Army's already considerable powers.
- This Act confers more powers to the army chief and calls for imprisonment for those found guilty of defaming the army.
- According to critics of the government, these laws will expand the power of the army and the state to persecute opponents and activists.
- Also, these laws were passed swiftly (within a day) in the far end of the Pakistani National Assembly's tenure, under questionable circumstances.
- Pak President Alvi was deemed to have given his assent to both. Later, he denied to have signed these bills.



- On the social media platform, the President claimed that he ordered his staff to return the bills unsigned within the stipulated time to render them ineffective.

He alleged that his staff undermined his orders and failed to follow his instructions. In light of the President's latest comments, the legal status of these bills is now up in the air.

Under Article 75(1) of the Pakistani Constitution, after a bill has passed through both the National Assembly and the Senate, it is presented to the President for his assent. The President, at this juncture, has two options – either to give assent within 10 days or to return the bill along with his objections to the legislature.

If the legislature passes it again, with or without incorporating the President's objections, as per the Constitution, the President shall give his assent within ten days, failing which such assent shall be deemed to have been given.

As per constitutional experts of Pakistan, the concept of deemed assent only kicks in with bills that have already been sent back to the Parliament by the President one time. Nowhere does 75(1) provide that if President has not assented to the Bill within 10 days it will automatically be deemed that the President has assent and the Bill becomes an Act.

As per legal experts from Pakistan, there are serious questions regarding the validity of both the passed bills which became laws after Presidential assent. The President is saying that key legal amendments have become law through fraud and subterfuge. Hence, there now existed strong legal grounds for the court to declare that the two laws were not validly enacted acts.