

# Governor's Role in Universities

### Why in News

Recently, a controversy has erupted in Kerala over the **reappointment of Gopinath Ravindran as the Vice Chancellor of Kannur University.** 

- The appointment was against the decision of the Governor as the Chancellor of State Universities.
- While the Governor's powers and functions as the Chancellor are laid out in the statutes that govern the universities under a particular state government, their role in appointing the Vice Chancellors has often triggered disputes with the political executive.

- Role of Governors in State Universities:
  - In most cases, the Governor of the state is the ex-officio chancellor of the universities in that state.
  - While as Governor he functions with the aid and advice of the Council of Ministers, as
     Chancellor he acts independently of the Council of Ministers and takes his own decisions on
     all University matters.
- Case of Central Universities:
  - Under the **Central Universities Act, 2009**, and other statutes, the President of India shall be the Visitor of a central university.
  - With their role limited to presiding over convocations, Chancellors in central universities are titular heads, who are appointed by the President in his capacity as Visitor.
  - The Vice Chancellor too are appointed by the Visitor from panels of names picked by search and selection committees formed by the Union government.
  - The Act adds that the President, as Visitor, shall have the right to authorise inspections
    of academic and non-academic aspects of the universities and also to institute
    inquiries.
- Constitutional Provisions Related to Governor:
  - Governor has a dual role vis-s vis State Government:
    - He is the **constitutional head of the state**, bound by the advice of his council of ministers (CoM).
    - He functions as a vital link between the Union Government and the State Government.
  - **Article 153** says that there shall be a Governor for each State. One person can be appointed as Governor for two or more States.
    - A Governor is appointed by the President and is a nominee of the Central Government.
  - **Article 163**: There is a CoM with the CM at the head to aid and advise the Governor in the exercise of his functions, **except some conditions for discretion.**

- Article 200: Governor assents, withholds assent, or reserves the bill for the consideration
  of the President passed by the Legislative Assembly.
- Article 213: Governor may promulgate the Ordinances under certain circumstances.
- Controversies Related to Governor's Role:
  - **Abuse of Power by the Centre:** There are numerous examples of the Governor's position being abused, usually at the behest of the ruling party at the Centre.
    - The process of appointment has generally been the cause behind it.
  - Biased Ideology: In several cases, politicians and former bureaucrats identifying with a
    particular political ideology have been appointed as the Governors by the central
    government.
    - This goes against the constitutionally mandated neutral seat and has resulted in bias, as appears to have happened in Karnataka and Goa.
  - Puppet Rulers: Recently, the Governor of Rajasthan has been charged with the violation of the <u>model code of conduct</u>.
    - His support of the central ruling party is against the spirit of non-partisanship that is expected from the person sitting on constitutional posts.
    - Due to such incidents, negative terms like an agent of the Centre, Puppet and rubber stamps are used to describe a governor of the state.
  - Favouring a Particular Political Party: Governor's discretionary powers to invite the leader of the largest party/alliance, post-election, to form the government has often been misused to favour a particular political party.
  - **Misuse of Power:** A Governor's recommendation for <u>President's Rule</u> (Article 356) in a state has not always been based on 'objective material', but on political whim or fancy.
- Related Recommendations of Various Committees:
  - On Appointment and Removal of Governor:
    - The "Punchhi commission 2010" recommended that there should be a provision for the impeachment of the governor by the state legislature.
    - The state chief minister should have a say in the governor's appointment.
  - On the Use of Article 356:
    - The "Punchhi commission 2010" recommended that Articles 355 & 356 be amended.
    - The **Sarkaria Commission (1988)** recommended that Article 356 should be used in very rare cases when it becomes unavoidable to restore the breakdown of constitutional machinery in the State.
    - Recommendations have also been given by the Administrative Reforms Commission (1968), Rajamannar Committee (1971) and Justice V.Chelliah Commission (2002).
  - On Dismissal of State Government under Article 356:
    - **S.R. Bommai Judgment (1994):** The case put an end to the arbitrary dismissal of State governments by a hostile Central government.
      - The verdict ruled that the floor of the Assembly is the only forum that should test the majority of the government of the day, and not the subjective opinion of the Governor.
    - On Discretionary Powers:
      - The Supreme Court in the Nabam Rebia judgment (2016) ruled that the exercise of Governor's discretion Article 163 is limited and his choice of action should not be arbitrary or fanciful.

# **Bank-NBFC Co-lending**

# Why in News

Recently, several banks have entered into **co-lending 'master agreements**' with registered **Non-Banking Financial Companies (NBFCs)**, and more are in the pipeline. In 2020, the **Reserve Bank of India (RBI)** allowed the co-lending model based on a **prior agreement.** 

• However, there are **some criticisms** associated with the co-lending.

- About the Co-Lending Model:
  - Background: In September 2018, the RBI had announced co-origination of loans" by banks and NBFCs for lending to the priority sector.
    - The arrangement entailed joint contribution of credit and sharing of risks and rewards. **Co-lending or co-origination** is a set-up where banks and non-banks enter into an arrangement for the joint contribution of credit for priority sector lending.
    - These guidelines were later amended in 2020 and rechristened as co-lending models (CLM) by including Housing Finance Companies and some changes in the framework.
    - Under priority sector norms, banks are mandated to lend a particular portion of their funds to specified sectors, like weaker sections of the society, agriculture, MSME and social infrastructure.
  - Objective: The primary focus of the 'Co-Lending Model' (CLM) is to "improve the flow of credit to the unserved and underserved sector of the economy.
    - It also envisages making available funds to the ultimate beneficiary at an affordable cost.
  - **Underlying Idea:** CLM seeks to better leverage the respective comparative advantages of the banks and NBFCs in a collaborative effort.
    - The lower cost of funds from banks
    - Greater reach of the NBFCs.
    - For example, CLM will enhance last-mile finance and drive financial inclusion to MSMEs.
  - Example of CLM: SBI, the country's largest lender, signed a deal with Adani Capital, a small NBFC of a big corporate house, for co-lending to farmers to help them buy tractors and farm implements.
- Risk in Co-lending:
  - Majority of Responsibility Lies with the Banks: Under the CLM, NBFCs are required to retain at least a 20% share of individual loans on their books.
    - This means 80% of the risk will be with the banks who will take the big hit in case of a default.
    - In effect, while the banks fund the major chunk of the loan, the NBFC decides the borrower.
  - **Corporates in Banking:** While the RBI hasn't officially allowed the entry of big corporate houses into the banking space, the NBFCs are mostly floated by corporate houses.

- This is risky, especially when four big private finance firms IL&FS, DHFL, SREI and Reliance Capita have collapsed in the last three years despite tight monitoring by the RBI.
- Limited Reach of NBFCs: While the RBI has referred to "the greater reach of the NBFCs", the small NBFCs with 100-branch networks will fall short in serving underserved and unserved segments.

# **Way Forward**

- There is a need to give greater powers to the bank's board in order to drive, review & oversight the decision-making process. And for that, the best talent must be recruited.
  - Also, there is the requirement of a much stronger risk handling mechanism.
- The need is to now look at foreign markets, and set up appropriate business policies (in terms of the global location & the product these banks can target) that will help in increasing the efficiency and the competition of these banks with their global counterparts.
- Continuous reforms should be undertaken regarding,
  - Product innovation,
  - Investments in technologies,
  - Better back-end processes,
  - Reduction in turnaround time.

Source: IE

# Trafficking in Persons (Prevention, Care & Rehabilitation) Draft Bill 2021

### Why in News

The Indian Leadership Forum Against Trafficking (ILFAT) has written to the Ministry of Women and Child Development identifying gaps in the **Trafficking in Persons (Prevention, Care and Rehabilitation) draft Bill 2021**, which is expected to be tabled in the Winter session of **Parliament**.

- Issues with the Bill:
  - While the Bill provides rehabilitation to the survivors, it does not extend the relief beyond shelter homes.
    - There is a demand for a community-based rehabilitation model that provides health services, legal aid, access to welfare schemes and income opportunities crucial for ensuring "all-round reintegration of victims" back into their community and family.
  - According to the <u>United Nations</u>' human rights experts, it was not in accordance with the <u>international human rights laws.</u>
  - The Bill seemed to combine sex work and migration with trafficking.
  - The Bill was criticised for addressing **trafficking through a criminal law perspective** instead of complementing it with a human-rights based and victim-centred approach.
  - It was also criticised for **promoting "rescue raids" by the police as well as institutionalisation of victims** in the name of rehabilitation.
  - It was pointed out that certain vague provisions would lead to blanket criminalisation

of activities that do not necessarily relate to trafficking.

### Provisions in the New Bill:

### It extends to all citizens inside as well as outside India,

- Persons on any ship or aircraft registered in India wherever it may be or carrying Indian citizens wherever they may be,
- A foreign national or a stateless person who has his or her residence in India at the time of commission of offence under this Act, and
- The law will apply to every offence of trafficking in persons with cross-border implications.

#### • Victims Covered:

- It extends beyond the protection of women and children as victims to **now include transgenders as well as any person** who may be a victim of trafficking.
- It also does away with the provision that a victim necessarily needs to be transported from one place to another to be defined as a victim.

### Defines 'Exploitation':

• The exploitation of the prostitution of others or other forms of sexual exploitation including pornography, any act of physical exploitation, forced labour or services, slavery or practices similar to slavery, servitude or forced removal of organs, illegal clinical drug trials or illegal bio-medical research.

### Government Officers as Offenders:

• Offenders will also include defence personnel and government servants, doctors and paramedical staff or anyone in a position of authority.

#### Penalty:

- A minimum of seven years which can go up to an imprisonment of 10 years and a fine of Rs 5 lakh in most cases of child trafficking.
- In case of the trafficking of more than one child, the penalty is now life imprisonment.

### Similarity to Money laundering Act:

 Property bought via such income as well as used for trafficking can now be forfeited with provisions set in place, similar to that of the <u>money laundering Act.</u>

### Investigation Agency:

 The <u>National Investigation Agency (NIA)</u> shall act as the national investigating and coordinating agency responsible for prevention and combating of trafficking in persons.

### National Anti-Human Trafficking Committee:

- Once the law is enacted, the Centre will notify and establish a National Anti-Human Trafficking Committee, for ensuring overall effective implementation of the provisions of this law.
- This committee will have representation from various ministries with the home secretary as the chairperson and secretary of the women and child development ministry as co-chair.
- State and district level anti-human trafficking committees will also be constituted.

### Significance:

- The transgender community, and any other person, has been included which will automatically bring under its scope activity such as organ harvesting.
- Also, cases such as forced labour, in which people lured with jobs end up in other
  countries where their passports and documentation is taken away and they are made to
  work, will also be covered by this new law.

### **Human Trafficking Situation in India**

### Data Analysis:

- According to the <u>National Crime Records Bureau (NCRB)</u> data, a total of 6,616 human trafficking cases were registered in the country in 2019, as compared to 5,788 cases in 2018 and 5,900 cases in 2017.
- Children make up almost **a third of all human trafficking victims worldwide**, with the situation being more disturbing in India for children.
  - According to the NCRB 2018 data, 51% of all trafficking victims were children, of which more than 80% were girls.
  - The recently orphaned children in India, due to the <u>Covid-19 pandemic</u>, also run the increased risk of trafficking in the garb of adoption, employment or livelihood and shelter.

### Legislations in India that Prohibits Human Trafficking:

- Article 23 (1) in the constitution of India prohibits trafficking in human beings and forced labour.
- The Immoral Traffic (Prevention) Act, 1956 (ITPA) penalizes trafficking for commercial sexual exploitation.
- India also prohibits bonded and forced labour through the Bonded Labour System (Abolition) Act 1976, Child Labour (Prohibition and Abolition) Act 1986, and Juvenile Justice Act.
- Sections 366(A) and 372 of the Indian Penal Code, prohibits kidnapping and selling minors into prostitution respectively.
- Apart from this, the Factories Act, 1948 guaranteed the protection of rights of workers.

### Related International Conventions, Protocols and Campaigns:

- Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children in 2000 as a part of the UN Convention Against Transnational Organised Crime (Palermo Convention).
- Protocol against the Smuggling of Migrants by Land, Sea and Air.
- Universal Declaration of Human Rights (1948).
- Blue Heart Campaign.
- Sustainable Development Goals

### **Way Forward**

- The Bill should be better realigned with the existing provisions of the <u>Juvenile Justice Act</u> and other relevant Acts to avoid duplicity or confusion for enforcement agencies.
- Since the effective implementation of the Act is dependent on lucid and consistent rules, it would be useful for the Central Government to prepare model rules for use by the States.

Source: IE

# Climate Change & Infectious Diseases

# Why in News

According to a recent study published in the journal 'Science of the Total Environment', scientists have found that climate change parameters accounted for 9-18% of the total infectious disease cases.

 Climate change driven by anthropogenic activities may challenge the gains in public health over the past many years, particularly in a country like India that ranks high in the list of climatevulnerable countries in the world.

# **Key Points**

### Highlights of the Report:

- **Vulnerability of Children**: Globally, it is estimated that children are to bear most of the burden of disease due to climate change, with the poorest disproportionately affected.
  - The higher risk associated with children is due to the combination of physiological vulnerability as well as the risk of exposure.
- Affecting Factors: Climate parameters like temperature, humidity, rainfall, solar radiation, and wind speed were significantly associated with the infectious diseases-gastrointestinal diseases, respiratory diseases, vector-borne diseases, and skin diseases.
- **Impact**: Socio-economic conditions and child anthropometry (study of the measurements and proportions of the human body) modified the climate-disease association with a high proportion of children found suffering from stunting, wasting, and underweight conditions.

### Example of Climate Change and Infectious Diseases Linkage:

- Malaria is of great public health concern, and seems likely to be the vector-borne disease most sensitive to long-term climate change.
  - Malaria varies seasonally in highly endemic areas. The link between malaria and extreme climatic events has long been studied in India, for example.
  - Early last century, the river-irrigated Punjab region experienced periodic malaria epidemics.
  - Excessive monsoon rainfall and high humidity was identified early on as a major influence, enhancing mosquito breeding and survival.
  - Recent analyses have shown that the malaria epidemic risk increases around five-fold in the year after an El Niño event. //

Environmental changes	Example diseases	Pathway of effect
Dams, canals, irrigation	Schistosomiasis	Snail host habitat, human contact
	Malaria	Breeding sites for mosquitoes
	Helminthiasies	Larval contact due to moist soil
	River blindness	▼ Blackfly breeding, ▼ disease
Agricultural intensification	Malaria	Crop insecticides and <a>vector</a> resistance
	Venezuelan haemorraghic fever	rodent abundance, contact
Urbanization, urban crowding	Cholera	▼ sanitation, hygiene;  ▲ water contamination
	Dengue	Water-collecting trash, Aedes aegypti mosquito breeding sites
	Cutaneous leishmaniasi	s A proximity, sandfly vectors
Deforestation and new habitation	Malaria	Breeding sites and vectors, immigration of susceptible people
	Oropouche	<ul> <li>contact, breeding of vectors</li> </ul>
	Visceral leishmaniasis	contact with sandfly vectors
Reforestation	Lyme disease	▲ tick hosts, outdoor exposure
Ocean warming	Red tide	▲ Toxic algal blooms
Elevated precipitation	Rift valley fever	Pools for mosquito breeding
	Hantavirus pulmonary syndrome	Rodent food, habitat, abundance
		▲ increase ▼ reduction

# **Way Forward**

- Changes in infectious disease transmission patterns are a likely major consequence of climate change. Thus, there is a need to learn more about the underlying complex causal relationships, and apply this information to the prediction of future impacts, using more complete, better validated, integrated, models.
- Government and policymakers need to prioritize effective measures for child health as the present association may increase disease burden in the future under climate-change scenarios in an already malnourished pediatric population through multiple pathways.

**Source: PIB** 

# **Great Indian Bustard (GIB)**

### Why in News

Recently, the Centre has approached the <u>Supreme Court</u> seeking **modification of its order directing** that all transmission cables in the habitat of the <u>Great Indian Bustard (GIB)</u> be laid underground.

- Background:
  - Earlier this year (2021), in a bid to check the dwindling numbers of the endangered Great Indian Bustard and Lesser Florican, a Supreme Court bench directed that overhead power lines be laid underground, wherever feasible, passing along the habitat of the birds in Rajasthan and Gujarat.
- Concerns Raised:
  - Implications for the Power Sector in India:
    - The area falling in Rajasthan and Gujarat contains a large proportion of the country's total solar and wind energy potential.
    - Laying power lines underground will escalate the cost of renewable energy production and hurt <u>India's renewable energy</u> cause.

- Energy transition is essential for reducing emission and controlling climate change and India has made international commitments including under the agreement signed in Paris in 2015 under the <u>United Nations</u> <u>Framework Convention on Climate Change (UNFCCC)</u> for transition to non-fossil fuels and for emission reduction.
- India has set a **target to achieve installed <u>renewable energy capacity</u>** (excluding large Hydro) of 175 GW by 2022 and 450 GW by 2030.
- Chances of Renewable Energy to Remain Untapped:
  - So far, **only a miniscule 3%** of the estimated potential of around 263 GW renewable energy in this area has been tapped.
  - If the remaining potential stays untapped, an additional **93,000 MW of coal fired** capacity will be needed to replace the unutilised renewable energy in the future which would cause an adverse direct impact on the environment.

### **Great Indian Bustard (GIB)**



### About:

- It is the State bird of Rajasthan and is considered India's most critically endangered bird.
- It is considered the **flagship grassland species**, representing the health of the grassland ecology.
- Its population is **confined mostly to Rajasthan and Gujarat**. Small populations occur in Maharashtra, Karnataka and Andhra Pradesh.
- The bird is under constant threats due to collision/electrocution with power transmission lines, hunting (still prevalent in Pakistan), habitat loss and alteration as a result of widespread agricultural expansion, etc.

### Protection Status:

- International Union for Conservation of Nature Red List: Critically Endangered
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix 1
- Convention on Migratory Species (CMS): Appendix I
- Wildlife (Protection) Act, 1972: Schedule 1
- Measures taken to protect GIB:
  - Species Recovery Programme:
    - It is kept under the species recovery programme under the <u>Integrated</u>
       <u>Development of Wildlife Habitats</u> of the Ministry of Environment, Forests and Climate Change (MoEFCC).
  - National Bustard Recovery Plans:

- It is currently being implemented by conservation agencies.
- Conservation Breeding Facility:
  - MoEF&CC, Rajasthan government and Wildlife Institute of India (WII) have also established a **conservation breeding facility** in **Desert National Park** at Jaisalmer in June 2019.
  - The objective of the programme is to build up a captive population of Great Indian Bustards and to release the chicks in the wild for increasing the population.
- Project Great Indian Bustard:
  - It has been launched by the Rajasthan government with an **aim of constructing breeding enclosures** for the species and developing infrastructure to reduce human pressure on its habitats.
- Eco-Friendly Measures:
  - Task Force for suggesting eco-friendly measures to mitigate impacts of power transmission lines and other power transmission infrastructures on wildlife including the Great Indian Bustard.

Source: IE

# **Buxa Tiger Reserve: West Bengal**

# Why in News

Recently, a Royal Bengal tiger was sighted at the Buxa reserve - a first such sighting in 23 years.

■ Historically, tigers were distributed throughout the reserve including the southernmost ranges and fringe areas. However, **the reserve has a low tiger density at present.** 

- About:
  - Buxa Tiger Reserve is situated in the Alipurduar Sub-division of Jalpaiguri District, West Bengal. It was created in 1983 as the 15<sup>th</sup> tiger reserve of India.
    - It was declared as a National Park in January 1992.
  - The northern boundary of Buxa Tiger Reserve runs along the international border with Bhutan. The Sinchula hill range lies all along the northern side of Buxa National Park and the Eastern boundary touches that of the Assam State.
  - The main rivers flowing across the Tiger Reserve are Sankosh, Raidak, Jayanti, Churnia, Turturi, Phashkhawa, Dima and Nonani.
- Tiger Corridor:
  - The reserve has **corridor connectivity across the border** with the forests of Bhutan in the North, on the East it has linkages with the Kochugaon forests, Manas Tiger Reserve and

on the West with the Jaldapara National Park. The following corridor links are important:

- **Buxa-Titi (via Torsa):** Connecting Rangamati Reserve Forest area of Buxa Tiger Reserve with Titi Reserve Forest.
- Buxa-Titi (via Beech and Bharnabari Tea estate): Connecting Bharnabari Reserve Forest of Buxa Tiger Reserve and Titi Reserve Forest situated south of Dalsingpara tea estate by passing through Bharnabari tea estate and Beech tea estate.
- Nimati-Chilapata (Buxa-Chilapata): Facilitating elephant movement between Nimati Range of Buxa Tiger Reserve and Chilapata Reserve Forest, thereby maintaining elephant movement between Buxa Tiger Reserve and Jaldapara Wildlife Sanctuary (West Bengal).
- **Buxa-Ripu at Sankosh (Sankosh):** This corridor is a contiguous forest that connects Buxa Tiger Reserve of West Bengal with the Ripu Reserve Forest of Kachugaon Forest Division, Assam.
- The corridors mentioned above form part of North East and Brahmaputra Valley tiger landscape, providing crucial linkages for the dispersal of tigers to various protected areas like, Buxa, <u>Manas Tiger Reserve</u> (Assam), Phipsoo Wildlife Sanctuary in Bhutan and Jaldapara National Park.

#### Flora:

The forests of the reserve can be broadly classified as the 'Moist Tropical Forest'.

#### Fauna:

Some important species found in the reserve are <u>Indian Tiger</u> (Panthera tigris tigris), <u>Leopard</u> (Panthera pardus), <u>Clouded Leopard</u> (Neofelis nebulosa), <u>Hog badger</u> (Arctonyx collaris), <u>Jungle Cat</u> (Felis chaus) etc.

### Other Protected Areas in West Bengal:

- Gorumara National Park
- Sundarbans National Park
- Neora Valley National Park
- Singalila National Park
- Jaldapara National Park

### Tiger

### Conservation Status:

- Indian Wildlife (Protection) Act, 1972: Schedule I
- International Union for Conservation of Nature (IUCN) Red List: Endangered.
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix I.

### Tigers in India:

- India is home to over **70% of the tiger population globally.**
- India is home to 53 tiger reserves spread across 18 states and the last tiger census of 2018 showed a rise in the tiger population.
- India achieved the target of doubling the tiger population four years ahead of schedule (2022) of the St. <u>Petersburg Declaration</u> on tiger conservation.
- India's strategy of tiger conservation attaches topmost importance to involving local communities.

### Tiger Conservation Projects in India:

- <u>Project Tiger 1973:</u> Project Tiger is a <u>Centrally Sponsored Scheme</u> of the Ministry of Environment, Forests and Climate Change (MoEFCC) launched in 1973. It provides havens for tigers in the country's national parks.
  - Recently, the National Tiger Conservation Authority (NTCA) has designated

the combined areas of the **Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary** as the <u>53<sup>rd</sup> Tiger Reserve in India.</u>

• **National Tiger Conservation Authority :** It is a statutory body under the MoEFCC and was established in 2005 following the recommendations of the Tiger Task Force.

Source: IE

# **Atmanirbhar Hastshilpkar Scheme**

## Why in News

Recently, the Atmanirbhar Hastshilpkar Scheme has been announced for the Artisans of the North Eastern Region under the Ministry of Development of North Eastern Region.

### **Key Points**

- About:
  - Financial assistance will be provided to the grass root Artisans of the region in the form of term loan for income generating activities for setting up / expansion / modernization / working capital requirement and other activities related to the sector.
  - During the announcement, credit assistance of Rs 1 lakh each was provided to as many as 17 artisans.
    - The credit facility is **collateral-free and carries a subsidized interest rate of 6%** p.a., which is repayable in 24 months.
    - For regular repayment, an **incentive of 1% on the interest rate** is provided, which will be refunded to the artisans on successful repayment of loans.
- Eligibility:
  - Registered/ unregistered artisan/ Individual
  - Having valid qualification or practicing any art form
  - No existing loan from any other bank/ financial institution
  - Bank Account
- Launched by:
  - North Eastern Development Finance Corporation Ltd. (NEDFi).

#### **NEDFi**

- NEDFi is a **premier financial institution** in the North-Eastern Region.
- It has completed an eventful twenty-six years since its establishment in 1995.
- Over the years, the Corporation has provided loans to over 7500 projects and taken up several development initiatives through its <u>Corporate Social Responsibility (CSR)</u> activities in the <u>eight states of North-East India.</u>

**Source: PIB** 

# **Supersonic Missile Assisted Torpedo**

### Why in News

Recently, the <u>Defence Research and Development Organisation (DRDO)</u> successfully launched the <u>Supersonic Missile Assisted Torpedo System (SMART)</u> from Wheeler Island in Odisha.



# **Key Points**

#### About:

- It is a missile assisted release of the lightweight Anti-Submarine Torpedo System for anti-submarine warfare (ASW) operations far beyond torpedo range. It is a canister based missile system.
- The system is a next generation missile-based standoff torpedo delivery system.
- The system has been designed to enhance anti-sub marine warfare capability far beyond the conventional range of the torpedo.

### Functioning:

- SMART, when launched from a warship or a truck-based coastal battery, takes **off like a regular supersonic missile.**
- It covers most of its flight in the air at lower altitudes with two-way data link from the warship or an airborne submarine target detection system and provides the exact location of the hostile submarine to correct its flight path midway.
- Just when it approaches close enough to the submerged submarine, the missile will eject
  the torpedo system into the water and the autonomous torpedo will start moving towards
  its target to take out the submarine.
  - Torpedo is a cigar-shaped, self-propelled underwater weapon, launched from a submarine, surface vessel, or airplane and designed for exploding upon contact with the hulls of surface vessels and submarines.
  - **Varunastra** is the first indigenous heavyweight ship launched anti-submarine electric torpedo.

### Significance:

- Strengthens the country's maritime strategic capabilities.
- A major breakthrough for stand-off capability in anti-submarine warfare.
  - Project 28, approved in 2003, is a class of anti- submarine warship corvettes currently in service with the Indian Navy. It includes INS Kamorta, INS Kadmatt, INS

Kiltan and INS Kavaratti.

- **Project 75** is a programme by the Indian Navy that entails building six Scorpene-Class attack submarines (Kalvari, Khanderi, Karanj, Vela, Vagir and Vagsheer).
- **Project 75 India** envisages indigenous construction of submarines equipped with the state-of-the-art Air Independent Propulsion system at an estimated cost of Rs. 43,000 crore.

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