11th Oct -17th October Weekly Compilation

(The Hindu+ Indian Express + PIB + Other World Wide News)

❖ PM GATI SHAKTI PLAN (Source: The Hindu & PIB)

Why in News: Recently, the government of India has launched the ambitious Gati Shakti scheme or National Master Plan for multi-modal connectivity plan, with the aim of coordinated planning and execution of infrastructure projects to bring down logistics costs.

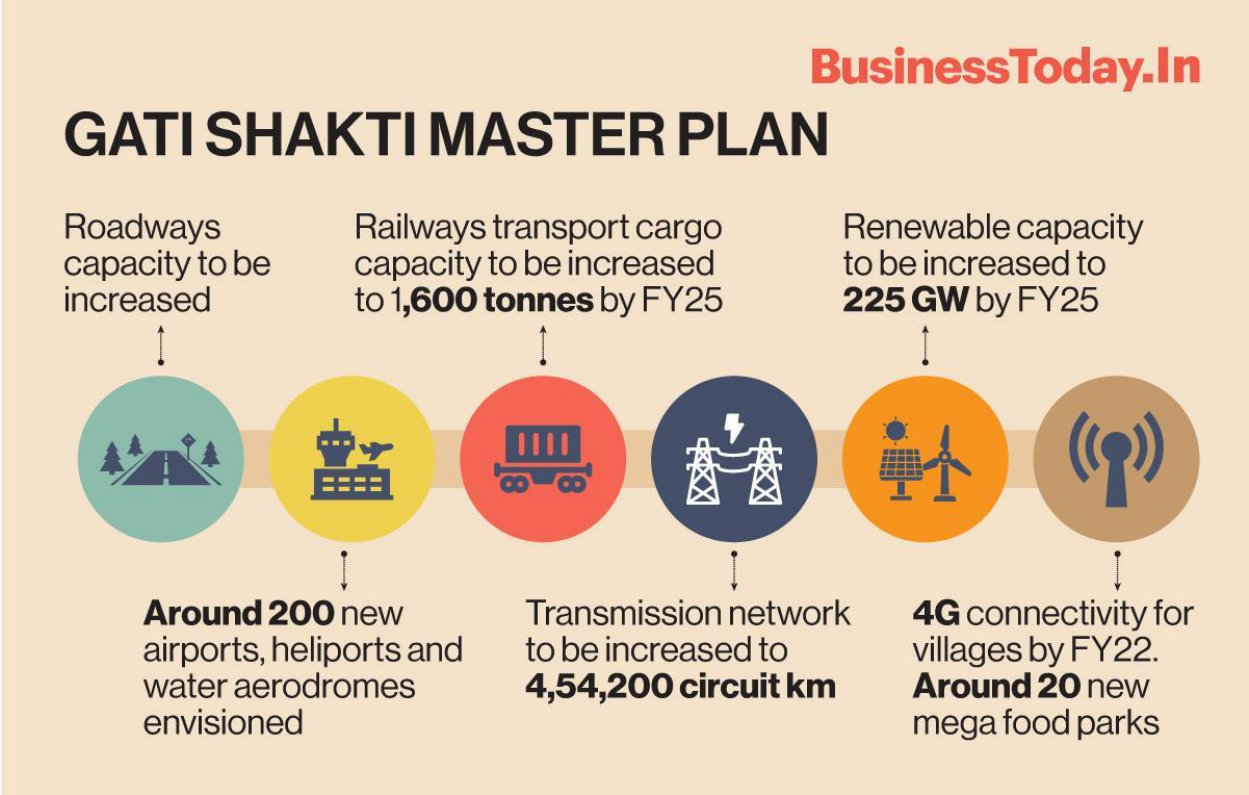
About the Scheme

Aim: To ensure integrated planning and implementation of infrastructure projects in the next four years, with focus on expediting works on the ground, saving costs and creating jobs.

- The Gati Shakti scheme will subsume the Rs 110 lakh crore National Infrastructure Pipeline that was launched in 2019.
- Besides cutting logistics costs, the scheme is also aimed at increasing cargo handling capacity and reducing the turnaround time at ports to boost trade.
- It also aims to have 11 industrial corridors and two new defence corridors - one in Tamil Nadu and other in Uttar Pradesh. Extending 4G connectivity to all villages is another aim. Adding 17,000 Kms to the gas pipeline network is being planned.
- It will help in fulfilling the ambitious targets set by the government for 2024-25, including expanding the length of the national highway network to 2 lakh kms, creation of more than 200 new airports, heliports and water aerodromes.

Integrated Approach: It intends to bring together 16 infrastructure related Ministries: This will help in removing long-standing issues such as disjointed planning, lack of standardisation, problems with clearances, and timely creation and utilisation of infrastructure capacities.

Gati Shakti Digital Platform: It involves the creation of a common umbrella platform through which infrastructure projects can be planned and implemented in an efficacious manner by way of coordination between various ministries/departments on a real-time basis.



❖ MILITARY EXERCISES (Source: PIB)

Why in News: The Indian Navy (IN) would be participating in the Second Phase of the 25th edition of the Multilateral Maritime Exercise Malabar to be conducted in the Bay of Bengal.

Exercise Malabar

- Exercise Malabar is a multilateral war-gaming naval exercise that was started in 1992.
- The exercise began as a bilateral exercise between the navies of India and the United States.
- From 2002 onward, the exercise has been conducted every year. Japan and Australia first participated in 2007. Since 2014, India, the US and Japan have participated in the exercise. In 2020 Australia too joined the Malabar Exercise.

Aim of the Exercise

The exercise is aimed to support free, open and inclusive Indo-Pacific and remains committed to the rules-based international order.

Other Exercises between India and Participating Countries of Malabar exercise

Exercises between India and Japan

- **Exercise DHARMA GUARDIAN:** It is an annual joint military exercise between Indian and Japan from 2018.
- **SHINYUU Maitri:** It is a joint exercise between the Indian Air Force and the Japanese Air Self Defence Force (JASDF).
- **Exercise JIMEX:** The exercise is an annual Naval Exercise between Indian and Japanese naval forces.

Exercises between India and Australia

- **Exercise AUSINDEX:** It is a bilateral maritime exercise between India and Australian Navies.
- **Exercise Pitch Black:** It is a biennial multilateral air combat exercise hosted by the Royal Australian Air Force (RAAF) since 1981.

Exercises between India and the US

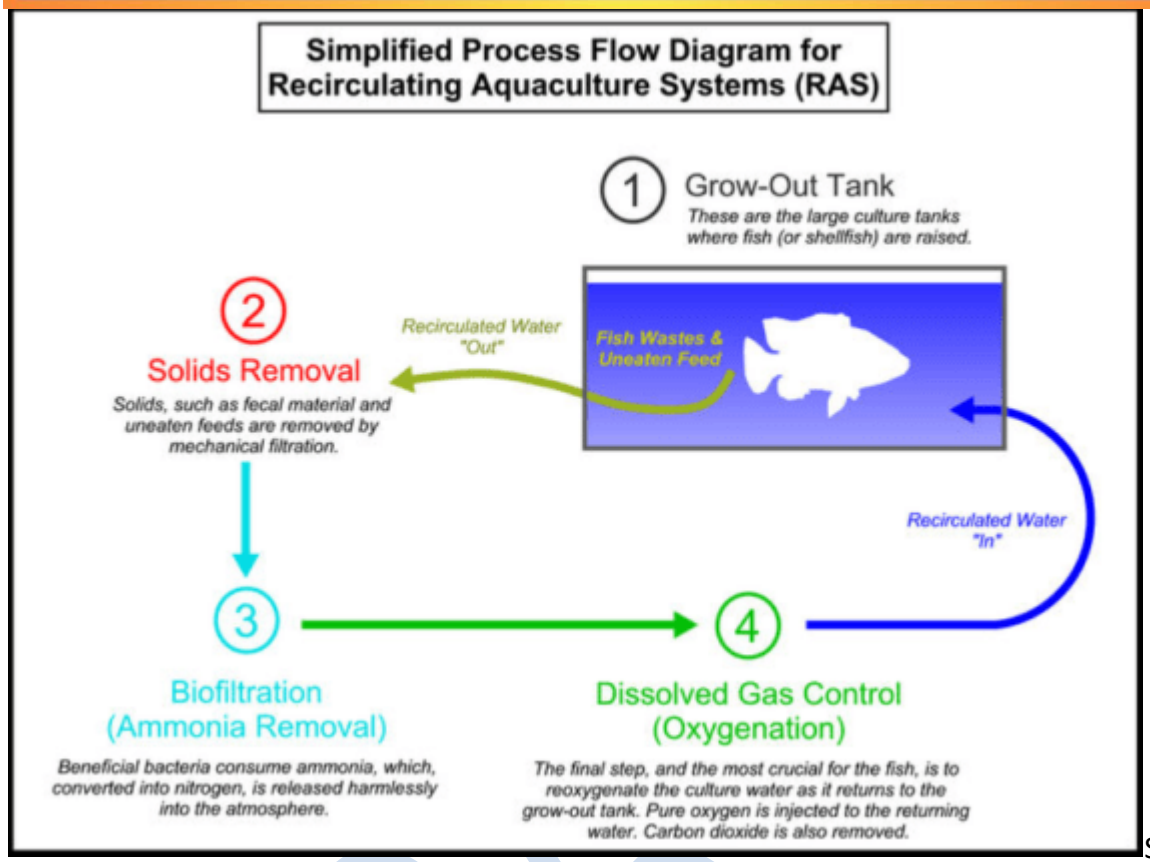
- **Yudh Abhyas:** It is a joint military exercise between India and the US.
- **Tiger Triumph:** It is a tri-service military exercise between India and the US.
- **Vajra Prahar:** It is a Special Forces joint military training exercise conducted alternately in India and the US since 2010.

❖ RE-CIRCULATORY AQUACULTURE SYSTEM (RAS) TECHNOLOGY (PIB)

Why in News: Union Minister of Fisheries, Animal Husbandry and Dairying has inaugurated the Re-circulatory Aquaculture Systems (RAS) technology for the culture of rainbow trout in the private sector under Pradhan Mantri Matsya Sampada Yojana (PMMSY)

Re-circulatory Aquaculture System (RAS) Technology

- Re-circulatory Aquaculture System (RAS) is a technology where water is recycled and reused after mechanical and biological filtration and removal of suspended matter and metabolites. This method is used for high- density culture of various species of fish, utilizing minimum land area and water.
- It is an intensive high density fish culture unlike other aquaculture production systems. Instead of the traditional method of growing fish outdoors in open ponds and raceways, in this system fish are typically reared in indoor/outdoor tanks in a controlled environment.



Source: **Blue Ridge Aqua Culture**

This method is used for high- density culture of various species of fish, utilizing minimum land area and water. Under the Re-circulatory Aquaculture System (RAS) technology, water is recycled and reused after mechanical and biological filtration and removal of suspended matter and metabolites.

It is an intensive high-density fish culture, unlike other aquaculture production systems. In the traditional method, the fish is grown in open ponds and raceways. But, in RAS the fishes are typically reared in indoor/outdoor tanks in a controlled environment.

The RAS method has many advantages. Such as:

- Extended durability of Tanks and Equipment
- Reduced dependency on antibiotics and therapeutants hence, an advantage of getting high-quality fish.
- Reduction of direct operational costs associated with feed, predator control and parasites.
- Risk reduction due to climatic factors, disease and parasite impacts
- RAS production can promote flexibility in terms of location for farming, proximity to market.

❖ UN NATION RIGHTS COUNCIL (Express)

Why in News: The United Nations Human Rights Council (UNHRC) has unanimously voted for recognizing a clean, healthy and sustainable environment as a universal right.

Right to Clean the Environment

- The idea of the Right to a clean environment is rooted in the "1972 Stockholm Declaration".
- The right brings together the environmental dimensions of civil, cultural, economic, political, and social rights, and protects the core elements of the natural environment that enable a life of dignity.

The Right is not legally binding, but it has the potential to shape global standards. The resolution emphasises on the rights to life, liberty and security of human rights defenders working in environmental matters referred to as environmental human rights defenders.

Environmental defenders across the globe are subject to constant physical attacks, detentions, arrests, legal action and smear campaigns. Some 200 environmental defenders have been murdered in 2020 alone.

The UNHRC has also passed another resolution creating a three-year post of a special rapporteur. The special rapporteur will monitor how the adverse effects of climate change, including sudden and slow-onset disasters; affect the full and effective enjoyment of human rights.

❖ LUCY MISSION (Source: Express)

Why in News: NASA is set to launch the 'Lucy' Mission in the next week.

- Mission Lucy is NASA's first mission to explore the Jupiter Trojan asteroids. The mission is named after 'Lucy', a 3.2 million-year-old ancestor who belonged to a species of hominins (which include humans and their ancestors).
- As per some planet formation and evolution models, the Trojan asteroids are believed to be formed from the same material that led to the formation of planets nearly 4 billion years ago when the solar system was formed.
- Therefore, the mission is designed to understand the composition of the diverse asteroids that are a part of the Trojan asteroid swarms, to determine the mass and densities of the

materials and to look for and study the satellites and rings that may orbit the Trojan asteroids.

- It is a solar-powered mission. It is estimated to be over 12 years long, during the course of which the spacecraft will visit eight asteroids covering a distance of about 6.3 billion km to deepen the understanding of the "young solar system".

Asteroids are divided into three categories:

- The first group are those that are found in the main asteroid belt, between Mars and Jupiter. This region is estimated to contain somewhere between 1.1-1.9 million asteroids.
- The second group is that of trojans (the name comes from Greek mythology), which are asteroids that share an orbit with a larger planet. NASA reports the presence of Jupiter, Neptune and Mars trojans. In 2011, they reported an Earth trojan as well.
- The Jupiter asteroids can be found in what are referred to as "swarms" that lead and follow the planet Jupiter along its orbit around the Sun. 'Lucy' will reach the first swarm of these asteroids that precede Jupiter by August 2027.
- The third classification of asteroids is under Near-Earth Asteroids (NEA), which has orbits that pass close to the Earth. Those that cross the Earth's orbit are called Earth-crossers. More than 10,000 such asteroids are known, of which over 1,400 are classified as potentially hazardous asteroids (PHAs).

❖ State of Climate Services Report (Express)

Why in News: The World Meteorological Organization (WMO) has released a report titled 2021 State of Climate Services Report.

Terrestrial Water Storage (TWS)

- Terrestrial Water Storage (TWS) has dropped at a rate of 1 cm per year in 20 years (2002-2021).
- TWS is the sum of all water on the land surface and in the subsurface, i.e. surface water, soil moisture, snow and ice and groundwater.
- The biggest losses have occurred in Antarctica and Greenland. But many highly populated, lower latitude locations have also experienced TWS losses.

Findings related to India

  - The TWS has been lost at a rate of at least 3 cm per year. In some regions, the loss has been over 4 cm per year too.

- India has recorded the highest loss in terrestrial water storage if the loss of water storage in Antarctica and Greenland is excluded. The northern part of India has experienced the maximum loss within the country.

India's Per Capita Water Availability

In India, per capita, water availability is reducing due to an increase in population. The average annual per capita water availability has reduced to 1,545 cubic meters in 2011, from 1,816 cubic meters in 2001. It is projected to further decrease to 1,367 cubic meters in 2031.

Water Scarce River Basins

- According to the Falkenmark Water Stress Indicator, Five of the 21 river basins in India are 'absolute water scarce' (per capita water availability below 500 cubic meters).
- Five are 'water scarce' (per capita water availability below 1,000 cubic meters) and three are 'water stressed' (per capita water availability below 1,700 cubic meters).
- By 2050, six will become absolute water-scarce, six will become water-scarce and four will become water-stressed.
- Note: The Falkenmark indicator is one of the most widely used indicators for assessing the stress on water. It relates the total freshwater resources with the total population in a country and indicates the pressure that population puts on water resources, including the need for natural ecosystems

❖ INDIA'S DHOLE POPULATION (Down to Earth)

Why in News: A recent study has identified 114 priority talukas/tehsils where habitats can be consolidated to enhance population connectivity for the Dholes. The study was conducted by scientists from the Non-profit Wildlife Conservation Society–India (WCS-India), National Centre for Biological Sciences, Bangalore, University of Florida, United States, Non-profit Conservation Initiatives and Centre for Wildlife Studies, Bangalore.

What are the key findings of the study?

- The study found that the Western and Eastern Ghats is a stronghold region for dholes. On the other hand, Central India appeared to be weak in terms of connectivity.

- The findings suggested that having a special focus on habitat patches, protected areas and talukas can facilitate the movement of Dholes especially between the Western Ghats and the Eastern Ghats. For that, the study has identified 114 priority talukas/tehsils.

It is also known as the Asiatic wild dog, red dog, and whistling dog. It is about the size of a German shepherd, but looks more like a long-legged fox.

Furthermore, it is a highly social animal, living in large clans without rigid dominance hierarchies and containing multiple breeding females. They are native to Central, South, East Asia, and Southeast Asia.

Habitat: Dholes occupy a wide variety of climates and habitats, including dense forests, scrub, steppes, and alpine regions. They vary in colour from charcoal grey to rust-red to sandy beige, depending on their habitat.

India: They are found in Western and Eastern Ghats, Central Indian landscape and North East India.

Conservation Status of Dhole: They are listed under

- Schedule II species under the Wildlife Protection Act, 1972
- Endangered by the International Union for Conservation (IUCN)
- Under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) list

❖ Sustainable Urban Plastic Waste Management (PIB)

Why in News: NITI Aayog Vice-Chairman has launched the NITI Aayog United Nations Development Program (UNDP) Handbook on Sustainable Urban Plastic Waste Management.

Globally, only about 9% of the total plastic produced gets recycled, about 12% is incinerated and energy is recovered and the rest about 79% gets into the land, water, and ocean and pollutes the environment.

In India, Urban local bodies (ULBs) are mandated under the Municipal Solid Waste Management Rules, 2016, and the Plastic Waste Management Rules, 2016 to manage municipal solid waste and plastic waste at the city level. Hence, the handbook has provided suggestions that can be adopted by the urban local bodies for Sustainable Urban Plastic Waste Management.

Material Recovery Facility (MRF)

- The urban local bodies across states should adopt the Material Recovery Facility (MRF) model & implement it as a public-private partnership model for sustainable management of urban plastic waste.
- A Materials Recovery Facility is a specialized plant that receives, separates and prepares recyclable materials for marketing to end-user manufacturers.

Institutionalization of Waste Pickers in governance bodies

The Waste Pickers need to be institutionalized by Urban Local Bodies (ULBs) for long-term plastic waste management. They should be provided with benefits like making them financially literate and opening bank accounts for them, linking them to various social protection schemes, providing occupational ID cards, health benefits and personal protective equipment while working, and creating self-help groups.

IEC and Digitization

The Indore model of spreading mass awareness and explaining the importance of waste management at the household level needs to be adopted by other cities. It will be the key to make plastic waste management a people's movement. Moreover, technology platforms need to be linked with relevant stakeholders such as bulk waste generators (BWGs), recyclers and waste pickers for more effective online reporting, monitoring and information exchange.

❖ KUNMING DECLARATION (Source: PIB)

Why in News: The **"Kunming Declaration**" was adopted by over 100 countries in the ongoing virtual 15th meeting of the Conference of the Parties (COP) to the United Nations Convention on Biological Diversity (UNCBD).

The theme of the COP-15 is "Ecological Civilization: Building a Shared Future for All Life on Earth". COP15 is being held to review the achievement and delivery of the CBD's Strategic Plan for Biodiversity 2011-2020.

- It calls upon the parties to "mainstream" biodiversity protection in decision-making and recognize the importance of conservation in protecting human health.
- They should ensure that the post-pandemic recovery plans contribute to the conservation and sustainable use of biodiversity, promoting sustainable and inclusive development.
- The declaration expects signatory nations to synchronize Biodiversity plans with the three UN decades programs which are on 'Sustainable Development', 'Ecosystem Restoration' and 'Ocean Science for Sustainable Development'.

❖ REASEARCH CENTRE FOR INDIAN ART (Source: The Hindu)

Why in News: Museum Rietberg based in Zurich, Switzerland has established a unique research centre and fellowship program named GBF Centre.

- GBF Centre is a public-private partnership initiative meant for scholars, curators and artists who specialize in Indian painting. The centre takes its name from the initials of its founders, three renowned names in art historical research, Prof. B.N. Goswamy from India, Prof. Milo Cleveland Beach from the U.S and Dr. Eberhard Fischer from Switzerland.
- **Aim:** To enhance international scientific, artistic, and curatorial exchange on Indian art and advance the museum's own collections through dialogues from different perspectives. As part of the initiative, research fellows will get a chance to engage with original artworks from renowned collections for three to six months in a project of their own design.
- The research fellows will work with the museum's team of scholars as well as experts from Switzerland and Europe. Their papers will be presented at lectures and conferences and feed into the work at the Rietberg.

Museum Rietberg

Museum Rietberg was founded in 1952. It is the only art museum for non-European art in Switzerland, and houses collections from Asia, Africa, the Americas, and Oceania. It holds exhibitions, cultural events, and global collaborations. Its Indian paintings collection is ranked alongside those in London, Paris, and Berlin.

❖ Ecological Threat Report 2021 (Source: PIB)

Why in News: Institute of Economics and Peace (IEP), an international think tank has released a report titled "Ecological Threat Report (ETR) 2021".

Ecological Threat Report (ETR)

This is the second edition of the Ecological Threat Report (ETR), which analyses 178 independent states and territories. The report assesses threats relating to food risk, water risk, rapid population growth, temperature anomalies and natural disasters.

Relationship between ecological degradation and conflict

There is a cyclic relationship between ecological degradation and conflict. It is a vicious cycle whereby degradation of resources leads to conflict and the ensuing conflict leads to further resource degradation.

Hence, breaking the cycle requires improving ecological resource management and socio-economic resilience.

Ecological Risk Countries: Around 1.26 billion people across 30 countries are suffering from both extreme ecological risk and low levels of resilience.

The most vulnerable countries are clustered in the Middle East and North Africa, sub-Saharan Africa and South Asia.

Food Insecurity: Global food insecurity has increased by 44% since 2014, affecting 30.4 % of the world's population in 2020, and is likely to rise further. As a region, South Asia is the worst-placed.

Water Stress: By 2040, over 5.4 billion people will live in countries facing extreme water stress. Lebanon and Jordan are the countries most at risk.

Rapid Population Growth: Eleven countries are projected to double their population between 2021 and 2050. They are all in sub-Saharan Africa.

Natural Disasters and Warmer Temperature: From 1990 to 2020, a total of 10,320 natural disasters occurred globally. Flooding has been the most common natural disaster, accounting for 42% of the total disaster count. In 2020, 177 countries and territories recorded a warmer average temperature compared to their historical average temperatures.

Institute for Economics & Peace (IEP): It is one of the world's leading think tanks headquartered in Sydney, Australia. It also releases reports such as the Global Peace Index and Global Terrorism Index.

❖ HUNGER INDEX (Source: Express)

Why in News: Global Hunger Index 2021 has been released and the government has challenged India's poor ranking and the methodology used, calling it "devoid of ground reality and facts"

"India slips 7 spots to rank 101 among 116 countries on Global Hunger Index"

Findings regarding India

- India's score on the Global Hunger Index (GHI) in the recent two decades has declined by 10 points. It slipped to 28.8 in 2021, from 38.8 in 2000.
- It ranked India at 101st position of 116 countries. India was ranked 94 among 107 countries in the Global Hunger Index (GHI) released last year.
- Globally, India ranked among the worst in 'child wasting' or 'weight for height'. Its performance was worse than Djibouti and Somalia.
- Report has shown increase in the value of 'proportion of population undernourished' from 14.0% for the previous period 2017-19 to 15.3% for the latest period 2018-20.
- According to the report, only 15 countries fare worse than India. India was also behind most of the neighbouring countries. Pakistan was placed at 92, Nepal and Bangladesh at 76 and Sri Lanka at 65.

Global findings

Each country's GHI score is classified by severity, from low to extremely alarming. The level of hunger was 'serious' in 36 countries besides India. In nine countries severity was 'alarming'. It was 'extremely alarming' in Somalia, which ranked 116 on the Index this year. It is the FAO report used for assessing undernourishment that the Government has questioned. According to FAO report 'The State of Food Security and Nutrition in the World 2021', four countries of this region: Afghanistan, Bangladesh, Nepal and Sri Lanka-despite covid 19, were able to improve their position on the indicator 'proportion of undernourished population during the period 2018-20 over 2017-19.

Global Hunger Index

- It is an annual report jointly published by 'Concern Worldwide' and 'Welthungerhilfe'.
- GHI scores are based on the values of four component indicators — child wasting, child stunting, child mortality and undernourishment.