News Analysis (17 Oct, 2020)

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Global Hunger Index 2020

Why in News

India has been **ranked at 94 among 107 countries** in the **Global Hunger Index (GHI) 2020.**

Global Hunger Index

- **Annual Report:** Jointly published by **Concern Worldwide** and **Welthungerhilfe.** It was **first produced in 2006.** It is **published every October.** The **2020 edition** marks the **15th edition of the GHI.**
- **Aim:** To comprehensively measure and track hunger at the global, regional, and country levels.
- **Calculation:** The **GHI scores** are calculated each year to assess progress and setbacks in combating hunger. It is calculated on the basis of **four indicators:**
    - **Undernourishment:** Share of the population with **insufficient caloric intake.**
    - **Child Wasting:** Share of children under age five who have **low weight for their height,** reflecting acute undernutrition.
    - **Child Stunting:** Share of children under age five who have **low height for their age,** reflecting chronic undernutrition.
    - **Child Mortality:** The mortality rate of children **under the age of five.**
- **Scoring:**
    - Based on the values of the four indicators, the GHI determines hunger on a **100-point scale** where **0** is the **best possible score** (no hunger) and 100 is the worst.
    - Each country's GHI score is **classified by severity,** from low to extremely alarming.

Key Points

- **Global Scenario:**
  - **Worldwide Hunger:** Represented by a **GHI score of 18.2** (moderate level), **down from a 2000 GHI score of 28.2** (serious).
  - **Factors:**
    - The **Covid-19 pandemic** and the **resulting economic downturn,** as well as a **massive outbreak of desert locusts** in the Horn of Africa and other crises, are **exacerbating food and nutrition insecurity** for millions of people.
      - It needs to be noted that **2020 GHI scores do not reflect the impact of Covid-19** on hunger and undernutrition.
    - The above mentioned crises come on top of **existing hunger** caused by **conflict, climate extremes,** and **economic shocks** (random, unpredictable events).
  - **Region-wise Performance: Africa South of the Sahara** and **South Asia** have the **highest hunger and undernutrition levels** among world regions, with 2020 GHI scores of 27.8 and 26.0, respectively—both considered serious.
  - **SDG 2 Progress:** The **world is not on track to achieve the second Sustainable Development Goal** - known as **Zero Hunger** for short - **by 2030.**
- **Indian Scenario:**
  - **Overall Performance:**
    - With a **score of 27.2,** India has a level of hunger that is **"serious".**
    - It **ranks 94 out of 107 countries** in the Index. In **2019**, India's rank **was 102 out of 117 countries.**
  - **Comparison with Other Countries:**
    - **India features behind** Nepal (73), Pakistan (88), Bangladesh (75), Indonesia (70) among others.
    - Out of the total 107 countries, **only 13 countries fare worse than India** including countries like Rwanda (97), Nigeria (98), Afghanistan (99), Liberia (102), Mozambique (103), Chad (107) among others.
  - **Performance on the Indicators:**
    - **Undernourishment: 14%** of India's population is undernourished (2017-19). It was 16.3% during 2011-13.
    - **Child Wasting:** 17.3% (2015-19), it was 15.1% in 2010-14.
    - **Child Stunting:** 34.7%, it has improved significantly, from 54% in 2000 to less than 35% now.
    - **Child Mortality:** 3.7%, it was 5.2% in 2012.

Where India stands

The Global Hunger Index score is computed using four indicators — undernourishment, child wasting, child stunting and child mortality. A country's GHI score is classified by severity — low ( ), moderate ( ) and serious ( )

RANK	COUNTRY	2020 SCORE
1-17*	China	<5
64	Sri Lanka	16.3
73	Nepal	19.5
75	Bangladesh	20.4
78	Myanmar	20.9
88	Pakistan	24.6
94	India	27.2
99	Afghanistan	30.3

*17 countries have scores of less than 5 and are collectively ranked 1-17

Some Related Initiatives by India

- **Eat Right India Movement:** An outreach activity organised by the **Food Safety and Standards Authority of India (FSSAI)** for citizens to nudge them towards eating right.
- **POSHAN Abhiyaan**: Launched by the **Ministry of Women and Child Development in 2018,** it targets to **reduce stunting, undernutrition, anemia** (among young children, women and adolescent girls).
- **Pradhan Mantri Matru Vandana Yojana**: A **centrally sponsored scheme** executed by the **Ministry of Women and Child Development,** is a **maternity benefit programme** being implemented in all districts of the country with effect from 1st January, 2017.
- **Food Fortification**: Food Fortification or Food Enrichment is the addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content.
- **National Food Security Act, 2013**: The National Food Security Act, (NFSA) 2013 legally entitled up to **75% of the rural population and 50% of the urban population** to receive subsidized food grains under the Targeted Public Distribution System.
- **Mission Indradhanush**: It targets **children under 2 years of age and pregnant women** for immunization against **12 Vaccine-Preventable Diseases (VPD).**
- **Integrated Child Development Services (ICDS) Scheme**: Launched on **2nd October, 1975,** the Integrated Child Development Services (ICDS) Scheme offers a package of **six services (Supplementary Nutrition, Pre-school non-formal education, Nutrition & health education, Immunization, Health check-up and Referral services)** to children in the age group of **0-6 years, pregnant women and lactating mothers.**

Suggestions

- Governments, private actors, and NGOs should carefully coordinate their **responses to overlapping food and health crises** and work with community organizations to make sure interventions are culturally acceptable, reach the most vulnerable, and preserve local ecosystems.
- **Food should be priced not only by its weight or volume but also by its nutrient density,** its freedom from contamination, and its contribution to ecosystem services and social justice.
- Governments should **expand access to maternal and child health care,** as well as **education on healthy diets and child feeding practices.**
- **Supporting smallholder farmers** in becoming sustainable and diversified producers; governments and NGOs must seek to improve those farmers' access to agricultural inputs and extension services, coupling local and indigenous agricultural knowledge with new technologies.
- **Existing human rights-based multilateral mechanisms** and international standards—such as the Committee on World Food Security—must be strengthened to support inclusive policy making and sustainable food systems.

Source: TH

Report on Food Consumption: WWF

Why in News

Recently, the **World Wildlife Fund** (WWF) has published the report **"Bending the Curve: The Restorative Power of Planet-Based Diets".**

> The report offered a **detailed analysis of food consumption patterns** in 147 countries and six regions and the **national dietary guidelines** (NDGs) across 75 countries. For each country and region, the impacts of diets were **assessed on various environmental and health indicators.**

Key Points

- **Food consumption patterns vary widely** and can best be characterised by **massive inequality.**
    - **Different consumption patterns are observed in the richest and poorest countries,** with European countries consuming approximately 600 grams per day more food (1,800 g/day) than African countries (1,200 g/day).
    - Although **under-nutrition and obesity affect almost all countries,** the rate of underweight people is up to 10 times higher in the poorest countries as compared to other countries.
    - The rate of overweight/obese people is up to five times higher in the richest countries.

- **Major Concerns:**
  - **Premature deaths** in low- and middle-income countries **due to unhealthy diets, under-consumption** as well as **over-consumption.**
  - India needs to be extra careful in figuring out the changes in the diet because there could be an **increase in biodiversity loss** due to a shift to a healthier and planet-friendly diet and **extensively increased consumption.**
    - The country has to **first increase consumption of fruits, vegetables and dairy** to meet its nutritional requirements.
- **Suggestions:**
  - There is a need to strike a **balance in how countries consume their food as well as a shift to a plant-based diet** which is the need of the hour.
    - However, this dietary **shift will impact different countries differently.** While some countries will need to reduce their consumption of animal-source foods, others may need to increase them.
  - The shift will not only **improve human health by preventing over-consumption** of any food but will also **reverse the biological loss** that has occurred until now and improve environmental health.
    - The shift to more plant-based diets will **cut down carbon emissions** by 30%, wildlife loss by 46%, agriculture land use by 41% and premature deaths by 20%.
  - A **sustainable environment and human health can be achieved** by following a few **lifestyle changes** that include **eating foods which are:**
    - More sustainable.
    - More plant-based food and less animal-based.
    - Healthy and locally grown and minimally processed.
    - More diverse instead of just one kind.
  - Countries **should not solely depend on the domestic production and biodiversity-rich countries,** including India, **should import** food from higher-yielding and less biodiverse nations.
- **New Launch:**
  - The WWF has launched a new platform known as **Planet-Based Diets Impact and Action Calculator.**
    - One can calculate their consumption and **find out the impact caused by their diet on the environment.**
  - The platform **also shows national level impacts.** This will **help people living anywhere in the world to make a conscious decision** by finding out if their diet is good for them as well as their environment.

Source: DTE

World Food Day

Why in News

World Food Day is celebrated to commemorate the establishment of the United Nation's **Food and Agriculture Organisation** (FAO) on **16ᵗʰ October 1945.**

- The Prime Minister of India released a **commemorative coin of Rs. 75 denomination** to mark the **75ᵗʰ Anniversary of the FAO.**
- FAO is a **specialised agency of the United Nations** that leads international efforts to defeat hunger.

Key Points

- **About World Food Day:**
  - It is observed **annually on 16ᵗʰ October** to address the problem of global hunger.
  - It emphasises on the **Sustainable Development Goal 2** (SDG 2) i.e. **Zero Hunger.**
  - **Theme for 2020:** "Grow, Nourish, Sustain. Together."
    There has been a renewed focus on food, **nutrition**, health, immunity and sustainability due to the unprecedented challenges posed by the **Covid-19 pandemic**.
- **75ᵗʰ Anniversary of FAO:**
  - Over the years, FAO has **helped to increase agricultural production and eradicate hunger all over the world,** including India and has played an important role in increasing nutrition.
  - **2020's Nobel Peace Prize** to the **World Food Programme** is also a major achievement for the FAO as the programme was started by FAO.
- **Indian Context:**
  - FAO has closely watched **India's fight against malnutrition** in the past decades but its scope had many constraints.
    Due to reasons such as pregnancy at a young age, lack of education and information, inadequate access to drinking water, lack of cleanliness, etc.
    India is lagging behind in achieving the expected results of **"malnutrition free India"** by **2022,** envisaged under the **National Nutrition Mission** (POSHAN Abhiyaan).
  - FAO **supported India's proposal to declare 2023** as the **International Year of Millets.**
    The move will **encourage intake of nutritious food, increase their availability** further and **benefit small and medium farmers** who mostly grow coarse grains on their land where there is a problem of water and the land is not so fertile.

Highlighted Indian Initiatives

- **Eat Right India** and **Fit India Movement** along with **Swachh Bharat Abhiyan**, **Jal Jeevan Mission** and other efforts will improve the health of Indians and heal the environment.

- **Introduction of 17 new <u>biofortified varieties</u> of crops** to overcome the shortcomings of the common variety of crops which lacks important micronutrients.
  Example: **<u>MACS 4028 Wheat</u>**, **<u>Madhuban Gajar</u>**, etc.
- **Increased ambit and effective implementation** of the **<u>Food Security Act, 2013.</u>**
- **<u>Amendments</u> to the <u>APMC (agricultural produce market committee) Acts</u>** to make them more competitive.
- Steps to ensure that farmers get one and a half times the cost as **<u>Minimum Support Price</u>** (MSP), which along with the government procurement, is an important part of ensuring the country's food security.
- Development of a large network of **<u>Farmer Producer Organisations</u>** (FPOs).
- **<u>Amendments in the Essential Commodities Act, 1955</u>** to deal with the issue of grain wastage in India.
- Government is making efforts to **make India Trans Fat free by 2022,** a year ahead of the **<u>World Health Organisation</u>** (WHO) target, in synergy with the vision of **<u>New India @75</u>** (75 years of India's independence).
  - **<u>Trans Fat</u>** is a **food toxin** present in **Partially Hydrogenated Vegetable Oils** (PHVOs) (e.g. vanaspati, shortening, margarine, etc.), baked and fried foods.
  - It is a major **contributor to the rise in <u>non-communicable diseases</u>** in India and also a modifiable risk factor for **<u>cardiovascular diseases</u>** (CVD). Eliminating CVD risk factor is especially relevant during Covid-19 as **people with CVD are predisposed to have serious conditions having** an impact on mortality.

<u>Source: PIB</u>

India & its Sex Ratio

Why in News

Recently, C Rangarajan (former Chairman, Prime Minister's Economic Advisory Council) argued that there is an urgent need to reach young people **both for reproductive health education and services** as well as **to cultivate gender equity norms.**

His arguments are based on the **<u>Sample Registration System</u> (SRS) Statistical Report (2018)** and **<u>United Nation Population Fund (UNFPA) State of World Population 2020.</u>**

SRS Report

- SRS is the **largest demographic sample survey** in the country that among other indicators provide direct estimates of **sex ratio, fertility rate etc.** through a nationally representative sample.
- It is brought by the **<u>Office of Registrar General</u>**.

United Nation Population Fund

The UNFPA is **aimed at improving reproductive and maternal health** worldwide. It is headquartered in **New York.**

Key Points

- **Sex Ratio at Birth:**
  - Biologically normal sex ratio at birth is 1,050 males to 1,000 females or **950 females to 1,000 males.**
  - The SRS Report 2018 shows that sex ratio at birth in India, **declined marginally from 906 in 2011 to 899 in 2018.**
    - Sex ratio is measured as the number of females per 1,000 males.
  - The **UNFPA State of World Population 2020 estimated the sex ratio at birth in India as 910,** which is on the lower side of index.
  - This is a cause for concern because this adverse ratio results in a gross imbalance in the number of men and women and its inevitable impact on marriage systems as well as other harms to women.
- **Total Fertility Rate (TFR):**
  - According to SRS Report 2018, TFR has been declining in India for some time now. It **declined from 2.4 to 2.2 during the period between 2011 and 2018.**
    - In 2011, 10 states had a fertility rate **below the replacement rate.** This increased to 14 states in 2020.
    - Fertility is likely to continue to decline and it is estimated **that replacement TFR of 2.1 would soon be reached for India** as a whole.
    - **TFR** is the number of children a mother would have at the current pattern of fertility during her lifetime.
    - **Replacement rate** is the average number of children born per woman—at which a population exactly replaces itself from one generation to the next, without migration.
  - **Many people believe that the population would stabilise** or begin to reduce in a few years once replacement fertility is reached.
  - **However, this is not so** because of the **population momentum effect,** a result of more people entering the reproductive age group of 15-49 years due to the **past high-level of fertility.**
    - For instance, the replacement fertility level was reached in Kerala around 1990, but its annual population growth rate was 0.7% in 2018, nearly 30 years later.

- **Challenges Involved:**
  - **Regressive Mindset:** There is **considerable son preference** in all states, except possibly in **Kerala and Chhattisgarh.** This son's preference is derived from a regressive mindset. **E.g.:** People associate girls with dowry.
  - **Misuse of Technology:** Cheaper technology like ultrasound helps in sex selection.
  - **Failure in Implementation of Law:** The **Prenatal Conception and Prenatal Determination Act (PC-PNDT), 1994** which punishes healthcare professionals for telling expectant parents the sex of a child with imprisonment and hefty fines, has failed to control the sex selection.
    - Reports found **major gaps in the training of personnel implementing PC-PNDT.** Poor training meant that they were **unable to prepare strong cases against violators** to secure convictions.
  - **Illiteracy:** Illiterate women in the reproductive age group of 15-49 years have higher fertility than literate women.
- **Government Initiative- Beti Bachao Beti Padhao Scheme:**
  - The sharp decline in **sex ratio** as pointed by Census 2011 data called for urgent action. Beti Bachao Beti Padhao Scheme was launched in 2015 in Panipat, Haryana **to address the issue of decline in child sex ratio** and related issues of empowerment of girls and women over a life cycle continuum.
  - It is a **triministerial effort** of the ministries of Women and Child Development, Health & Family Welfare and Human Resource Development (now Ministry of Education).
- **Suggestions Made:**
  - Increasing **female education and economic prosperity** will help to improve the ratio.
  - Rollout campaigns on **sensitisation towards women and children,** making **women safety cells,** ensuring the **safety of women on public transport systems,** making **cyber-crime cells** are some other initiatives that need to be taken.
  - In view of the complexity of son preference resulting in gender-biased sex selection, government actions need to be supplemented by **improving women's status in the society.**
  - Reaching out to young people could reduce the effect of population momentum and accelerate progress towards reaching a more normal sex-ratio at birth.

Way Forward

- Despite several policies and programmes, lower health outcomes for women and girl children still persist in India. Certain forms of discrimination, especially the son preference, reinforced by the techno-economic forces are eliminating the girl child (even from the womb).
- Effective implementation of the existing women- and children-related policies, including **women's property ownership**, are required to empower women, to ensure girl child's survival, and to reduce gender gap in access to healthcare.

Increased Emissions of N2O

Why in News

According to a recent research paper, **human emissions of <u>nitrous oxide</u>** (N_2O) have **increased by 30% between 1980 and 2016.**

> The research was conducted through an international collaboration between the **International Nitrogen Initiative** (INI) and the **Global Carbon Project of <u>Future Earth</u>**, a partner of the **World Climate Research Programme.**

Key Points

- **Nitrous Oxide (N_2O):**
  - It is a **<u>greenhouse gas</u>** (GHG) **300 times more potent than carbon dioxide** (CO_2).
  - It has the **third-highest concentration, after CO_2 and <u>methane</u>** (CH_4), in Earth's atmosphere among GHGs responsible for global warming.
  - N_2O is also the **only remaining threat to the <u>ozone</u>** (O_3) **layer,** for it accumulates in the atmosphere over a long period of time, just like CO_2.
  - It can **live in the atmosphere for up to 125 years.**
  - Its global concentration levels have increased from **270 parts per billion** (ppb) in 1750 to **331 ppb in 2018,** a jump of 20%.
    > The growth has been the **quickest in the past five decades because of human emissions.**
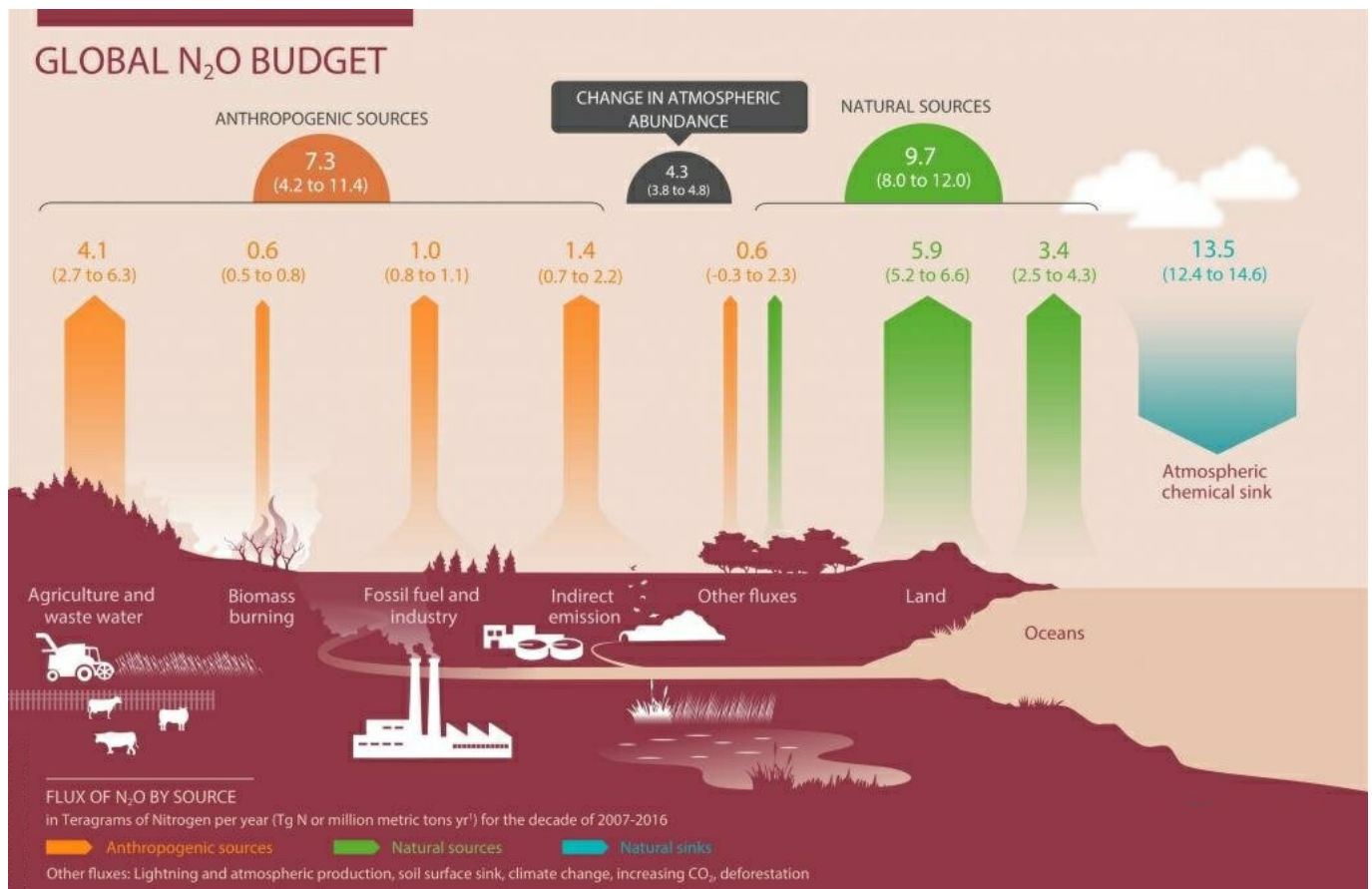- **Research and the Study:**
  - This is the **most comprehensive study** of global N_2O emissions ever published, as it **combines both natural and anthropogenic** (man-made) sources.
  - The study found that **43% of the total emissions came from human sources** and **most N_2O emissions came from emerging countries** like India, China and Brazil.
  - Increase in its emissions means that the **climatic burden on the atmosphere is increasing from non-carbon sources** as well, while the major focus of global climate change negotiations is currently centred on carbon, its emissions and mitigation.
  - It also highlighted the dichotomy of the **<u>climate crisis</u> and global <u>food security.</u>**
    - A major proportion of the N_2O emissions in the last four decades came **from the agricultural sector,** mainly because of the use of **<u>nitrogen-based fertilisers.</u>**
    - The **growing demand** for food and feed for animals will **further increase its global emissions,** leading to a direct **conflict between the way countries are feeding people and stabilising the climate.**

- **Suggestions:**
  - There are **well-established practices and technologies** like **crop and manure management,** the **use of bio-fertilisers**, to mitigate N_2O emissions which **need to be utilised to their full extent.**
  - **Revised industrial and agricultural policies** at the global level will reduce such emissions considerably.
  - **Reducing GHGs emissions** will also have the **co-benefits** of reduced **air** and **water pollution.**
  - There is a **need to bring the non-carbon sources under the major global climate change negotiations.**
  - It is possible to slow down N_2O emissions if countries implement the **United Nations Global Campaign on Sustainable Nitrogen Management, 2019** held in **Colombo, Sri Lanka.**
    - The focus of the event was to finalise the **Colombo Declaration**, a follow **up on the UNEA 4 Resolution on Sustainable Nitrogen Management** which aims to further the dialogue on Nitrogen management.

GLOBAL N₂O BUDGET

ANTHROPOGENIC SOURCES — 7.3 (4.2 to 11.4)

CHANGE IN ATMOSPHERIC ABUNDANCE — 4.3 (3.8 to 4.8)

NATURAL SOURCES — 9.7 (8.0 to 12.0)

| 4.1 (2.7 to 6.3) | 0.6 (0.5 to 0.8) | 1.0 (0.8 to 1.1) | 1.4 (0.7 to 2.2) | 0.6 (-0.3 to 2.3) | 5.9 (5.2 to 6.6) | 3.4 (2.5 to 4.3) | 13.5 (12.4 to 14.6) |

Agriculture and waste water | Biomass burning | Fossil fuel and industry | Indirect emission | Other fluxes | Land | Oceans | Atmospheric chemical sink

FLUX OF N₂O BY SOURCE
in Teragrams of Nitrogen per year (Tg N or million metric tons yr⁻¹) for the decade of 2007-2016
Anthropogenic sources   Natural sources   Natural sinks
Other fluxes: Lightning and atmospheric production, soil surface sink, climate change, increasing CO₂, deforestation

Source: DTE

Pro-Democracy Protests in Thailand

Why in News

Recently, Thailand's government banned gatherings of **more than five people** in the face of **three months of escalating demonstrations** that have targeted the **King** as well as the **Prime Minister.**

Key Points

- Initially, the government allowed peaceful and lawful protests but now stringent control, due to anarchy in protests.
- **Background:** The roots of the current discontentment go back to the **2014 coup** which brought the **junta (military dictatorship)** in power which tightened its grip on power and introduced more and more restrictions on the public.
    - In **2017,** the military introduced a **new Constitution,** which allowed the military to appoint a **250-member Senate** that would play a role in selecting the **Prime Minister.**
    - The country held the **delayed Parliamentary** election in **2019,** which was seen as a mere exercise to transfer power from the junta to an elected government.
    - **Role of Monarchy:** Thailand's royal family has considerable influence over the country's political system and is revered by citizens.
        > Many, particularly young Thais, have increasingly started questioning the monarchy's role, its privileges, and the power it has exerted in the country for years.
- **Latest Cause:** Anti-government protests emerged last year after courts banned the most vocal opposition party.
    > This political party was relatively new, and had been formed in 2018, with the goals to restrain the military's powers and interference in the political spectrum and to tackle social and economic inequality in the country.

- **The Protest:**
  - Most of the protestors are students and young people in their 20s. There is **no overall leader.**
  - **Key Groups:**
    - The **Free Youth Movement,** which was behind the first major protest in July.
    - The **United Front of Thammasat and Demonstration,** a student group from Bangkok's Thammasat University, which has championed calls for monarchy reform.
    - The **Bad Student Movement** of high-schoolers, which seeks education reform.
  - **Demands:**
    - **Reforms to the Monarchy:** Students submitted 10 demands to the government, asking for a separation of the King's assets and the Crown Property Bureau (quasi-government institution to manage the monarch's property in Thailand).
      - They also wanted to cut the Palace's share in the national budget, a ban on the King from expressing his political views, and safeguards to prevent him from endorsing future coups.
      - Some protesters **want to reverse a 2017 increase in the king's constitutional powers,** made the year after he succeeded his widely revered late father King Bhumibol Adulyadej.
    - **The Lese Majeste Laws:** The monarchy is protected by **Section 112 of the Penal Code,** which says whoever defames, insults or threatens the king, queen, heir-apparent or regent shall be jailed for three to 15 years.
      - This law has remained virtually unchanged since the creation of the country's first criminal code in 1908, although the penalty was toughened in 1976.
      - Protesters also seek the scrapping of **lese majeste laws.**
    - **Pro-democracy activists** say that Thailand is backtracking on the constitutional monarchy established when absolute royal rule ended in **1932.** Also, the monarchy is too close to the army and argue that this has undermined democracy.
    - **Other Demands:** The students have also called for the Prime Minister's resignation; a new Constitution; fresh, free and fair elections; and an end to attacks on dissidents and opposition parties such as the Future Forward Party.

Way Forward

The democratic voice must be heard in Thai Protests not merely a promise of superficial democracy. For India also, it is a critical time to observe the outcome of the protest but wiser is to engage constructively with the regime in regard to democracy and human rights.

First 'Har Ghar Jal' State: Goa

Why in News

Recently, Goa has become the first **'Har Ghar Jal' State** in the country as it successfully provided **100% Functional Household Tap Connections (FHTCs)** in the **rural areas** covering **2.30 lakh rural households.**

Key Points

- **Early Achiever:** State's commitment and brisk efforts have ensured advancement and achievement of targets well **before time, i.e. 2024 at national level.**
- **Annual Action Plan:** Goa prepared the State's Annual Action Plan (AAP) to provide 100% Functional Household Tap Connections (FHTCs) in rural areas by **2021.**
    - Goa utilized the benefits of the **Jal Jeevan Mission (JJM)** which aims to improve the quality of life and bring 'ease-of-living' to rural communities.
    - Accordingly, fund allocation from the Union to Goa in 2020-21 has been increased to Rs. 12.40 Crore for the plan.
- **Convergence of Schemes:** The State explored through convergence of various programmes like the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**, **Swachh Bharat Mission (Grameen)**, **15th Finance Commission** for rural local bodies, etc. for strengthening of drinking water sources, water supply, grey water (any domestic wastewater excluding sewage) treatment & re-use and operation & maintenance.
- **Water Testing Facilities:** The State is in process of getting **14 National Accreditation Board for Testing and Calibration Laboratories (NABL)** accredited **water quality testing laboratories.**
    - Jal Jeevan Mission mandates **training 5 persons in every village especially women** to be trained in using **Field Test Kits,** so that water can be tested in the villages.

Jal Jeevan Mission

- **Jal Jeevan Mission (JJM)** envisages supply of **55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024.**
- JJM focuses on **integrated demand and supply-side management of water** at the local level.
    - Creation of local infrastructure for source sustainability measures as mandatory elements, like **rainwater harvesting, groundwater recharge and management of household wastewater for reuse,** would be undertaken in convergence with other government programmes/schemes.

- The Mission is based on a **community approach to water** and includes extensive Information, Education and Communication as a key component of the mission.
- JJM looks to **create a jan andolan for water,** thereby making it everyone's priority.
- **Funding Pattern:** The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.
     The total allocation to the scheme is over ₹3 lakh crore.

Way Forward

- Having achieved universal access, the State now plans for a sensor-based **service delivery** monitoring system so as to monitor the functionality of water supply i.e. potable water in adequate quantity and of prescribed quality.
- Goa's achievement is an **example for other States to emulate** and ensure every rural home gets tap connection.
- Especially in these times of **Covid-19** pandemic, it is all the more imperative to have assured safe water supply within households.
- This silent revolution happening in rural India in terms of household tap water connections is a work in progress for a **'New India'.**

Source PIB

Bodoland Statehood Movement

Why in News

A **new organisation** (All India Bodo People's National League for Bodoland Statehood) has announced the **revival of the Bodoland statehood movement** ahead of the elections to the Bodoland Territorial Council (BTC).

Key Points

- **About Bodos:** These are the **single largest community among the notified Scheduled Tribes in Assam.** Part of the larger umbrella of **Bodo-Kachari,** the Bodos **constitute about 5-6% of Assam's population.**
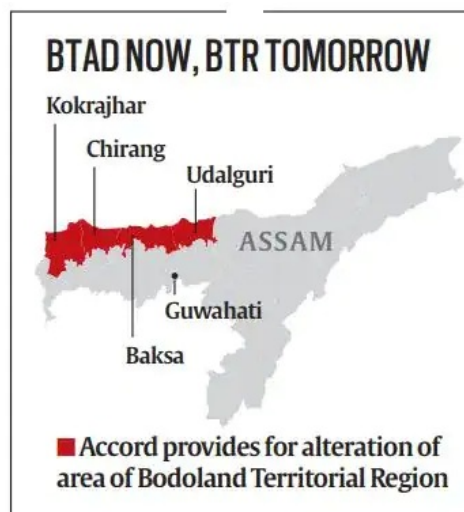
- **About Bodo Statehood Movement:**
  - **1967-68: First organised demand** for a Bodo state came under the banner of the political party **Plains Tribals Council of Assam.**
  - **1986:** The armed group Bodo Security Force arose, which subsequently renamed itself **'National Democratic Front of Bodoland (NDFB)',** an organisation that is known to be involved in attacks, killings, and extortions. It later split into factions.
  - **1987:** All Bodo Students Union (ABSU) renewed the demand.
    - A **fallout of the Assam Movement (1979-85),** whose culmination - **the Assam Accord** - addressed the demands of protection and safeguards for the "Assamese people", leading the Bodos to launch a movement to protect their own identity.
  - **1990s:** Indian **security forces launched extensive operations against the NDFB,** causing the latter to flee to bordering Bhutan.
    - In Bhutan, the group faced stiff **counter-insurgency operations** by the Indian Army and the Royal Bhutan Army in the early 2000s.

- **Government Interventions:**
  - **1993 Bodo Accord:** The ABSU-led movement from 1987 culminated in a 1993 Bodo Accord, which paved the way for a **Bodoland Autonomous Council (BAC),** but ABSU withdrew its agreement and renewed its demand for a separate state.
  - **2003 Bodo Accord:** In 2003, the second Bodo Accord was signed by the extremist group Bodo Liberation Tiger Force (BLTF), the Centre and the state. This led to the **Bodoland Territorial Council (BTC).**
    - BTC is an **autonomous body under the <u>Sixth Schedule</u>** of the Constitution.
    - The **area under the jurisdiction of BTC** was called the **Bodo Territorial Autonomous District (BTAD).**
  - **2020 Accord:** The Central government signed a **<u>tripartite agreement</u>** with the state government and different Bodo groups, including four factions of the National Democratic Front of Bodoland (NDFB), for a "permanent" solution to the Bodo issue. Some **features:**

- It provides for **"alteration of area of BTAD"** and **"provisions for Bodos outside BTAD"**
- The **BTAD was renamed Bodoland Territorial Region (BTR).**
- It provides for **more legislative, executive, administrative and financial powers** to BTC.
- Provision for **rehabilitation of surrendered militants of NDFB** and bringing **a special development package of Rs. 1,500 crore** for the region.
- **Present Revival of the Bodoland Statehood Movement:**
  According to the new organisation, the new (2020) accord has been a **betrayal of the Bodo people.** Besides being an **inferior accord,** it **prescribes a reduction of the area currently under the BTC.**
  The accord has a provision for excluding from the BTR villages with more than 50% non-Bodos and including villages with more than 50% Bodo people left out of the BTC map after the 2003 accord.

Way Forward

- The **signatories of the accord will be under pressure** to find a way out to ensure the successful implementation of the accord. Support of relevant organisations will be required.
- Further, **the opposition to the latest accord voiced by organisations of non-Bodo communities,** including Koch-Rajbangshis, Adivasis and religious and linguistic minorities, has given rise to fears that if their grievances are not addressed, the ethnic fault lines in Assam will deepen. Thus, the accord's success will lie in the stakeholders working out a **power-sharing arrangement** in the BTR that **privileges equity over hegemony.**
- Peace will continue to be fragile in Assam's Bodo heartland until an **all-inclusive power sharing and governance model** is evolved under the **provisions of the Sixth Schedule.**

Source: TH

Guidelines for Digital Media Regulation

Why in News

Recently, the Centre has announced **new guidelines** for **digital news platforms.**

Key Points

- **New Guidelines:**
  - The government has put emphasis on compliance to the **26% Foreign Direct Investment (FDI)** cap under the government approval route in digital media.
    - 26% FDI through the government approval route in the digital media sector was brought in 2019. FDI in print media is capped at 26%, and that in TV news is 49%.
  - The majority of the directors on the company's board, and the Chief Executive Officer (CEO) of the company would have to be an **Indian citizen.**
  - All foreign employees working for more than 60 days would need **security clearance.**
    - If the government denies or withdraw security clearance, the digital media company will ensure that the concerned person resigns or his/her services are terminated.
  - The government has given a year to digital media news entities to align their shareholding with these requirements.

- **Application:**
  The guidelines will be applicable to the following categories of entities registered or located in India:
  - **Digital media entities** which streams/uploads news and current affairs on websites, apps or other platforms.
  - **News agency** which gathers, writes and distributes/transmits news, directly or indirectly, to digital media entities and/or news aggregators.
  - **News aggregator,** an entity which uses software of web applications to aggregate news content from various sources, such as news websites, blogs, podcasts, video blogs, user submitted links, etc in one location.
- **Benefits:**
  - The Ministry of Information and Broadcasting will be considering in the near future to extend the following benefits, presently available to traditional media (print and TV), to digital media entities also:
    - **Press Information Bureau (PIB) accreditation** for its reporters, cameramen, videographers enabling them with better first-hand information and access including participation in official press conferences and such other interactions.
    - Persons with PIB accreditation can also avail **Central Government Health Scheme (CGHS) benefits and concessional rail fare.**
    - Eligibility for digital advertisements through the Bureau of Outreach and Communication.
  - Similar to self-regulating bodies in print and electronic media, **entities in digital media can form self-regulating bodies** for furthering their interests and interaction with the Government.
- **Reason:**
  - **Threat of fake news, propaganda vehicles, foreign influence** and **interference in India's domestic affairs is more real than ever,** particularly from **India's hostile neighbours like China and Pakistan.**
  - The guidelines could help the government in **tightening the noose on Chinese and other foreign companies** who are making investments in digital media in the country.

Foreign Direct Investment

- FDI is an **investment made by a firm or individual** in one country into business interests located in another country.
- Generally, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets, including establishing ownership or controlling interest in a foreign company.
- It is different from **Foreign Portfolio Investment** where the foreign entity merely buys equity shares of a company. FPI does not provide the investor with control over the business.

- **Routes** through which India gets FDI:
  - **Automatic Route:** In this, the foreign entity does not require the prior approval of the government or the RBI.
  - **Government route:** In this, the foreign entity has to take the approval of the government.
    - The **Foreign Investment Facilitation Portal** (FIFP) facilitates the single window clearance of applications which are through approval route.
    - This portal is administered by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.

Bioremediation Mechanism for Oil Spills

Why in News

The **National Institute of Ocean Technology (NIOT), Chnnai** has developed an **eco-friendly crude oil bioremediation mechanism technology** using consortia (group of two or more species) of marine microbes **wheat bran (WB)** immobilized **(microbes controlled degradation)** on agro-residue bacterial cells.

> **Wheat bran** is the hard outer layer of the **wheat** kernel. It's stripped away during the milling process.

Key Points

Eco-friendly Crude Oil Bioremediation Mechanism Technology
- **Bioremediation:** It can be defined as any process that uses microorganisms or their enzymes to remove and or **neutralize contaminants within the environment to their original condition.**
- In the marine ecosystem, deep sea **hydrocarbonoclastic** (ability to degrade hydrocarbon) microbial consortium plays an important role in breaking down **oil in the event of a spill.**
  - The microbial community serves as **energetic primary degraders** of a complex mixture of petroleum hydrocarbons into various aldehydes, ketones and acidic metabolites.
  - These hydrocarbon degrading bacteria don't depend on hydrocarbons for survival, but have a metabolic mechanism where they use petroleum products as **carbon and energy source** and thus, help cleaning up oil spills.
  - The **complete breakdown and degradation** of crude oil is achievable using **wheat bran marine bacterial consortia** (which are **low-cost non-toxic** agro-residues) in an environmentally sustainable manner.
- **Advantages of Immobilized State:**
  - They are more **effective in their immobilised state** than the free bacteria cells in degrading the oil spills.
    - They could remove 84% of the oils within 10 days. The free bacterial cells degraded a maximum of 60% of the crude oil at optimised conditions.
  - They are more **versatile and resistant** to adverse conditions.
  - They have **efficacy in treating accidental bulk discharge of oil** in marine environments through non-toxic clean-up technology.

Oil Spill

- It is an **accidental/uncontrolled release** of crude oil, gasoline, fuels, or other oil by-products into the environment. Oil spills can pollute land, air, or water, though it is mostly used for oceanic oil spills.
  - The recent **MV Wakashio spill off Mauritius** — about 1,000 tonnes of oil spilled into a sanctuary for rare wildlife after the Japanese ship struck a coral reef in 2020.
- **Cause:** They have become a major environmental problem, chiefly as a result of **intensified petroleum exploration and production** on continental shelves and the transport of large amounts of oils in vessels.

- **Measure: Cleaning** up of the oil spillage from the oceans **without damaging the marine ecosystem** is becoming an increasingly challenging task.
    - **Containment Booms:** Floating barriers, called booms are used to restrict the spread of oil and to allow for its recovery, removal, or dispersal.
    - **Skimmers:** They are devices used for physically separating spilled oil from the water's surface.
    - **Sorbents:** Various sorbents (e.g., straw, volcanic ash, and shavings of polyester-derived plastic) that absorb the oil from the water are used.
    - **Dispersing agents:** These are chemicals that contain surfactants, or compounds that act to break liquid substances such as oil into small droplets. They accelerate its natural dispersion into the sea.

Source: DTE

Atomic Hydrogen Content of Galaxies

Why in News

In a significant discovery, the Pune-based **Nationwide Centre for Radio Astrophysics (NCRA-TIFR) and Raman Analysis Institute (RRI),** Bengaluru have used the **Giant Metrewave Radio Telescope (GMRT)** to measure the **atomic hydrogen** content (of 8 billion years ago) of galaxies when the universe was young.

> This will **help in unveiling the reason behind declining star formation in the Milky Way** in the present time.

Key Points

- **The Study:** For the first time the atomic hydrogen gas content of star forming galaxies for a past date (about 8 billion years ago) was measured with the help of the upgraded GMRT.
    - Unlike stars which emit light strongly at optical wavelengths, the atomic hydrogen signal lies in the radio wavelengths, at a wavelength of 21 cm, and can only be detected with radio telescopes.
    - **Stacking:** This 21 cm signal is intrinsically very weak, to overcome this limitation, the team used a technique called "stacking" to combine the 21 cm signals of nearly 8,000 galaxies that had earlier been identified with the help of optical telescopes. This method measures the average gas content of these galaxies.

- **Significance of Discovery:**
  - Galaxies in the universe are made up mostly of gas and stars, with gas being converted into stars throughout the life of a galaxy.
    - Understanding galaxies requires us to determine how the amounts of both gas and stars change with time.
  - The star formation activity in galaxies peaked about 8-10 billion years ago (galaxy was young) and has been declining steadily till today.
    - The cause of this decline was unknown as there had been no **information regarding the amount of atomic hydrogen gas** — the **primary fuel for star formation** — in galaxies in these early times.
  - The observed decline in star formation activity could thus be explained by the exhaustion of the atomic hydrogen. Given the intense star formation in these early galaxies, their atomic gas would be consumed by star formation in just one or two billion years.

Giant Metrewave Radio Telescope

- GMRT is an array of **thirty fully steerable parabolic radio telescopes of 45 metre diameter.** It is operated by the National Centre for Radio Astrophysics of the Tata Institute of Fundamental Research. It is an **indigenous project.**
- It functions at the **metre wavelength part of the radio spectrum** because **man-made radio interference is considerably lower** in this part of the spectrum in India and there are **many outstanding astrophysics problems** which are best studied at metre wavelengths.
- Detecting the 21 cm signal from the most distant galaxies in the universe was the main science goal of the GMRT, when it was designed and built by a team led by the late pioneering astrophysicist **Govind Swarup** in the 1980s and 1990s.
- The big jump in sensitivity was due to the upgrade of the GMRT with new wide band receivers and electronics in 2017.
- The **location** for GMRT, Pune meets several important criteria such as **low man-made radio noise,** availability of **good communication,** vicinity of **industrial,** educational and other infrastructure and, a geographical latitude sufficiently north of the geomagnetic equator in order to have a reasonably quiet ionosphere and yet be able to observe a good part of the southern sky as well.

Source: TH

36th NSG Raising Day

Why in News

National Security Guard (NSG) Raising Day is celebrated on 16th October.

Key Points

- **Formation:** The decision to form an anti-terror federal contingency force was taken in 1984 when militancy in Punjab was at its peak. The **NSG came into existence** through the **National Security Guard Act, 1986.**
- **Anti Terrorist Force:** The NSG is an **anti-terrorist force.** They are been given the specific role to handle all the facets of terrorism in any part of the country as a **federal contingency force.**
    - They are also informally referred to as the **'Black Cats'** because of their menacing, all-black uniforms.
- **Elements:** It has two complementary elements:
    - **Special Action Group (SAG)** comprising Army personnel.
    - **Special Rangers Group (SRG)** comprising personnels drawn from State Police and Central Armed Police Force.
- **Model:** It is modelled on the elite anti-terror forces **GSG-9 of Germany** and **SAS of the United Kingdom.**
- **Deployment:** Since its raising the NSG has been used in Punjab in 1986 and Jammu & Kashmir. It played a significant role in thwarting Mumbai terror attacks (26/11 attacks).
- **Not For VIP:** In January 2020, the Centre decided to **remove the NSG from providing security to VIPs,** a task which it was not supposed to perform when it was originally formed.

Source: PIB

Kala Sanskriti Vikas Yojana

Why in News

Recently, the Ministry of Culture has issued guidelines for **holding cultural events/activities in virtual/online mode** under various scheme components of **Kala Sanskriti Vikas Yojana** (KSVY).

Key Points

- The **Covid-19 pandemic** and the resultant **lockdowns** have had a substantial **impact on the performing arts and cultural sector** with in-person exhibitions, events, and performances either cancelled or postponed. **Example: Behrupiyas.**
- The guidelines will **enable artists to avail benefits under KSVY** even if they are not able to stage programs in the physical format as before and will **ensure continued financial assistance.**
- **Kala Sanskriti Vikas Yojana** (KSVY) is an **umbrella scheme** under the Ministry of Culture for the **promotion of art and culture** in the country.
- It is a **central sector scheme.**

- The ministry implements **many schemes under KSVY,** where the grants are sanctioned/approved for holding programs/activities.
    - **Scheme of Financial Assistance for Promotion of Art and Culture.**
    - **Scheme of Financial Assistance for Creation of Cultural Infrastructure.**
    - **Scheme for Safeguarding the Intangible Cultural Heritage**, which aims to promote the **13 intangible cultural heritage of India,** recognised by the **United Nations Educational, Scientific and Cultural Organization** (UNESCO).

	13 ICH traditions recognised by UNESCO		
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India ,2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

Source: PIB