San-Sadhan Hackathon: Divyang Accessible Toilets

The government has invited applications for its latest initiative under the **Swachh Bharat Mission,** called the **'San-Sadhan' Hackathon,**

- The initiative aims to ease lives of **Divyangjan** by making toilets smarter, more accessible, and easier to use.
- **The Objective of San-Sadhan Hackathon are:**
  - Affordable, compact, flexible to use & design and scalability to suit variable area requirements.
  - Demands of different disabilities, geographies, age groups, genders and cultures have to be kept in mind.
  - Specifically, issues of wheelchair users, amputees, visually impaired and conditionally disabled (person with fracture, pregnant women, lactating mothers, elderlies etc.) need to be addressed.
- The solution could be developed for any one of the following categories:
  - Rural Individual Use Toilet
  - Rural Community Use Toilet
  - Urban Individual Use Toilet
  - Urban Community Use Toilet
- As per the **2011 census, 2.68 crore people** in the country fall under the category of 'Divyangs'.

Swachh Bharat Abhiyan

- The **Swachh Bharat Abhiyan (SBA)** or Swachh Bharat Mission (SBM) was launched on **October 2, the birth anniversary of Mahatma Gandhi in 2014.**
- It aims to clean up the streets, roads and infrastructure of India's cities, towns, and rural areas and achieve an **open-defecation free India by October 2, 2019, the 150th birth anniversary of Mahatma Gandhi.**
- Also aims to build 90 million rural toilets in the country.

- Further, the mission will also help India meet the **Sustainable Development Goal-6 (SDG 6)**, as established by the UN in 2015.

Other Initiatives Related to Divyangjan

Source: PIB

Free Medicine Scheme of Rajasthan

The flagship **free medicine scheme** of Rajasthan government has bagged 1st position amongst 16 states, in the monthly rankings issued by the **National Health Mission (NHM).**

About the Scheme

- **Rajasthan Mukhyamantri Nishulk Dava Yojana** was launched on 2nd October 2011, by the then Chief Minister Ashok Gehlot.
- It had 2 components-
    - **Free Medicines:** To provide commonly-used essential *medicines free of cost* to patients visiting government healthcare institutions (introduced on 2nd October 2011), and
    - **Free Tests:** To provide free tests (introduced on 7th April 2013).
- For the successful *implementation* of the same, **Rajasthan Medical Services Corporation Limited (RMSCL)** was incorporated as a Public Limited Company.
- Since 2011, it has benefitted around 67 crore patients, and a record number of 712 medicines are covered under it.
- National Health Mission under its *Free Drug Service Initiative,* started giving rankings to the states, in order to encourage them to provide free drugs to their patients coming to public health facilities.
- The performance of the states was assessed by NHM on the basis of 10 parameters. A few of them are,
    - The stock of drugs,
    - Value of drugs about to expire, and
    - Effective compliance with the Drugs and Vaccine Distribution Management System (DVDMS), etc.
- The main **aim** of this initiative was *to reduce out of pocket expenditure* of patients suffering from cancer, heart and kidney-related diseases, and other severe ailments.
- This initiative of NHM is implemented by the **Ministry of Health & Family Welfare** in order to support the states.

Way Forward

- Rewarding the states will act as a catalyst for ensuring the inclusive accessibility and

affordability of health care services to the most downtrodden and the poorest sections of our society.

- This will also promote the spirit of co-operative and competitive federalism, whereby other states can take the lead and follow similar successful initiatives.

Source: IE

Ocean Energy as Renewable Energy

The **Ministry of New and Renewable Energy** has declared Ocean Energy as renewable energy.

It has clarified to all the stakeholders that energy produced using various forms of ocean energy such as tidal, wave, ocean thermal energy conversion among others shall be considered as renewable energy and shall be eligible for meeting the non-solar **Renewable Purchase Obligations (RPO).**

Renewable Purchase Obligation

- This is a mechanism by which the State Electricity Regulatory Commissions are obliged to purchase a certain percentage of power from renewable energy sources.
- RPO is being implemented throughout the country to create demand for renewable energy.

Potential

- According to MNRE, the total identified potential of tidal energy is about 12,455 MW, with potential locations identified at **Khambhat & Kutch regions (Gujrat)** and large backwaters, where barrage technology could be used.
- The total theoretical potential of wave energy in India along the country's coast is estimated to be about 40,000 MW.
- **Ocean Thermal Energy Conversion (OTEC)** has a theoretical potential of 180,000 MW in India subject to suitable technological evolution.
- The sector has the potential to grow, fuelling economic growth, reduction of carbon footprint and creating jobs not only along the coasts but also inland along its supply chains.

Ocean Energy

- Oceans cover 70% of the earth's surface and represent an enormous amount of energy in the form of wave, tidal, marine current and thermal gradient. India has a long coastline with the estuaries and gulfs.

- Ocean energy is used in the form of Tidal, Wave, Current Energy and Ocean Thermal Energy.
  - **Tidal Energy:** The tidal cycle occurs every 12 hours due to the gravitational force of the moon. The difference in water height from low tide and high tide is stored in the form of potential energy. Similar to traditional hydropower generated from dams, tidal water can be captured in a barrage across an estuary during high tide and forced through a hydro-turbine during low tide.
    - The capital cost for tidal energy power plants is very high due to the high construction cost and high power purchase tariff.
    - To capture sufficient power from the tidal energy potential, the height of high tide must be at least five meters (16 feet) greater than low tide.
    - The Gulf of Cambay and the Gulf of Kutch in Gujarat on the west coast have few ideal locations in the country where potential exists.
  - **Wave Energy:** Wave energy is generated by the movement of a device either floating on the surface of the ocean or anchored to the ocean floor.
    - Wave conversion devices that float on the surface have joints hinged together that bend with the waves. This kinetic energy pumps fluid through turbines and creates electricity.
    - Stationary wave energy conversion devices use pressure fluctuations produced in long tubes from the waves swelling up and down.
  - **Current Energy:** Marine current is ocean water moving in one direction. Few examples being the Gulf Stream, North Atlantic Drift, etc. Tides also create currents that flow in two directions.
    > Kinetic energy can be captured from the Gulf Stream and other tidal currents with submerged turbines.
  - **Ocean Thermal Energy Conversion (OTEC) :** Ocean Thermal Energy Conversion uses ocean temperature differences from the surface to depths lower than 1,000 meters, to extract energy. A temperature difference of only 20°C can yield usable energy.

Source: THBL

Big data to Mitigate the Impact of Disasters

According to the report by the **UN's Asia-Pacific social agency,** technological innovations like **big data** can better predict **disasters** in the Asia-Pacific region and help to reduce its impact.

- The report stated that, since 1970, natural disasters in the Asia-Pacific region have killed **two million people i.e. 59% of the global death toll.**
- **Rising global temperatures and climate change** have increased the frequency and

intensity of floods, cyclones and droughts in the region.

- Further, disasters also cause **more damage in Asia and the Pacific,** measured as a percentage of GDP, than the rest of the world, and this gap has been widening.
- In this context, technologies intervention caused by big data can help **identify and locate those most at risk, to warn people ahead of a disaster,** and **deliver targeted relief afterwards.**
- This data can come from a **range of sources,** including satellite imagery, drone videos, simulations, crowdsourcing, social media and global positioning systems.
- **Application of Big Data in <u>Disaster Risk Reduction</u>:**
  - There are four main phases of disaster management i.e. **prevention, preparedness, response and recovery.**
  - A Big Data-driven sensor network can help mitigate disaster in the following ways:
    - Flood and cyclone forecasting now rely on computer simulations, **<u>machine learning</u>** can help predict the location and severity of floods.
    - Sensor webs and the **<u>Internet of Things</u>** can enable efficient earthquake early-warning systems.
    - Remote sensing via satellites and drones provide quick assessments of damage and people affected so that disaster response can be prioritized.
    - Public data like **<u>India's digital ID system (Aadhar)</u>** can help deliver targeted benefits to millions of small and marginal farmers affected by drought.
  - Big data applications have led to substantial reductions in mortalities and economic losses due to typhoons in the north and east Asia.

Big Data

- Big Data, broadly characterize data sets so large they cannot be stored and analysed by the traditional data storage and processing methods.
- It has three characteristics, referred to as the **three V's – Volume, Velocity and Variety,** that distinguish Big Data from other forms of data.
- The emergence of Big Data has primarily been, due to the decrease in the cost of sensory and mass digitization of systems and processes around the globe.

<u>Source: THBL</u>

Leprosy Resurfaced

The latest data from the **<u>World Health Organization (WHO)</u>** shows that **India hosts 66% of all <u>leprosy</u> patients in the world.**

- India **officially eliminated leprosy in 2005,** reducing its prevalence rate to 0.72 per

10,000 people at national level.

>According to the WHO, 'elimination' implies a prevalence rate of less than one case per 10,000.

- In 2016-17, at least 1,35,485 cases of leprosy were detected in the country.
- As of March 2017, **about 53 districts** in 11 states and Union territories reported a **prevalence rate higher than 2/10,000 population.**

>These states were Bihar, Odisha, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, West Bengal, D&N Haveli, Lakshadweep and Delhi.

Reasons for Recurrence

- **New Detections:** Post 2005, **many new cases started getting reported**. New detections occurred due to major changes in the **National Leprosy Elimination Programme (NLEP)** and the Global Leprosy Programme.

>Efforts made under these programmes led to the discovery of child leprosy, apart from other new cases.

- **Reduced Efforts:** The declaration of elimination diluted efforts of health workers, who were helping in identifying cases in rural areas. As a result, efforts to fight against the disease at different levels were also reduced to a great extent.

Way Forward

- **The strengthening of the public health system** at the ground level is necessary to handle this issue in areas where a large number of cases are being reported.
- India needs a clear strategy and implementation plan to address the problem and achieve eradication of leprosy.

Source: Mint

Amazon Rainforest

According to the data from Brazil's National Institute for Space Research (INPE), **the Amazon Forests in Brazil has experienced 74,155 fires since January 2019.**

- This is an **85% increase from the last year (2018)** and significantly higher than that in the year 2016, when there were severe drought conditions in the region associated with a strong **El Nino** event.
- Moreover, there is **nothing abnormal about the climate this year** or the rainfall in the Amazon region, which is just a little below average.

Amazon Rainforests

- These are **large tropical rainforest** occupying the drainage basin of the Amazon River and its tributaries in northern South America and covering an area of 6,000,000 square km.
    - **Tropical forests are closed-canopy forests** growing within 28 degrees north or south of the equator.
    - They are very **wet places,** receiving more than 200 cm rainfall per year, either seasonally or throughout the year.
    - Temperatures are uniformly high - between 20°C and 35°C.
    - Such forests are found in Asia, Australia, Africa, South America, Central America, Mexico and on many of the Pacific Islands.
- Comprising about 40% of Brazil's total area, it is bounded by the Guiana Highlands to the north, the Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.

Reason Behind the Fires

- **Natural Cause:** The dry season creates favourable conditions for the use and spread of fire.
- **Man-made causes:** Since the 1960s, the Amazon has witnessed large-scale deforestation because of cattle-ranching, logging, power projects, mining and farming.
    The Amazon has large reserves of gold and other minerals.
- **Immediate Cause:** Environmentalists have blamed farmers setting the forest alight to clear land for pasture.
    The President of Brazil has repeatedly said that he believes that Brazil should

open the Amazon up to business interests, to allow mining, agricultural and logging companies to exploit its natural resources.

Concerns

- The Amazon rainforest is a **repository of rich biodiversity and produces approximately 20% of oxygen** in the Earth's atmosphere.
- It is home to many indigenous communities, their life depends on the forests.
- **Additional Carbon Emissions:** Carbon intake by the Amazon basin matches the emissions released by nations in the basin. The burning of forests, therefore, implies additional carbon emissions.
    - Further deforestation could lead to Amazon's transformation from the world's largest rainforest to a savanna, which would reverse the region's ecology.
    - **Savanna** is a vegetation type that grows under hot, seasonally dry climatic conditions and is characterized by an open tree canopy (i.e., scattered trees) above a continuous tall grass understory (the vegetation layer between the forest canopy and the ground).
    - The largest areas of savanna are found in Africa, South America, Australia, India, Myanmar (Burma)–Thailand region in Asia, and Madagascar.
- **Impact on Water Cycle:** Amazon rainforest has the ability to produce at least half of the rain it receives. The rain produced by the Amazon travels through the region and even reaches the Andes mountain range.

The **United Nations** and the international community **need to take serious measures** to save the forests.

Source: TH

Five Star Movement

Recently, **Italy's Prime Minister Giuseppe Conte** announced his resignation on account of the collapse of coalition between his party **Five Star Movement (M5S) and League party.**

> League party withdrew its support by stating that its political goal was to challenge the **European Union's fiscal rules.**

Five Star Movement (M5S)

- M5S is a **populist movement** that was **stared in 2009** as an internet-based group becoming one of the most voted-for parties in Italy.
- It was started by Beppe Grillo and Gianroberto Casaleggio through their social networking site, **Meetup.com**, to bring people together to campaign on local issues

and then field candidates for elections.
- In 2013 it became the second-largest party and eventually coming to power in 2018.
- M5S marks the **significance of the internet and social media** that could spur a **new kind of politics.**
  - **M5S used the internet to form a political party – one without organisation, money, ideology or headquarters.**
  - Also, it adds a new dimension to **populism.**
    - Populism is a political approach that strives to appeal to ordinary people who feel that their concerns are disregarded by established elite groups.

Source: TH

Sabka Vishwas

Sabka Vishwas is a **legacy dispute resolution scheme** notified by Government for closing **pending disputes** relating to legacy **Service Tax and Central Excise cases.** It is to be operationalized from 1st September 2019.

- The two main components of the Scheme are **dispute resolution and amnesty.**
  - The **dispute resolution component** is aimed at liquidating the legacy cases of **Central Excise and Service Tax** that are subsumed in GST and are pending in litigation at various forums.
  - The **amnesty component** of the Scheme offers an opportunity to the taxpayers to pay the outstanding tax and be free of any other consequences under the law.
    - The most attractive aspect of the Scheme is that it provides substantial relief in the tax dues for all categories of cases as well as full waiver of interest, fine, penalty. In all these cases, there would be no other liability of interest, fine or penalty. There is also a complete amnesty from prosecution.
- **The objective of the Scheme:** is to free the large number of small taxpayers of their pending disputes with the tax administration.

Source: PIB