GOVERNANCE

1,SWAMITVA Scheme

The scheme has been extended to all states. Earlier, it was launched only for 9 states.

Key Features

- Launched on Panchayati Raj Diwas (April 24th, 2020).
- The scheme seeks to map residential land ownership in the rural sector using modern technology like the use of drones.
- The scheme aims to revolutionise property record maintenance in India.
- The scheme is piloted by the Panchayati Raj ministry.
- Under the scheme, residential land in villages will be measured using drones to create a non-disputable record.
- Property card for every property in the village will be prepared by states using accurate measurements delivered by drone-mapping. These cards will be given to property owners and will be recognised by the land revenue records department.

Benefits of the scheme:

- The delivery of property rights through an official document will enable villagers to access bank finance using their property as collateral.
- The property records for a village will also be maintained at the Panchayat level, allowing for the collection of associated taxes from the owners. The money generated from these local taxes will be used to build rural infrastructure and facilities.
- Freeing the residential properties including land of title disputes and the creation of an official record is likely to result in appreciation in the market value of the properties.
- The accurate property records can be used for facilitating tax collection, new building and structure plan, issuing of permits and for thwarting attempts at property grabbing.

Need for and significance of the scheme:

- The need for this Yojana was felt since several villagers in the rural areas don't have papers proving ownership of their land. In most states, survey and measurement of the populated areas in the villages has not been done for the purpose of attestation/verification of properties. The new scheme is likely to become a tool for empowerment and entitlement, reducing social strife on account of discord over properties.

2.Disaster Management Act, 2005 Put Into Effect

Recently, the Ministry of Home Affairs invoked Disaster Management Act, 2005 (DM Act) and ordered free inter-state movement of oxygen carrying vehicles.

Earlier in March 2020 various government authorities invoked their respective powers under the DM Act to deal with the novel coronavirus (Covid-19) outbreak in the country.

Key Points

About: The DM Act was passed by the government of India in 2005 for the 'efficient management of disasters and other matters connected to it. However it came into force in January 2006.

Objective: To manage disasters, including preparation of mitigation strategies, capacity-building and more.Definition of a "disaster" in Section 2 (d) of the DM Act states that a disaster means a "catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man made causes.

Major Features of The Act:

Nodal Agency: The Act designates the Ministry of Home Affairs as the nodal ministry for steering the overall national disaster management.

National Level Important Entities:

- **The National Disaster Management Authority (NDMA):**
  It is tasked with laying down disaster management policies and ensuring timely and effective response mechanisms.
- **The National Executive Committee (NEC):**
  It is constituted under Section 8 of the DM Act to assist the National Disaster Management Authority in the performance of its functions.
  The NEC is responsible for the preparation of the National Disaster Management Plan for the whole country and to ensure that it is "reviewed and updated annually.
- **The National Institute of Disaster Management (NIDM):**
  It is an institute for training and capacity development programs for managing natural calamities.
- **National Disaster Response Force (NDRF):**

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

It refers to trained professional units that are called upon for specialized response to disasters

- **State and District level:**
  The Act also provides for state and district level authorities responsible for, among other things, drawing plans for implementation of national plans and preparing local plans.
  State Disaster Management Authority
  District Disaster Management Authority.

Finance:

It contains the provisions for financial mechanisms such as the creation of funds for emergency response, National Disaster Response Fund and similar funds at the state and district levels.

Civil and Criminal Liabilities:

The Act also devotes several sections various civil and criminal liabilities resulting from violation of provisions of the act.

Under Section 51 of the Act, anyone refusing to comply with orders is liable for punishment with imprisonment up to one year, or fine, or both. In case this refusal leads to death of people, the person liable shall be punished with imprisonment up to two years.

Challenges:

Absence of Disaster Prone Zones:

- One of the most glaring inadequacies in the Act is the absence of a provision for declaration of 'disaster- prone zones'.
- Almost all disaster related legislations in the world have mapped out disaster- prone zones within their respective jurisdictions.
- The state cannot be expected to play a pro- active role unless an area is declared 'disaster-prone'. Classification helps in determining the extent of damages as well.

Neglects Progressive Behavior of Disasters:

- The Act portrays every disaster as a sudden occurrence and completely fails to take into account that disasters can be progressive in nature as well.
- In 2006, over 3,500 people were affected by dengue, a disease with a history of outbreaks in India, yet no effective mechanism has been put in place to check such an ordeal.
- Tuberculosis is known to kill thousands of people in the country each year but since its occurrence is not sudden or at once, it has not found a place in the Act.

Overlapping Functions:

- The Act calls for establishment of multiple- national level bodies, the functions of which seem to be overlapping, making coordination between them cumbersome.
- The local authorities, who have a very valuable role to play in the wake of any disaster as first responders, barely find a mention at all. There are no substantive provisions to guide them, merely a minor reference to taking 'necessary measures'.

Procedural Delays and Inadequate Technology:

- Added to that, delayed response, inappropriate implementation of the plans and policies, and procedural lags plague the disaster management scheme in India.
- Inadequate technological capacity for accurate prediction and measurement of the disaster result in large scale damage.

Way Forward

Although the DM Act has undoubtedly filled a huge gap in the scheme of governmental actions towards dealing with disasters. Laying down elaborate plans on paper doesn't serve the purpose unless they are translated into effective implementation.Civil society, private enterprises and Non-governmental Organizations (NGOs) can play a valuable role towards building a safer India.

INDIA ECONOMY

1.Falling Crude Oil & Natural Gas Production In India

According to the latest government data India's crude oil production and natural gas output declined in the Financial Year (FY) 2020-2021.India's crude oil and natural gas production have been falling consistently since 2011-12.

Key Points

Decline in Production:

- **Crude Oil Production:**Declined by 5.2% as private and public firms produced 30.5 million tonnes in 2020-21 compared to 32.17 million tonnes produced during the same period in 2019-2020.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- **Natural Gas Production:**Declined by 8.1% and in 2020-21 only 28.67 billion cubic meters was produced compared to 31.18 billion cubic meters in 2019-20.

Reason for Decline:

- **Ageing Sources:**Most of India's crude oil and natural gas production comes from ageing wells that have become less productive over time.
- **Need of Intensive Technology:**There is no more easy oil and gas available in India and that producers would have to invest in extracting oil and gas using technologically intensive means from more difficult fields such as ultra deepwater fields.
- **Domination of State Owned Companies:**Crude oil production in India is dominated by two major state-owned exploration and production companies, Oil and Natural Gas Corporation Limited (ONGC) and Oil India.These companies are the key bidders for hydrocarbon blocks in auctions and were the only successful bidders in the fifth and latest round of auctions under the Open Acreage Licensing Policy (OALP) regime with ONGC bagging seven of the eleven oil and gas blocks on offer and Oil India acquiring rights for the other four.
- **Low Interest of Foreign Companies:**India's efforts to attract foreign energy giants into hydrocarbon exploration and production haven't been quite fruitful.The government has asked ONGC to boost its investments in explorations and increase tie-ups with foreign players to provide technological support in extracting oil and gas from difficult oil and gas fields.
- **Climate Change:**Mounting pressure due to climate change is prompting oil and gas players to diversify into clean energy.

Reason for Less Private Participation:

- **Operationalisation Delays**:One of the key reasons cited by experts for low private participation in India's upstream oil and gas sector are delays in the operationalisation of hydrocarbon blocks due to delays in major clearances including environmental clearances and approval by the regulator of field development plans.
- **High Cess**:Industry players have been calling for a reduction in the cess on domestically produced crude oil to 10% from the current 20%.
- **Limit on maximum Production:**Internal maximum production levels set by oil and gas majors to address climate change had also lowered interest by oil majors to expand operations in India.

Impact:

- **Reliance on Imports:**Low domestic production of crude oil and natural gas makes India more reliant on imports.The share of imports as a proportion of overall crude oil consumption in India has risen from 81.8% in FY2012 to 87.6% in FY2020.
- **Not in Favouring of India's Vision:**Boosting oil and gas production has also been a key part of the government's Atma Nirbhar Bharat initiative and its goal to boost the use of natural gas in India's primary energy mix from the current 6.2% to 15% by 2030.

Some Government Initiatives to Improve Production:

- **Reforming Exploration & Licensing:**In October 2020 Cabinet Committee on Economic Affairs (CCEA) approved the Policy framework on reforms in the exploration and licensing sector for enhancing domestic exploration and production of oil and gas.
- **National Data Repository (NDR):**The NDR was established by the Government in 2017 to assimilate, preserve and upkeep the vast amount of data which could be organized and regulated for use in future exploration and development, besides use by R&D and other educational institutionsIt is an integrated data repository of Exploration and Production (E&P) data of Indian sedimentary basins.
- **Hydrocarbon Exploration and Licensing Policy (HELP):**It replaced the erstwhile New Exploration Licensing Policy (NELP) in 2016 and provides for a single License for exploration and production of conventional as well as non-conventional Hydrocarbon resources; Pricing and Marketing Freedom; reduced rate of royalty for offshore blocks.

2.Microfinance institutions (MFIs)

Microfinance institutions (MFIs) have urged the Centre to consider prioritising vaccinations for their employees and self-help group workers.

This request is in order to ensure that lines of credit remain open for the poor amidst the rising second wave of Covid-19 infections.

Key Points

About:

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- MFI is an organization that offers financial services to low income populations.These services include microloans, microsavings and microinsurance.
- MFIs are financial companies that provide small loans to people who do not have any access to banking facilities.The definition of "small loans" varies between countries. In India, all loans that are below Rs.1 lakh can be considered as microloans.
- In most cases the so-called interest rates are lower than those charged by normal banks, certain rivals of this concept accuse microfinance entities of creating gain by manipulating the poor people's money.
- Microfinance sector has grown rapidly over the past few decades and currently it is serving around 102 million accounts (including banks and small finance banks) of the poor population of India.
- Different types of financial services providers for poor people have emerged - non-government organizations (NGOs); cooperatives; community-based development institutions like self-help groups and credit unions; commercial and state banks; insurance and credit card companies; telecommunications and wire services; post offices; and other points of sale - offering new possibilities.
- Non Banking Finance Company (NBFC)-MFIs in India are regulated by The Non-Banking Financial Company -Micro Finance Institutions (Reserve Bank) Directions, 2011 of the Reserve Bank of India (RBI).

Major Business Models:

- **Joint Liability Group:**This is usually an informal group that consists of 4-10 individuals who seek loans against mutual guarantee.The loans are usually taken for agricultural purposes or associated activities.
- **Self Help Group:**It is a group of individuals with similar socio-economic backgrounds.These small entrepreneurs come together for a short duration and create a common fund for their business needs. These groups are classified as non-profit organisations.The National Bank for Agriculture and Rural Development (NABARD) SHG linkage programme is noteworthy in this regard, as several Self Help Groups are able to borrow money from banks if they are able to present a track record of diligent repayments.
- **Grameen Model Bank:**It was the brainchild of Nobel Laureate Prof. Muhammad Yunus in Bangladesh in the 1970s.It has inspired the creation of Regional Rural Banks (RRBs) in India. The primary motive of this system is the end-to-end development of the rural economy.
- **Rural Cooperatives:**They were established in India at the time of Indian independence.However, this system had complex monitoring structures and was beneficial only to the creditworthy borrowers in rural India. Hence, this system did not find the success that it sought initially.

Benefits:

- They provide easy credit and offer small loans to customers, without any collateral.
- It makes more money available to the poor sections of the economy, leading to increased income and employment of poor households.
- Serving the under-financed section such as women, unemployed people and those with disabilities.
- It helps the poor and marginalised section of the society by making them aware of the financial instruments available for their help and also helps in developing a culture of saving.
- Families benefiting from microloans are more likely to provide better and continued education for their children.

Challenges:

- **Fragmented Data:**While overall loan accounts have been increasing, the actual impact of these loans on the poverty-level of clients is not clear as data on the relative poverty-level improvement of MFI clients is fragmented.
- **Impact of Covid-19:**It has impacted the MFI sector, with collections having taken an initial hit and disbursals yet to observe any meaningful thrust.
- **Social Objective Overlooked:**In their quest for growth and profitability, the social objective of MFIs—to bring in improvement in the lives of the marginalized sections of the society—seems to have been gradually eroding.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- **Loans for Non-income Generating Purposes:**The proportion of loans utilized for non-income generating purposes could be much higher than what is stipulated by the RBI which is 30% of the total loans of the MFI.These loans are short-tenured and given the economic profile of the customers, it is likely that they soon find themselves in the vicious debt trap of having to take another loan to pay off the first.

Way Forward

- MFIs need to focus on creating a sustainable and scalable microfinance model with a mandate that is unequivocal about both economic and social good.
- MFIs should ensure that the 'stated purpose of the loan' that is often asked from customers at the loan-application stage is verified at the end of the tenure of the loan.
- RBI should encourage all institutions to monitor their impact on society by means of a 'social impact scorecard'.

SCIENCE AND TECHNOLOGY

1.Crew-2 Mission

Four astronauts were launched to the International Space Station (ISS) from Florida as part of a collaboration between NASA and SpaceX under the Commercial Crew Program. The mission is called Crew-2.

Key Points

About the Commercial Crew Program:

- NASA's Commercial Crew Program is a partnership between NASA and private industry to carry astronauts to and from the International Space Station.
- Unlike previous human spaceflight programs, NASA is a customer buying flights from commercial providers. The agency does not own or operate the spacecraft.
- The program is helping to lower the cost of spaceflight and potentially create a new commercial market for humans in space.
- By encouraging private companies to provide crew transportation services to and from low-Earth orbit, NASA can focus on building spacecraft and rockets meant for deep space exploration missions.
- Boeing and SpaceX were selected by NASA in September 2014 to develop transportation systems meant to transfer crew from the US to the ISS.

NASA's Partnership with SpaceX:

- In May 2020, NASA's SpaceX Demo-2 test flight lifted off for the ISS carrying two astronauts.
- The aim of this test flight was to see if SpaceX capsules could be used on a regular basis to ferry astronauts to and from the ISS.
- Demo-2 was followed by the Crew-1 mission in November, which was the first of six crewed missions between NASA and SpaceX marking the beginning of a new era for space travel.
- Crew-1 was the first operational flight of the SpaceX Crew Dragon spacecraft on a Falcon 9 rocket to the ISS.
- Crew-1 team members joined members of Expedition 64 and conducted microgravity studies at the ISS.

About the Crew-2 Mission:

- It is the second crew rotation of the SpaceX Crew Dragon and the first with international partners.
- Out of the four astronauts, two are from NASA and two are from the Japan Aerospace Exploration Agency (JAXA) and the European Space Agency (ESA).
- Crew-2 astronauts will join the members of Expedition 65 (65th long duration expedition to the International Space Station).
- They will stay aboard the ISS for six months during which time they will conduct science experiments in low-Earth orbit.
- Their central focus during this time will be to continue a series of Tissue Chips in Space studies.

Tissue Chips:

- Tissue Chips are small models of human organs that contain multiple cell types that behave similarly to the human body.
- According to NASA, these chips can potentially speed up the process of identifying safe and effective drugs and vaccines.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- Scientists can use these tissue chips in space to study diseases that affect specific human organs, which would take months or years to develop on Earth.

International Space Station:

- ISS is a habitable artificial satellite - the single largest man-made structure in low earth orbit. Its first component was launched into orbit in 1998.
- The ISS programme is a joint project between five participating space agencies: NASA (United States), Roscosmos (Russia), JAXA (Japan), ESA (Europe), and CSA (Canada) but its ownership and use has been established by intergovernmental treaties and agreements.
- It is expected to operate until 2030.

2.Classical Swine Fever (CSF) & Sheep Pox Vaccines

The ICAR-Indian Veterinary Research Institute (IVRI) has transferred the technology for Classical Swine Fever (CSF) & Sheep Pox Vaccines to an animal healthcare company Hester Biosciences.The technology was transferred through state-owned Agrinnovate India (AgIn), which aims to work on the strengths of theIndian Council of Agricultural Research (ICAR).

Key Points

Classical Swine Fever (CSF):

About the Disease:

- CSF, also known as hog cholera, is an important disease of pigs.
- It is one of the most economically-damaging pandemic viral diseases of pigs in the world.
- It is caused by a virus of the genus Pestivirus of the family Flaviviridae, which is closely related to the viruses that cause bovine viral diarrhoea in cattle and border disease in sheep.
- Mortality is 100%.

About the Vaccine Developed in India:

- In India, the disease is controlled by a lapinized CSF vaccine (Weybridge Strain, UK) produced by killing large numbers of rabbits.
- Lapinization means serial passage of a virus or vaccine through rabbits to modify its characteristics.
- The new vaccine has been found to induce protective immunity from day 14 of the Vaccination till 18 Months.

Sheep Pox:

About the Disease:

- It is a severe viral disease in Sheep and its virus is closely related to the Goat (capripoxviruses).
- The virus is also related to the virus of lumpy skin disease.
- The disease is very serious, often fatal, characterized by widespread skin eruption.
- It is confined to parts of southeastern Europe, Africa, and Asia.

About the Vaccine Developed in India:

- A live attenuated Sheep Pox Vaccine using indigenous strain was developed by the ICAR-IVRI for preventive vaccination in the sheep population.
- The developed Vaccine uses indigenous Sheep Pox Virus Strain (SPPV Srin 38/00) and is adapted to grow in the Vero cell line which makes the Vaccine production to be easily scalable.
- It is potent and immunogenic for sheep aged more than 6 months of age. It protects the Vaccinated animals for a period of 40 months.

3.Brucellosis

Recently, Kerala launched preventive measures after a few cases of brucellosis, a zoonotic infection, have been detected in some dairy animals.Earlier in September 2020 Brucella abortus S19Δ per vaccine" was developed by the Indian Council of Agricultural Research's -Indian Veterinary Research Institute (ICAR-IVRI) for brucellosis prevention in the dairy sector.

Zoonotic Diseases:

- It is a disease that passes into the human population from an animal source directly or through an intermediary species.
- Zoonotic infections can be bacterial, viral, or parasitic in nature, with animals playing a vital role in maintaining such infections.
- Examples of zoonoses include HIV-AIDS, Ebola, Malaria, and the current Covid-19 disease.

Key Points

About:

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- It is a bacterial disease caused by various Brucella species, which mainly infect cattle, swine, goats, sheep and dogs.
- It is also known as Malta fever or Mediterranean fever.

Brucellosis is endemic in India causing huge economic losses to dairy industry due to: Infertility**,**Abortion**,**Birth of weak off springs**,**Reduced productivity

Infection to Humans:

Infection: Brucellosis has infected over 3000 people in China.Humans generally acquire the disease **through:**Direct contact with infected animals.Eating, drinking contaminated animal products, unpasteurized milk.Inhaling airborne agents.The US Centers for Disease Control and Prevention states that person-to-person transmission of brucellosis is "extremely rare" but some symptoms may reoccur or never go away.

Symptoms: Fever, sweats, malaise, anorexia (psychological disorder in which one eats less due to fear of weight gain), headache and muscle pain.

Treatment and prevention: It is usually treated with antibiotics, including rifampin and doxycycline.Avoiding unpasteurised dairy products and taking safety precautions such as wearing rubber gloves, gowns or aprons, when handling animals or working in a laboratory can help prevent or reduce the risk of getting brucellosis.Other preventive measures include cooking meat properly, vaccinating domestic animals, etc.

BIODIVERSITY & ENVIRONMENT

1.Tough Corals

A recent study has suggested that coral structures may withstand climate change owing to their impressive process of forming rock-hard skeletons.

Key Points

The Study:

- It studied Stylophora pistillata, a common stony coral in the Indo-Pacific revealing that coral structures consist of a biomineral containing a highly organized organic mix of proteins that resembles human bones.
- It highlighted that several proteins are organized spatially – a process that's critical to forming a rock-hard coral skeleton.
- The study highlighted that corals have survived global climate change over millions of years by the process called Biomineralization.
- Biomineralization is the study of processes that lead to the formation of hierarchically structured organic–inorganic materials generated by living organisms, such as shells, bone and teeth.

Coral:

- Corals are made up of genetically identical organisms called polyps. These polyps have microscopic algae called zooxanthellae living within their tissues.
- The corals and algae have a mutualistic relationship.
- The coral provides the zooxanthellae with the compounds necessary for photosynthesis. In return, the zooxanthellae supply the coral with organic products of photosynthesis, like carbohydrates, which are utilized by the coral polyps for the synthesis of their calcium carbonate skeletons.
- In addition to providing corals with essential nutrients, zooxanthellae are responsible for the unique and beautiful colors of corals.
- They are also called the "rainforests of the seas".

There are two types of corals:

- Hard, shallow-water corals—the kind that builds reefs.
- Soft corals and deepwater corals that live in dark cold waters.

Benefits of Coral:

- **Habitat:** Corals are home to over 1 million diverse aquatic species, including thousands of fish species.
- **Income:** Coral reefs and related ecosystems have a global estimated value of '$2.7 trillion per year, or 2**.2% of all global ecosystem service values', this includes tourism and food.**
- **Coastal Protection:** Coral reefs reduce shoreline erosion by absorbing energy from the waves. They can protect coastal housing, agricultural land, and beaches.
- **Medicine:** Reefs are home to species that have the potential for treatments for some of the world's most prevalent and dangerous illnesses and diseases.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

Threat to Corals:

- **Overfishing:**Overfishing of certain species on or adjacent to coral reefs can affect the reef's ecological balance and biodiversity. For example, overfishing of herbivorous fish can lead to high levels of algal growth.
- **Destructive Fishing Methods:**Fishing with dynamite, cyanide, bottom trawling and Muro Ami (banging on the reef with sticks) can damage entire reefs and is unsustainable.
- **Recreational Activities:**Unregulated recreational activities and tourism cause damage to the very environment upon which the industries depend. Physical damage to the coral reefs can occur through contact from careless swimmers, divers, and poorly placed boat anchors.
- **Coastal Development:**Coastal areas have some of the fastest rates of growth in tropical countries. Airports and buildings are often built on land reclaimed from the sea. Sensitive habitats are destroyed or disturbed by the dredging of deep-water channels or marinas, and through the dumping of waste materials.
- **Pollution:**Urban and industrial waste, sewage, agrochemicals, and oil pollution are poisoning reefs. These toxins are dumped directly into the ocean or carried by river systems from sources upstream. Some pollutants, such as sewage and runoff from farming, increase the level of nitrogen in seawater, causing an overgrowth of algae, which 'smothers' reefs by cutting off their sunlight.
- **Climate Change:Coral Bleaching:**Coral bleaching is the loss of the algae and a rapid whitening of the coral. This is a stress response by the coral host that can be caused by various factors such as the rise in sea surface temperature. If the temperature decreases, the stressed coral can recover; if it persists, the affected colony can die.**Ocean Acidification:**The decrease in the pH of the Earth's oceans, caused by their uptake of anthropogenic CO2 from the atmosphere is known as Ocean Acidification. The decrease in pH has negative consequences for oceanic calcifying organisms such as coral reefs.

Initiatives to Protect Corals::

- International Coral Reef Initiative
- Global Coral Reef Monitoring Network (GCRMN)
- Global Coral Reef Alliance (GCRA)
- The Global Coral Reef R&D Accelerator Platform
- Similarly, the Ministry of Environment and Forests and Climate Change(MoEF&CC), India has included the studies on coral reefs under the Coastal Zone Studies (CZS).
  In india, the Zoological Survey of India (ZSI), with help from Gujarat's forest department, is attempting a process to restore coral reefs using "biorock" or mineral accretion technology.
  National Coastal Mission Programme to protect and sustain coral reefs in the country.

2.Snow Leopard

Just days before celebrating Earth Day, the internet was going viral over a photo of a snow leopard.

Key Points

About:

Protection Status:

- The snow leopard is listed as Vulnerable on the IUCN-World Conservation Union's Red List of the Threatened Species.
- In addition, it is also listed in Appendix I of the Convention on International Trade of Endangered Species (CITES).
- Making trading of animal body parts (i.e., fur, bones and meat) illegal in signatory countries.
- It is listed in Schedule I of the Indian Wildlife (Protection) Act 1972.
- It is also listed in the Convention on Migratory Species (CMS), affording the highest conservation status to the species, both globally and in India.
- It is also protected by several national laws in its range countries.

Conservation Efforts by India:

- The Government of India has identified the snow leopard as a flagship species for the high altitude Himalayas.
- India is also party to the Global Snow Leopard and Ecosystem Protection (GSLEP) Programme since 2013.
- **HimalSanrakshak:** It is a community volunteer programme, to protect snow leopards, launched in October 2020.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- In 2019, First National Protocol was also launched on Snow Leopard Population Assessment which has been very useful for monitoring populations.
- SECURE Himalaya: Global Environment Facility (GEF)-United Nations Development Programme (UNDP) funded the project on conservation of high altitude biodiversity and reducing the dependency of local communities on the natural ecosystem.
- Project Snow Leopard (PSL): It was launched in 2009 to promote an inclusive and participatory approach to conserve snow leopards and their habitat.
- Snow Leopard is on the list of 21 critically endangered species for the recovery programme of the Ministry of Environment Forest & Climate Change.
- Snow Leopard conservation breeding programme is undertaken at Padmaja Naidu Himalayan Zoological Park, Darjeeling, West Bengal.

Global Snow Leopard and Ecosystem Protection (GSLEP) Programme:

- The GSLEP is a high-level inter-governmental alliance of all the 12 snow leopard range countries.
- The snow leopard countries namely, India, Nepal, Bhutan, China, Mongolia, Russia, Pakistan, Afghanistan, Kyrgyzstan, Kazakhstan, Tajikistan, and Uzbekistan.
- It majorly focuses on the need for awareness and understanding of the value of Snow Leopard for the ecosystem.

Living Himalaya Network Initiative:

- Living Himalayas Initiative (LHI) is established as one of WWF's global initiatives to bring about transformational conservation impact across the three Eastern Himalayan countries of Bhutan, India (North-East) and Nepal.
- Objectives of LHI include adapting to climate change, connecting to habitat and saving iconic species.

3.Protest Against Blue Flag Beaches

Recently Odisha government's plan to get Blue Flag Certification for five beaches was opposed by the fishermen.Odisha planned to develop five more beaches in three districts to meet international standards after receiving the certification for Puri's Golden Beach in 2020.

Key Points

Fishermen's Demands: The proposed land for the certification is used by the fishermen to anchor their boats.They want a permanent sea mouth to anchor the fishing boats.Protection of livelihood should be ensured and protected.Reopening of a new fishing jetty.

Blue Flag Certification: Blue Flag beaches are considered the cleanest beaches of the world.The Blue Flag is one of the world's most recognised voluntary eco-labels awarded to beaches, marinas, and sustainable boating tourism operators.

Criteria for Certification: In order to qualify for the Blue Flag, a series of stringent environmental, educational, safety, and accessibility criteria must be met and maintained.There are around 33 criteria that are to be met to qualify for a Blue Flag certification,Such as the water meeting certain quality standards, having waste disposal facilities, being disabled- friendly, having first aid equipment, and no access to pets in the main areas of the beach.Some criteria are voluntary and some compulsory.

Organisations: The Blue Flag Programme for beaches and marinas is run by the international, non-governmental, non-profit organisation FEE (the Foundation for Environmental Education).FEE (the Foundation for Environmental Education) was established in France in 1985.On the lines of Blue Flag certification, India has also launched its own eco-label BEAMS (Beach Environment & Aesthetics Management Services).

BEAMS

- Beach Environment & Aesthetics Management Services that comes under ICZM (Integrated Coastal Zone Management) project.
- This was launched by the Society of Integrated Coastal Management (SICOM) and the Union Ministry of Environment, Forest and Climate Change (MoEFCC).
- The objectives of BEAMS program is to:Abate pollution in coastal waters,Promote sustainable development of beach facilities,Protect & conserve coastal ecosystems & natural resources,Strive and maintain high standards of cleanliness,Hygiene & safety for beachgoers in accordance with coastal environment & regulations.

There are eight beaches in India which have received Blue Flag Certification:

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- Shivrajpur in Gujarat,Ghoghla in Daman & Diu,Kasarkod in Karnataka and,Padubidri beach in Karnataka,Kappad in Kerala,Rushikonda in Andhra Pradesh,Golden beach of Odisha,Radhanagar beach in Andaman and Nicobar.

4.Leaders' Summit on Climate

Recently, the Leaders' Summit on Climate was convened by the US President virtually.This summit is seen as a key milestone on the road to the United Nations Climate Change Conference, Conference of the Parties 26 (COP 26) in November 2021 in Glasgow, Scotland.

Key Points

India-US Clean Energy Agenda 2030 Partnership:

About:

- It is a joint climate and clean energy initiative of India with the US.
- It will demonstrate how the world can align swift climate action with inclusive and resilient economic development, taking into account national circumstances and sustainable development priorities.
- **Objective**:Mobilise investments, demonstrate clean technologies and enable green collaborations in India that could also create templates of sustainable development for other developing countries.
- **Two Main Tracks of the Initiative:**The Strategic Clean Energy Partnership.The Climate Action and Finance Mobilization Dialogue.

USA' Stand:

- **Pledged:**To cut the US's GreenHouse Gas (GHG) in half by the year 2030 and called upon other nations to "set higher climate ambitions" that will create jobs at home, advance innovative technologies and help countries vulnerable to the impact of climate change.To double its public climate financing to developing countries and triple public financing for climate adaptation in developing countries by 2024.
- **NDC:**It submitted a new Nationally Determined Contribution (NDC) target that aims to reduce its GHG emissions by 50-52% below 2005 levels.The US has rejoined the Paris Agreement.
- **Applauded:**India for stepping up its climate change commitment including the partnership with the US to deploy 450 gigawatts of renewable power to meet the ambitious 2030 target for climate action and clean energy.

China's Stand:

- Carbon Neutrality:Its carbon emissions will peak before 2030 and the country will achieve carbon neutrality by 2060.Promoted its green Belt and Road Initiative and announced efforts to "strictly control coal-fired power generation projects" and phase down coal consumption.
- **Common but Differentiated Responsibilities:**It also emphasised on the principle of common but differentiated responsibilities, which argues for long-time polluters such as developed countries to do more to fight the climate crisis.

India's Stand :

- **Emissions**:India was already doing its part and that the country's per capita carbon emissions are 60% lower than the global average.
- **Commitment:**India's ambitious renewable energy target of 450 GW by 2030.
- Despite its development challenges, India has taken many bold steps on clean energy, energy efficiency, afforestation and biodiversity. India is among few countries whose NDCs are 2°C compatible.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- **Emphasis:**Emphasised its encouragement of global initiatives such as the International Solar Alliance and the Coalition for Disaster Resilience Infrastructure.

Some Indian Initiatives to Fight Climate Change:

- National Clean Air Programme (NCAP)
- Bharat Stage-VI (BS-VI) emission norms
- UJALA scheme
- National Action Plan on Climate Change (NAPCC)

Way Forward

- There is an urgent need for every country, city, business and financial institution to adopt concrete plans for transitioning to net-zero.
- Even more urgent is for governments to match this long-term ambition with concrete actions now, as trillions of dollars are mobilised to overcome the Covid-19 pandemic. Revitalising economies is our chance to re-engineer our future.
- The G7 Summit in June 2021 offers the opportunity for the world's wealthiest countries to step up and provide the necessary financial commitments that will ensure the success of COP26.

5.Climate Change: Impact on Children

A recent analysis, based on Notre Dame Global Adaptation Initiative (ND-GAIN) index, has shown the impact of climate change on children across the world.The analysis was done by Save the Children International, a child rights non-profit organisation.

Key Points

From the Analysis:

Countries with Highest Climate Risk:

- Sub-Saharan Africa has 35 of the 45 countries globally at highest climate risk.
- Climate risk can be defined as a combination of hazard exposure, sensitivity to impact, and adaptive capacity.
- Chad, Somalia, Central African Republic, Eritrea and Democratic Republic of the Congo are the least capable of adapting to the impact of climate change.
- Around 490 million children under the age of 18 in 35 African countries are at the highest risk of suffering the impact of climate change.

Situation in South Asian Region:

- Of the 750 million children in 45 countries likely to be most affected by climate risk, 210 million are in three South Asian nations — Pakistan, Bangladesh and Afghanistan.

Impact of Climate Change on Children:

- Floods, droughts, hurricanes and other extreme weather events will have a deep impact on vulnerable children and their families.
- Malaria and dengue fever already plague children in the Democratic Republic of Congo.
- Increasing extreme weather events can lead to new health risks while the health system is already limited.
- Around 9.8 million people were displaced due to the disasters caused by climate change during the first half of 2020.
- Most of them were in South and South-East Asia and the Horn of Africa, confirmed the World Meteorological Organisation in its flagship State of the Global Climate report.
- Children will be impacted by food shortages, diseases and other health threats, water scarcity, or be at risk from rising water levels – or a combination of these factors.
- There is enough evidence that establishes the impact of "climate crisis on food production". Hence, this will lead to local food scarcity and price hikes.
- Climate change can disrupt food availability, reduce access to food, and affect food quality.
- Children of the poorest households will be the most-affected. In fact, there has been scientific evidence of the link between obesity, under-nutrition and climate change.

India's Scenario:

- Disadvantaged and vulnerable populations (including children), indigenous people and local communities dependent on agricultural or coastal livelihoods are at a disproportionately higher risk of adverse consequences due to climate change.
- Children bear the brunt of climate change as it affects their fundamental rights of survival, protection, development and participation.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- Other potential effects of climate change on children are orphanhood, trafficking, child labour, loss of education and development opportunities, separation from family, homelessness, begging, trauma, emotional disruption, illnesses, etc.

India's Performance in Other Related Indices:

- **Climate Change Performance Index:**India ranked 10th in CCPI 2021, released by Germanwatch, the New Climate Institute and the Climate Action Network.
- **World Risk Index 2020:** India has ranked 89th among 181 countries on the WRI 2020 and is fourth-most-at-risk in South Asia, after Bangladesh, Afghanistan and Pakistan.It is released by the United Nations University Institute for Environment and Human Security (UNU-EHS), Bündnis Entwicklung Hilft and the University of Stuttgart in Germany.
- **Assessment of Climate Change over the Indian Region: MoES:**It is India's first-ever national forecast on the impact of global warming on the subcontinent in the coming century, published by the Ministry of Earth Sciences (MoES).
- **National Climate Vulnerability Assessment Report:** Released by the Department of Science and Technology, it identified Jharkhand, Mizoram, Orissa, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal as states highly vulnerable to climate change.

Some of the Indian Initiatives to Fight Climate Change: Shift from Bharat Stage-IV (BS-IV) to BharatStage-VI (BS-VI) emission norms,National Clean Air Programme (NCAP),UJALA scheme,National Action Plan on Climate Change (NAPCC), etc.

IMPORTANT FACTS FOR PRELIM

1.Atal Innovation Mission

Recently, the Atal Innovation Mission (AIM), NITI Aayog launched AIM-PRIME (Program for Researchers on Innovations, Market-Readiness & Entrepreneurship).

Atal Innovation Mission

- About:AIM is Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country.
- Objective:To develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee the innovation ecosystem of the country.
- Major Achievement:AIM's initiatives have played an important contributory role in the advancement of India from a position of 81 in the Global Innovation Index in 2015 to a position of 48 in 2020.

Key Points

- **Aim:**Promoting science based, deep technology ideas to market through training and guidance over a period of 12 months.Deep technology is based on tangible engineering innovation or scientific advances and discoveries. Deep Tech is often set apart by its profound enabling power, the differentiation it can create, and its potential to catalyse change.
- **Focus Area:**Science-based, knowledge-intensive, deep technology entrepreneurship.
- **Launching & Implementing Agency:**AIM has collaborated with Bill & Melinda Gates Foundation (BMGF) to launch this nationwide programme which will be implemented by Venture Centre - a non-profit technology business incubator hosted by Council Of Scientific And Industrial Research–National Chemical Laboratory (CSIR-NCL).
- **Beneficiaries:**Technology developers (early-stage deep tech start-ups, and scientists/ engineers/clinicians) with strong science-based deep tech business ideas.Chief Executive Officers and Senior incubation managers of AIM Funded Atal Incubation Centers that are supporting deep tech entrepreneurs.
- **Significance:**Candidates selected for the programme will get access to in-depth learning via a comprehensive lecture series, live team projects, exercises, and project-specific mentoring.They will also have access to a deep tech start-up playbook, curated video library, and plenty of peer-to-peer learning opportunities.

2.National Panchayati Raj Day

India commemorates the 12th National Panchayati Raj day on 24th April 2021.The Prime Minister has launched the distribution of e-property cards under the SWAMITVA scheme on the Day.

Key Points

About:

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- **Background:** The first National Panchayati Raj Day was celebrated in 2010. Since then, the National Panchayati Raj Day is celebrated on 24th April every year in India.
- **Awards Presented on the Day:**The Ministry of Panchayati Raj has been awarding the best performing Panchayats/States/UTs across the country in recognition of their good work.Awards are given under various categories namely-Deen Dayal Upadhyay Panchayat Sashaktikaran Puraskar,Nanaji DeshmukhRashtriya Gaurav Gram Sabha Puraskar,Child-friendly Gram Panchayat Award,Gram Panchayat Development Plan Award ande-Panchayat Puraskar (given to States/UTs only).
- For the first time, the Prime Minister will transfer the award money (as Grants-in-Aid) directly **to the bank account of the Panchayats concerned in real time.**

Panchayati Raj:

- After the Constitution came into force, Article 40 made a mention of panchayats and Article 246 empowered the state legislature to legislate with respect to any subject relating to local self-government.
- Panchayati Raj Institution (PRI) was constitutionalized through the 73rd Constitutional Amendment Act, 1992 to build democracy at the grass roots level and was entrusted with the task of rural development in the country.

PRI is a system of rural local self-government in India:

- Local Self Government is the management of local affairs by such local bodies who have been elected by the local people.
- To strengthen e-Governance in Panchayati Raj Institutions (PRIs) across the country, Ministry of Panchayati Raj (MoPR) has launched eGramSwaraj, a user friendly web-based portal.
- It unifies the planning, accounting and monitoring functions of Gram Panchayats. It's combination with the Area Profiler application, Local Government Directory (LGD) and the Public Financial Management System (PFMS) renders easier reporting and tracking of Gram Panchayat's activities.

Salient Features of the 73rd Constitutional Amendment:

- The 73rd Constitutional Amendment added Part IX titled "The Panchayats" to the Constitution.
- Basic unit of democratic system-Gram Sabhas (villages) comprising all the adult members registered as voters.
- Three-tier system of panchayats at village, intermediate block/taluk/mandal and district levels except in States with population is below 20 lakhs (Article 243B).
- Seats at all levels to be filled by direct elections (Article 243C (2)).
- **Reservation of Seats:**Seats reserved for Scheduled Castes (SCs) and Scheduled Tribes (STs) and the chairpersons of the Panchayats at all levels also shall be reserved for SCs and STs in proportion to their population.One-third of the total number of seats to be reserved for women.One-third offices of chairpersons at all levels reserved for women (Article 243D).
- **Duration:**Uniform five year term and elections to constitute new bodies to be completed before the expiry of the term.In the event of dissolution, elections compulsorily within six months (Article 243E).Independent Election Commission in each State for superintendence, direction and control of the electoral rolls (Article 243K).
- **Power of Panchayats:** Panchayats have been authorised to prepare plans for economic development and social justice in respect of subjects illustrated in Eleventh Schedule (Article 243G).
- **Source of Revenue (Article 243H):** State legislature may authorise the Panchayats with Budgetary allocation from State Revenue.Share of revenue of certain taxes.Collection and retention of the revenue it raises.Establish a Finance Commission in each State to determine the principles on the basis of which adequate financial resources would be ensured for panchayats and municipalities (Article 243I).
- **Exemptions:**The Act does not apply to the states of Nagaland, Meghalaya and Mizoram and certain other areas because of socio-cultural and administrative considerations. These areas include:the Scheduled areas and the tribal areas (under Schedule VI of the Constitution) in the states.The hill areas of Manipur for which district councils exist,Darjeeling district of West Bengal for which Darjeeling Gorkha Hill Council exists.However, the Parliament has extended the provisions of Part IX to Vth schedule areas through an Act called the Provisions of Panchayats (Extension to the Scheduled Areas) Act, 1996.At present, 10 States namely Andhra

Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana have Fifth Schedule Area.

3.World Malaria Day

The report, titled 'Zeroing in on malaria elimination', was released by the World Health Organization (WHO) ahead of World Malaria Day 2021.World Malaria Day is observed on 25th April every year. The 2021 theme is "Reaching the Zero Malaria target".The WHO has also identified 25 countries with the potential to eradicate malaria by 2025 under its 'E-2025 Initiative'.

Key Points

Malaria:

- **About:**Malaria is a life threatening mosquito borne blood disease caused by plasmodium parasites. It is predominantly found in the tropical and subtropical areas of Africa, South America as well as Asia.The parasites spread through the bites of infected female Anopheles mosquitoes.After entering the human body, parasites initially multiply within the liver cells and then attack the Red Blood Cells (RBCs) resulting in their rupture.There are 5 parasite species that cause malaria in humans, and 2 of these species – Plasmodium falciparum and Plasmodium vivax – pose the greatest threat.Symptoms of malaria include fever and flu-like illness, including shaking chills, headache, muscle aches, and tiredness.It is preventable as well as curable.
- **Malaria Vaccine:**Known by its lab initials as RTS,S but branded as Mosquirix, the vaccine has passed lengthy scientific trials that found it to be safe and reducing the risk of malaria by nearly 40%, the best ever recorded.It was developed by GlaxoSmithKline (GSK) company and approved by the European Medicines Agency in 2015.The RTS,S vaccine trains the immune system to attack the malaria parasite (Plasmodium (P.) falciparum, the most deadly species of the malaria parasite).

E-2025 Initiative:

- In 2017, WHO launched the E-2020 initiative to support a group of countries to achieve zero indigenous cases of malaria by 2020.Some 21 countries across five regions were identified as having the potential to reach the milestone of eliminating malaria.The report 'Zeroing in on malaria elimination' brings out the progress made through the E-2020 initiative of WHO.
- Building on the successes of the E-2020, WHO has identified a new group of 25 countries that have the potential to stamp out malaria within a 5-year timeline.
- The E-2025 countries will receive technical and on-the-ground support by WHO and its partners. In return, they are expected to audit their elimination programmes annually, participate in elimination forums, conduct surveillance assessments, and share malaria case data periodically.
- The new countries were selected based on four criteria:The establishment of a government-endorsed elimination plan;Meeting the threshold of malaria case reductions in recent years;Having the capacity of malaria surveillance and a designated governmental agency responsible for malaria elimination; and Being selected by the WHO Malaria Elimination Oversight Committee.

India's Scenario:

- **Malaria Burden:** The World Malaria Report (WMR) 2020 released by WHO, which gives the estimated cases for malaria across the world, indicates that India has made considerable progress in reducing its malaria burden.India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018.
- **Initiatives Taken:**In 2017, India launched its 5-year National Strategic Plan for Malaria Elimination that shifted focus from Malaria control to elimination and provided a roadmap to end malaria in 571 districts out of India's 678 districts by 2022.Indian Council of Medical Research (ICMR) has recently established 'Malaria Elimination Research Alliance-India (MERA-India) which is a conglomeration of partners working on malaria control.

4.Rare Genetic Disorder

Recently, Odisha reported its first-ever case of a baby born with Harlequin Ichthyosis, a rare genetic skin condition.India's first recorded case of a baby born with harlequin ichthyosis was in 2016, at a private hospital in Nagpur, Maharashtra.

Key Points

About:

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- Harlequin Ichthyosis is a rare genetic skin disorder to a newborn infant.It's a type of ichthyosis, which refers to a group of disorders that cause persistently dry, scaly skin all over the body.It is inherited in an autosomal recessive pattern.

Autosomal Recessive Pattern:

- Autosomal (that means inherited) Recessive Pattern is a way, where a genetic trait or condition can be passed down from parent to child.A genetic condition can occur when the child inherits one copy of a mutated (changed) gene from each parent.If an individual receives one normal gene and one abnormal gene for the disease, the person will be a carrier for the disease.The risk to have a child who is a carrier, like the parents, is 50% with each pregnancy. The chance for a child to receive normal genes from both parents is 25%. The risk is the same for males and females.

Causes:

- It can be caused by changes (mutations) in the ABCA12 gene.
- ABCA12 Gene gives instructions for making a protein that is necessary for skin cells to develop normally.
- It plays a key role in the transport of fats (lipids) to the most superficial layer of the skin (epidermis), creating an effective skin barrier.
- When this gene is mutated, the skin barrier is disrupted.

Impact:

- Newborn infants are covered with plates of thick skin that crack and split apart and can restrict breathing and eating.
- Premature birth is typical, leaving the infants at risk for complications from early delivery.

Affected Population:

- It affects males and females in equal numbers.
- It affects approximately one in 5,00,000 persons.
- There are around 250 such cases across the world.

Treatment:

- A newborn with Harlequin ichthyosis requires neonatal intensive care, which may include spending time in a heated incubator with high humidity.

Related Disorder:

- Lamellar ichthyosis is an inherited skin disorder characterized by broad, dark, plate-like scales separated by deep cracks.Its symptoms are similar to Harlequin Ichthyosis.

DAILY ANSWER WRITING PRACTICE

Qns How will the melting of Himalayan glaciers have a far- reaching impact on the water resources of India? (UPSC GS-1 Mains 2020)

Ans:

Introduction

The Himalayas is referred to as the Third Pole. Being the major source of water for the rivers, these glaciers are the lifeline for one-third of the population across the globe.However, the rapid melting of Himalayan glaciers has put enormous pressure on the weather resource of India.

Body

Effect of Melting Himalayan Glaciers:

Frequent Flooding & Droughts:

- Himalayan glaciers provide for a vital regional lifeline to over two billion people through 10 main rivers that originate from the glaciers.
- Given that there are 8,790 glacial lakes in the region, rapid melting of glaciers could lead to floods from glacial lake outbursts. For example in Uttrakhand flash floods in 2013 and 2021.
- Glacial melt could result in more streamflow due to high glacial melt but for a short time, after which the flow would start reducing and result in conditions of droughts.

Impacting Moonsoon:

- The Himalayas exerts a significant influence on seasonal shifts in the monsoon circulation and the distribution of rainfall over India.
- The south-west monsoon accounts for 70% of the annual rainfall in India.
- According to IPCC projections, the melting of glaciers could indicate a likely increase in summer rainfall by 4-12% in the near term and 4-25% in the long term.

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com

- Changing monsoon patterns, including increased severity and frequency of storms, could lead to mountain hazards that may destroy critical infrastructure.

Destabilize Flow of Indian Rivers:

- Increasing glacial melts could destabilize Indian rivers by changing their streamflow.
- The Indian rivers like Ganga and the Brahmaputra are partly fed by glacier melt and partly mainly monsoon-fed rivers
- With the impact on monsoon, this will hamper agriculture that accounts for the largest share of water usage.

Conclusion

According to a recent IPCC report the Himalayan glaciers are melting and receding at an alarming rate and if adequate steps are not taken to limit global warming, two-thirds of glaciers in the Hindu Kush Himalayas could melt by 2100.

DAILY QUIZ

Q.1 Consider the following statements regarding Ocean Energy.

1. Various forms of ocean energy include tidal, wave and ocean thermal energy.
2. Ocean Energy is considered as renewable energy and is eligible for meeting the non-solar Renewable Purchase Obligations (RPO).
3. In India, Ocean Energy capacity is installed in Khambat & Kutch regions.

Which of the above statements is/are correct?

a) 1,2
b) 2 only
c) 2,3
d) 1,2,3

Q.2 Consider the following statements regarding 'Group – 4' (G4) nations.

1. G4 nations are group of four countries which support each other's bids for permanent seats on the United Nations Security Council.
2. G4 nations includes Brazil, India, Australia and Japan.

Which of the above statements is/are correct?

a) 2 only
b) **1 only**
c) Both 1 and 2
d) Neither 1 nor 2

Q.3 Consider the following statements regarding RESPOND programme:

1. It is a program by DRDO.
2. To establish strong links with premiere academic institutions in India is one of the objectives of the programme.

Which of the above is/are correct?

a) 2 only
b) 1 only
c) Both 1 and 2
d) Neither 1 nor 2

4. Litigants approach Lok Adalats mainly because it is a party-driven process, allowing them to reach an amicable settlement. Which of the following are the attributes of Lok Adalats?

1. Speed of settlement of cases
2. Procedural flexibility
3. Economic affordability
4. Finality of awards

Select the correct answer code:

a) 2,3
b) 1,2
c) 1,2,3
d) 1,2,3,4

5. Headquarter of Boao Forum is situated in?

a) China b) Bangladesh c) Afganisthan d) India

Plot-1441, Opp. IOCL Petrol Pump, CRP Square, Bhubaneswar-751015
Ph.: 8984111101, 8093083555. Web: www.vanikias.com, E-mail: vaniksias@gmail.com