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Climate Smart Cities Assessment Framework (CSCAF) 2.0

- Union Minister for Housing and Urban Affairs has launched the Climate Smart Cities Assessment Framework (CSCAF) 2.0, along with the 'Streets for People Challenge'.
- The objective of CSCAF is to provide a clear roadmap for cities towards combating Climate Change while planning and implementing their actions, including investments.
- CSCAF initiative intends to inculcate a climate-sensitive approach to urban planning and development in India.
- The framework has 28 indicators across five categories namely

i. Energy and Green Buildings,
ii. Urban Planning,
iii. Green Cover & Biodiversity,
iv. Mobility and Air Quality,
v. Water Management and Waste Management.

- The Climate Centre for Cities under National Institute of Urban Affairs (NIUA) is supporting MoHUA in implementation of CSCAF.

Streets for People Challenge

- The Streets for People Challenge is the response to the need for making the cities more walkable and pedestrian friendly.
- The Challenge builds on the advisory issued by the Ministry for the holistic planning for pedestrian-friendly market spaces, earlier this year.
- The Challenge will support cities across the country to develop a unified vision of streets for people in consultation with stakeholders and citizens.
- Fit India Mission, under Ministry of Youth Affairs and Sports, along with the India program of the Institute for Transport Development and Policy (ITDP) have partnered with the Smart Cities Mission to support the challenge.

SAROD-PORTS

- Union Shipping Ministry has launched 'SAROD-Ports' (Society for

Affordable Redressal of Disputes - Ports) through virtual ceremony.

- SAROD-Ports is established under Societies Registration Act, 1860 with the following objectives:

1. Affordable and timely resolution of disputes in fair manner
2. Enrichment of Dispute Resolution Mechanism with the panel of technical experts as arbitrators.

- SAROD-Ports consists members from Indian Ports Association (IPA) and Indian Private Ports and Terminals Association (IPTTA).
- SAROD-Ports will advise and assist in settlement of disputes through arbitrations in the maritime sector, including ports and shipping sector in Major Port Trusts, Non-major Ports, including private ports, jetties, terminals and harbors.
- 'SAROD-Ports' is similar to provision available in Highway Sector in the form of SAROD-Roads constituted by NHAI.
- **Dispute Resolution Mechanism -** In January, 2018, the Union Cabinet approved amendments in the Model Concession Agreement (MCA) which envisaged constitution of SAROD-PORTS as dispute resolution mechanism for PPP Projects in the Major Ports.

Living Planet Report 2020

- WWF's has released the Living Planet Report 2020.
- The report has found that there has been a reduction of 68 % in the global wildlife population between 1970 and 2016.
- 75 % of the Earth's ice-free land surface has already been significantly altered, most of the oceans are polluted, and more than 85% of the area of wetlands has been lost during this period.
- The highlights of the report are as follows

1. The most important direct driver of biodiversity loss in the last several decades has been land-use change, primarily the conversion of pristine habitats into agricultural systems, while much of the oceans have been overfished.
2. The highest biodiversity loss due to land use change globally has been found in Europe and Central Asia at 57.9 %, then in North America at 52.5 %, Latin America and Caribbean at 51.2 %, Africa at 45.9 % and then Asia at 43 %.
3. The largest wildlife population loss, according to the Living Planet Index, has been in Latin America at an alarming 94 %
4. One of the most threatened biodiversity globally has been freshwater

biodiversity, which has been declining faster than that in oceans or forests.

5. Almost 90 % of global wetlands have been lost since 1700 and global mapping has recently revealed the extent to which humans have altered millions of kilometers of rivers.
6. India, a “megadiverse country” with over 45,000 species of plants in only 2.4 % of the world’s land area, has already lost six plant species to extinction, according to the IUCN Red List.

Net Present Value (NPV)

- Net Present Value (NPV) is a mandatory one-time payment that a user has to make for diverting forestland for non-forest use, under the Forest (Conservation) Act, 1980.
- It is calculated on the basis of the services and ecological value of the forests.
- It depends on the location and nature of the forest and the type of industrial enterprise that will replace a particular parcel of forest.
- These payments go to the Compensatory Afforestation Fund (CAF) and are used for afforestation and reforestation.
- The CAF is managed by the Compensatory Afforestation Management and Planning Authority (CAMPA).
- The Forest Advisory Committee (statutory body) constituted by the Ministry of Environment, Forest and Climate Change (MoEF&CC) decides on whether forests can be diverted for projects and the NPV to be charged.
- Some projects have been provided exemption from paying NPV like

i. Construction of Schools,
ii. Hospitals,
iii. Village tanks,
iv. Laying down of optical fiber etc.

- Projects like underground mining and wind energy plants have been given a 50% exemption from NPV.
- Recently Ministry of Mines has requested the Forest Advisory Committee to exempt digging exploratory boreholes from Net Present Value (NPV).

Exploratory Boreholes

- An exploratory borehole is drilled for the purpose of identifying the characteristics, location, quantity and quality of a resource (coal, metal or

petroleum).
- It is a part of prospecting a site for future use for mining and extraction activities.

Bradykinin Storm

- A recent analysis of samples of patients with the Covid-19 infection has shown a phenomenon called a 'bradykinin storm'.
- SARS-CoV-2 uses a human enzyme called ACE2 to enter into the cells of its host.
- ACE2 lowers blood pressure in the human body and works against another enzyme known as ACE (which has the opposite effect).
- The virus causes the levels of ACE to fall in the lungs, and consequently pushes up the levels of ACE2.
- This happens as a chain reaction and increases the levels of the molecule bradykinin in the cells, causing a bradykinin storm.
- Bradykinin is a compound that is related to pain sensation and lowering blood pressure in the human body.
- Bradykinin storm causes the blood vessels to expand and become leaky, leading to swelling of the surrounding tissue.
- The levels of a substance called hyaluronic acid also increases.
- The bradykinin storm-induced leakage of fluid into the lungs combined with the excess hyaluronic acid would likely result in a Jello-like substance that prevents oxygen uptake and carbon dioxide in the lungs of severely affected Covid-19 patients.
- This rapid accumulation of fluid in the lungs of patients sometimes makes even the most sophisticated intensive care, including ventilators, futile.
- Knowing the mechanism, doctors can target the bradykinin pathway to evolve more therapeutic interventions to offset the severe effects of Covid-19.

Also Read - Cytokine Storm Syndrome

Hyaluronic acid

- Hyaluronic acid is a sugar molecule that occurs naturally in the skin, and it helps to bind water to collagen (a protein).
- It can absorb more than 1,000 times its own weight in water to form a hydrogel.

Ancient Universities of India

- **University at Takshashila or Taxila –** It is Built around 5th century BC, located in modern-day Pakistan.
- Both Buddhist and Hindu theologies were taught in the institution.
- Noted personalities from Takshashila include

i. Chanakya,
ii. Charaka,
iii. Panini,
iv. Jivaka,
v. Prasenajit, etc.

- **Nalanda University -** It is Established in modern day Bihar, in 5th Century CE, during the reign of Kumaragupta.
- It was visited by Chinese pilgrim Hiuen Tsang and also by scholar l-Tsing.
- Famous scholars of the university include

i. Nagarjuna (Madhyamika Shunyavad)
ii. Aryabhatta.

- **Vikramshlla University** - It is founded by King Dharampala of Pala dynasty (Bhagalpur district of Bihar).
- It was primarily a Buddhist learning center, it was affiliated with Vajrayana sect and Tantric teachings.
- **Vallabhi University -** It was established by Maitrak King, Bhattarka in Saurashtra, Gujarat.
- This existed between 600A.D and 1200A.D and was an important place to learn the Hinayana Buddhism.

Source: PIB, the Hindu, Indian Express

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