

UPSC CURRENT AFFAIRS NOTES 05-03-2024

ADITI scheme

Recently, the Union Minister of Defence launched the ADITI scheme during DefConnect 2024 in New Delhi.



About ADITI Scheme

Acing Development of Innovative Technologies with iDEX (ADITI) is a scheme to promote innovations in critical and strategic defence technologies.

Aim: It aims to develop about 30 deep-tech critical and strategic technologies in the proposed timeframe.

Eligibility: Under this scheme start-ups are eligible to receive grant-in-aid of up to Rs 25 crore for their research, development, and innovation endeavours in defence technology.

Time period: This scheme worth Rs 750 crore for the period 2023-24 to 2025-26.

It falls under the iDEX (Innovations for Defence Excellence) framework of the Department of Defence Production, Ministry of Defence.

It also envisages to create a 'Technology Watch Tool' to bridge the gap between the expectations and requirements of the modern Armed Forces and the capabilities of the defence innovation ecosystem.

In the first edition of ADITI, 17 challenges – Indian Army (3), Indian Navy (5), Indian Air Force (5) and Defence Space Agency (4) - have been launched.

To motivate young innovators, iDEX was expanded to iDEX Prime, with the assistance increasing from Rs 1.5 crore to Rs 10 crore.

The idea behind the schemes/initiatives such as ADITI, iDEX, iDEX Prime is to also transform India into a knowledge society.

The scheme will nurture the innovation of youth, and help the country leap forward in the field of technology.

Risa Textile

Tripura's traditional tribal attire 'risa' received the Geographical Indication (GI) tag recently.



About Risa Textile

It is a handwoven cloth used as a female upper garment, and also as headgear, a stole, or a present to express respect.

It is woven in colourful designs and has a crucial social and religious significance.

Adolescent Tripuri girls are first given a risa to wear in an event called Risa Sormani, at age 12 to 14.

Religious relevance: The risa is used in religious festivals such as Garia Puja by tribal communities, a turban by men during weddings and festivals, a cummerbund over the dhoti, a head scarf by young girls and boys, and a muffler during winters.

The cloth is also used as a makeshift hanger to hold an infant on mothers' backs.

It is presented as a mark of honour to distinguished recipients.

Risa is common in almost all 19 indigenous tribal communities of Tripura.

The traditional Tripuri female attire consists of three parts — risa, rignai and rikutu.

Risa is a handwoven cloth used as a female upper garment.

Rignai is primarily worn as the lower garment and literally means 'to wear'.

Rituku is mainly used as a wrap, or like a 'chunri' or a 'pallu' of the Indian saree. It is also used to cover the heads of newly married Tripuri women.

The complete Tripuri attire is claimed to have originated even before the time of the Manikya kings, who ruled Tripura for over 500 years starting from the 15th century.

GLOBAL RESOURCES OUTLOOK 2024





The United Nations Environment Programme (UNEP) and the International Resource Panel (IRP) released a new report titled "Global Resources Outlook 2024 - **Bend the Trend: Pathways to a Liveable Planet as Resource Use Spikes.**"

The Global Resources Outlook 2024, released during the Sixth United Nations Environmental Assembly (UNEA-6), sheds light on the alarming trends in the extraction and use of the world's resources.

Global Resources Outlook 2024: Key Highlights

Rapid Growth in Resource Consumption

Global consumption of resources has tripled in the past 50 years.

Average annual growth rate exceeds 2.3%, making resource use a major driver of environmental issues.

Driving Factors and Environmental Impact

Upper-income countries consume the most resources.

Resource extraction and processing contribute to over 55% of greenhouse gas emissions and 40% of air pollution in these countries.

Agriculture and forestry activities further contribute to environmental degradation.

United Nations Environment Programme

- The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.
- **UNEP is headquartered in Nairobi, Kenya.** It operates through various regional offices and collaborating centres worldwide.
- UNEP's primary functions include assessing
- Global and regional environmental trends, providing policy advice, promoting international cooperation on environmental issues, and coordinating environmental activities across the UN system.

Establishment and Mandate: UNEP was established in 1972 by the United Nations General Assembly in response to the Stockholm Conference on the Human Environment. Its mandate is to provide leadership and encourage



partnerships in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

UNEP works on a variety of environmental issues categorized under six main areas

Climate Change: UNEP helps countries strengthen their ability to respond to climate change through leadership in adaptation, mitigation strategies, technological advancements, and financing.

Ecosystems Management: UNEP works on facilitating the management and restoration of ecosystems while promoting the use of services they provide in a sustainable way.

Post-Conflict and Disaster Management: UNEP plays a role in assessing environmental damage in areas affected by crises and guides the setting up better environmental management practices during reconstruction.

Chemicals and Waste Management: UNEP addresses challenges related to chemicals and waste disposal by promoting sound management practices.

Environmental Governance: UNEP works on strengthening environmental laws and institutions around the world.

Resource Efficiency: UNEP works on promoting resource efficiency and a move towards a more circular economy.

The Global Resources Outlook 2024 report underscores the urgent need for transformative action to address the crisis of excess resource consumption. It advocates for sustainable resource use paths, innovative business models, supportive regulations, and multilateral cooperation to achieve global sustainability goals.

NARSAPUR CROCHET LACE



The Narasapur crochet lace craft, renowned in the Godavari region of Andhra Pradesh, has been granted the Geographical Indications (GI) tag by the Department of Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry.

Details

This recognition aims to revitalize the dwindling craft and provide a boost to its demand, particularly in the face of competition from machine-made lace products from China.

Geographic Scope

The GI tag specifies that the Narasapur crochet lace craft is geographically limited to 19 mandals in West Godavari and Dr. B.R. Ambedkar Konaseema districts in the Godavari region.

Major trade points for lace products include Narsapur, Palacole, Razole and Amalapuram, where approximately 15,000 women are directly involved in producing garments, home furnishings, and accessories.

Collaborative Efforts

The West Godavari District Alankriti Lace Manufacturing Mahila Mutual Aided Co-operative Societies' Federation Limited, along with other associations like the All India Crochet Lace Exporters Association and Andhra Pradesh Handicrafts Development Corporation Limited, collectively applied for the GI tag.

These organizations aim to leverage the GI tag to revive the craft and stimulate foreign trade, particularly amid challenges posed by the COVID-19 pandemic and competition from machine-made lace products.



Despite the rich tradition of the Narasapur crochet lace craft, the market has faced significant challenges, including a lack of new orders and competition from China's machine-made lace products.

The COVID-19 pandemic exacerbated these challenges, leading to a decline in regular production and the paralysis of the craft market in the region.

Historical Context

The origin of the craft dates back to 1844 when Macrae and his wife from Scotland taught the lace-making technique to local women associated with a Christian missionary at Dummugudem, present-day Telangana.

Despite facing adversities such as the Indian famine in 1899 and the Great Depression in 1929, the craft survived and thrived, with over 2,000 women involved in the early 1900s.

GI Tags in Andhra Pradesh

Srikalahasthi Kalamkari

Kondapalli Bommallu

Machilipatnam Kalamkari

Budithi Bell & Brass Metal Craft

Andhra Pradesh Leather Puppetry

Uppada Jamdani Sarees

Tirupathi Laddu

Guntur Sannam Chilli

Venkatagiri Sarees

Bobbili Veena

Mangalagiri Sarees and Fabrics

Dharmavaram Handloom

Pattu Sarres And Paavadas

Bandar Laddu

Udayagiri Wooden Cutlery

Durgi Stone Carvings

Etikoppaka Toys

Allagadda Stone Carving

Atreyapuram Pootharekulu

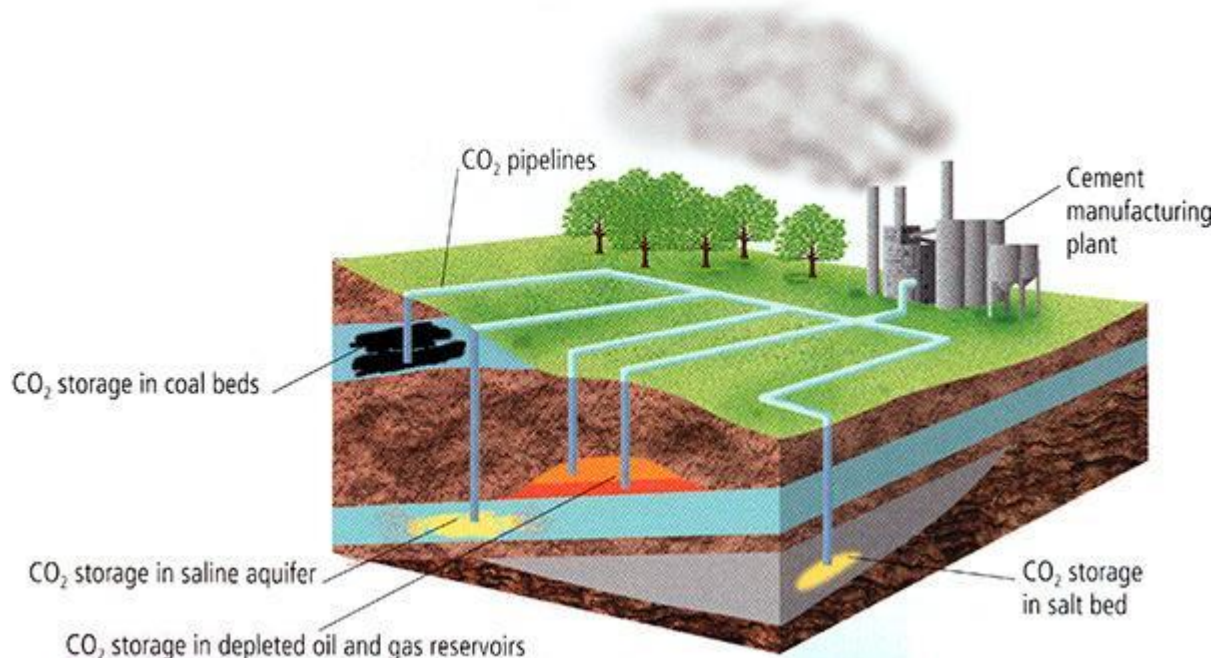
Araku Valley Arabica Coffee

Banaganapalle Mangoes

Carbon Capture and Storage (CCS)

Germany recently announced that it would allow carbon capture and off-shore storage for certain industrial sectors.

CARBON CAPTURE AND STORAGE (CCS)



About is Carbon Capture and Storage (CCS)

CCS refers to a host of different technologies that capture CO2 emissions from large point sources like refineries or power plants and trap them beneath the Earth.

Notably, CCS is different from carbon dioxide removal (CDR), where CO2 is removed from the atmosphere.

It's a three-step process, involving: capturing the carbon dioxide produced by power generation or industrial activity, such as steel or cement making; transporting it; and then storing it deep underground.

CCS involves three different techniques of capturing carbon, including post-combustion, pre-combustion, and oxyfuel combustion.

In post-combustion, CO₂ is removed after the fossil fuel has been burnt. By using a chemical solvent, CO₂ is separated from the exhaust or 'flue' gases and then captured.

Pre-combustion involves removing CO₂ before burning the fossil fuel. "First, the fossil fuel is partially burned in a 'gasifier' to form synthetic gas. CO₂ can be captured from this relatively pure exhaust stream. The method also generates hydrogen, which is separated and can be used as fuel.

In oxyfuel combustion, the fossil fuel is burnt with almost pure oxygen, which produces CO₂ and water vapour. The water is condensed through cooling, and CO₂ is separated and captured.

Out of the three methods, oxyfuel combustion is the most efficient, but the oxygen burning process needs a lot of energy.

After capture, CO₂ is compressed into a liquid state and transported to suitable storage sites.

Possible storage sites for carbon emissions include saline aquifers or depleted oil and gas reservoirs.

There are also only a few operational CCS projects across the world, even though the technology has been pushed for decades.

According to the International Energy Agency (IEA), there were 40 operational CCS projects in 2023, which captured more than 45 metric tonnes (Mt) of CO₂ annually.

Syngas, also called a synthesis gas, is a mix of molecules containing hydrogen, methane, carbon monoxide, carbon dioxide, water vapours, as well as other hydrocarbons and condensable compounds. It is a main product of gasification and majority product of high temperature pyrolysis carried on any biomass, residues and waste. When produced in pyrolysis, it is created by the vaporisation of volatile compounds from the raw material thanks to the heat, which induces a set of complex reactions.

Women, Business and Law Index

India's ranking improved to 113 out of 190 countries in the World Bank's Women, Business and Law index.

About Women, Business and Law Index

It is a World Bank index measuring the enabling environment for women's economic opportunity in 190 economies.

The index measures how laws and regulations affect women's economic opportunity on a scale from 0 to 100, where 100 means equal legal rights for men and women.

The report covers eight related areas: Mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, and pension.

The data offer objective and measurable benchmarks for evaluating global progress toward legal gender equality.

India - Scores for Women, Business and the Law 2023



It demonstrates the progress made while emphasising the work still to be done to ensure economic empowerment for all.

Highlights of 2024 Index:

It is the 10th edition of the report.

Globally, none of the countries has a full score in the new index, indicating that women did not enjoy equal rights in any of the countries.

India's ranking improved to 113 out of 190 countries.

Indian women enjoyed 60% of the legal rights given to men as per the new report, lower than the global average of 64.2%.

The WB is an international financial institution that provides loans and grants to the governments of low and middle-income/developing countries for the purpose of pursuing capital projects. It was established along with the IMF at the 1944 Bretton Woods Conference. The WB is the collective name for the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA), two of five international organisations owned by the WB Group.

GLOBAL GREAT BACKYARD BIRD COUNT (GBBC) 2024

In the Global Great Backyard Bird Count 2024, held from February 16-19, 2024, Indian bird enthusiasts marked their 12th consecutive year of participation, securing the second-highest global submissions with over 61,000 checklists and documenting 1,036 bird species.



India submitted over 1,000 species for the Global Great Backyard Bird Count (GBBC) 2024, securing the second-highest number of submissions globally.

The United States led in the number of checklists submitted, with India coming in second.

Indian Participation

Indian birdwatchers contributed more than 61,000 checklists over the four days of the event.

The country documented 1,036 bird species on the online platform eBird during the GBBC.

This marks India's 12th consecutive year of active participation in the GBBC.

State-wise Contributions

For the first time, birders from all states and Union territories participated in the event.

Kerala recorded the highest number of checklists (14,023), followed by Tamil Nadu and Maharashtra.

West Bengal reported the highest number of species (538), followed by Uttarakhand and Assam.

Notable Species Spotted

Indian birders reported spotting some restricted-range species during the GBBC, including the Andaman Serpent-Eagle, Andaman Woodpecker, Nilgiri Laughingthrush, White-headed Starling, Nilgiri Sholakili, White-bellied Blue Flycatcher, Andaman Treepie, Forest Owlet, Bugun Liocichla, and White-bellied Sholakili.

India actively participates in the Global Great Backyard Bird Count 2024, documenting over 1,000 species, showcasing a vibrant birdwatching community, and underscoring the nation's ongoing commitment to global bird conservation efforts.

NATIONAL DOLPHIN RESEARCH CENTRE



India's first National Dolphin Research Centre (**NDRC**) has been established in **Patna, Bihar**, marking a significant milestone in the conservation efforts for the endangered Gangetic river dolphin.

Details

The National Dolphin Research Centre (NDRC) aims to facilitate comprehensive research on Gangetic dolphins, covering various aspects such as behaviour, survival skills, food habits, causes of death, and more. The centre will provide training to fishermen on conservation and protection measures for dolphins during fishing activities.

Gangetic River Dolphin

The Gangetic River dolphin (scientifically known as *Platanista gangetica*) is a freshwater dolphin species found in the Ganges and related rivers of South Asia, including India, Nepal, and Bangladesh.

It is one of four freshwater dolphin species in the world and is closely related to the Indus River dolphin, which inhabits the Indus River in Pakistan and the Beas River in northwestern India.

Freshwater dolphin species in the world			
Species	Habitat	Conservation Status	Interesting Fact
Amazon River Dolphin (Inia geoffrensis)	Amazon River basin and tributaries in South America	Data Deficient	Known for their pink colouration, especially in males.
Ganges River Dolphin (Platanista gangetica)	Ganges and Brahmaputra rivers in India, Nepal, and Bangladesh	Endangered	Nearly blind and relies on echolocation for navigation and hunting.
Indus River Dolphin (Platanista minor)	Indus River in Pakistan	Endangered	One of the most endangered dolphin species due to habitat loss and pollution.
Irrawaddy Dolphin (Orcaella brevirostris)	Mekong, Ayeyarwaddy, and Mahakam rivers in Southeast Asia	Critically Endangered	Known for their friendly and playful behaviour.

Geographical Range and Regional Names

These dolphins inhabit the **Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems** in Bangladesh and India, including the **Sapta Koshi and Karnali Rivers** in Nepal.

Known by diverse names like Susu, Hihu, Shushuk, and others, their presence holds cultural significance in the region.

Appearance and Behavior

With a rectangular dorsal fin and females larger than males, Gangetic River Dolphins exhibit colours ranging from tan to chocolate brown.

They possess an elongated snout, sharp teeth, and a distinctive melon head for echolocation. Typically swimming alone or in pairs, they breach rarely and maintain a shy demeanor around boats

Vocalization and Echolocation

The Gangetic Dolphin showcases remarkable echolocation capabilities, navigating the murky river waters effectively. Echolocation sounds, including clicks, bursts, and twitters, help them identify prey. While they can perform whistles, it is rare, suggesting these sounds are more spontaneous than communicative.

Reproduction and Diet

Mating occurs without a specific season, with calves staying close to their mothers for a year.

The Gangetic River Dolphin, relying on echolocation, feeds on crustaceans, various fish, birds, and even sharks like the Ganges shark.

Threats and Conservation

Listed as an endangered species, these dolphins face multifaceted threats, including habitat fragmentation, fishing gear entanglement, pollution, and climate change.

Conservation efforts involve legal protection, designation of sanctuaries, and initiatives like 'Project Dolphin' to bolster their survival.





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The establishment of India's first National Dolphin Research Centre represents a significant step forward in the conservation of Gangetic river dolphins. By fostering research, training, and conservation efforts, the NDRC is poised to make a substantial impact on the protection of these endangered mammals and their fragile aquatic ecosystem.

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