

UPSC CURRENT AFFAIRS NOTES 21-04-2024

Corals

Recently, the US National Oceanic and Atmospheric Administration (NOAA) said the fourth global mass coral bleaching event has been triggered by extraordinary ocean temperatures.

About Corals



Corals are essentially animals, which are sessile, meaning they permanently attach themselves to the ocean floor.

Corals share a symbiotic relationship with single-celled algae called zooxanthellae.

The algae provide the coral with food and nutrients, which they make through photosynthesis, using the sun's light.



They use their tiny tentacle-like hands to catch food from the water and sweep into their mouth.

Each individual coral animal is known as a polyp and it lives in groups of hundreds to thousands of genetically identical polyps that form a 'colony'.

Corals are largely classified as either hard coral or soft coral. It is the hard corals that are the architects of coral reefs — complex three-dimensional structures built up over thousands of years.

Hard corals have stony skeletons made out of limestone that are produced by coral polyps. When polyps die, their skeletons are left behind and used as foundations for new polyps.

Coral reefs, also referred to as “rainforests of the sea”, have existed on the Earth for nearly 450 million years.

Significance of corals: Coral reefs have a crucial role in marine ecosystems. Thousands of marine species can be found living on one reef.

Coral Bleaching

It happens when corals experience stress in their environment due to changes in temperature, pollution or high levels of ocean acidity.

Under stressed conditions, the zooxanthellae or food-producing algae living inside coral polyps start producing reactive oxygen species, which are not beneficial to the corals.

So, the corals expel the colour-giving zooxanthellae from their polyps, which exposes their pale white exoskeleton, giving the corals a bleached appearance.

This also ends the symbiotic relationship that helps the corals to survive and grow.

Reasons for Coral Bleaching

Change in Ocean Temperature: Increased Ocean temperature caused by climate change is the leading cause of coral bleaching.

Runoff and Pollution: Storm generated precipitation can rapidly dilute ocean water and runoff can carry pollutants, which can bleach near shore corals.

Overexposure to sunlight: When temperatures are high, high solar irradiance contributes to bleaching in shallow water corals.



Extremely low tides: Exposure to the air during extremely low tides can cause bleaching in shallow corals.

It is defined as a close, prolonged association between two or more different biological species. This relationship can be symbiotic (mutualistic), where both parties involved benefit from the interaction, or it can be parasitic, where one party benefits while the other is harmed.

Bitcoin halving

The cryptocurrency community is gearing up for the upcoming Bitcoin halving event, which is likely to be held this weekend.

About Bitcoin halving

The halving refers to an alteration in the foundational blockchain technology of Bitcoin, aimed at decreasing the pace of generating new bitcoins.

Since its creation by the pseudonymous figure Satoshi Nakamoto, Bitcoin has been structured to possess a finite supply of 21 million tokens.

The process of halving will persist until 2041, by which time all Bitcoins will have been mined.

How does it happen?

Blockchain technology involves creating records of information - called 'blocks' - which are added to the chain in a process called 'mining'.

Miners use computing power to solve complex mathematical puzzles to build the blockchain and earn rewards in the form of new bitcoin.

The blockchain is designed so that a halving occurs every time 210,000 blocks are added to the chain, roughly every four years.

At the halving, the amount of bitcoin available as rewards for miners is cut in half. This makes mining less profitable and slows the production of new bitcoins.

Impact the Crypto market

Experts say that the halving event might impact Bitcoin's price as its heightened scarcity could result in upward pressure on prices and attract a wave of new investors to the cryptocurrency market.

Clouded tiger cat

Scientists in Brazil have identified a new species of tiger cat, called the clouded tiger cat (*Leopardus pardinoides*), which is small.

Details of the Tiger Cat:

Tiger cats, also known as oncillas, are small spotted cats found in Central and South America. They are adapted for tree-climbing and hunting small prey, weighing between 1.5 to 3 kilograms, much smaller than domestic house cats.

Scientific Name: *Leopardus pardinoide*.

IUCN Status: Vulnerable

Previous Classification: Until recently, tiger cats were classified into two species:

The northern tiger cat (*Leopardus tigrinus*) and

The Atlantic Forest tiger cat (*Leopardus guttulus*).



Researchers studying tiger cats in Brazil concluded that there is a third species, the clouded tiger cat, found in the cloud forests of southern Central America and the Andean mountain chains.

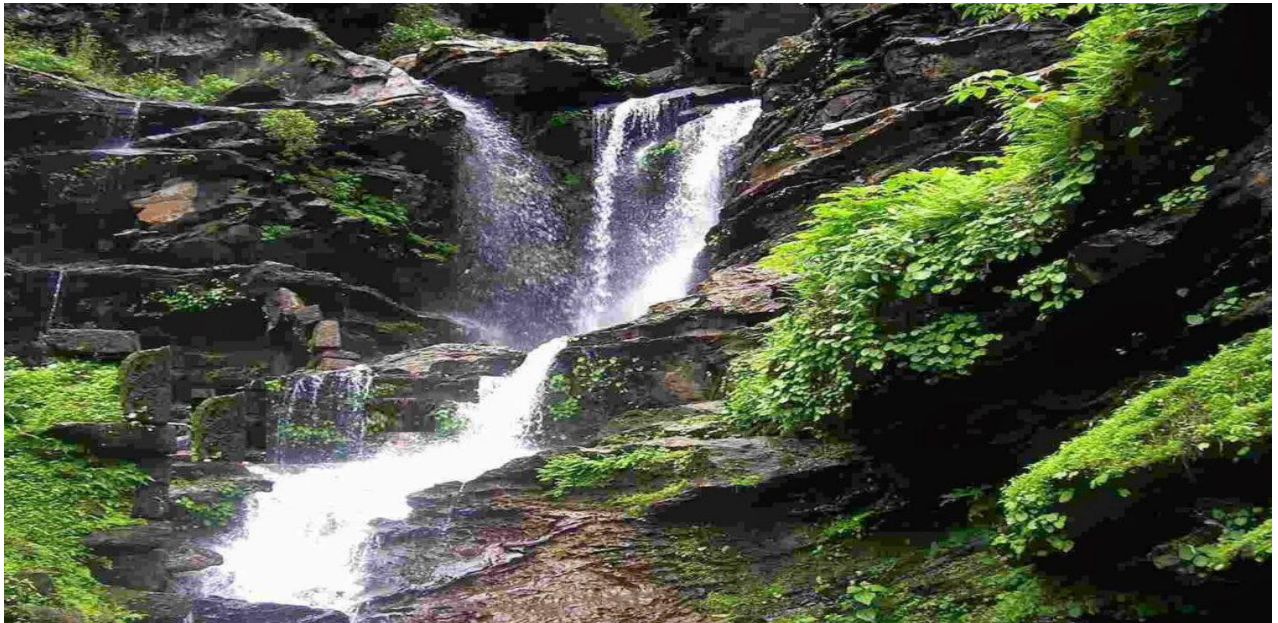
Threat of Extinction:

Despite the discovery of a new species, all tiger cats, including the clouded tiger cat, are under threat from deforestation and habitat destruction. This puts them at risk of extinction.

The discovery of a new species of tiger cat highlights the critical need for conservation efforts to prevent their extinction, as indicated by the researchers' urgent call to action.

LAKSHMANA TEERTHA RIVER

The drying up of the Lakshmana Tirtha river in Kodagu District, Karnataka, is a critical issue that highlights the severe impact of drought and insufficient rainfall on local communities and ecosystems.



Details

Last year, Kodagu District experienced a deficit rainfall of only 40% of its average. This significant shortfall in rainfall has resulted in a depletion of groundwater levels and reduced flow in smaller streams and rivers.



The lack of adequate rainfall has led to depleted groundwater levels, which directly impacts the flow of rivers and streams. Smaller streams in the hills dried up as early as February, contributing to reduced inflow into major rivers like Lakshmana Tirtha and Cauvery.

Current Situation and Urgency for Rainfall

The situation has worsened with the onset of April, with more rivers in the district beginning to dry up. The absence of regular rainfall since January exacerbates the water crisis.

The lack of immediate signs of rainfall raises concerns about the future water supply for communities in the Kodagu-Mysore region.

About Lakshmana Tirtha River

The Lakshmana Tirtha River starts in the Brahmagiri range and flows eastward before joining the Kaveri River at the Krishna Raja Sagara reservoir.

The river plays a vital role in sustaining agriculture, particularly coffee plantations, and provides drinking water to communities in South Kodagu.

Threats to Lakshmana Tirtha River

Water Depletion: Groundwater depletion and exposure to direct sunlight contribute to the river running dry months after the monsoon season.

Pollution: Tributaries of the Lakshmana Tirtha, such as streams of Kuranthoad near Ponnampet and Gonikoppal, are polluted due to waste dumping. Coffee wastewater from the de-pulping process poses a significant threat to water quality.

Untreated Waste Disposal: Untreated waste from Hunsur is directly discharged into the Lakshmana Tirtha River, contributing to pollution and environmental degradation.

Illegal Sand Mining: The River faces illegal sand mining activities, which not only disrupt its natural flow but also cause erosion and habitat destruction. Sand mining without proper regulations poses a serious threat to the river's stability and ecological balance.

Impact on Environment and Communities

Ecological Degradation: Pollution and habitat destruction jeopardize the river's biodiversity and ecological balance.



Water Quality: Contaminated water due to waste disposal and pollution affects the quality of water available for drinking and agricultural purposes.

Community Dependence: Communities, such as those in Hunsur, rely on the Lakshmana Tirtha for drinking water, highlighting the urgent need for water conservation and pollution control measures.

Agriculture: Farmers, especially those reliant on the river for irrigation of coffee plantations, are facing significant challenges due to water scarcity. The drying up of the river hampers agricultural productivity and threatens livelihoods.

Drinking water and Health Issues: The water crisis extends beyond agriculture, affecting residents and their livestock. Scarcity of drinking water poses a serious threat to public health and well-being.

Addressing the Challenges

Regulation and Enforcement: Strict enforcement of regulations to curb illegal sand mining and waste disposal is essential.

Waste Management: Implementation of effective waste management practices, including proper treatment of industrial and domestic waste, is crucial.

Community Engagement: Engaging local communities in conservation efforts and raising awareness about the importance of preserving the river's health.

Policy Interventions: Advocating for policy interventions to protect river ecosystems and promote sustainable water management practices.

Indelible Ink

As the Lok Sabha elections are round the corner, the classic symbol of Indian polls is visible everywhere – a left hand with only its index finger extended, marked by a purple-black indelible ink.

About Indelible ink

It contains silver nitrate. It is a colourless compound which becomes visible when exposed to ultraviolet light, including sunlight.

The higher silver nitrate's concentration, the higher the ink's quality.



For up to 72 hours after application it can remain resistant to soap, liquids, home-cleansing, detergents, etc.

This water-based ink also contains a solvent like alcohol to allow its faster drying... The precise protocol for making this ink including its chemical composition and the quantity of each constituent is, however, not known to many people.”

The indelible ink was first manufactured at the Election Commission of India’s request by the government’s Council of Scientific & Industrial Research (CSIR).

Mysore Paints & Varnish Ltd. has been licensed to manufacture the ink and has been in the business since 1962.

It is exported to more than 25 countries that include Canada, Ghana, Nigeria, Mongolia, Malaysia, Nepal, South Africa and the Maldives

The Representation of the People Act (RoPA) of 1951 mentions the ink.

Section 61 states that rules may be made under the Act “for the marking with indelible ink of the thumb or any other finger of every elector who applies for a ballot paper or ballot papers for the purpose of voting at a polling station before delivery of such paper or papers to him.”

It is an inorganic compound with the chemical formula AgNO_3 . In its solid form, silver nitrate is coordinated in a trigonal planar arrangement. It is often used as a precursor to other silver-containing compounds.

RUPEE/KYAT DIRECT PAYMENT SYSTEM AND SPECIAL RUPEE VOSTRO

Traders importing pulses from Myanmar now utilize Rupee/Kyat direct payment system through Punjab National Bank's Special Rupee Vostro Account (SRVA), as announced by the consumer affairs ministry.

Dependency on Pulse Imports:

India relies on imports, particularly tur and urad dals, from Myanmar to address domestic shortages of pulses.

Operationalization of Rupee/Kyat Settlement Mechanism:



Discussion with Indian Mission in Yangon:

Consumer Affairs Secretary Nidhi Khare engaged with the Indian Mission in Yangon to address issues related to pulses imports, including import prices and stocks held by importers in Myanmar.

Effective from January 25, 2024:

The Rupee/Kyat Settlement Mechanism has been operational since January 25, 2024, simplifying trade transactions and enhancing efficiency.

Guidelines by Central Bank of Myanmar:

The Central Bank of Myanmar issued guidelines for payment procedures under Special Rupee Vostro Account (SRVA) on January 26, 2024.

Applicability of the Mechanism:

The new payment mechanism applies to both sea and border trade, covering trade in goods and service

Benefits of Adoption:

Adoption of the mechanism by traders reduces costs associated with currency conversions and streamlines exchange rate complexities.

Dissemination of Information:

Traders, particularly pulses importers, are being encouraged to utilize the Rupee/Kyat direct payment system using SRVA through Punjab National Bank.

Weekly Stock Disclosure and Enforcement Measures:

Importers, millers, stockists, and retailers are required to honestly declare their pulse stocks, including imported yellow peas, weekly on the designated portal (<https://fcainfoweb.nic.in/psp/>) from April 15.

Warning against Forward Trade:

The government warns against engaging in forward trade of pulses, with firm actions stipulated under the Essential Commodities Act for violators.

Enforcement by States and Union Territories:

States and Union Territories are tasked with enforcing weekly stock disclosure by all stockholding entities and verifying the accuracy of declared stocks.



Verification of Stocks:

Verification of stocks in warehouses at major ports and pulses industry hubs is mandated, with stringent actions against entities providing false information on the stock disclosure portal.

Industry Feedback and Market Intelligence:

Feedback from the industry and market intelligence regarding the stock positions of various market players is being collated for further verification and enforcement.

The government's initiatives aim to streamline pulse imports, enhance transparency, and curb malpractices in the pulse industry, ensuring a more efficient and accountable trade ecosystem.

AADHARSHILA

The Union government has launched a new curriculum called Aadharshila (meaning "foundation stone") for children aged 3-6 years in anganwadis (rural childcare centres).

Details

The Ministry of Women and Child Development (MWCD) has released the National Curriculum for Early Childhood Care and Education (ECCE) 2024 titled '**Aadharshila**', **marking a significant step towards improving pre-school learning in anganwadis across India.**

This initiative marks a significant step in promoting preschool learning for children aged three to six years, filling a crucial gap in foundational education.

Importance of the Curriculum

The curriculum is designed to align with the National Education Policy 2020 and the National Curriculum Framework, emphasizing the need for structured learning experiences during the crucial early childhood years.

Its implementation signifies a concerted effort to provide quality education and developmental support to young children.



Key Components of Aadharshila Curriculum

Duration and Structure: Aadharshila is structured as a detailed 48-week curriculum, specifically tailored for children in the age group of three to six years. This duration is critical for laying down a strong educational foundation before children transition into formal schooling.

Curriculum Focus: The curriculum is thoughtfully designed to foster holistic development, including academic, social, and emotional growth. It emphasizes a balance between structured academic activities and unstructured play-based learning.

Play Calendar: Aadharshila introduces a weekly play calendar spanning 48 weeks, structured into distinct phases:

Initiation (4 weeks): This phase focuses on introductory academic activities to initiate children into the learning process.

Exploration (36 weeks): The majority of the curriculum is dedicated to exploring various aspects of learning through activities such as storytelling, rhymes, arts, crafts, and conversation. This phase encourages curiosity, creativity, and social interaction.



Reinforcement and Observation (8 weeks): The final phase reinforces previous learning and encourages the observation of children's progress and performance.

Age-Appropriate Activities: Activities and timetables are modified to different age groups within the three to six-year range. The curriculum provides detailed guidelines on the materials required for effective implementation.

Developmental Objectives: The curriculum is designed to achieve specific developmental milestones, including:

Developing listening skills

Building vocabulary

Boosting imagination and creativity

Enhancing the ability to follow instructions

Facilitating social development

Fostering self-esteem and confidence

Impact and Longitudinal Research

According to a former NCERT official, longitudinal research on early childhood education highlights its significance. Studies have shown that children who receive quality early childhood education demonstrate better academic performance and psychosocial adaptation in later years.

Implementation and Adaptation

States have the flexibility to adapt Aadharshila to suit local cultural contexts, ensuring that the curriculum is relevant and effective across diverse communities. This localized approach is crucial for addressing the unique challenges and needs of children in different regions of India.

The release of Aadharshila represents a critical milestone in early childhood education, emphasizing the importance of structured learning and developmental support during the formative years. By focusing on holistic development and providing a strong foundation for future learning, this curriculum sets a benchmark for nurturing young minds and ensuring a smoother transition into formal education. It highlights the government's commitment to promoting inclusive and quality education from the very beginning of a child's educational journey.



Palestine

Request by Palestine: Amid the Gaza war, Palestine submitted a request to reconsider its 2011 application for UN membership to the Secretary-General on April 2.

Previous Attempts: In 2011, the Security Council couldn't agree on recommending Palestine's membership to the General Assembly, which needs to hold a vote involving its 193 member states.

Draft Resolution: The draft resolution was moved to UNGA, simply recommending Palestine's admission to the UN as a member state.

Voting Requirements: For a draft resolution to pass, the Security Council needs at least nine members in favor and no veto from its permanent members (China, France, Russia, UK, US).

The Voting: The vote in the 15-member Security Council was 12 in favor, the United States opposed, and two abstentions.

Palestine's Status: Palestine has been a Permanent Observer at the UN since 2012, and prior to that, it was an observer in the UN General Assembly.

Why the US does not support Palestine's inclusion in the UN as a full member state:

Strategic Alliance with Israel: The US has a longstanding and close strategic alliance with Israel. Supporting Palestine's inclusion in the UN as a full member state could be seen as undermining this alliance and Israel's interests.

Security Concerns: The US may have security concerns regarding Palestine's inclusion in the UN, especially if it believes that Palestine has not taken sufficient steps to address security threats or has not shown a commitment to peace and stability in the region.

Bilateral Negotiations: The US has historically advocated for a negotiated settlement to the Israeli-Palestinian conflict through direct bilateral negotiations between the parties involved. Supporting Palestine's unilateral inclusion in the UN could be viewed as bypassing this process and undermining the US-led peace efforts.



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Domestic Politics: Support for Israel is a significant aspect of US domestic politics, with strong bipartisan backing for Israel in Congress. The US administration's handling of the conflict can impact domestic political dynamics, particularly in terms of public opinion and electoral considerations.