

DAILY pre PARE

Current affairs summary for prelims

11 July, 2024

Law on maintenance in India

Context: The Supreme Court dismissed a Muslim man's appeal against a Telangana High Court order allowing his exwife to seek maintenance under the CrPC, 1973.

Evolution of the Law on Maintenance

Codification under Section 125 of the CrPC:

- Section 125 of the CrPC governs maintenance for destitute wives, children, and parents.
- It mandates that a person with sufficient means must maintain his wife, with the magistrate deciding the monthly allowance.
- "Wife" includes divorced women who have not remarried, irrespective of religion.
- States have made amendments to cap the maintenance amount.

> 1986 Act:

- A religion-specific law for Muslim women to claim maintenance during divorce.
- Enacted to nullify the Supreme Court's 1985 Shah Bano decision, which upheld a Muslim woman's right to maintenance under Section 125 of the CrPC.
- Guarantees maintenance payment during the iddat period, equal to mahr or dowry.
- After iddat, women can seek maintenance from a magistrate if they haven't remarried and are financially destitute.

Supreme Court Rulings:

- Danial Latifi v. Union Of India (2001): Upheld the 1986 Act, extending maintenance rights till remarriage but limiting the period to iddat.
- Shabana Bano v. Imran Khan (2009): Affirmed that divorced Muslim women can claim maintenance under Section 125 of the CrPC even after iddat.
- Patna High Court (2019): Reiterated that Muslim women can seek maintenance under both CrPC and the 1986 Act.

Key Points of the Verdict

Secular Nature of Relief:

- Section 125 CrPC applies irrespective of the woman's faith.
- It supports destitute women, ensuring social justice and gender equality.

Harmonious Interpretation:

- Both Section 125 of the CrPC and the 1986 Act offer maintenance rights in distinct domains.
- The 1986 Act provides an additional remedy without barring claims under Section 125.
- Muslim women can choose to seek maintenance under either provision based on their financial situation.

Rights of Divorced Muslim Women:

- Muslim women divorced through illegal methods like triple talaq can claim maintenance under Section 125 CrPC.
- The ruling prevents discrimination based on the law under which a woman is married or divorced.

RAIN (Regional Analysis of Indian OceaN)

Context: Recently, the Indian National Centre for Ocean Information Services (INCOIS) has upgraded its Regional Analysis of Indian Ocean (RAIN) system to enhance information gathering on the health of the Indian Ocean.

- > RAIN is a data assimilation system developed by INCOIS.
- It integrates ROMS (Regional Ocean Modeling System) with the Local Ensemble Transform Kalman Filter (LETKF).
- **ROMS**: An ocean general circulation model used by INCOIS for forecasting in the Indian Ocean.
- ➤ LETKF: A smart and efficient variant of the ensemble Kalman Filter.

Ensemble Members:

- RAIN comprises 80 ensemble members.
- Each member evolves from slightly different initial conditions.
- Physical parameters and mixing parameterization schemes vary across members.
- This strategy maintains a healthy spread and prevents filter divergence.

Forcing and Boundary Conditions:

- Ensemble members are forced every 6 hours by 80 ensembles of fluxes from the GFS model operated by NCMRWF.
- Identical boundary conditions from INCOIS-GODAS are applied to all members.

Ocean State Vectors:

- Covers the Indian Ocean basin (30°N 30°S; 30°E 120°E).
- Grid has a horizontal length scale of ~9 km and 40 vertical levels.
- Ensemble runs for 5 days with assimilation performed every fifth day to generate an ocean analysis.

Data Assimilation:

- Assimilates satellite sea surface temperature (SST) data and temperature/salinity profiles from Argo floats, moored buoys, and ship tracks.
- Incorporates improved representation error that varies across space and time.

Sea Surface Salinity:

Not forced with river discharge fluxes.









DAILY pre PARE

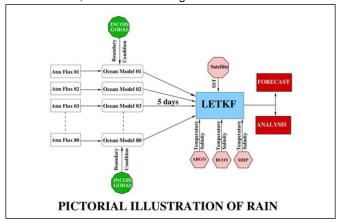
Current affairs summary for prelims

11 July, 2024

 SSS relaxed to World Ocean Atlas (WOA) monthly climatology over 30 days.

Outputs:

- Provides improved initial conditions (ensemble mean of analyses) for the operational ocean forecast model ROMS.
- Generates an improved analysis of the Indian Ocean basin, available from August 2016 onwards.



Scientific deep-drilling

Context: India is on a mission to drill a 6-kilometer deep hole in Koyna, Maharashtra, aiming to uncover seismic insights.

Definition

- Scientific deep-drilling involves strategically digging boreholes to observe and analyze deeper parts of the earth's crust.
- It helps study earthquakes and enhances understanding of the planet's history, rock types, energy resources, life forms, climate change patterns, and the evolution of life.

Borehole Geophysics Research Laboratory (BGRL)

- Located in Karad, Maharashtra, under the Ministry of Earth Sciences, Government of India.
- Executes India's only scientific deep-drilling program.
- Aims to drill 6 km into the earth's crust to study reservoir-triggered earthquakes in the Koyna-Warna region.
- The region has experienced frequent earthquakes since the Koyna Dam was impounded in 1962.
- BGRL completed a pilot borehole to a depth of 3 km and plans to reach 6 km.

Benefits of Deep-Drilling

• Understanding Earthquakes

- Surface-level observations are insufficient; deeper drilling provides a unique opportunity to study earthquakes.
- Recurrent earthquakes in Koyna are linked to the dam's loading/unloading during monsoon seasons.

Geological Observatories

- Boreholes with sensors serve as observatories to monitor fault lines and earthquake behavior.
- Provide direct, in-situ experiments and observations.

Expanding Knowledge

- Yields fundamental knowledge of earth's crust composition, structure, and processes.
- Informs societal problems related to geohazards and geo-resources.
- Promotes scientific know-how and technological innovation in seismology.

Challenges of Deep-Drilling

Technical and Environmental Challenges

- Labourand capital-intensive.
- Hot, dark, high-pressure environment complicates operations.
- Hook load capacity of the drilling rig mast limits depth.
- Increased depth requires more compressed air pressure and enhanced rig capacity.

• Drilling Techniques

- Hybrid technique: mud rotary drilling and percussion drilling (air hammering).
- Mud rotary uses a rotating steel rod with a diamond drill bit; drilling mud cools and lubricates the bit and brings up debris.
- Air hammering uses compressed air to deepen the borehole and flush out cuttings.

• Operational Challenges

- Drilling to 6 km requires updated rig capacity and advanced planning.
- Dynamic decision-making based on rock type, water inflow zones, and need for core samples.
- 24/7 on-site engagement for months requires skilled technical personnel.

Achievements and Findings

Pilot Drilling Success

- Revealed Deccan trap lava flows and ancient granitic basement rocks.
- Provided new information on rock properties, chemical composition, temperature, stress regimes, and fracture orientations.
- High-resolution borehole wall images show faultfracture zones and rock deformation.

Key Discoveries

- Presence of meteoric water down to 3 km indicates deep percolation.
- Koyna region is critically stressed, leading to frequent small earthquakes.











DAILY pre PARE

Current affairs summary for prelims

11 July, 2024

News in Between the Lines

The Ministry of Fisheries, Animal Husbandry and Dairying has announced recently that the nominations for the National Gopal Ratna Award for the year 2024 will be opened from the 15th of July and close on 31st August of this year.

National Gopal Ratna Award



About the National Gopal Ratna Award:

- The National Gopal Ratna Award is one of the highest National Awards in the field of livestock and dairy sector.
- It has been **conferring every year since 2021** to encourage the milk producing farmers, dairy cooperative societies, Milk producer Companies, **Dairy Farmer** Producer Organizations and Artificial Insemination Technicians.
- The awards will be conferred on the occasion of National Milk Day which will be celebrated on 26th November.
- The winners will receive certificates of merit, mementos and monetary prizes.
- The award categories include Best Dairy Farmer rearing Indigenous Cattle/Buffalo Breeds, Best Dairy Cooperative Society (DCS)/Milk Producer Company (MPC)/Dairy Farmer Producer Organization (FPO), and Best Artificial Insemination Technician (AIT).
- The awards for Best Dairy Farmer and Best DCS/FPO/MPC categories include cash prizes of Rs 5 lakh for 1st place, Rs 3 lakh for 2nd place, Rs 2 lakh for 3rd place and Rs 2 lakh for the Special Award for NER.
- The Rashtriya Gokul Mission (RGM) was launched in December 2014 with a view to conserve and develop indigenous bovine breeds in a scientific manner.
 Recently, it has been found that the locals and farmers body and human rights body of Arunachal Pradesh

are protesting against the proposed 11,000 MW hydropower project on the Siang river in the Upper Siang

Siang River



district of Arunachal Pradesh.

About the Siang River:

- The Siang River originates from the Kailash Range glacier in Tibet at an elevation of about 5,300
- It is the largest tributary of the river Brahmputra river system in Northeast India.
- It traverses more than 1,000 km eastward, before forming a horseshoe bend around the towering Namcha Barwa peak and enters Arunachal Pradesh as the Siang.
- In Tibet, it is known as the Tsangpo River and the Yarlung Zangbo in China.
- It flows through the Tibetan Plateau and then through a deep gorge in the Himalayas before entering India.
- In India, it flows through Arunachal Pradesh for about 230 kilometers in a south-easterly direction to reach **Pasighat**.
- It has several major tributaries, including the Lohit and Dibang Rivers, which join it in Arunachal Pradesh.

Recently, Delhi police rescued nearly 100 turtles including Indian-eyed and Indian softshell turtles.

Indian-eyed and Indian softshell turtles



About the Indian-eyed and Indian softshell turtles:

- The Indian-eyed turtle (Morenia petersi) is a small freshwater turtle belongs to the **family Geoemydidae**, while the Indian softshell turtle (Nilssonia gangetica) also freshwater turtle but belongs to the **family Trionychidae**.
- The Indian-eyed turtle is primarily found in **rivers**, **lakes** and **ponds** in the **Ganges-Brahmaputra** basin in India and Bangladesh.
- In contrast, the Indian softshell turtle inhabits large rivers, reservoirs and marshes, particularly in the Ganges, Indus and Mahanadi river systems.
- The Indian-eyed turtle is notable for its distinctive eye-like markings on its head and body, with a moderately domed carapace that is olive to brown in colour.
- The Indian softshell turtle has a flattened, soft, and leathery carapace, which is more flexible compared to hard-shelled turtles, typically olive or brown with a lighter underside.
- Both, the Indian-eyed turtle and the Indian softshell turtle are listed as endangered in the IUCN Red List.

Face to Face Centres





Place in News

France

DAILY pre PARE

Current affairs summary for prelims

11 July, 2024

Recently, the India-France-UAE Trilateral Focal Points meeting was held virtually to discuss progress in trilateral cooperation per the February 2023 Joint Roadmap.

France (Capital: Paris)

Location: France, officially the French Republic is a country **located in Western Europe**.

Boundaries:

France shares its border with Switzerland (East), the Atlantic Ocean (West), Belgium, Luxembourg and North Sea (North), Germany (Northeast), Italy, Monaco and the Mediterranean Sea (Southeast), Andorra and Spain (South), the English Channel (Northwest).

Physical Features:

- The highest point in France is Mont Blanc, located in the French Alps.
- France's major rivers include the Seine, Loire, Rhône, Garonne, Dordogne, Meuse, Marne and Moselle.
- Important minerals found in France include coal, iron ore, bauxite, uranium, potash, salt, lead, zinc, and copper, contributing to its mineral resource base.

Parliamentary System:

France has a bicameral parliamentary system consisting of the National Assembly (lower house) and the Senate (upper house), with the President as the head of state and a Prime Minister as the head of government.

POINTS TO PONDER

- Which ministry is actively involved in the disposal and repurposing of Fly Ash, a byproduct generated by burning pulverized coal in thermal power plants? – Ministry of Coal
- Recently, which country completed the construction of the long-awaited bridge at the zero line of the Kartarpur Corridor? Pakistan
- Who was recently remembered on his birth anniversary for his contributions to revitalizing Vachana Literature? Fa. Gu. Halakatti
- According to a recent observation by the Supreme Court, when would there be an implied revocation of a Power of Attorney ("POA")
 granted to an agent? If the Principal chooses to act for himself and this fact is known to the agent and third parties
- During his recent visit to Russia, which honour was awarded to the Prime Minister of India, the highest civilian honour of Russia?
 - Order of Saint Andrew the Apostle



