



**KERALA STATE CIVIL SERVICE ACADEMY**



Established under Centre for Continuing Education Kerala (CCEK)

November 15 to November 21, 2025

# WEEKLY CURRENT AFFAIRS MAGAZINE



**CLICK HERE**


Monthly Current Affairs Magazine

## GENDER-NEUTRALITY IN LEGISLATIONS


A Supreme Court notice in a case involving an alleged female perpetrator of penetrative sexual assault has reopened debate on whether the POCSO Act — India's primary child-protection law — is gender-neutral in prosecuting both victims and offenders.

### Main Arguments


- **Statutory Interpretation Favors Inclusion**
- Section 3 uses the pronoun “he”, but **Section 13(1) of the General Clauses Act (1897)** clarifies that masculine words include females unless context dictates otherwise.
- The broad definition of penetrative sexual assault — including digital, object-based, and oral penetration — clearly enables prosecution of women as potential offenders.
- The inclusion of acts where a person makes a child perform penetration further strengthens this gender-neutral reading.



### POCSO (Protection of Children from Sexual Offences) Act, 2012



defines a child as any person below eighteen years of age




sexual assault includes actions where a person touches/ penetrates the vagina, penis, anus or breast of a child with sexual intent


**Forms of Sexual Abuse:**

- Penetrative and Non-Penetrative assault
- Sexual harassment
- Pornography
- Aggravated sexual assault
- Child trafficking


Incorporates child-friendly mechanisms for reporting, recording of evidence, investigation and speedy trial of offences through designated Special Courts




does not recognize consensual sexual acts among children or between a child and an adult




seeks to award strong punishment for abuse of children



aims at making offences against children 'gender-neutral'



mandatory reporting of sexual offences: legal duty upon a person who has knowledge that a child has been sexually abused to report the offence



police are also required to bring the matter to the attention of the Child Welfare Committee (CWC) within 24 hours

- **Legislative Intent Unambiguously Confirms Neutrality**
  - Parliamentary records consistently reflect gender neutrality. The **Ministry of Women and Child Development** (Lok Sabha, 20 December 2024) and the **2019 Amendment Bill's Statement of Objects and Reasons** explicitly describe POCSO as gender-neutral.
  - In contrast, Section 63 of the **Bharatiya Nyaya Sanhita (2023)** clearly limits rape to a male perpetrator and female victim. The fact that POCSO avoids such gendered language indicates a **deliberate legislative choice**.

- **Normative and Judicial Logic Require Neutral Protection**
  - The Supreme Court in **Sakshi vs Union of India (2004)** recognised that child sexual abuse spans a wide spectrum beyond penile-vaginal intercourse.
  - Abuse stems from **power, trust, and vulnerability**, not gender alone. Survivor accounts and research affirm that women can also perpetrate abuse.
  - A gender-specific interpretation would conceal these experiences and deny justice to certain victims, undermining the Act's protective purpose.

### Criticisms and Drawbacks Identified

- **Ambiguity from Masculine Pronouns:** Use of "he" in statutory text triggers avoidable interpretive disputes despite the GC Act's clear rule.
- **Inconsistent Official Communication:** Some earlier Parliamentary replies emphasised gender neutrality only for victims, inadvertently creating confusion over perpetrators.
- **Social Biases Limit Recognition:** Deep-rooted notions that women cannot commit sexual offences hinder reporting, investigation, and acknowledgement of abuse against boys.
- **Limited Jurisprudence:** Few POCSO cases have involved female offenders, resulting in sparse judicial precedent and uncertainty in enforcement.
- **Doctrinal Overlap with BNS:** The coexistence of a gender-specific rape definition in the BNS and a gender-neutral penetrative assault definition in POCSO risks interpretive inconsistency in similar factual situations involving minors.

### Reforms and Strengthening Measures

- **Clarify Statutory Language:** Amend Section 3 to replace pronouns with gender-neutral terms ("person"), eliminating reliance on interpretive rules.
- **Ensure Consistent Government Messaging:** Uniform Ministry clarifications and FAQs should emphasise that gender neutrality applies to both **victims and perpetrators**.
- **Sensitise Law-Enforcement and Judiciary:** Training modules must address non-traditional abuse patterns and empower officials to handle cases involving female offenders without bias.
- **Improve Research and Documentation:** Systematic studies on abuse by women and non-conforming offenders can inform policy design and correct societal misconceptions.
- **Harmonise POCSO with the BNS:** A clarificatory amendment or authoritative Supreme Court ruling can ensure coherent interpretation between POCSO and BNS, avoiding doctrinal conflict.

The POCSO Act was consciously drafted as a gender-neutral framework to protect all children from diverse forms of sexual harm. Upholding this neutrality best aligns with its text, legislative intent, and protective purpose. Clear statutory language, consistent official communication, and informed judicial interpretation can ensure equal justice for every child, regardless of the gender of the offender.



## SIXTH SCHEDULE

The Leh Apex Body (LAB), which is spearheading an agitation over Statehood and Sixth Schedule status for Ladakh, submitted a draft proposal to the Ministry of Home Affairs.

Sixth Schedule	
Sixth Schedule of the constitution is again in news, after the reconstitution of high-powered committee to examine Ladakh's demand for inclusion in the Sixth Schedule.	
Sixth Schedule	Issues
<ul style="list-style-type: none"> <li>» <b>Constitutional Provisions- Art 244</b> of the constitution provides for the sixth schedule of the constitution which is applicable to specific areas of <b>Assam, Meghalaya, Tripura and Mizoram</b></li> <li>» <b>Purpose-</b> It provides for the formation of autonomous administrative divisions called <b>Autonomous District Councils (ADCs)</b> that have some legislative, judicial and administrative autonomy within a state.</li> <li>» The acts of Parliament or the state legislature do not apply to autonomous districts and autonomous regions, or apply with specified modifications and exceptions</li> </ul>	<ul style="list-style-type: none"> <li>» <b>Limited Geographical Coverage-</b> Only limited to certain tribal pockets of <b>Assam, Meghalaya, Tripura and Mizoram</b></li> <li>» <b>Lack of Effective decentralisation-</b> Several districts have only one autonomous council. For ex- <b>Only one District council for entire Bodo Territorial Area districts</b></li> <li>» <b>Legislative power of state over autonomous councils-</b> The laws made by the councils require the assent of governor. In case of conflict, the <b>governor's assent prevails.</b></li> <li>» <b>Financial dependency-</b> Dependent on state govts for funds in addition to the occasional special package from the Centre. <b>Lack of timely constitution of State Finance Commission (SFC)</b></li> <li>» <b>Corruption, Financial Mismanagement and Lack of skilled professionals</b></li> </ul>
Advantages	Way Forward
<ul style="list-style-type: none"> <li>» <b>Democratic Devolution of Powers-</b> Sixth Schedule has helped in democratic devolution of powers through the creation of <b>Autonomous District Councils</b>, which have some legislative, judicial and administrative autonomy within a state.</li> <li>» <b>Preservation of Cultural Practices and Customs-</b> Tribal language, customs and practices are protected. For ex- <b>Bodo language of Bodoland were protected.</b></li> <li>» <b>Protection of tribal Land rights-</b> Autonomous councils the powers to legislate on matters like <b>land, forests, and fisheries.</b></li> <li>» <b>Grant-in Funds- Finance commission</b> recommends Grant-in aids for sixth scheduled areas</li> <li>» <b>Sustainable Socio-Economic Development-</b> Ensures socio-economic development of a region in consonance with the cardinal virtue of sustainability.</li> </ul>	<ul style="list-style-type: none"> <li>» <b>Increase geographical coverage-</b> Constitutional amendment to expand coverage of 6th scheduled areas in other tribal dominated regions which need protection. For ex- <b>Ladakh inclusion in 6th schedule.</b></li> <li>» <b>Ensuring regular Elections-</b> The state governments must ensure regular, free and fair elections to these autonomous councils. For Ex- <b>Reduce the dominance of Tribal Elites.</b></li> <li>» <b>Transparency-</b> Transparency in <b>funds, functionaries and functioning</b> of the autonomous district councils must be enhanced for effective socio-economic development.</li> </ul>

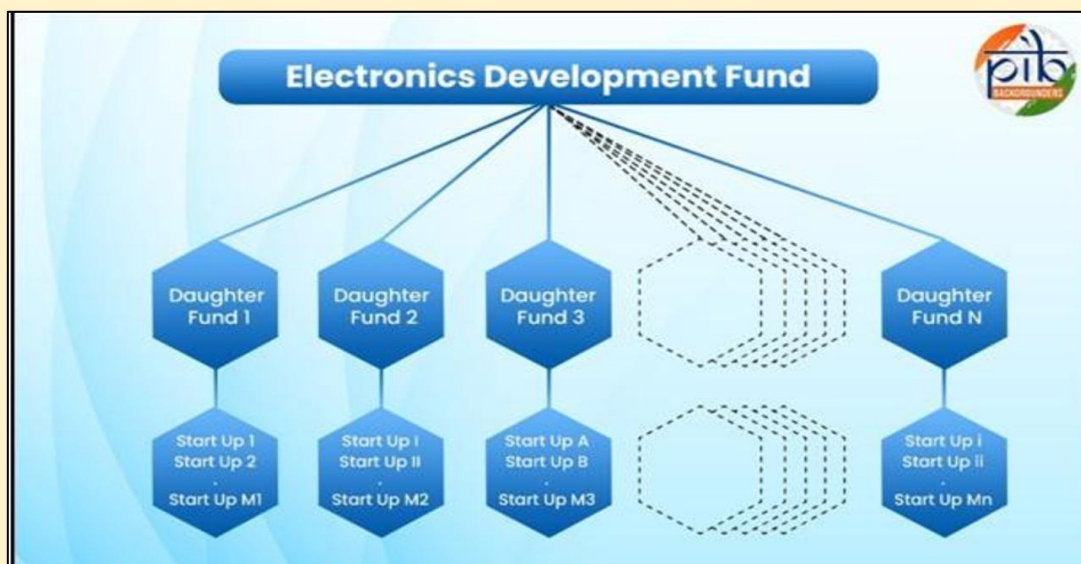
### About 6th Schedule:

- Constitutional provision: The Sixth Schedule of the Constitution, under Article 244(2) and Article 275(1) of the Constitution, is provided for the administration of tribal areas in Assam, Meghalaya, Tripura, and Mizoram.
- Objectives:
  - To protect tribal land and resources and prohibits the transfer of such resources to non-tribal individuals or communities.
  - To ensure the tribal communities are not exploited or marginalized by non-tribal populations and that their cultural and social identities are preserved and promoted.
- Creation of Autonomous districts and autonomous regions:
  - The tribal areas in the four states of Assam, Meghalaya, Tripura, and Mizoram are to be administered as Autonomous Districts.
  - If there are different Scheduled Tribes in an autonomous district, the Governor can divide the district inhabited by them into Autonomous Regions.
  - The Governor is empowered to organize and reorganize the autonomous districts. He can also increase, decrease the boundaries or alter the name of any autonomous district.

- Constitution of District Councils and Regional Councils:
  - There shall be a District Council for each autonomous district consisting of not more than 30 members, of whom not more than four persons shall be nominated by the Governor, and the rest shall be elected on the basis of adult suffrage.
  - There shall be a separate Regional Council for each area constituted an autonomous region.
- Powers of the District Councils and Regional Councils:
  - The District and Regional councils are empowered to make laws on certain specified matters like lands, management of forest (other than the Reserved Forest), inheritance of property, etc.
  - These councils also empowered to make law for the regulations and control of money-lending or trading by any person other than Scheduled Tribe residents in that Scheduled District.
  - However, all laws made under this provision require the assent of the Governor of the State.
- Administration of justice in autonomous districts and autonomous regions:
  - The District and Regional Councils are empowered to constitute Village and District Council Courts for the trial of suits and cases where all parties to the dispute belong to Scheduled Tribes within the district.
  - The High Courts have jurisdiction over the suits and cases which is specified by the Governor.
  - However, the Council Courts are not given the power to decide cases involving offenses punishable by death or imprisonment for five or more years.
- Exceptions: To autonomous districts and autonomous regions, the acts of Parliament or the state legislature do not apply or apply with specified modifications and exceptions. The Governor can appoint a commission to investigate and provide a report on any issue pertaining to the autonomous districts or regions.

## ELECTRONICS DEVELOPMENT FUND

With ₹257.77 crore invested, the Electronics Development Fund has supported 128 startups nationwide.



### **About Electronics Development Fund (EDF):**

- **Launch:** The Government of India had launched the Electronics Development Fund (EDF) on 15 February 2016.
- **Objective:** The Fund aims to promote research, development, and entrepreneurship in the fields of electronics, nano-electronics, and information technology.
- **Acts as a fund of funds:** The EDF functions as a Fund of Funds, designed to invest in professionally managed Daughter Funds such as early-stage angel and venture funds. These Daughter Funds, in turn, provided risk capital to startups and companies developing new technologies.
- **Key objectives of EDF include:**
  - To foster research and development in electronics, nano-electronics, and information technology by supporting market-driven and industry-led innovation.
  - To invest in professionally managed Daughter Funds such as early-stage angel and venture funds that, in turn, provide capital to startups and technology ventures.
  - To nurture entrepreneurship by supporting companies involved in the creation of new products, processes, and technologies within the country.
  - To enhance India's capacity for indigenous design and development in the Electronics System Design and Manufacturing (ESDM) sector.
  - To generate a strong base of intellectual property in key technology areas and encourage ownership of innovation within India.
  - To enable acquisition of foreign technologies and companies where such products are imported in large volumes, promoting self-reliance and reducing import dependence.
- **Main Features of EDF:**
  - EDF participates in Daughter Funds on a non-exclusive basis, allowing wider collaboration and participation across the industry.
  - The share of EDF in a Daughter Fund's total corpus is determined by market requirements and the capacity of the Investment Manager to administer the fund in accordance with EDF's policy guidelines.
  - EDF generally maintains a minority participation in each Daughter Fund, encouraging greater private investment and professional fund management.
  - Investment Managers of Daughter Funds are given flexibility and autonomy to raise corpus, make investments, and monitor portfolio performance.
  - EDF participation is available across the entire value chain of electronics, information technology, and related ecosystems, ensuring comprehensive sectoral coverage.
  - The final selection of Daughter Funds is carried out after detailed due diligence by the Investment Manager.
- **Achievements:**
  - The Electronics Development Fund (EDF) has made remarkable progress in nurturing India's innovation ecosystem. EDF has drawn a total of ₹216.33 crore from its contributors, including ₹210.33 crore from MeitY.
  - The supported startups operate in frontier areas such as Internet of Things (IoT), Robotics, Drones, Autonomous Vehicles, HealthTech, Cyber Security, and Artificial Intelligence and Machine Learning, positioning India as a hub for advanced technological innovation.



## SENKAKU ISLANDS

A China Coast Guard ship formation passed through the waters of the Senkaku Islands on a “rights enforcement patrol.”



### About Senkaku Islands:

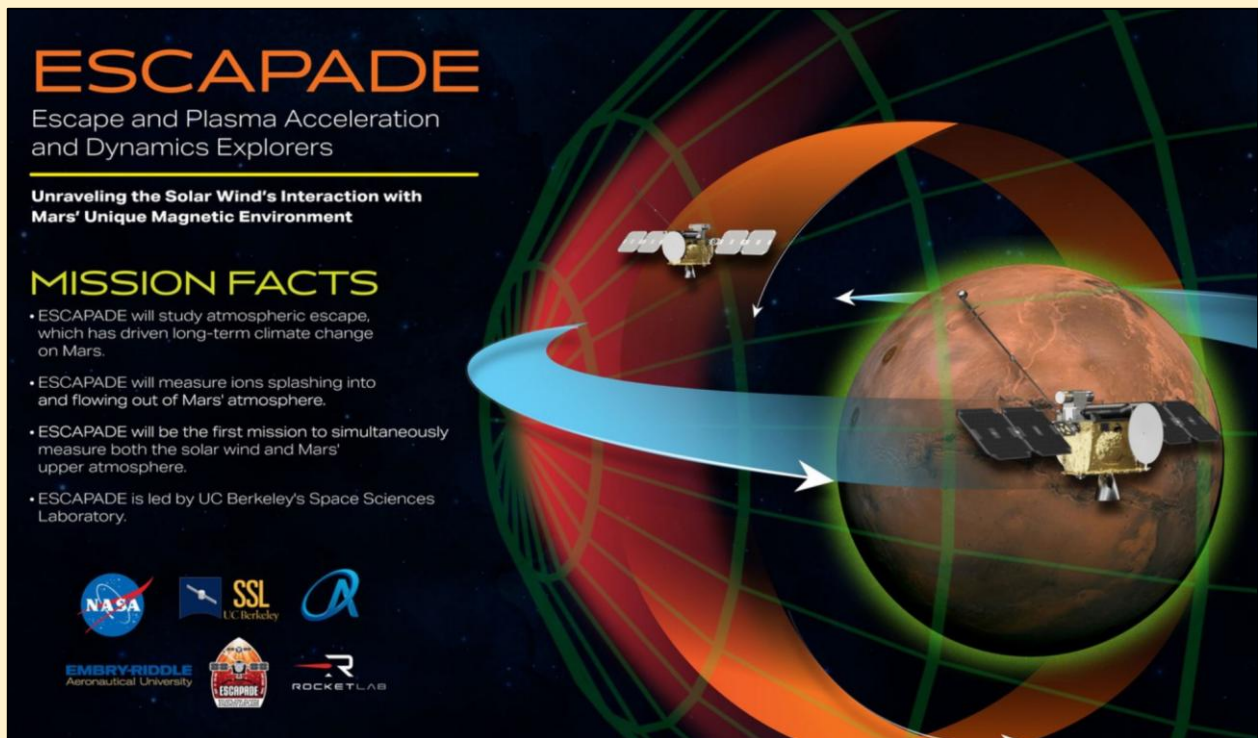
- **Location:** The Senkaku Islands are an uninhabited group of islands situated in the East China Sea, approximately 90 nautical miles north from the Yaeyama Islands in Japan's Okinawa Prefecture and 120 nautical miles northeast of the island of Taiwan.
- **Different names:** They are also known as the Diaoyu Islands in mainland China, the Diaoyutai Islands in Taiwan, and the Pinnacle Islands by other observers.
- **Group of islands:** The islands comprise Uotsuri Island, Kuba Island, Taisho Island (also called Kumeakashima Island), Kitakojima Island, Minamikojima Island, Tobise Island, Okinokitaiwa Island, and Okinominamiiwa Island.
- **Area:** The total land area of all the islands is roughly 6.3 square kilometers, with the largest, Uotsuri Island, being some 3.6 square kilometers in size.
- **Composition:** They consist of conglomerate sandstone (alternate layers of sandstone and conglomerate in some parts), tuff, andesite, andesitic lava, coral outcroppings elevated above sea level during the Holocene era, and other rocky material.
- **Dispute:** The islands are the focus of a territorial dispute between Japan and China and between Japan and Taiwan.
- **Administration:** They were never administered by any other country before Japan incorporated them into its territory in 1895. Currently, Japan administers and controls the Senkaku Islands as part of the city of Ishigaki in Okinawa Prefecture.

## ESCAPADE MISSION

Blue Origin has successfully launched Nasa's highly anticipated Escapade mission to Mars, marking a historic day for the future of multi-planetary exploration.

### About Escapade Mission:

- **Nomenclature:** The ESCAPADE stands for Escape and Plasma Acceleration and Dynamics Explorers.
- **Objective:** This mission is the first coordinated multi-spacecraft orbital science mission to Mars. Its twin orbiters are known as Blue and Gold which will take simultaneous observations from different locations around Mars.



- **Part of NASA's program:** It is part of NASA's SIMPLEx (Small Innovative Missions for Planetary Exploration) program.
- **Management:** The ESCAPADE mission is managed by the Space Sciences Laboratory at the University of California, Berkeley, with key partners Rocket Lab, NASA's Goddard Space Flight Center, Embry-Riddle Aeronautical University, Advanced Space LLC, and Blue Origin.
- **Use of 'launch and loiter' strategy:** This mission has chosen 'launch and loiter' strategy. It means the satellites will launch from Earth toward the Lagrange 2 Point (L2), a point in space where the balance of Earth and Sun's gravitational pull ensures that a spacecraft stays put. The spacecraft will stay loiter at L2 until the apt window for Mars travel opens up, and then it will move toward Mars in late 2026.
- **Reveal critical information about Mars:** It will reveal the planet's real-time response to space weather and how the Martian magnetosphere changes over time. These spacecraft will travel to Mars to study the interaction between solar wind, streams of charged particles from the Sun, and the Martian magnetic field.
- **Opens new gateways for future human explorations:** Understanding how solar wind strips Mars of its atmosphere is critical for planetary science and future human exploration.



## GAMMA-RAY BURSTS

According to new researches, gamma-ray bursts from black hole 'morsels' could expose quantum gravity.

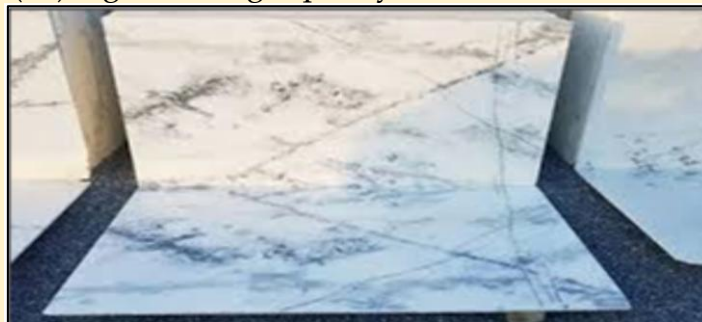


### About Gamma-Ray Bursts:

- **Definition:** Gamma-ray bursts are short-lived explosions of gamma rays, the most energetic form of light.
- **Duration:** Lasting from a few milliseconds to several hours, they shine hundreds of times brighter than a typical supernova and about a million trillion times as bright as the Sun.
- **Uniqueness:** Observed in distant galaxies, they are the brightest electromagnetic events known to exist in the universe.
- **Intensity:** It emits more energy in a few seconds than our Sun will emit in its lifetime.
- **Phases:** It has two distinct emission phases- the short-lived prompt emission (the initial burst phase that emits gamma-rays), followed by a long-lived multi-wavelength afterglow phase.
- **Linkage with black holes:** The shortest GRBs likely mark the collision of two compact stellar remnants called neutron stars, and the longest bursts are thought to arise when a massive, rapidly spinning star collapses to form a black hole.
- **Sources of Gamma Ray:** They are produced by the hottest and most energetic objects in the universe, such as neutron stars and pulsars, supernova explosions, and regions around black holes. On Earth, gamma waves are generated by nuclear explosions, lightning, and the less dramatic activity of radioactive decay.

## GEOGRAPHICAL INDICATION (GI)

Marble from Ambaji, Gujarat's prominent pilgrimage site and Shaktipeeth, has been awarded the Geographical Indication (GI) tag for its high-quality white stone.



### About Ambaji Marble:

- **Nature:** It is a type of marble known for its stunning white appearance and unique natural patterns.
- **Nomenclature:** It is named after the town of Ambaji in the state of Gujarat, where it is predominantly quarried. It is also known as Amba White Marble and Ambe White Marble.

- **Uniqueness:** It is characterized by its pristine white colour, which often features subtle grey or beige veining. It has very long-lasting shine and durability.
- **Distinctive variations:** The veins can vary in intensity, ranging from fine and delicate to bold and pronounced, giving each slab a distinct and individualistic appearance. These variations occur naturally due to the presence of minerals and impurities during the marble formation process.
- **Uses:** The smooth and polished surface of the marble adds to its appeal and sophistication. It is widely used for luxury architectural projects, sculptures, and monuments.

### GLOBAL COOLING WATCH 2025

Global Cooling Watch 2025, launched recently at COP30 in Belém, Brazil, finds that cooling demand could more than triple by 2050 under business as usual.

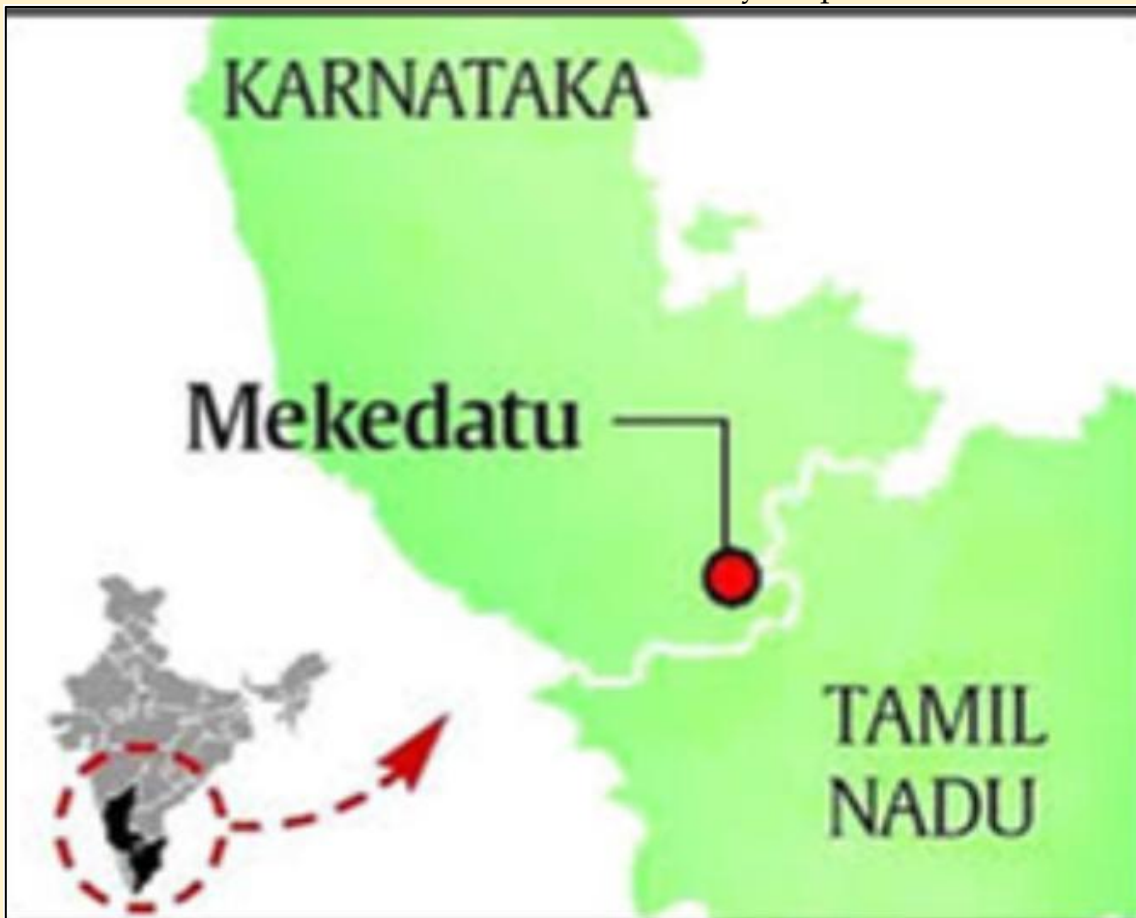


#### About Global Cooling Watch Report:

- **Nature:** The Global Cooling Watch 2025 is UNEP's second global assessment on the environmental, economic, and equity dimensions of cooling, providing the scientific foundation for the Global Cooling Pledge.
- **Publishing agency:** It is published by United Nations Environment Programme (UNEP).
- **Objective:** It aims to analyse global cooling trends, project future emissions, and propose a "Sustainable Cooling Pathway" to achieve near-zero emissions while ensuring equitable access to cooling worldwide.
- **Key highlights of Global Cooling Watch Report 2025:**
  - Global cooling capacity is projected to rise 2.6 times by 2050, driven by rapid urbanization, income growth, and intensifying heatwaves, particularly in developing nations.
  - Cooling demand in Article 5 countries (developing nations) is set to increase fourfold, highlighting a widening divide in energy use and infrastructure readiness between rich and poor economies.
  - Global electricity use for cooling may rise from 5,000 TWh (2022) to 18,000 TWh (2050), straining power grids and escalating peak load demands, especially in tropical regions.
  - Phasing down high-global-warming refrigerants (HFCs) and adopting low-GWP alternatives could eliminate up to 0.4°C of projected global warming this century.
  - So far, 72 nations and 80 organizations have joined the Global Cooling Pledge, collectively aiming for a 68% emission reduction in the cooling sector by 2050.

## MEKEDATU PROJECT

The Supreme Court Tamil Nadu's application challenging the proposed construction of a reservoir by Karnataka at Mekedatu across the inter-state river Cauvery as "premature".



### About Mekedatu Reservoir Project:

- **Location:** It is a multi-purpose (drinking water and power) project proposed by Karnataka. It is about 90 km away from Bengaluru and 4 km ahead of the border with Tamil Nadu.
- **Nature:** The Mekedatu project is a multipurpose project involving the construction of a balancing reservoir near Kanakapura in Ramanagara district, Karnataka.
- **Nomenclature:** Mekedatu, meaning goat's leap, is a deep gorge situated at the confluence of the rivers Cauvery and its tributary Arkavathi.
- **Objective:** Its primary objectives are to provide drinking water to Bengaluru and neighboring areas, totaling 4.75 TMC, and generate 400 MW of power.
- **Associated river:** The project is proposed at the confluence of the Cauvery River with its tributary Arkavathi.
- **Structure:** The plan involves building a 99-metre-high, 735-metre-long concrete gravity dam, an underground powerhouse, and a water conductor system.
- **Capacity of reservoir:** The expected capacity of the dam is 66,000 TMC (thousand million cubic feet) of water. Once completed, it is expected to supply over 4 TMC of water to Bengaluru city for drinking purposes.
- **Estimated cost:** The estimated cost of completing the project is around Rs 14,000 crores, covering an area of over 5,000 hectares.
- **Concerns:** Tamil Nadu, the lower riparian state has claimed that Mekedatu area represents the last free point in Karnataka from where Cauvery water flows unrestricted into Tamil Nadu, and Mekedatu dam project is an attempt by Karnataka to lock this free flow of water.



## EXPORT PROMOTION MISSION

The Union Cabinet has approved the Export Promotion Mission (EPM), a flagship initiative announced in the Union Budget 2025–26 to strengthen India's export competitiveness, particularly for MSMEs.



### About Export Promotion Mission (EPM):

- Built on collaboration: EPM is anchored in a collaborative framework involving the Department of Commerce, Ministry of MSME, Ministry of Finance, and other key stakeholders including state governments.
- Objective: It is a flagship initiative to strengthen India's export competitiveness, particularly for MSMEs, first-time exporters, and labour-intensive sectors. It will provide a comprehensive and digitally driven framework for export promotion.
- Implementing agency: The Directorate General of Foreign Trade (DGFT) will act as the implementing agency, with all processes – from application to disbursal – being managed through a dedicated digital platform integrated with existing trade systems.
- Time Period: It has a budget outlay of Rs. 25,060 crore for FY 2025–26 to FY 2030–31.
- Strategic shift: It marks a strategic shift from multiple fragmented schemes to a single, outcome-based, and adaptive mechanism.
- Consolidation of related schemes: It consolidates key export support schemes such as the Interest Equalisation Scheme (IES) and Market Access Initiative (MAI), aligning them with contemporary trade needs.
- Priority sectors: Under EPM, priority support will be extended to sectors impacted by recent global tariff escalations, such as textiles, leather, gems & jewellery, engineering goods, and marine products.
- Sub-schemes:
  - NIRYAT PROTSAHAN: It focuses on improving access to affordable trade finance for MSMEs through a range of instruments such as interest subvention, export factoring, collateral guarantees etc.
  - NIRYAT DISHA: It focuses on non-financial enablers that enhance market readiness and competitiveness such as export quality and compliance support, assistance for international branding, packaging, export warehousing and logistics etc.

## NATIONAL SOCIAL ASSISTANCE PROGRAMME (NSAP)

National Social Assistance Programme (NSAP) caters to 3.09 crore beneficiaries with a scheme-wise ceiling/ cap for each State/UT on the number of beneficiaries.



### About National Social Assistance Programme (NSAP):

- Launch: NSAP was launched on 15th August 1995 as a Centrally Sponsored Scheme.
- Objective; NSAP aims to provide support to aged persons, widows, disabled persons and bereaved families on the death of the primary income producer, belonging to below-poverty-line households.
- Nodal ministry: NSAP is implemented by the Ministry of Rural Development in collaboration with the state/UT governments.
- Step towards DPSPs: NSAP represents a significant step towards the fulfilment of the Directive Principles in Articles 41 and 42 of the Constitution of India.
- Components: NSAP has Five Sub-Schemes:
  - Indira Gandhi National Old Age Pension Scheme (IGNOAPS): Under the scheme, BPL persons aged 60 years or above are entitled to a monthly pension of Rs. 200/- up to 79 years of age and Rs.500/- thereafter.
  - Indira Gandhi National Widow Pension Scheme (IGNWPS): BPL widows aged 40-59 years are entitled to a monthly pension of Rs. 200/-.
  - Indira Gandhi National Disability Pension Scheme (IGNDPS): BPL persons aged 18-59 years with severe and multiple disabilities are entitled to a monthly pension of Rs. 200/-.
  - National Family Benefit Scheme (NFBS): Under the scheme a BPL household is entitled to a lump sum amount of money on the death of a primary breadwinner aged between 18 and 64 years. The amount of assistance is Rs. 10,000/-.
  - Annapurna: Under the scheme, 10 kg of food grains per month are provided free of cost to those senior citizens who, though eligible, have remained uncovered under NOAPS.
- Outcomes: NSAP has helped in reducing poverty, improving living standards, and enhancing the dignity and empowerment of the beneficiaries. It has also contributed to the achievement of the Sustainable Development Goals (SDGs) related to poverty eradication, social protection and inclusion.
- Selection of beneficiaries: Gram Panchayats and Municipalities play an active role in identifying eligible beneficiaries under the different NSAP schemes.
- Disbursement: Benefits are provided through DBT mode i.e beneficiary's bank or post office savings accounts, or via postal money orders.
- Monitoring: States and Union Territories have the flexibility to implement the schemes through any State Government department, but each must appoint a Nodal Secretary at the State level to oversee implementation with relevant departments.

## LICHENS

A team of researchers from Maharaja's College, Kochi, discovers four new species of lichens from Western Ghats.



- The newly identified species are *Parmotrema sahyadricum* (discovered from Wayanad), *Solenopsora rhizomorpha* (from Eravikulam and Mathikettanshola National Parks), *Buelloa ghattensis* (Mathikettanshola National Park) and *Pyxine janakiae* (Mathikettanshola National Park).
- The work that started in 2022 resulted in these discoveries. The team also recorded more than 50 species of lichens, which are new reports to the Kerala part of the Western Ghats.

### About Lichens:

- **Definition:** A lichen is a symbiosis between different organisms — a fungus and an algae or cyanobacterium.
- **Underlying basis:** The basis of their relationship is the mutual benefit that they provide each other.
- **Mechanism:** The photosynthetic algae or cyanobacteria form simple carbohydrates that, when excreted, are absorbed by fungi cells and transformed into a different carbohydrate.
- **Fungi contribute to the symbiosis** by absorbing water vapour from the air and by providing much-needed shade for the light-sensitive algae beneath.
- **Structure:** The composite body of a lichen is called a thallus (plural thalli); the body is anchored to its substrate by hairlike growths called rhizines.
- **Distribution:** Lichens are found worldwide and occur in a variety of environmental conditions.
- **Uniqueness:** They are a diverse group of organisms. They can colonize a wide range of surfaces and are frequently found on tree bark, exposed rock, and as a part of biological soil crust.
- **Benefits:** They are a keystone species in many ecosystems. They serve as a food source and habitat for many animals, such as deer, birds, and rodents. They protect trees and rocks from extreme elements such as rain, wind, and snow.
- **Pioneers of Colonization:** Lichens are considered as primary colonisers. These invade bare areas and contribute to soil formation by breaking down rock minerals both physically and chemically and thus creating conditions for other species such as mosses and liverworts to follow.



## EXERCISE MALABAR-2025

The participation of INS Sahyadri in Exercise Malabar-2025 reaffirms India's enduring partnership and its commitment to strengthening coordination, enhancing interoperability, and demonstrating a collective resolve to safeguard regional security.



### About Exercise Malabar:

- **Origin:** It started as an annual bilateral naval drill between India and the US in 1992.
- **Expansion of membership:** Japan joined in 2015, and Australia participated in Malabar 2020, making it a four-nation exercise under the Quad framework.
- **Location:** It takes place annually in the Indian Ocean and Pacific Oceans alternatively.
- **Evolution:** It has evolved into a key multilateral event aimed at enhancing interoperability, fostering mutual understanding, and addressing shared maritime challenges in the Indian Ocean and Indo-Pacific region.
- **Objective:** It aims to improve interoperability, coordination, and communication, focusing on joint fleet operations, anti-submarine warfare, gunnery drills, and airborne maritime missions.
- **Focus areas:** It highlights the convergence of views among the participating countries on maritime issues and their shared commitment to an open, inclusive Indo-Pacific and a rules-based international order.
- **Strategic Significance:** It strengthens Quad military interoperability, coordinated maritime operations, and freedom of navigation.

### 2 phases of Exercise Malabar 2025:

- **Harbour Phase:** It will feature operational planning and discussions, alignment on communication protocols, familiarisation visits between participating nations, and sports fixtures.
- **Sea Phase:** Following the harbour phase, all participating units will proceed in this phase, wherein ships and aircraft will take part in naval drills, focusing on joint fleet operations, anti-submarine warfare, gunnery serials and flying operations.

## RICIN

The Gujarat Anti-Terrorist Squad has busted a suspected terror syndicate by arresting a 'doctor' with a Chinese MBBS degree, who was allegedly preparing highly-lethal chemical poison, 'Ricin', and whose handler is associated with the Islamic State.



### About Ricin:

- **Source:** Ricin is a poison found naturally in castor beans. If castor beans are chewed and swallowed, the ricin that comes out can cause injury. Ricin can also be made from the waste material left over from processing castor beans.
- **Forms:** Ricin can be in the form of a powder, a mist, or a pellet. It can also be dissolved in water or weak acid.
- **Nature:** It is stable under normal conditions. However, it will not work if temperatures are over 80 degrees centigrade (176 degrees Fahrenheit).
- **Toxicity:** It is toxic when inhaled, ingested, or injected. As few as five to ten micrograms per kilogram can be lethal.
- **Mechanism:** Ricin works by getting inside the cells of a person's body and preventing the cells from making the proteins they need. Without the proteins, cells die. Eventually this is harmful to the whole body, and death may occur.
- **Potential of a biological weapon:** It is of special concern because of its potential use as a biological weapon. Accidental exposure to ricin is rare and results primarily from the ingestion of castor seeds.
- **Treatment:** Presently, no antidote exists for ricin. Symptomatic ricin poisoning is treated by providing supportive medical care to minimize the effects of the poisoning.

## KHANGCHENDZONGA NATIONAL PARK

The International Union for Conservation of Nature (IUCN) recently rated Khangchendzonga National Park as “good” in its latest global review of natural World Heritage sites. It is the only Indian park to receive this rating.



### About Khangchendzonga National Park:

- **Location:** It is located in the north of Sikkim. It lies entirely along the Sikkim-Nepal border.
- **Area:** It encompasses an area covering 1784 sq.km. It exhibits one of the widest altitudinal ranges of any protected area worldwide. The park has an extraordinary vertical sweep of over 7 kilometres (1,220 m to 8,586 m).
- **Part of UNESCO's MAB:** It is a part of the Khangchendzonga Biosphere Reserve (KBR), which is one of the 13 biosphere reserves, based on the UNESCO Man and the Biosphere (MAB) Programme.
- **One of the biodiversity hotspots:** It is a part of one of the 4 biodiversity hotspots in India (the Himalayas global biodiversity hotspot). The other 3 biodiversity hotspots are the Western Ghats, the Indo-Burma region, and the Sundaland region.
- **Uniqueness:** KBR is India's first “mixed” UNESCO World Heritage Site, recognised in 2016 for its combination of natural beauty and cultural importance.
- **Home to third highest mountain peak:** It is home to Mt. Khangchendzonga, the third highest peak in the world.
- **Contains some of the largest glaciers:** It has, in total, 18 glaciers, the largest one being Zemu Glacier, one of the largest glaciers in Asia.
- **Lepcha tribe:** It is one of the very few places where one can find the Lepcha tribal settlements.
- **Flora:** It mostly contains subtropical to alpine vegetation such as oak, fir, birch, maple, and rhododendron.
- **Fauna:** It is home to important flagship species such as the snow leopard, Tibetan wolf, red panda, blue sheep, Himalayan Tahr, and mainland serow, among many. It is home to nearly half of India's bird diversity.



## UN WATER CONVENTION

Bangladesh's accession to the UN Water Convention has a ripple effect that could cause problems with India after Bangladesh became the first country in South Asia to join the convention.



### About UN Water Convention:

- **Nomenclature:** It is also known as the Convention on the Protection and Use of Transboundary Watercourses and International Lakes.
- **Adoption:** It was adopted in Helsinki in 1992 and entered into force in 1996.
- **Amendment:** It was originally negotiated as a regional framework for the pan-European region. Following an amendment procedure, since March 2016 all UN Member States can accede to it.
- **Legally binding:** It is a unique legally binding instrument promoting the sustainable management of shared water resources, the implementation of the Sustainable Development Goals, the prevention of conflicts, and the promotion of peace and regional integration.
- **Mandate:** It requires Parties to prevent, control and reduce transboundary impact, use transboundary waters in a reasonable and equitable way and ensure their sustainable management. Parties bordering the same transboundary waters have to cooperate by entering into specific agreements and establishing joint bodies.
- **Does not replace bilateral and multilateral agreements:** As a framework agreement, the Convention does not replace bilateral and multilateral agreements for specific basins or aquifers; instead, it fosters their establishment and implementation, as well as further development.
- **Significance:** It is a powerful tool to promote and operationalize the achievement of the 2030 Agenda for Sustainable Development and its SDGs.

## FUNCTIONAL FOODS & SMART PROTEINS

India's food policy is evolving from ensuring *food security* to achieving *nutritional security*. Functional foods and smart proteins represent a technological and sustainable approach to address malnutrition, environmental degradation, and health challenges in a growing economy.

# Functional Foods and Smart Proteins

Functional foods and smart proteins were recently mentioned in the news in the context of India's nutritional security.

### What are Functional Foods?

- They are foods that provide **health benefits beyond basic nutrition**, either **naturally** or **leveraged through technologies** such as **nutrigenomics, bio-fortification, 3D food printing, and bioprocessing**.
- **Examples:** Vitamin-enriched rice, omega-3-fortified milk, probiotic yoghurt.

### What are Smart Proteins?

- These are **proteins sourced using biotechnology** that aims to reduce reliance on conventional production.
- **It includes:** Plant-based proteins (to mimic animal meat and dairy), fermentation-derived proteins, cultivated meat, etc.



### Main Arguments:

1. **Functional Foods:** These are enriched foods designed to enhance health or prevent diseases – examples include vitamin-fortified rice, iron-rich millets, or omega-3 milk. They employ technologies such as *nutrigenomics, bio-fortification, 3D food printing, and bioprocessing*. Japan pioneered their regulation in the 1980s.
2. **Smart Proteins:** These include **plant-based, fermentation-derived, and cultivated meat** sources developed using biotechnology to replace conventional animal-based proteins. Singapore became the first country (2020) to approve *cultivated chicken* for commercial sale.
3. **Need for Nutritional Security:** Despite economic progress, over one-third of Indian children remain stunted. Rising incomes and lifestyle changes are shifting public expectations from calorie sufficiency to nutrient-rich diets. Nutrition-focused policies can bridge the urban-rural divide and reduce non-communicable diseases.

4. **India's Emerging Ecosystem:** Under the *BioE3 policy*, the Department of Biotechnology (DBT) and *BIRAC* support innovation in functional foods and smart proteins. Bio-fortified crops like **zinc-rich rice (IIRR)** and **iron-rich pearl millet (ICRISAT)** mark key progress. Private players such as *Tata Consumer Products* and *ITCare* investing in fortified staples, while startups like *GoodDot* and *Evo Foods* lead the smart protein market.
5. **Global Economic Opportunity:** The global plant-based food market could reach between **\$85–240 billion by 2030**. India's strong agri-base and biotech sector can make it a major exporter while creating employment across agri, processing, and logistics sectors.

### Criticisms and Challenges:

1. **Regulatory Ambiguity:** FSSAI lacks a clear framework for *novel foods*, especially cultivated meat and precision-fermented proteins. Absence of regulation risks consumer mistrust and market misuse.
2. **Public Scepticism:** "Lab-made" foods face social and cultural hesitation in India. Misconceptions about safety and taste may limit acceptance.
3. **Technological and Skill Gaps:** Biomanufacturing requires high-end research, infrastructure, and skilled manpower, which remain limited in India's agri-food sector.
4. **Equity and Market Concentration:** Without proper regulation, large corporations may dominate, marginalising farmers and small-scale producers.
5. **Environmental Sustainability:** Although smart proteins reduce livestock pressure, their energy-intensive production could offset climate gains if not managed sustainably.

### Reforms and Policy Measures:

1. **Regulatory Clarity:** A national *novel food framework* under FSSAI should define categories, safety standards, and labelling norms for functional and alternative protein products.
2. **Institutional Coordination:** Ministries of Biotechnology, Agriculture, and Health must align policies for nutritional transformation through integrated food value chains.
3. **Public-Private Partnerships:** To scale biomanufacturing, attract R&D investments, and develop indigenous technologies like *precision fermentation*.
4. **Workforce Upskilling:** Training in biotechnology and food sciences to enable rural participation in new agri-bio value chains.
5. **Public Awareness Campaigns:** Transparent communication, consumer education, and farmer inclusion are essential to build trust and acceptance.

India's next phase of food transformation must go beyond calorie sufficiency to *nutrition and sustainability*. Functional foods and smart proteins can address malnutrition, climate change, and rural employment together—if guided by sound regulation, innovation, and inclusivity. As Shambhavi Naik notes, biotechnology's benefits must "extend across society" to ensure a truly equitable nutritional future.

**CLICK HERE**

Monthly Current Affairs Magazine







# KERALA STATE CIVIL SERVICE ACADEMY

Established under Centre for Continuing Education Kerala (CCEK)

## NURTURING YOUNG MINDS TOWARDS TOMORROW'S CIVIL SERVICE

### COURSES

#### ➤ Prelims Cum Mains Regular Batch

Course Fee: ₹ 49,200 (₹ 40,000 + 18% GST ₹ 7,200 + Caution Deposit ₹ 2,000)

#### ➤ Prelims Cum Mains Weekend Batch

For the Working Professionals & students who are doing their UG/PG

◆ Course Fee: Ongoing Degree/PG students: ₹ 41,300 (₹ 35,000 + 18% GST ₹ 6,300)

◆ Course Fee: Working Professionals : ₹ 49,200 (₹ 40,000 + 18% GST ₹ 7,200 + Caution Deposit ₹ 2,000)

#### ➤ Civil Service Foundation Course

For Higher Secondary School Students

Course Fee: ₹ 5,900 (₹ 5,000 + GST ₹ 900)

#### ➤ Talent Development Course

For High School Students

Course Fee: ₹ 4720 (₹ 4,000 + 18% GST ₹ 720)

#### ➤ REHEARSE- Prelims Test Series

38 Test papers including 3 exclusive current affairs tests and 5 CSAT papers

#### ➤ RESILIENCE- Mains Test Series

17 Tests including compulsory papers

#### ➤ REKINDLE- PCM REPEATERS BATCH

Mentorship, Weekly Current Affairs classes, Bi Weekly CSAT classes, Prelims Test Series, Revision classes, Extensive Answer Writing class / Practices

#### ➤ REPHRASE- Mains Answer Writing Programme

This answer writing exercise will cover Essay, General Studies - I, General Studies - II, General Studies -III & General Studies -IV papers

**R** EHEARSE  
ESILIENCE  
EKINDLE  
EPHRASE

### KEY HIGHLIGHTS

- Prelims & Mains test series with All Kerala rank list.
- Expert faculties.
- Library facility across the centres.
- Instalment facility for fee payment available to BPL category students.

### Optional Subjects

**Geography, History, Malayalam, Political Science & International Relations,  
Public Administration and Sociology**

Course Fees : Rs. 11,800/- (Fees Rs 10,000/- + GST Rs.1,800/-).

### KERALA STATE CIVIL SERVICE ACADEMY

Charachira, Kowdiar P.O. Thiruvananthapuram - 695003. Phone: 0471-2313065, 2311654,  
Email: directorceek@gmail.com, info.ceek@gmail.com Web : <https://kscca.org>

LOG ON



For more details contact:

**82810 98864**

THIRUVANANTHAPURAM: 8281098864 || KOLLAM: 8281098867 || KONNI: 8281098872 || CHENGANNUR: 8281098871 || KOTTAYAM :  
8281098863 || ERNAKULAM: 8281098873 || IDUKKI : 8281098863 || THRISSUR: 8281098874 || PALAKKAD : 8281098869 || PONNANI :  
8281098868 || KOZHIKODE : 8281098870 || WAYANAD : 9496810543 || KALLIASSERY: 8281098875 || KASARAGOD : 8281098876