theIAShub

the IAS hub
Be Your Dream.

MARCH
31

CRUX 10

10 News. 10 Sources. One Place

THE HINDU
ET
BS
TOI
The Indian EXPRESS
livemint
pib
DownToEarth
FORTNIGHTLY ON POLITICS OF DEVELOPMENT, ENVIRONMENT AND HEALTH
Science Reporter
विज्ञान एवं प्रौद्योगिकी मंत्रालय
MINISTRY OF SCIENCE AND TECHNOLOGY
सत्यमेव जयते



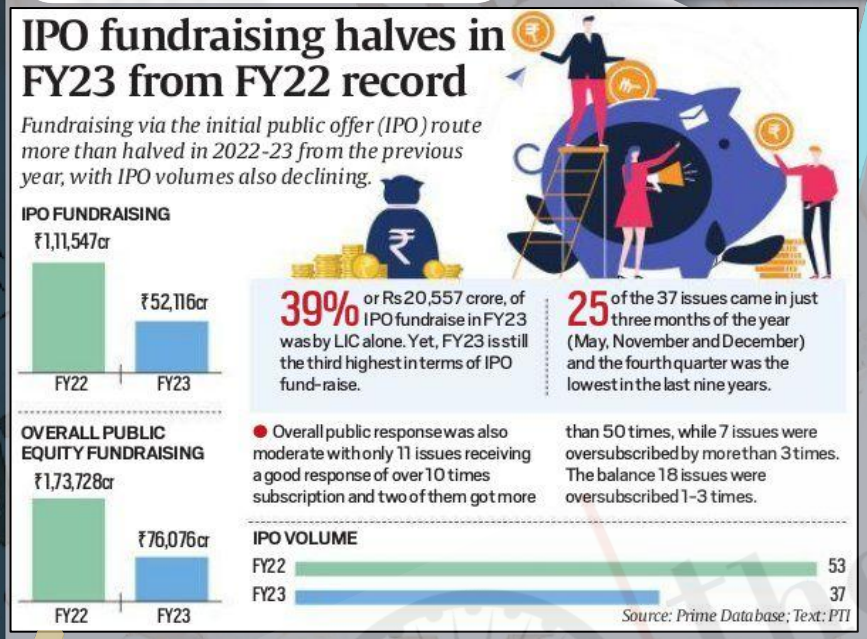
MK Yadav Sir

Table of Contents

1. Initial Public Offering
2. H1B Visa
3. Food Labelling Regulations
4. Policy for Rare Diseases
5. Salt Marshes
6. Gamma Ray Bursts
7. Perovskite Solar Cells
8. LYNX U2 GFCS
9. IN-SPACe
10. Vaikom Satyagraha

INITIAL PUBLIC OFFERING

(Syllabus: GS Paper 3 - Economy)



Context: The total amount raised through **initial public offerings (IPOs)** more than halved to Rs 52,116 crore in FY23 from an all-time high collection of Rs 1,11,547 crore in the previous fiscal, according to an analysis.

Initial Public Offering (IPO)

- **About**: IPO is the **selling of securities** to the public in the primary market.
  - **Primary market** deals with new securities being issued for the first time. It is also known as the new issues market.
  - It is different from the **secondary market** where existing securities are bought and sold. It is also known as the **stock market or stock exchange.**
  - It is when an **unlisted company** makes either a fresh issue of securities or an offer for sale of its existing securities or both for the first time to the public.
  - **Unlisted companies** are companies that are not listed on the stock exchange.
  - It is generally **used by new and medium-sized firms** that are looking for funds to grow and expand their business.
- **Eligibility criteria for companies willing to float an IPO:**
  - **Tangible assets** of at least Rs 3 crore
  - Exhibit **average operating profits** of Rs 15 crore in the preceding three years with no operating losses in any one of those years.
  - **Net worth of Rs 1 crore** in each of the three preceding years.
- **Investors Eligibility:**
  - **Qualified Institutional Buyers (QIBs)** is a category of investors that includes Foreign Portfolio Investors (FPIs), mutual funds, commercial banks, insurance companies, pension funds, etc.
  - QIBs are those institutional investors who are generally perceived to possess expertise and the financial capacities to evaluate and invest in the capital markets.
  - **All individuals** who invest up to Rs 2 lakh in an issue are classified as retail investors.
  - **Retail investors i**nvesting above Rs 2 lakh are classified as high net worth individuals.
- **Benefits**:
  - The funds raised by IPO allows the company to **invest in new capital equipment and infrastructure.**
  - An IPO paves **way for listing and trading** of the issuer's securities on the Stock exchange market.
  - The IPO also allows the company to **attract top talent** because it can offer stock options to its employees. This enables the company to pay its executives fairly **low wages initially.** And later, in return, the employees as promised can cash out with the IPO.

ECONOMIC TIMES
Page 16

H1B VISA

(Syllabus: GS Paper 3 - Economy & Employment)

H-1B Holders' Spouses can Work: US Court

CLEARING WAY Washington DC court's ruling will benefit thousands of Indians holding H-4 visas

Our Bureau

Pune: A Washington DC court has dismissed a lawsuit challenging the rights of H-4 visa holders to work in the US, a ruling that will benefit thousands of Indians in that country.

The H-4 visa is issued to spouses who accompany H-1B job visa holders to the US. They are allowed to apply for employment authorisation (EAD) to legally work in the US.

It is estimated that about 90% of the over 90,000 H-4 EAD holders are Indian women.

The lawsuit had been filed by Save Jobs USA, a group of US nationals who say their jobs have been taken by foreign nationals.

It questioned the authority of the homeland security department (DHS) to issue employment authorisation to spouses of highly skilled H-1B visa holders.

This was opposed by several large companies such as Amazon, Google, Microsoft and Apple that are among the biggest employers of H-1B visa holders. They argued that allowing spouses of H-1B holders to find jobs in the US has been a major attraction for highly skilled foreign workers to take up jobs in the country.

US District Judge Tanya Chutkan rejected the contention by Save Jobs USA.

"Plaintiff's primary contention is that Congress has never granted DHS authority to allow foreign nationals, like H-4 visa holders, to work during their stay in the United States," the judge wrote in her order, according to a Bloomberg report.

Right to Work

About 90% of the over **90,000** H-4 EAD holders are Indian women

The lawsuit was opposed by several large companies, some of the biggest employers of H-1B visa holders

They argued that allowing spouses of H-1B holders to find jobs has been a major attraction for highly skilled foreign workers to take up jobs in the country



Context: A Washington DC court has dismissed a lawsuit challenging the rights of **H-4 visa holders** to work in the US, a ruling that will benefit thousands of Indians in that country.

- The **H-4 visa is issued to spouses who accompany H-1B job visa holders** to the US.
- They are allowed to apply for employment authorisation (EAD) to legally work in the US.

H1B Visa

- **About**: It is a **multiple entry non-immigrant visa** which allows foreign workers employed by US companies to work in the United States.
  - The workers under H1B visas should be **engaged in specialised occupations** such as science, medicine, engineering and mathematics.
- **Eligibility**: H1B applicants **must have at least a US bachelor's degree or equivalent.**
  - Generally this visa is **granted for a period of three years** and can be extended for an additional three years for special circumstances.
  - H-1B visa requires the **employer to apply on the person's behalf.**
- **Key benefits**: Holders of H1B visas **can sell or buy property** and invest in the stock market in the United States.

L1 Visa

- **About**: L1 Visa is an **Intra-Company Transferee Visa.**
  - It allows large multinationals (need not be a US company) - with operations across various countries - to **shift employees in specialized positions** on a temporary basis to the US.
- **Types**: There are two types of L1 visas - **L1A and L1B.**
  - **Managers and executives** come under the category of L1As while L1Bs **encompass workers** with specialized knowledge.
- **Key features:** There is **no education requirement** for the L1 visa.
  - L-1A visa holders are **allowed a maximum stay of seven years** in the U.S while s L-1B visa holders are allowed a maximum stay of five years.

TIMES OF INDIA

Page 1

FOOD LABELLING REGULATIONS

(Syllabus: GS Paper 3 - Food Processing industry)

FSSAI accepts states' 'nahi' to 'dahi'

TIMES NEWS NETWORK

Chennai: Drawing flak from the southern states, the Food Safety and Standards Authority of India issued on Thursday a revised notification to say that food business operators may use the term "curd" along with any other prevalent common name in a regional language, such as "thayir", "mosaru", "zaamut daud" or "dahi", in brackets on the labels of curd packets sold in those states.

Getty Images/iStockphoto



DIFFERENT TONGUES

The revision follows a strong backlash from Tamil Nadu, Karnataka and Kerala to a notification issued on January 11 on FSSAI's conditions regarding the labelling of curd in Hindi. It had asked state agencies, including Aavin of Tamil Nadu and Nandini of Karnataka, to use "dahi" instead of "thayir" or "mosaru" on curd packets. Thursday's FSSAI notification acknowledged that "many representations" had been received.

Tamil Nadu chief minister MK Stalin had slammed the instruction as "unabashed Hindi imposition" on the southern states and had cautioned that forces guilty of such "brazen disregard to our mother tongues" would be "banished from the South forever".

Former Karnataka IPS officer and TN BJP chief K Annamalai, too, had written to FSSAI demanding that the order be rolled back.

On Thursday, Annamalai welcomed the new notification from FSSAI.

Context: Drawing flak from the southern states, the **Food Safety and Standards Authority of India** issued a revised notification to say that food business operators may use the term "curd" along with any other prevalent common name in a regional language, such as "thayir", "mosaru", "zaamut daud" or "dahi", in brackets on the labels of curd packets sold in those states.

- The revision follows a strong backlash from Tamil Nadu, Karnataka and Kerala to a notification issued on January 11 on FSSAI's conditions regarding the labelling of curd in Hindi.

Food Labelling Regulations in India

- **About**: All food products sold in India that are prepackaged must comply with the **Food Safety and Standards (Packaging and labeling) Regulations, 2011.**
  - The Food Safety and Standards Regulation, 2011 is a notification issued by the Food Safety and Standards Authority of India under the **Ministry of Health and Family Welfare.**
- **Applicability of Food Labelling Regulations:** The food labeling regulations require all **"Prepackaged" or "Pre-packed food"** to comply with the labeling regulations in India.
  - As per the rules, **prepackaged food** means food placed in a package of any nature in such a manner that the contents cannot be changed without tampering and which is ready for sale to the consumer.

General Labelling Requirements

- The label must be in **English or Hindi**, or the Devnagri language.
  - In addition to the above, the title can contain Information in **any other language,** as required.
- The label must **not contain Information about the food that could be deemed false**, misleading, deceptive, or otherwise create an erroneous impression regarding the product.
- The label **must be affixed to the container** so that it would not easily be separated from the container.
- The contents or Information presented on the label should be **clear, prominent, memorable, and readily legible by the consumer.**
- If a wrapper covers the container, then the **wrapper must contain necessary Information** or make the label of the product inside readily legible by not obscuring.
- The **name of the food must be mentioned** along with the trade name and description.
- In case the food contains more than one ingredient, then **a list of ingredients** must be presented in descending order of their composition by weight or volume, as the case may be, at the time of its manufacture.

PIB

MARCH 31

NATIONAL POLICY FOR RARE DISEASES

(Syllabus: GS Paper 2 - Health)

Customs duty full exemption for all imported drugs&Food for Special Medical Purposes for personal use for treatment of all Rare Diseases

Context: The Central Government has given full exemption from basic customs duty on all drugs and Food for Special Medical Purposes imported for personal use for treatment of all Rare Diseases listed under the **National Policy for Rare Diseases 2021** through a general exemption notification.

- **Rare diseases (also called "Orphan" diseases)** are broadly defined as diseases that infrequently occur in a population and three markers are used (the total number of people with the disease, its prevalence, and the availability/non-availability of treatment options).

National Policy for Rare Diseases, 2021

- **About**: It offers **financial support for one-time treatment** of up to Rs. 20 lakh, introduces a crowdfunding mechanism, creates a registry of rare diseases and provides for early detection.
- **Origin**: It was first prepared by the Centre in 2017 but was put on hold due to questions on its formation, criterias, cost sharing, beneficiaries, etc.
  - An expert group was constituted in 2018 to review these questions, which submitted its report in January 2021 and after a further round of consultation, the policy has been made public.
- **Three groups:** It categories 'rare disease' into three groups:
  - **Group 1**: Disorders amenable to **one-time curative treatment.**
    - Eligible for a **one-time treatment cost of up to Rs. 20 lakh** provided the beneficiaries conformed to definition of the **Pradhan Mantri Jan Arogya Yojana** and were treated in government tertiary care hospital, under the umbrella scheme of **Rashtriya Arogya Nidhi (RAN).**
    - RAN provides for **financial assistance to patients, living below poverty line (BPL)** and who are suffering from major life threatening diseases, to receive medical treatment at any of the super specialty Government hospitals/institutes.
  - **Group 2**: Diseases requiring **long term/lifelong treatment** having relatively lower cost of treatment and benefit has been documented in literature and annual or more frequent surveillance is required.
  - **States could "consider" supporting patients** of such rare diseases that could be managed with special diets or hormonal supplements.
  - **Group 3**: Diseases for which **definitive treatment** is available but challenges are to make optimal patient selection for benefit, very high cost and lifelong therapy.
- **Centres of Excellence**: The government would notify **selected Centres of Excellence at premier government hospitals** for comprehensive management of rare diseases.
  - The Centres of Excellence would be **provided a one-time grant to a maximum of Rs. 5 crore** each for infrastructure development for screening, tests, treatment.



DTE

MARCH 31

SALT MARSHES

(Syllabus: GS Paper 3 - Env & Eco)



More than 90% of the world's salt marshes may soon succumb to sea level rise: Study

In a sea level rise scenario, the only solution left with plants will be to colonise new areas or to go uphill, but this may not be possible in some places

NEXT NEWS >

By Arya Rohini

Published: Thursday 30 March 2023

Context: More than 90 percent of **Salt marshes** may soon succumb to sea level rise by the turn of the century, according to a new research.

- Scientists from the Marine Biological Laboratory (MBL) have been tracking vegetative cover in **Great Sippewissett Marsh in Falmouth, Massachusetts,** for the last 50 years to analyse the implications of higher nitrogen levels on marsh grass species.

Key Points

- **Increased nitrogen** favoured higher levels of vegetation and accretion of the marsh surface.
- Marshes all over the globe experience **'coastal squeeze,'** where their movement is obstructed by sea level rise, anthropogenic activities and geographical factors.
- In a **sea level rise** scenario, the only solution left with plants will be to colonise new areas or to go uphill.

Salt marshes

- **About**: These are **coastal wetlands** that are flooded and drained by salt water brought in by the tides.
  - They are marshy because the soil may be composed of **deep mud and peat.**
  - **Peat is made of decomposing plant matter** that is often several feet thick.
  - Peat is waterlogged, root-filled, and very spongy.
- **Hypoxia condition:** Because salt marshes are frequently submerged by the tides and contain a lot of decomposing plant material, **oxygen levels in the peat can be extremely low** - a condition called hypoxia.
  - Hypoxia is **caused by the growth of bacteria** which produce the sulfurous rotten-egg smell that is often associated with marshes and mudflats.

- **Significance**: These intertidal habitats are essential for **healthy fisheries, coastlines, and communities** - and they are an integral part of our economy and culture.
  - They also provide **essential food, refuge, or nursery habitat** for more than 75 percent of fisheries species, including shrimp, blue crab, and many finfish.
  - Salt marshes also **protect shorelines from erosion** by buffering wave action and trapping sediments.
  - They **reduce flooding by slowing and absorbing rainwater** and protect water quality by filtering runoff, and by metabolizing excess nutrients.

DTE

MARCH 31

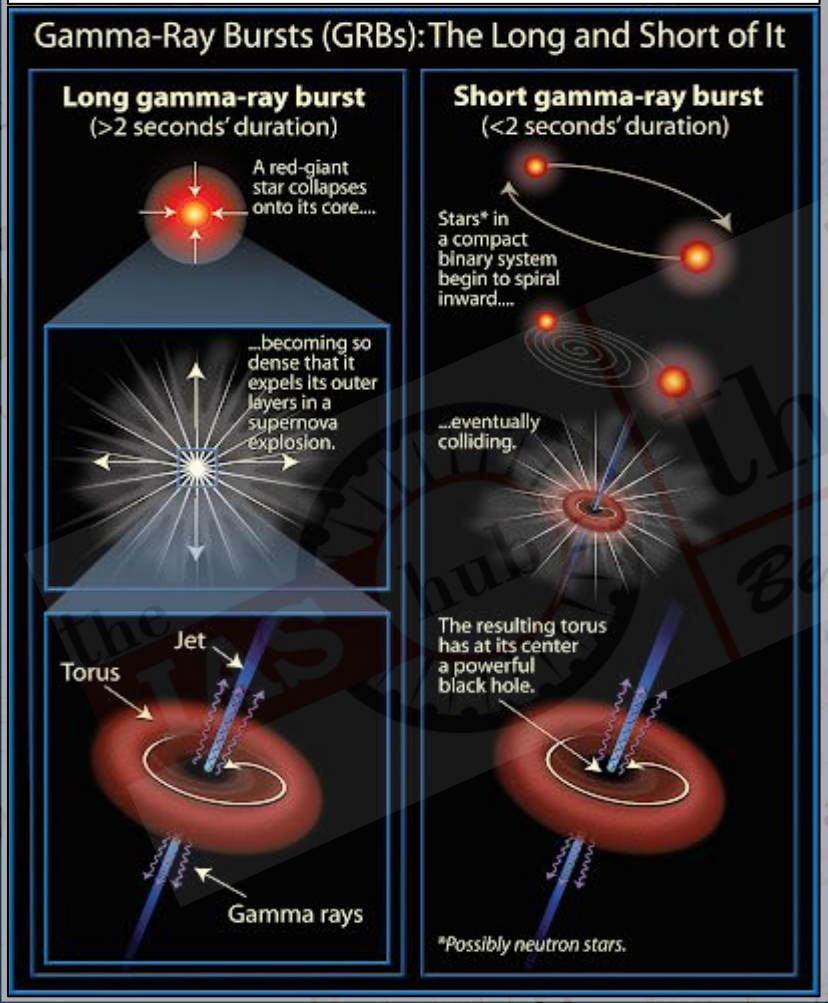
GAMMA RAY BURSTS

(Syllabus: GS Paper 3 - Sci & Tech)

A cosmic explosion in 2022 was the brightest ever – and may overturn decades-long theory on gamma ray bursts

New analysis by Pune institute shares more possibilities of reasons behind fast-moving jets that produce X-ray and visible light in the afterglow

By Himanshu Nitnaware
Published: Wednesday 29 March 2023



Context: The brightest **gamma-ray radiation** of all time was recorded by astronomers around the world in October 2022.

- Now, data from the radiation pulse may help overturn a decades-long theory of **gamma ray burst (GRB) jets**, according to a new study.

Key Points

- The observations of the radiation named **GRB 221009A** throw a fresh light on the long quest to fathom the origin of the noted extreme cosmic explosions.
- Astronomers concluded such signals were **a birth cry of a black hole.**
- The phenomenon of the **formation of a new black hole** releases powerful plasma jets almost of the speed of light shooting gamma rays.

Gamma ray burst (GRB)

- **About**: GRBs are a very **bright and powerful explosion of gamma rays,** the most energetic form of light.
  - Most GRBs are caused by **massive stars** collapsing into black holes or by the merging of **two neutron stars.**
  - GRB (Gamma ray burst) jets are **luminous explosions** that pierce through the star, emitting gamma rays and X-rays as they stream through space.
- **Significance**: They are important to study because they can give us **insights into the early universe** and the processes that drive the most powerful explosions in the cosmos.

DST

MARCH 31

PEROVSKITE SOLAR CELLS

(Syllabus: GS Paper 3 - Sci & Tech)

Perovskite Solar Cells with enhanced stability fabricated using inorganic material

Context: Scientists have developed **copper thiocyanate (CuSCN**) as a dopant-free and robust hole transporting material (HTM) for PSCs.

- Their studies have shown that inorganic CuSCN, with a large band-gap of 3.9 eV, minimum valence band offset, and high hole mobility, can be a cost-effective and industry viable alternative HTM for stable **Perovskite solar cells (PSCs).**

Key Points

- **Perovskite solar cells (PSCs)** with increased stability have been fabricated with the help of the inorganic hole transporting material **copper thiocyanate (CuSCN).**
  - A **perovskite solar cell (PSC)** is a type of solar cell that includes a perovskite-structured compound, most commonly a hybrid organic–inorganic lead or tin halide-based material as the light-harvesting active layer.
  - **Perovskite materials**, such as **methylammonium lead halides** and all-inorganic caesium lead halide, are cheap to produce and simple to manufacture.
- The chemical has proved to be a **cost-effective** and industry viable alternative to Spiro hole transporting material (HTM) for stable PSCs.
- **Metal halide perovskite solar cells (PSCs)** have caught the attention of the photovoltaic research community for their high power conversion efficiencies (PCEs), surpassing thin film and multi-crystalline silicon solar cells.
  - However, the **critical issue of their stability** under atmospheric conditions needs to be addressed before outdoor deployment.
- Typically, **PSCs use hygroscopic dopants** to p-dope the Spiro hole transporting material (HTM), which is suitable due to its favourable energy level and solution processability.
- Unfortunately, this **leads to moisture ingress into the device,** degrading the perovskite absorber and solar cell performance.

PIB

MARCH 31

LYNX U2 GFCS

(Syllabus: GS Paper 3 -Defence Tech.)

Aatmanirbhar Bharat: MoD signs contract with BEL for 13 Lynx-U2 Fire Control Systems for Indian Navy worth Rs 1,700 crore

Context: Ministry of Defence signed a contract with Bharat Electronics Limited, Bangalore for procurement of 13 **Lynx-U2 Fire Control Systems** for Indian Navy at a total cost of over Rs 1,700 crore under Buy **{Indian - IDMM (Indigenously Designed Developed and Manufactured)}** category.



LYNX U2 GFCS

- **About**: It is a **Naval Gun Fire Control System.**
  - The Gunfire Fire Control System is designed with **open and scalable architecture** that permits simple and flexible implementation in different configurations.
- **Main features of LYNX U2 GFCS:**
  - It has been designed to **track and engage targets amidst sea clutter.**
  - It can accurately **track air and surface targets.**
  - Also, it can generate required target data to **predict weapon aiming points.**
  - The target engagement is done using **Russian A190, AK176 and AK630.**
  - The system has **servo and weapon control modules,** tracking radars. It ensures **maximum up-time.**

LIVE MINT

Page 8

IN-SPACe

(Syllabus: GS Paper 3 - Space Sector)

Space design lab for startups opens in Ahmedabad

India has unveiled a state-of-the-art design lab in Ahmedabad to enable space sector startups to transform their innovative ideas into implementable models at a faster pace.

The Space Systems Design Lab of the Indian National Space Promotion and Authorization Centre (IN-SPACe) was inaugurated by ISRO chairman S. Somanath at Bopal in Ahmedabad earlier this week.

The IN-SPACe design lab consists of high-end analysis and simulation software for mission simulation, modelling, visualizing, optimising payload and spacecraft, ground station, and launch vehicle avionics, IN-SPACe chairman Pawan Goenka said. He said the lab resources will help build prototypes with the least iterations, thus significantly reducing the turnaround time and research and development costs for start-ups.

The lab has the computing resources comprising 16 workstations and high-performance computing multi-core (up-to 400 core) servers, a statement from IN-SPACe said. PTI



IN-SPACe chairman Pawan Goenka.

Context: A new laboratory for space systems design was inaugurated at the **Indian National Space Promotion and Authorization Centre (IN-SPACe).**

Key points

- The lab is aimed at **enabling space startups** to implement innovative ideas on-board.
- The IN-SPACe is a **key facilitator and promoter of the space activities** of non-government entities (NGE) in the country.
- The lab is equipped with 16 workstations and **high-performance computing multi-core servers.**
- The software resources available at the lab include system tool kit, advance design systems, pathwave system design, high frequency structure simulation, **3D CAD Mach 3, Simcenter 3D space system (thermal and cooling), finite element analysis structure (FEAST),** and OpticStudio (Zemax) among others. These resources will be useful for mission planning.

IN-SPACe

- **About**: It is an **autonomous and single window nodal agency** in the **Department of Space** for the promotion, encouragement and regulation of space activities of both government and private entities.
  - The establishment of IN-SPACe was announced in June **2020**.
- **Functions**: IN-SPACe will act as a single window, independent nodal agency to **take care of all the needs of the private sector.**
  - It also **facilitates the usage of ISRO facilities** by private entities.

THE HINDU Page 6

VAIKOM SATYAGRAHA

(Syllabus: GS Paper 1 - Modern History)

T.N. to celebrate Vaikom centenary

The Hindu Bureau
CHENNAI

Tamil Nadu Chief Minister M.K. Stalin announced in the Assembly on Thursday that his government was planning year-long events to commemorate the Vaikom Satyagraha that was launched to end caste discrimination in a local temple a century ago.

Making a *suo motu* statement, Mr. Stalin said Vaikom Award would be given to eminent personalities or organisations that worked for the welfare of oppressed sections beyond the State borders. It would be awarded on Periyar E.V. Ramasamy's birth anniversary on September 17, which is also being observed as Day of Social Justice by Tamil Nadu.

Periyar was among the leaders who took part in the movement and went on to earn the title 'Vaikom Veerar'. The government would take steps towards issuing a commemorative stamp to mark the centenary of the satyagraha.

Memorial for Periyar

On November 29, 2023 a grand event would be held by the Tamil Nadu government. Mr. Stalin, his Kerala counterpart Pinarayi Vijayan and several personalities would take part in it. The memorial for Periyar at Vaikom in Kerala would be renovated at a cost of ₹8.14 crore and efforts would be taken to set up a memorial at Aruvikutti, where Periyar was held in jail for the first time.

Researcher Pazha Adhiyaman's book *Vaikom Protest* in Tamil would be translated into Malayalam. It would also be published in Telugu, Kannada and English. A book on the movement would be published by the Tamil Nadu Textbook and Educational Services Corporation.

Context: On the beginning of the **centenary of the Vaikom Satyagraha**, Tamil Nadu Chief Minister announced that his government was planning a year-long celebration of the movement that was launched to end caste discrimination in a temple in colonial Kerala.

Vaikom Satyagraha

- **About**: It was a movement in **Travancore** (modern-day Kerala) for temple entry of the depressed classes.
  - Vaikom was at that time a part of the **princely state of Travancore.**
- **Background:** According to the prevalent caste system in Kerala and the rest of India, **low-caste Hindus were not allowed to enter into the temples.**
  - In Kerala, they were **not allowed even to walk on the roads** that led to the temples also.
  - In Kerala, a committee was formed comprising people of different castes to fight untouchability.
  - The committee chaired by **K Kelappan, comprised of T K Madhavan, Velayudha Menon, K Neelakantan Namboothiri and TR Krishnaswami Iyer.**
  - In February 1924, they decided to launch a **'Keralaparyatanam'** in order to get temple entry and also the right to use public roads for every Hindu irrespective of caste or creed.
- **The movement: Gandhiji, Chatampi Swamikal and Sree Narayana Guru** supported the movement.
  - The movement **gained prominence in the whole of India** and support came from far and wide.
  - The **Akalis of Punjab supported** by setting up kitchens to provide food to the Satyagrahis.
  - Even **Christian and Muslim leaders were in support** of the movement. However, Gandhiji was not entirely convinced by this as he wanted the movement to be an intra-Hindu affair.
  - On Gandhiji's advice, the movement was taken back temporarily in April 1924.
  - **E V Ramaswami Naicker (Periyar)** came from Tamil Nadu to support the movement and then he was arrested.
  - On 23rd November 1925, **all the gates of the temple were opened to Hindus** except the eastern gate. In 1928, backward castes got the right to walk on public roads leading to all temples in Travancore.

Secure Top Rank with theIAShub Courses

Prelims 2023 Courses

01 Prelims Crash Course Score Enhancement Program (SEP)

02 INA Current Affairs (Prelims)

03 TACKLE - Prelims Test Series

04 Geography - Prelims Crash Course

Quality Enrichment Courses (Mains 2023)

01 Quality Enrichment Program (QEP)

02 Science of Answer Writing (SAW)

Prelim Cum Mains 2024 Courses

01 NEEV GS Foundation 2024/25

02 INA Current Affairs Pre Cum Mains - 2024

FREE Download PDF

Login to theiashub.com

- Aaj Ka Quality Enrichment (Toppers' Favourite PDF)
- News-CRUX-10 (10 News. 10 Sources. One Place)
- Monthly Editorials (The Hindu & Indian Express)
- Daily Quiz (Prelims)
- Government Schemes & Ministry Wise Year End Review
- Free Enrichment PDFs (Tailor Made Crisp Study Material)



Log On To Our Unique
Free Answer Writing Sessions with Toppers (FAST) Portal
& Start Practicing!

SCAN HERE

9560082909

t.me/theiashub

/mkyadav

www.theiashub.com

www.theiashub.com