

SAHITYA AKADEMI YUVA PURASKAR



A 26-year-old writer from the tribal thanda of Vivek Nagar in Jakranpally mandal of Nizamabad district, Ramesh Karthik Naik, was awarded the Sahitya Akademi Yuva Puraskar for Telugu.

- It was first instituted in 2011.
- It is presented annually to best literary creations by the young writers of age 35 or below in all the 24 recognized languages.
- The Yuva Puraskar is conferred on eligible young writers for creative original works.
- It is the only Akademi award open for nominations by publishers and self-nominations by writers.
- The Yuva Puraskar comprises a plaque, shawl, citation and a cheque for Rupees Fifty Thousand (₹ 50,000).
- A posthumous publication is not eligible for Award.

Key points about the Sahitya Akademi

- It was formally inaugurated by the Government of India on 12 March 1954.
- Sahitya Akademi, India's National Academy of Letters, is the central institution for literary dialogue, publication and promotion in the country and the only institution that undertakes literary activities in 24 Indian languages, including English.
- Though set up by the Government, the Akademi functions as an autonomous organisation.
- It was registered as a society under the Societies Registration Act, 1860.



WHAT IS LOK ADALAT?

The Supreme Court has decided to organise a special Lok Adalat to facilitate amicable settlements of suitable pending cases, commemorating the 75th year of its establishment.

- It is one of the **alternative dispute redressal mechanisms** in India.
- It is a forum where disputes/cases pending in the court of law or at the **pre-litigation stage are settled/compromised** amicably.
- The Lok Adalat has been given statutory status under the **Legal Services Authorities Act, 1987**.
- Lok Adalats can be organized at the **district, state and national levels**.
 - The State/District Legal Services Authority or the Supreme Court/High Court/Taluk Legal Services Committee may organise Lok Adalat at such intervals and places and for exercising such jurisdiction and in such areas as it thinks fit.
- Every Lok Adalat organised for an area shall consist of such number of **servicing or retired judicial officers** and other persons of the area as may be specified by the agency organizing.
 - Generally, a Lok Adalat consists of a **judicial officer as the chairman and a lawyer** (advocate) and a **social worker** as members.
- There is **no court fee** payable when a matter is filed in a Lok Adalat.
- If a matter pending in the court of law is referred to the Lok Adalat and is settled subsequently, the court fee originally paid in the court on the complaints/petition is also refunded back to the parties.
- Dispute resolution in the Lok Adalat courts takes place by direct interaction of the Adalat members with the parties concerned.
- Lok Adalats possess jurisdiction over a diverse array of cases, including **civil disputes, criminal cases (compoundable offences) and family matters**.

Nature of cases to be referred to Lok Adalat

- Any case pending before any court
- Any dispute which has not been brought before any court and is likely to be filed before the court

- Provided that any matter relating to an offence not compoundable under the law shall not be settled in Lok Adalat.

Permanent Lok Adalat:

- The Legal Services Authorities Act, 1987, was amended in 2002 to provide for the establishment of the Permanent Lok Adalats to deal with cases pertaining to **public utility services** like transport, postal, telegraph, etc.
- These have been set up as **permanent bodies** and consists of a Chairman and two members
- It shall not have jurisdiction in respect of any matter relating to an offence not compoundable under any law.
- The jurisdiction of the Permanent Lok Adalats is **upto Rs. 1 Crore**.
- Before the dispute is brought before any court, any party to the dispute may make an application to the Permanent Lok Adalat for settlement of the dispute.
 - After an application is made to the Permanent Lok Adalat, no party to that application shall invoke the jurisdiction of any court in the same dispute.
- Every award made by the Permanent Lok Adalat shall be **final and binding** on all the parties thereto and shall be made by a majority of the persons constituting the Permanent Lok Adalat.

KRISHI SAKHI CONVERGENCE PROGRAMME



Recently, the Prime Minister of India granted certificates to over 30,000 women from Self Help Groups (SHGs) as 'Krishi Sakhis' under the Krishi Sakhi Convergence Programme (KSCP).

- It aims to **transform rural India** through the **empowerment of rural women** as Krishi Sakhi, by imparting training and certification of Krishi Sakhis as Para-extension Workers.

- This certification course also **aligns** with the **objectives** of the **‘Lakhpati Didi’ Program**.

Krishi Sakhis **have already been trained** on various extension service

- **Agro-Ecological Practices:** From land preparation to harvest.
 - **Organizing Farmer Field Schools:** Facilitating practical learning sessions for farmers.
 - **Seed Banks:** Establishment and management.
 - **Soil Health and Conservation:** Techniques for maintaining soil health and moisture.
 - **Integrated Farming Systems:** Combining various farming practices for sustainability.
 - **Livestock Management:** Basic management practices for livestock.
 - **Bio Inputs:** Preparation, use, and establishment of bio-input shops.
 - **Communication Skills:** Essential skills for effective communication with farmers.
- Now these Krishi Sakhis are undergoing refresher training with a special focus on Natural Farming and Soil Health Card through DAY-NRLM agencies in coordination with MANAGE.
 - Krishi Sakhi Training Program has been rolled out in **12 states in Phase – 1:** Gujarat, Tamil Nadu, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Karnataka, Maharashtra, Rajasthan, Odisha, Jharkhand, Andhra Pradesh, and Meghalaya.

BITUMEN



India is looking to start large-scale production of bio-bitumen from biomass or agricultural waste, a move that would help reduce imports of the material used for asphaltting of roads.

- It is a **dense, highly viscous, petroleum-based hydrocarbon**.

- It is found in deposits such as oil sands and pitch lakes (natural bitumen) or is obtained as a residue of the distillation of crude oil.
- **Composition**
 - It owes its density and viscosity to its chemical composition—mainly large hydrocarbon molecules known as **asphaltenes and resins**, which are present in lighter oils but are highly concentrated in bitumen.
 - In addition, bitumen frequently has a high content of metals, such as nickel and vanadium, and nonmetallic inorganic elements, such as nitrogen, oxygen, and sulfur.
- **Applications:**
 - It is known for its waterproofing and adhesive properties and is commonly used in the **construction industry, notably for roads and highways**.
 - It is commonly **used to waterproof boats** and other marine vessels.
 - It is also used by companies that create and **manufacture roofing products**.
 - It is used for sealing and insulating purposes in various building materials such as carpet tile backing and paint.

What is Bio-bitumen?

- It is a **petroleum-free alternative** to bitumen, or asphalt.
- It's made using **non-petroleum-based renewable resources** and can be made from vegetable oils, synthetic polymers, or both, making it a more sustainable model long term.

WHAT IS DOUBLE SUN HALO?



Recently, a rare celestial phenomenon known as a "double sun halo" was witnessed in the skies over Ladakh.

- It is a **rare optical phenomenon** where two concentric rings appear around the sun.

- This occurs when sunlight is refracted through ice crystals suspended in cirrus clouds, creating this dazzling visual effect.
- It is a variation of the more common 22-degree halo, where a bright ring encircles the sun.
- In this case, two halos are visible - an inner halo with a radius of approximately 22 degrees and an outer halo with a radius of around 46 degrees from the sun's center.

Formation:

- The formation of a double sun halo is a result of the unique shape and orientation of the ice **crystals in the cirrus clouds**. These crystals, typically hexagonal in shape, **act as natural prisms, refracting and reflecting** the sunlight in specific angles.
- When the ice crystals are randomly oriented, the refracted sunlight creates the **inner 22-degree halo**. However, if the crystals are aligned horizontally, with their flat faces parallel to the ground, an additional refraction occurs, resulting in the outer 46-degree halo.
- This precise alignment of the ice crystals is rare, making the double sun halo a relatively uncommon sight, especially in regions like Ladakh, where the atmospheric conditions are ideal for such phenomena.

KEY FACTS ABOUT NALANDA UNIVERSITY



Prime Minister Narendra Modi will inaugurate the new Nalanda University campus near Rajgir's ancient university ruins.

- Nalanda stands out as the **most ancient university** on the **Indian Subcontinent**.
- It was **founded by Kumargupta of the Gupta dynasty in Bihar** in the early **5th century**, and it flourished for 600 years until the 12th century.
- During the era of **Harshavardhan and the Pala monarchs**, it rose to popularity.

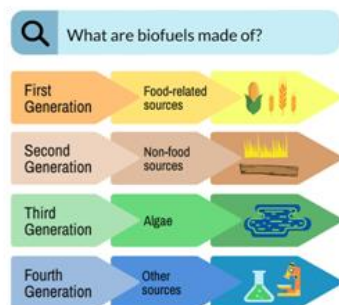
- It was a center of learning, culture, and intellectual exchange that had a profound impact on the development of Indian civilization and beyond.
- Nalanda was a **monastic establishment** in the sense that it was primarily a place where monks and nuns lived and studied. It used to **teach all the major philosophies of Buddhism**.
- It had **students from far-flung regions** such as China, Korea, Japan, Tibet, Mongolia, Sri Lanka, and Southeast Asia.
- The **students** at Nalanda were expected to **follow a strict code of conduct** and were required to participate in daily meditation and study sessions.
- Subjects such as medicine, the ancient Indian medical system **Ayurveda**, **religion**, **Buddhism**, **mathematics**, grammar, **astronomy**, and Indian philosophy were **taught** there.
- It continued to be a centre of intellectual activity up until it was destroyed in the 12th century AD, in 1193, by Turkish ruler **Qutbuddin Aibak's general Bakhtiyar Khilji**.
- After six centuries, the university was **rediscovered in 1812** by Scottish surveyor **Francis Buchanan-Hamilton** and later identified as the ancient university by Sir Alexander Cunningham in 1861.
- The Chinese monk **Xuan Zang** has offered invaluable insights into the academic and architectural grandeur of ancient Nalanda.
- It is also a **UNESCO World Heritage Site**.

SCIENTISTS FROM INDIA, CHINA, U.K. DEVELOP CATALYST TO PRODUCE CHEAPER BIODIESEL

- Biofuel is a fuel that is produced over a short time span from biomass, rather than by the very slow natural processes involved in the formation of fossil fuels, such as oil.
- Since biomass can be used as a fuel directly (e.g., wood logs), some people use the words biomass and biofuel interchangeably.

- However, the word **biofuel** is usually reserved for **liquid or gaseous fuels**, used for transportation.
- Most of biofuel consumption occurs as a blend with refined petroleum products such as gasoline, diesel fuel, heating oil, and kerosene-type jet fuel.
 - However, some biofuels do not require blending with their petroleum counterparts and are referred to as drop-in biofuels.
- The most common biofuels now are:
 - **Bioalcohols** such as ethanol, propanol, and butanol (a substitute for petrol/gasoline);
 - **Biodiesel** (a substitute for diesel);
 - **Bio-oils** (substitutes for kerosene).

Generations of Biofuel:



- Biofuels are also divided into four categories depending on their origin and production technologies.
- **First Generation:**
 - **1G** biofuels are produced from **consumable food items** containing starch (rice and wheat) and sugar (beets and sugarcane) for bioalcohols, or vegetable oils for biodiesel.
 - However, the yields of 1G biofuels are low and can have negative impacts on food security.
- **Second Generation:**
 - **2G** biofuels are mainly obtained from **non-food feedstocks** such as forest/industry/agricultural wastes and waste or used vegetable oils.
- **Third Generation:**
 - **3G** biofuels, known as ‘algae fuel’, are **derived from algae** in the form of both, biodiesel and bioalcohols.

- Although the yield of 3G biofuels is approximately 10 times higher than 2G biofuels, producing adequate algal biomass and scaling up extraction techniques are as yet unresolved challenges.
- **Fourth Generation:**
 - Like the third generation, **4G** biofuels are **made using non-arable land**.
 - However, unlike the third, they do not need the destruction of biomass.
 - This class of biofuels includes electro fuels and photo-biological solar fuels.

India's Biofuel Policy:

- In 2021-22, the **Central government amended the Biofuel Policy (2018) to set a target of country-wide blending rates of 20% ethanol and 5% biodiesel by 2025.**
- According to the Roadmap for ethanol blending in India 2020-2025 report from NITI Aayog, India will need to increase ethanol production capacity from the expected 3.3 billion liters (in 2020–2021) to at least 10.2 billion liters (5.5 billion liters from sugarcane and 4.7 billion liters from grains) by 2025.
- Supported by these policies, **ethanol for blending in gasoline production and demand nearly tripled between 2018 and 2023 and now stands at near 12% (7% on an energy basis).**
- **Sugar cane provides most ethanol production** with the remainder from food grains such as maize and surplus rice stocks determined by the Food Corporation of India.

Catalyst to Produce Cheaper Biofuel:

- A collaborative team of scientists from India, China, and the U.K. has developed a water-repellent catalyst that significantly reduces the cost of producing biodiesel.
- This innovative "**spherical superhydrophobic activated carbon catalyst**" is designed to withstand water byproducts generated during biodiesel production, mimicking the natural water-repelling properties of surfaces like lotus leaves.
- Currently, biodiesel production costs about ₹100 per liter in India, but the new catalyst could reduce this significantly.