

BIO-BITUMEN



Recently, the Council of Scientific and Industrial Research (CSIR) organised a Technology Transfer Event for its innovative technology “Bio-Bitumen from Lignocellulosic Biomass – From Farm Residue to Roads” for large-scale industry adoption in New Delhi.

- It is made using **non-petroleum-based renewable resources** and can be made from vegetable oils, synthetic polymers, or both.
- **Materials used:** Renewable organic materials, such as plant-based oils, agricultural waste, or biomass.
- These materials **undergo a special processing method** to create a high-quality binder that is similar to traditional bitumen.
- It is an **alternative to petroleum-based bitumen** that lowers both carbon emissions and import dependency,
- Bio-bitumen production involves multiple steps, depending on the source material used.
- **Advantages:**
 - **Sustainable:** It is generated from renewable materials. This makes it a more environmentally friendly alternative to petroleum-based bitumen, which is derived from limited resources.
 - **Low Carbon Footprint:** As it is derived from organic materials that have absorbed carbon dioxide during their development, it often has a lower environmental impact than standard bitumen.
 - **Improved environmental performance:** It is less toxic and detrimental to the environment than regular bitumen. It contains fewer heavy metals and other hazardous pollutants.
- **Applications:** It is versatile and may be utilised in a variety of applications, including road paving, roofing, and waterproofing.



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NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL



- It was established in 1994 as an **autonomous institution of the University Grants Commission (UGC)**.
- Its primary objective is to **ensure and enhance the quality of higher education** through a rigorous accreditation process.
- It conducts assessment and accreditation of Higher Educational Institutions (HEI) such as colleges, universities or other recognised institutions to derive an understanding of the 'Quality Status' of the institution.
- **Parameters for Evaluation:** NAAC evaluates institutions based on various parameters such as curricular aspects, teaching-learning processes, infrastructure, governance, and innovation.
- The NAAC functions through its **General Council (GC) and Executive Committee (EC)**, comprising educational administrators, policymakers, and senior academicians from a cross-section of the Indian higher education system.
- **Composition:** The **Chairperson of the UGC** is the **President of the GC of the NAAC**; the Chairperson of the EC is an eminent academician nominated by the President of the GC (NAAC).
- At present the Assessment and Accreditation by NAAC is done on a voluntary basis.
- **Headquarters:** Bengaluru.

INDIAN ACCOUNTING STANDARDS (IND AS)



Indian Accounting Standards (Ind AS)

- Indian Accounting Standards (Ind AS) are a set of accounting principles notified by the **Ministry of Corporate Affairs (MCA)** in 2015.
- These standards are largely converged with **International Financial Reporting Standards (IFRS)**, bringing Indian financial reporting closer to global practices.

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- **Focus:** Ind AS emphasizes a principle-based approach, focusing on fair value measurement, transparency, and enhanced disclosure.
- **History:**
 - Before the introduction of Indian Accounting Standards (Ind AS), India followed the Indian Generally Accepted Accounting Principles (IGAAP). Indian GAAP was primarily developed by:
 - The **Institute of Chartered Accountants of India (ICAI)**
 - **Provisions under the Companies Act, 1956**
 - Indian GAAP comprised **18 accounting standards** issued by ICAI, focusing largely on historical cost accounting and legal compliance.

Key Facts about Insurance Regulatory and Development Authority of India

- It is a statutory body formed under the **Insurance Regulatory and Development Authority Act, 1999 (IRDAI Act 1999)**, for the overall supervision and development of the insurance sector in India.
- It acts as an autonomous authority under the **Ministry of Finance, Government of India.**
- **The main goals of IRDAI are:**
 - To safeguard the **interest of the policyholders** by fair business conduct and settlement of claims within time.
 - To **regulate the business of insurance** with transparency, fairness, and honest practice.
 - **Facilitating financial prudence** of the insurers through solvency and stability checks of insurers.
 - It sets the **eligibility criteria**, qualifications, and capital requirements for obtaining licenses in the insurance business.
- **Head Office:** Hyderabad
- **Composition:** It consists of a **Chairman, five full-time members**, and four part-time members, all appointed by the Government of India.

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eGRAMSWARAJ PORTAL



- It was **launched in 2020**.
- It is an **e-governance platform** that enhances transparency and efficiency in Panchayati Raj institutions.
- It is developed under the **e-Panchayat Mission Mode Project** and integrated with the **Public Financial Management System (PFMS)**.
 - PFMS **enables real-time payments** to vendors and service providers, ensuring seamless fund flow and reducing delays.
- It aims to bring in **better transparency and strengthening** the e-Governance in Panchayati Raj Institutions (PRIs) across the country through decentralized planning, progress reporting and work-based accounting.

Features of eGramSwaraj Portal:

- It will assist in **enhancing the credibility of Panchayats** which would induce greater devolution of funds to PRIs.
- It encompasses all aspects of Panchayat functioning viz. **planning, budgeting, accounting, monitoring, asset management etc.** on a single digital platform including online payments.
- The eGramSwaraj enables Panchayats to **prepare and upload their Annual Panchayat Development Plans (GPDPs) online**.
- It has facilitated **digital planning, accounting, monitoring**, and online payments at the Panchayat level.
- The portal empowers Gram Panchayats to manage development projects effectively, ensuring that funds are utilized properly and citizens can access detailed reports on local governance activities.
- **Launched by:** Ministry of Panchayati Raj (MoPR)

GLOBAL TENSIONS & ITS IMPACT ON INDIA'S ECONOMY

- Geopolitical tensions, especially in energy-rich regions like West Asia, significantly influence India's macroeconomic stability.
- India imports over 85% of its crude oil, making it highly vulnerable to external shocks.
- Recent developments show how global conflicts can directly affect domestic indicators such as inflation, fiscal deficit, and exchange rates.

Channels of Transmission

- **Energy Prices**
 - Oil prices act as the primary transmission channel of global shocks.
 - The Indian crude basket touched \$156.29 per barrel recently.
 - A \$10 rise in crude prices can increase inflation and widen the current account deficit.
 - Higher oil prices increase transport costs, production expenses, and overall inflation in the economy.
- **Exchange Rate Pressure**
 - The rupee depreciated to a record Rs 95 per dollar.
 - The Reserve Bank of India has used foreign exchange reserves to control volatility.
 - Currency depreciation increases import costs and worsens inflationary pressures.

Changing Revenue Structure

- India's revenue system is increasingly dependent on transaction-based taxes.
 - GST collections have risen significantly, reaching Rs. 22.8 lakh crore.
 - Revenue growth is driven more by economic activity than income growth.
- This makes fiscal stability vulnerable to shocks that reduce consumption and transactions.
- During crises, lower consumption reduces GST collections, affecting government finances.

Impact on Households

- Households are a key channel through which economic shocks are transmitted.
 - Private consumption accounts for about 61.4% of GDP.
 - Household liabilities have increased to over 41% of GDP.
- Rising debt levels make households more sensitive to inflation and income shocks.
- Higher energy prices increase household expenses, reduce disposable income, and weaken consumption demand.
- Additionally, disruptions in LPG supply chains have led to higher costs and shortages.

Industrial and Investment Trends

- India's industrial growth shows a mixed pattern.
 - Manufacturing growth remains strong, especially in capital-intensive sectors.
 - Labour-intensive sectors remain weak.
- Only a small proportion of announced projects are completed, indicating cautious investment behaviour.
- Small businesses and informal sectors are more vulnerable to shocks, as seen in reduced demand and closures during recent disruptions.

Macroeconomic Contradiction

- India's economy currently reflects a dual reality.
 - Strong GDP growth (around 8.1%) and high capital expenditure.
 - Weak income growth, rising debt, and external vulnerabilities.
- This divergence highlights structural weaknesses in the growth model.

Way Forward

- India needs to recalibrate its economic strategy to reduce vulnerability to global shocks.
 - Diversify energy sources to reduce dependence on crude oil imports.
 - Broaden the tax base to reduce reliance on transaction-based revenues.
 - Maintain adequate fiscal buffers for crisis management.
- A balanced approach between growth, stability, and resilience is essential in an uncertain global environment.

IRAN WAR & FOOD INFLATION: IMMEDIATE RELIEF, FUTURE RISKS

India currently has strong food security buffers despite the Iran conflict. Government warehouses held 23.6 million tonnes of wheat on March 1—much higher than in the previous two years—and 36.5 million tonnes of rice.

Similar to the Covid period, good crop output and ample stocks provide a cushion against immediate food inflation pressures.

Strong Rabi Crop Prospects

- India's food situation remains comfortable not just due to high stocks, but also because of a promising rabi harvest.
- Good monsoon rains in 2025 encouraged farmers to increase acreage under crops like wheat, mustard, maize, chana, masoor, potato, and onion.
- Favorable weather, including cooler temperatures from western disturbances, has supported better grain filling and higher yields, especially for wheat.

Comfortable Fertiliser Stocks — For Now

- India currently has adequate fertiliser stocks, with higher year-on-year availability of urea (6.1 mt), DAP (2.4 mt), complex fertilisers (5.7 mt), and SSP (2.5 mt).
- Only potash stocks are slightly lower. These reserves can meet immediate needs.
- **Emerging Risk for Kharif Season**
 - The concern lies ahead. The Iran conflict has disrupted imports from Gulf countries, which are key suppliers of fertilisers and inputs like LNG, ammonia, and sulphur.
 - As a result, global prices have surged sharply—ammonia prices have risen to \$725–750 per tonne, sulphur to over \$700, and DAP to about \$825 per tonne.
- **Supply-Demand Pressure Ahead**
 - India's annual fertiliser demand is substantial—about 40 mt urea, 10 mt DAP, 14 mt complex fertilisers, and 5 mt SSP.

- Current stocks may only cover the first half of the kharif season, making timely imports and domestic production critical.
- Experts suggest **recalibrating** subsidy rates to reflect rising global prices and a weaker rupee.
- There is also a push to increase domestic production and shift farmers towards complex fertilisers and SSP, which are more nutrient-efficient than urea and DAP.
- **Turning Crisis into Opportunity**
 - The situation presents an opportunity to promote balanced fertilisation and nutrient efficiency.
 - For instance, the same raw material can produce more complex fertilisers than DAP, improving both supply management and soil health.

Pesticides Also Face Supply Risks

- Along with fertilisers, crop protection chemicals—such as insecticides, fungicides, and herbicides—are also vulnerable to supply disruptions caused by the West Asia conflict.
- These chemicals are essential to protect crops from pests, diseases, and weeds.
- **Dependence on Petrochemical Inputs**
 - About 55% of global naphtha supply, a key raw material for agrochemicals, comes from or passes through West Asia.
 - Naphtha is processed into base chemicals like ethylene, propylene, and benzene, which are crucial for manufacturing pesticide ingredients and formulations.
 - Disruptions in naphtha and propylene supply have led to higher prices of intermediate chemicals.
 - For example, the cost of isopropylamine, used in glyphosate herbicide, has increased due to higher prices from Chinese suppliers.

Uncertain Impact on Agriculture and Prices

- While the immediate impact is on production costs, the final effect on farmers and food prices is still uncertain, depending on how long the disruption continues and how costs are passed on.

SANSHODHAK SURVEY VESSEL

Recently, the Sanshodhak (Yard 3028) was delivered to the Indian Navy.



About Sanshodhak Survey Vessel:

- It is the **fourth and final** Survey Vessel (Large) built under a four-ship project at **Garden Reach Shipbuilders & Engineers Ltd (GRSE)** in Kolkata.
- The previous ships of the same class, **INS Sandhayak, INS Nirdeshak and INS Ikshak** were commissioned.
- The SVL ships are designed and built as per classification rules of **Indian Register of Shipping** by M/s Garden Reach Shipbuilders & Engineers Ltd (GRSE), Kolkata.

Role: The ship is capable of **full-scale coastal and deep-water Hydrographic survey** of port/Harbour approaches and determination of navigational channels/ routes.

- The ship's role also includes **collecting oceanographic and geophysical data for defence and civil applications.**

Features of Sanshodhak Survey Vessel

- It is fitted with state-of-the-art hydrographic equipment such as **Data Acquisition and Processing System, Autonomous Underwater Vehicle, Remotely Operated Vehicle, DGPS long-range positioning systems, Digital Side Scan Sonar, etc.**
- **Propulsion:** It is powered by two diesel engines; the ship can achieve **speeds in excess of 18 knots.**
- Sanshodhak has an indigenous content in excess of **80% by cost.**