

Current Affairs 27th November 2023 by Saurabh Pandey

Special category states

What is a special category status?

- It is a classification granted by the Centre to assist the development of States that face geographical or socioeconomic disadvantages.
- The SCS was introduced in 1969 on the recommendation of the fifth Finance Commission (FC).

Five factors such as

- (i) hilly and difficult terrain
- (ii) low population density and/or sizeable share of tribal population
- (iii) strategic location along international borders
- (iv) economic and infrastructural backwardness and
- (v) nonviable nature of state finances, are considered before granting SCS

- In 1969, three States Jammu & Kashmir, Assam and Nagaland were granted the SCS.
- Subsequently, eight more States including Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Tripura, Himachal Pradesh, and Uttarakhand were given the SCS

by the erstwhile National Development Council.

What are the benefits attached?

- The SCS States used to receive grants based on the Gadgil Mukherjee formula, which earmarked nearly 30% of the total central assistance for States to the SCS States.
- However, after the abolition of the Planning Commission and the recommendations of the 14th and 15th FC, this assistance to SCS States has been subsumed in an increased devolution of the divisible pool funds for all States (increased to 41% in the 15th FC from 32%).
- Additionally, in the SCS States, the Centre State funding of centrally sponsored schemes is divided in the ratio of 90:10, far more favourable than the 60:40 or 80:20 splits for the general category States.
- Besides, there are several other incentives available to the SCS States in the form of concession in customs and excise duties, income tax rates and corporate tax rates to attract investments to set up new industries etc.

The Hindu

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Himalaya and development

- The Char Dham Project, all weather roads, being constructed by the National Highway Authority of India (NHAI) in Uttarakhand, linking the four religious pilgrimages of Gangotri, Yamunotri, Badrinath, and Kedarnath, has brought into focus two major issues in the Indian Himalayan Region (IHR).
- The foremost one is about the development model itself and, in concrete terms, what should be the carrying capacity of the IHR.
- Also important are the processes in which environment clearances were sought, undermining safety protocols, and a new form of architecture that should be built to construct and monitor infrastructure projects, if at all they are desired, in the region
- One of the major problems in this project is in accepting the fact that the Himalayas are the youngest range of mountains and still in the formative stages.
- The area is extremely sensitive to earthquakes and frictional shear rocks are present as well.
- Constructing in this zone is dangerous. Now, the NHAI has said it is going to conduct a detailed inspection of 29 tunnels in the country for further safety and avoiding accidents
- The carrying capacity cannot just be limited to the number of people an ecosystem can sustain; it also has to take into cognisance the total carrying capacity of the IHR from the infrastructure aspect.
- The IHR is in a transformative phase and the impetus for this transformation unfortunately comes from the new geographies.
- There are spatial and temporal changes that go beyond the scope and spaces of the Himalayan aesthetic, culture, and building typologies.
- Sheer integration with the rest is not the way of sustaining them.
- A new legislative architecture that allows people to monitor these projects and ensures that geological experts are part of every move is required.
- The local communities should be an essential part of these monitoring structures with strict protocols.
- Likewise, civil society groups and community driven organizations should be included.
- The Hindu

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Fleet electrification

- About 9 lakh new trucks are added to Indian roads every year to an already running fleet of 70 lakh trucks.
- India carries over 2 trillion tonne kilometres freight on trucks, annually.
- These trucks consume over one fourth of Indian oil imports and contribute to over 90% of road transport CO2 emissions.
- The rate of increase of truck fleet is expected to keep increasing in a growing network of roads in an emerging economy.
- If all these new trucks are powered by dieselfired internal combustion engines vehicles, as is the case today, our cities will face a greater onslaught of PM2.5 pollution.
- Thankfully, India has already electrified rail freight transportation, but that caters to only about 20% of the freight carried in the country.
- On roads, India's electric vehicle penetration rate has crossed the 6% mark, but electric trucks remain a challenge due to upfront costs and charging infrastructure constraints.
- It is commendable that the government is aggressively electrifying the bus fleet, and sets

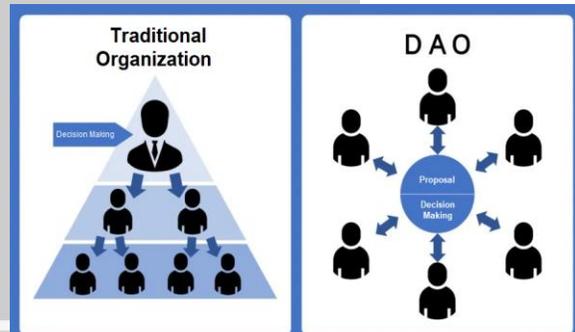
electrification targets for bus aggregators. However, the focus must extend to diesel trucks and dust mitigation significant PM sources requiring immediate attention

- The Indian truck fleet is likely to reach a figure of 1.7 crore in 2050. Hence, there is a need to push top gear on the pace of transition to e-trucks.
- Public funding alone cannot meet the transformational scale required. Declaring some of the expressways and national highways as green freight corridors will have a demonstration effect in the country.

The Hindu

Decentralised Autonomous Organisation

Decentralized Autonomous Organization (DAO)



The DAO governance

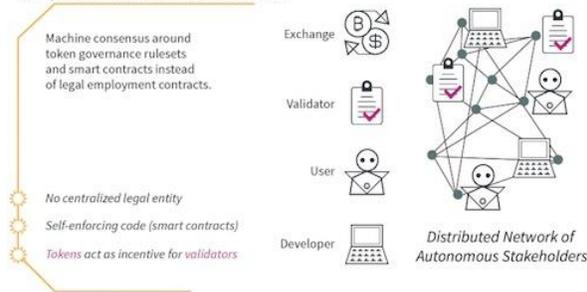


coingeograph.com

source: CryptoRobin

Decentralized Autonomous Organization

From the book "Token Economy" by Shermin Voshmgir, 2019
Excerpts available on <https://blockchainhub.net>



- Decentralised Organizations (DAOs) represent a groundbreaking innovation at the intersection of block chain technology and governance.
- These digital entities operate without centralized control and are governed by smart contracts and the consensus of their members, often utilizing cryptocurrencies as a means of decision making and resource allocation.
- DAOs have garnered attention for their potential to change various industries, including finance, art, and governance, by fostering transparent, democratic, and self-executing systems.

- These entities are not only reshaping traditional business structures but also challenging the way we perceive trust, governance, and collaboration in the digital world.

The genesis of DAOs

- DAO is an organisation represented by rules encoded as a computer program that is transparent, controlled by the respective organisation members, and not influenced by a government.
- The idea behind DAOs is to create self-sustaining, community driven entities governed by smart contracts on Blockchain networks.

- These smart contracts automatically execute predefined rules without the need for intermediaries, ensuring trust through code rather than traditional authorities.

- One of the most important aspects of DAOs is their potential to change the idea of collaboration.
- They enable global, borderless cooperation on an unprecedented scale.

• [The Hindu](#)

Privileged communication

- The proposed Bharatiya Sakshya (BS) Bill that seeks to replace the Indian

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Evidence Act of 1872 “bars the courts from inquiring into any privileged communication between Ministers and the President of India”.

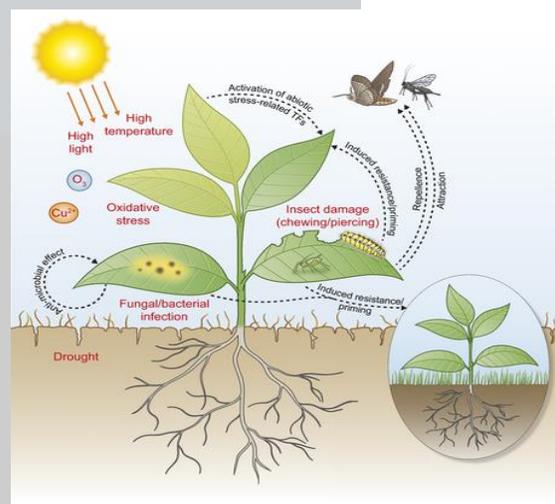
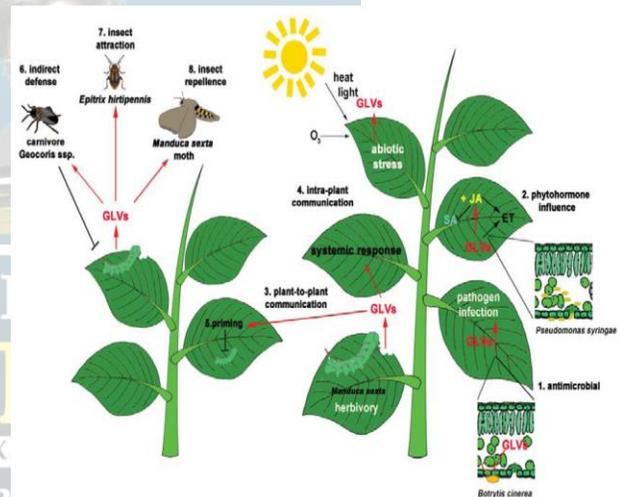
- Although Article 74(2) of the Constitution states this, the Union government seeks to give it legal backing by making it part of the evidence book.
- The government, however, has not clearly defined what constitutes “privileged communication”, leaving the provision open to interpretation.
- “The Constitution is not a regular law; it must be enforced through laws.
- Though the provision [of courts being barred from inquiring into privileged communication] exists in the Constitution, it has been done so directly and emphatically now through the BS Bill.
- But it will still be open to interpretation by courts as the government has not defined what is privileged communication.

The Hindu

Green leaf volatiles (GLV)

- The study in Nature Communications on October 17, could help unlock longstanding questions in the field of plant defence and pave the way to protect crops without pesticides

- The defence mechanism releases GLVs when attacked or damaged. Using this defence response, plants can make themselves less palatable or even indigestible to the insect attackers.
- They could also attract predators of the pests
- Plants lack brains but obtain information about the world and use it in meaningful ways just like we do



The Hindu

Green leaf volatiles (GLV)

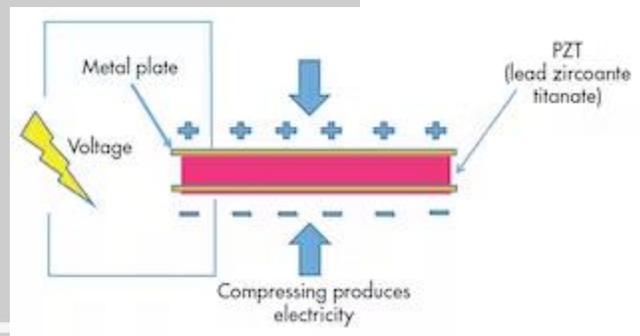
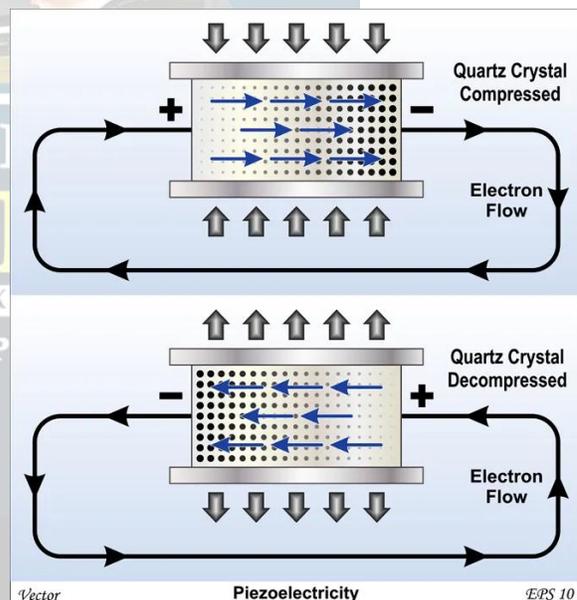
- Green leaf volatiles (GLV) are organic compounds released by plants.
- Some of these chemicals function as signaling compounds between either plants of the same species, of other species, or even different lifeforms like insects.
- Green leaf volatiles are involved in patterns of attack and protection between species.
- They have been found to increase the attractive effect of pheromones of cohabiting insect species that protect plants from attacking insect species.
- For example, corn plants that are being fed on by caterpillars will release GLVs that attract wasps, who then attack the caterpillars
- GLVs are commonly used as flavors to confer a fresh green odor to vegetable or fruit food products.
- This mixture of volatile compounds leads to characteristic plant flavors called the green notes (Ibdah et al., 2010).
- These molecules confer freshness and authenticity to food products, thus attracting the interest of the world market of flavors and the food industry.

Piezoelectricity

- Piezoelectricity is a remarkable phenomenon whereby some materials including quartz, ceramics such as lead zirconate titanate (PZT), and even certain biological substances like bone and the tendons can generate an electric charge in response to mechanical stress.
- This property is the result of their unusual crystal structures.

The Hindu

- Piezoelectricity



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- Usually, the charges on atoms in the molecules that make them up are symmetric on two sides of an axis. When some stress is applied, the molecule becomes distorted and the asymmetry of charges gives rise to a small electric current

The Hindu

