

Disqualification of MLA

When does conviction attract disqualification?

- Section 8 of the Representation of the People Act (RPA), 1951, contains provisions aimed at decriminalizing electoral politics.
- There are two categories of criminal cases that attract disqualification upon conviction.
- In the first category are offenses that entail disqualification for a period of six years upon any conviction.
- If the punishment is a fine, the six-year period will run from the date of conviction, but if there is a prison sentence, the disqualification will begin on the date of conviction, and will continue up to the completion of six years after the date of release from jail.
- Major IPC offences are included under this head: making speeches that cause enmity between groups (Sec.153A) and doing so in a place of worship (Sec.505), bribery and personation during elections and other electoral offences, offences relating to rape and cruelty to women by husband and latter's relatives.
- Besides, serious provisions of special laws such as the Protection of Civil Rights Act, Customs Act, Unlawful Activities (Prevention) Act, etc are

among the category of offenses that entail disqualification regardless of the quantum of punishment.

- Laws for the prevention of Sati, corruption, terrorism, and insult to the national flag and national anthem, etc are also part of this group.
- All other criminal provisions form a separate category under which mere conviction will not entail disqualification
- A sentence of at least two years in prison is needed to incur such disqualification.

THE HINDU

DMH 11 -and hybrid variant

- The Genetic Engineering Appraisal Committee (GEAC), India's apex regulator of genetically modified plants and food products, has approved the environmental release of Dhara Mustard Hybrid-11 (DMH-11), a genetically-engineered variant of mustard.

What is DMH-11?

- DMH-11 is a hybrid variant of mustard developed by researchers at The Centre for Genetic Manipulation of Crop Plants, at the University of Delhi.
- While India has several mustard varieties, it is a self-pollinating plant and therefore a challenge for plant

breeders to cross different mustard varieties and induce desirable traits.

- Being able to turn off this self-pollinating trait to enable such crossings and then restoring the trait, to enable seed production, is how the mustard plant's genes are to be manipulated.
- DMH-11 is a result of a cross between two varieties: Varuna and Early Heera-2.
- Such a cross wouldn't have happened naturally and was done after introducing genes from two soil bacterium called barnase and barstar.
- Barnase in Varuna induces temporary sterility because of which it can't naturally self-pollinate.
- Barstar in Heera blocks the effect of barnase allowing seeds to be produced.
- The result is DMH-11 (where 11 refers to the number of generations after which desirable traits manifest) that not only has better yield but is also fertile.
- DMH-11 is a transgenic crop because it uses foreign genes from a different species.

Are hybrid mustard varieties better?

- DMH-11 has 28% higher yields than its parent Varuna and was 37% better than zonal checks, or local

varieties that are considered the best in different agro-climatic zones.

- Having better hybrids is necessary to meet India's rising edible-oil import bill.
- Mustard (*Brassica juncea*) is cultivated in 6-7 million hectares during the Rabi winter season predominantly in Rajasthan, Haryana, Punjab, and Madhya Pradesh.
- India imports anywhere from 55-60% of its domestic edible-oil requirement.
- In 2020-21, around 13.3 million tonnes of edible oil were imported at a cost of ₹1, 17,000 crore according to the National Academy of Agricultural Sciences.
- This is primarily due to low productivity of about 1-1.3 tonnes/hectare that has been stagnant for over two decades.
- On the other hand, hybrid mustard and rapeseed are the dominant form of oil seeds in Canada, China and Europe.

Why is it controversial?

- The use of genes that are foreign to the species is one and secondly, the preparation of mustard hybrids requires the use of another gene, called the bar gene, that makes it tolerant to an herbicide called glufosinate-ammonium.

- Activist groups allege that the GM mustard hasn't been evaluated as an herbicide-tolerant crop posing potential risks.
- Finally, they allege, GM mustard plants may dissuade bees from pollinating the plant and this could have knock-off environmental catastrophes.

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World Network of Biosphere Reserves (WNBR)

- On November 3 will be the first 'The International Day for Biosphere Reserves', to be celebrated beginning in 2022.
- The World Network of Biosphere Reserves (WNBR) was formed in 1971, as a backbone for biodiversity conservation, ecosystem restoration, and living in harmony with nature.
- There are now 738 properties in 134 countries, including 12 in India, four in Sri Lanka, and three in the Maldives.
- Bangladesh, Bhutan, and Nepal do not have biospheres as yet, but help is on its way: The 'South and Central Asia MAB Reserve' Networking Meeting (where MAB stands Man and the Biosphere) is planned for 2023, to advance biosphere reserve establishment, and management.

World Network of Biosphere Reserves

- The World Network of Biosphere Reserves of the MAB Programme consists of a dynamic and interactive network of sites of excellence.
- It fosters the harmonious integration of people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for cultural values and society's ability to cope with change - thus contributing to the 2030 Agenda and the Sustainable Development Goals (SDGs).
- Accordingly, the Network is one of the main international tools to develop and implement sustainable development approaches in a wide array of contexts.
- The World Network of Biosphere Reserves promotes North-South and South-South collaboration and represents a unique tool for international co-operation through sharing knowledge, exchanging experiences, building capacity, and promoting best practices.

Opportunities in South Asia

- In South Asia, over 30 biosphere reserves have been established.
- The first one was the Hurulu Biosphere Reserve, in Sri Lanka, with

25,500 hectares of tropical dry evergreen forest.

- In India, the first biosphere reserve was designated by UNESCO in 2000, namely, the blue mountains of the Nilgiris stretching over Tamil Nadu, Karnataka, and Kerala.
- Spain, with a landmass of 506,000 km², and a population of 47.4 million is one of the leading participating WNBR countries globally, with 53 properties.
- In a comparison with the surface size of Spain to India (ca. 3.3 million km²), and India's human population of ca. 1.4 billion people, it appears a good idea to carry out a potentiality analysis of biosphere reserves in India, with a focus on the seven sisters in north-east India.
- The existence of the new World Network of Mountain Biosphere Reserves provides a welcome opportunity for Bhutan and Nepal to establish their first biosphere reserves and participate in the world network.

THE HINDU

Rhino species

- The horns of rhinoceroses may have become smaller over time from the impact of hunting
- Five species face threat
- Rhinos have long been hunted for their horns.

- The five surviving rhino species are threatened by habitat loss and hunting.
- The study found that the rate of decline in horn length was highest in the critically endangered Sumatran rhino and lowest in the white rhino of Africa, the most commonly found species in the wild and in captivity.
- The Greater One-Horned Rhino is one among the five different species of Rhino. The other four are:
 - Black rhino: Smaller of the two African species.
 - White Rhino: Recently, researchers have created an embryo of the northern white rhino by using In-vitro Fertilization (IVF) process.
 - Javan Rhino: Critically endangered in IUCN Red List.
 - Sumatran Rhino: Recently gone extinct in Malaysia.
- There are three species of rhino in Asia Greater one-horned (Rhinoceros unicornis), Javan, and Sumatran.
- Only the Great One-Horned Rhino is found in India.

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