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Genome editing

The Kerala University of Fisheries and Ocean Studies (Kufos) is set to launch a genome editing mission.

- **About -** Genome editing is a method for making specific changes to the ***Deoxyribonucleic acid (DNA) of a cell or organism.***
- It can be used to ***add, remove or alter*** DNA in the genome.
- Human genome editing technologies can be used on ***somatic cells, germline cells and germline cells.***
- **Usage of Genome editing**
    - **Research-** Genome editing can be used to change the DNA in cells or organisms to ***understand their biology*** and how they work.
    - **Disease treatment-** Genome editing has been used to modify ***human blood cells*** that can be put back into the body to treat conditions including blood cancers and AIDS.
    - **Biotechnology-** Genome editing has been used to ***modify agricultural crops to improve their yields*** and resistance to disease and drought.

Pearl spot production mission

- **Objective of the mission -** It will help enhance breeding and seed production of ***pearl spots.***
- **Significance-** Genome editing will target the genetic makeup of the fish ***to promote faster growth.***
- It will also enhance the breeding and seed production of pearl spots.

Pearl spot

• It is an indigenous fish extensively found along the east and south-west coasts of Peninsular India.
• **Scientific name-** Etroplus suratensis.
• **Common name-** “Karimeen” in Kerala.
• **Habitat-** It is an important candidate species for aquaculture in ponds in both brackish water and freshwater environments.
• **Distribution –** Kerala, Goa, Odisha in India and Srilanka.
• **Harvest-** Despite slow growth, high stocking density allows table-size pearl spot to be harvested within 9-12 months.
• **Conservation Status – IUCN –** Least Concern.



References

1. The Hindu | genome editing mission
2. Yourgenome | genome editing
3. TNAU | Pearl Spot

Internet Archive

The Internet Archive is facing a legal battle with traditional publishers over alleged copyright violations.

> *Copyright infringement occurs when the violating party exercises any of the creator's exclusive rights to the work without permission.*

- **About-** It is an American ***non-profit digital library*** which offers free access to digitized collections like websites, software, music, videos, and books.
- **Foundation-** 1996
- **Founder-** Brewster Kahle
- **Headquarters-** San Francisco, California, U.S.
- **Open Access-** It operates under ***principles of open access*** and aims to provide digital materials for educational and research purposes.
- Much of the content on the Internet Archive is ***freely accessible to the public.***

- **Projects-** In addition to archiving web pages, the Internet Archive runs various projects such as ***digitizing books, partnering with cultural institutions*** for preservation efforts, and providing resources for people with disabilities.
- **Legal dispute-** In 2020, traditional publishers Hachette, HarperCollins, Wiley, and Penguin Random House sued the Internet Archive.
- **Wayback Machine-** The Wayback Machine is easy and free of cost digital archive of the ***World Wide Web*** and other information on the Internet.

> *The World Wide Web (WWW), often called the Web, is a system of interconnected webpages and information that you can access using the Internet.*

- It allows users to browse through over 650 billion web pages archived from ***1996 to the present.***
- Users can use it to see how websites looked at different points in ***time and to access content*** that has been deleted or changed.
- The archive is maintained by the Internet Archive.

References

1. The Hindu | Internet Archive
2. Internet Archive | About

Right to Repair Portal

The Union government recently collaborates with automobile associations and partner companies to onboard them onto the Right to Repair Portal in India.

- **About-** The Right to Repair Portal India aims to empower consumers by
  - Providing easy access to repair information,
  - Promoting reuse,
  - Contributing to the circular economy, and
  - Reducing e-waste efficiently.
- **Nodal office-** Department of Consumer Affairs.
- **Nodal Ministry-** Ministry of Consumer Affairs, Food and Public Distribution.
- **Aim-** To uphold ***consumer rights*** and respond to evolving concerns regarding ***hassle free product repairs.***
- Under this framework, it would be mandatory for manufacturers to share their product details with customers so that they can either repair them by self or by third parties, rather than only depending on original manufacturers.



Reference

PIB | Right to Repair Portal

Spotted hyenas (Crocuta crocuta)

A Danish study finds that spotted hyenas, aided by humans, are outcompeting leopards in a Tanzanian protected area.

- The spotted hyena also known as the ***laughing hyena***.
- Hyenas are ***nocturnal***.
- **Appearance -** The spotted hyena's ***rounded ears*** help distinguish it from the striped and brown hyena.
- Although their behavior and appearance are like dogs, hyenas are more ***closely related to cats***.
- **Distribution** - Hyena fossils have been found in North America, Europe, Asia, and Africa but they are native to ***sub-Saharan Africa*** at present.
- **Social behaviour** - Spotted hyenas live in groups known as 'clans' or 'cackles.'
- They are also '***kleptoparasitic***', in that they steal kills from other predators, including leopards.
- **Diet** - The spotted hyena is the most ***carnivorous*** member of the Hyaenidae.
- **Breeding** - The spotted hyena is a ***non-seasonal breeder***, though a birth peak does occur during the wet season.
- **Conservation status**
  - **IUCN** - It is listed as being of ***least concern*** by the IUCN.



References

1. Down to Earth | Spotted hyenas
2. iNaturalist | Spotted Hyena

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