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## Regenerative agriculture can save water

### Why in Newspapers?

Farmers in Madhya Pradesh who follow **regenerative farming methods** believe they reduce the **need for frequent irrigation**, thereby **conserving water and energy**.

### Quick Issue?

- According to the **UN's World Water Development Report, 2022**, India extracts **251 cubic km** every year or **more than a quarter of the world's groundwater** withdrawals; Of this, **90 percent of the water is used for agriculture**.
- A 2019 study by the **Indian Institute of Technology, Delhi**, shows that over **39 million hectares (ha)** of area in the country under **wheat, rice and maize** has not improved over the past decade.



### Historical Background?

- At present Indian soils are **severely and widely deficient in organic carbon and micronutrients**.
- According to the **Food Security and Nutrition Status of the United Nations, 2022**, if agriculture is to provide food to the country's **224.5 million** malnourished population and run the country's economy, then it **needs to be in harmony with nature, not to go against it**.
- Farmer activists and agricultural research organizations around the world are developing such **chemical-free farming methods** in which natural methods and new methods of farming such as **crop rotation and diversification can be used**, all

### Other Key Facts?

#### Efforts of Government of India for Regenerative Agriculture

- National Project on Organic Farming:** - National Project on Organic Farming System running since **2004** is the **biggest experiment of the country**, it is **operated by ICAR-Indian Institute of Farming System Research Meerut**.
- Paddy Intensification System:-** A method in which the seeds are widely spaced and organic fertilizers are used to improve the yield.
- Zero Budget Natural Farming:-** It is also known as **Subhash Palekar Natural Farming**, in which the emphasis is on growing crops using manure made from **cow dung, urine, fruits and other things**.
- Samaj Pragati Sahyog** has conducted field trials in 2016-18 with 1,000 farmers on over 2,000 hectares of land in four districts of Madhya Pradesh and one district of Maharashtra to measure the water saved.

of which are methods of regenerative agriculture.

- The **Green Revolution of the 1960s** saved India from the brink of starvation, but this revolution made **India the world's largest user of groundwater**.
- Regenerative agriculture is a **holistic farming system** that seeks to **improve soil health, food quality**, and productivity through methods such as **reducing the use of chemical fertilizers and pesticides**, reducing tillage, integrating livestock and using cover crops. Focuses on improving biodiversity and water and air quality.
- **This agriculture follows the following principles:-**
  - **Minimizing soil erosion through conservation agriculture.**
  - **Diversifying crops to improve nutrient recapture and disrupt the life cycle of pests.**
  - **Maintaining soil cover by using cover crops.**
- Integrating livestock which **increases soil fertility** and acts as a **source of carbon sink**.
- **Improving Soil Health:-** It is a **step ahead of sustainable agriculture**, it not only maintains the resources like **soil and water but also tries to maintain them better**.
- According to the **Food and Agriculture Organization of the United Nations**, healthy soil helps in better water storage, transmission, filtering and **reduction of agricultural runoff**.
- **Water conservation:** Healthy soil helps **improve water-use efficiency by better water storage, transmission**, filtering and reduces agricultural runoff.
- Studies have shown that a **1% increase in soil organic matter per 0.4 hectare increases water storage capacity by more than 75,000 litres**.
- **Energy Conservation:** - Regenerative agriculture practices **conserve the energy** used by irrigation auxiliaries such as pumps.

## Other Key Facts?

### What is involved in regenerative agriculture?

- In **regenerative farming methods**, land is less tilled. This retains **CO2 in the soil**, improves its **water absorption capacity** and does not harm the beneficial fungi **buried deep in the soil**.
- **Rotating crops improves biodiversity**.
- Using **animal manure and compost helps to return nutrients to the soil**.
- According to a report, **continuous grazing of animals on the same piece of land can also lead to soil erosion**.





## “Dark Pattern”

### Why in Newspapers?

Some Internet-based firms have been seen duping users into agreeing to certain terms or pressuring them to click on a link. This kind of approval, which users never wanted but still such clicks are increasing their number day by day in users email inbox.

### Quick Issue?

- Dark patterns are a **type of deceptive user** interaction interface designed to trick users into **doing something they don't want to do: such as downloading a video while several other websites are illegally open.**

### Historical Background?

- The term **dark pattern** was first used by **Harry Brignole**.
- Harry Brignole** has been doing research since 2010 to catalog such **patterns and the companies that use them.**
- Functioning of Dark Patterns** - It is **more active when buying a product or service online**, which compels a consumer to buy a **more expensive product.**
- Social media companies and Big Tech firms: such as **Apple, Amazon, Skype, Facebook, LinkedIn, Microsoft, and Google** use dark or deceptive patterns to downgrade the user experience to their advantage.
- The **Amazon company** faced severe **criticism in the European Union** for having a **confusing and multi-step process** to cancel an **Amazon Prime subscription.**
- After **communicating with consumer regulators**, Amazon this year simplified the cancellation process for **online customers in European countries.**
- In social media, **LinkedIn users often receive unsolicited, sponsored messages from influencers.** Disabling this option is a difficult, multi-step process that requires users to be familiar with platform controls.





- Like- Instagram has turned to video-based content to compete with Tiktok.
  - Users have complained that they are being shown suggested posts they did not want to see and were unable to set preferences permanently.
- YouTube annoys users with pop-ups to sign up for YouTube Premium.
- **How it affects the users :-**
  - Dark patterns create **online disruptions by confusing users.**
  - Make simple tasks more time consuming.
  - Sign up users for unwanted services/products and coerce them into **paying more money or sharing more personal information** than they are willing to.
- In September 2022 in the U.S. The **Federal Trade Commission [FTC]**, a regulatory body of the United States, listed over 30 dark patterns.

**Other Key Facts?**

**FTC report outlines legal action against Amazon in 2014**

- Allegedly free app for children, which fooled young users into making in-app purchases, for which their parents had to pay.
- The case was settled after Amazon agreed to refund more than \$70 million.

**India's perspective**

- Recently the Advertising Standards Council of India (ASCI), a self-regulatory body of the advertising industry in India, said it is looking to expand its code to address concerns about 'dark patterns' in digital advertising.
- According to ASCI nearly one-third of ads in FY22 were passed off as regular content by influencers, which is a part of dark patterns in advertising.
- ASCI has constituted a task force to investigate the matter.

