Carbon - The Crop of the Future

Why in news?

Carbon farming promises a new agricultural business model — one that fights climate change and creates jobs.

What are the issues with the modern industrial agriculture?

- Agriculture is now a surgical economic activity that leads to the new epoch of corporate-environmental food monopolies with various issues including,
    - Less food out of the ground
    - Fewer nutrients
    - Less efficient
    - More expensive
    - Greater environmental devastation
- It has also kept a colonialist imprint on the planet with
    - Differentiated access to nutritious food
    - Reducing the biodiversity of our diet
    - Injudicious ecological practices like monocropping and systematic erosion of soil
    - Mounting cost of technology, chemicals exiling the farmers out of their fair share of the progress
    - Deepening the climate change crisis

According to the 3rd biennial update report submitted by the Union government in 2021 to the UNFCCC, the agriculture sector contributes 14% of the total GHG emissions.

What can fix the broken food systems of our times?

- Carbon farming promises a bold new agricultural business model in order to fight climate change, create jobs and save farms.
- Carbon farming is a whole farm approach to optimize carbon capture on working landscapes by practices that improve the rate at which CO2 is removed from the atmosphere and stored in plant material and/or soil organic matter.
- The total value of the global carbon markets grew by 20% in 2020.
- April 2022 has been the biggest year in carbon capture investment with big tech companies like Stripe, Alphabet, Meta and Shopify announcing millions of dollar of carbon removal offsets.

What are the benefits of carbon farming?

- **Profit for farmers**- Carbon farming can help the farmers shift their focus from improving yields to functioning ecosystems and sequestering carbon that can be sold or traded in carbon

markets.

- It provides with boosted/secondary income from carbon credits for the marginalised farmers.
- **Soil health**- It not only improves the health of soil but can also result in improved quality, organic and chemical-free food (farm-to-fork models)
- **Decarbonisation-**- Soil acts as an efficient carbon sink and can be capitalised to achieve the Net Zero target and decarbonising pathway.
- An initiative called "4 per 1000", launched at the 2015 Paris climate conference, showed that increasing soil carbon worldwide by 0.4% yearly could offset that year's new growth in CO2 emissions from fossil fuel emissions.

Studies show that soil removes about 25% of the world's fossil-fuel emissions each year.

What is the case of Meghalaya regarding carbon farming?

- In India, Meghalaya is currently working on a blueprint of a'carbon farming' Act to create a prototype of sustainable agriculture model for the entire North-East region.
- Out of the 5.5 million hectares of cultivated land available in the North-East, organic farming barely covers 3% of arable land highlighting the tremendous potential.
- A pioneering Carbon Farming Act with a robust transition plan can effectively demonstrate the idea of creating a carbon sink.
- It can improve nutrition, reduce the inequalities within farming communities, alter the land use pattern and provide the much-needed solution to fix our broken food systems.

References

1. https://www.thehindubusinessline.com/opinion/why-carbon-is-the-crop-of-the-future/article65431204.ece

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