



Global Impact of Land Squeeze

For Prelims: [International Panel of Experts on Sustainable Food Systems \(IPES-Food\)](#), [National Land Records Modernization Programme \(NLRMP\)](#), [National Food Security Act \(NFSA\), 2013](#), [National Mission on Sustainable Agriculture \(NMSA\)](#)

For Mains: Key takeaways regarding land squeeze from International Panel of Experts on Sustainable Food Systems (IPES-Food) Report, Land Use in India, India's Initiatives to Tackle the Issue of Land Squeeze and Food Insecurity

Source: DTE

Why in News?

A recent study conducted by the [International Panel of Experts on Sustainable Food Systems \(IPES-Food\)](#) focusses on the unprecedented 'land squeeze', threatening farmers and food production.

- Land squeeze refers to the situation where the **demand for land for various purposes** (agriculture, urbanisation, infrastructure, etc.) outpaces the available cultivable land.

What are the Key Highlights of the Report?

- The report **warns of prevalent "land squeeze"** due to rising land prices, land grabs, and carbon schemes, threatening farmers and food production.
- Globally, the **top 1% of the world's largest farms** now **control 70% of the world's farmland**.
 - As land becomes scarce, it can be **converted from productive agricultural land** to other uses, impacting food production
- Between **2008-2022**, there has been a **doubling of global land prices**.
 - This increase has been particularly pronounced in Central-Eastern Europe, where prices have tripled.
- **"Green grabs,"** land acquisitions are evidently motivated by **environmental concerns**, now account for approximately **20% of large-scale** land deals.
 - **Green grabbing** refers to the large-scale acquisition or control of land and resources for environmental purposes, often with negative social and economic consequences. It's essentially land grabs done under the guise of environmental protection.
- Over half of the land designated by governments for **carbon removal projects** presents a potential risk of interference with the livelihoods of small-scale farmers and Indigenous people.
 - **Carbon offset markets** are expected to **quadruple** in the **next 7 years**

What are the Key Reasons Behind Land Squeeze?

- **Land Grabs:**
 - **Large-scale acquisitions** of land by governments, corporations, and speculators are displacing farmers and Indigenous communities.
 - These acquisitions are mainly for **resource extraction** (mining, logging)

or **export-oriented agriculture**.

▪ **Rising Population and Demands:**

- The **increasing global population** along with the **huge demand for food, feed, fiber and fuel** is putting lots of pressure on the availability of the land.

▪ **Shifts in Global Food Production Systems:**

- It involves the transfer of large areas of land towards **industrial agriculture** like **Concentrated Animal Feeding Operations (CAFO)** and **monoculture farming practices**.
 - **Industrial agriculture** is the **large-scale, intensive production of crops and animals**, often involving chemical fertilizers on crops and harmful use of antibiotics in animals.
- Also, there has been **increased demand for land for biofuels** and other **non-food uses**.

What is the Status of Land Use in India?

LAND USE IN INDIA

Land Use

The way land is utilised for various purposes (residential, commercial and agricultural).

Data on land use is categorised in a nine-fold classification on a yearly basis.

Land-Use Records

- Ⓞ **Maintained by:**
 - Land Revenue Department
- Ⓞ **Measured by:**
 - Survey of India
- Ⓞ **Collection:**
 - **Total geographical area** - 329 million hectares (reporting area)
 - **Statistics available for** - 305 million hectares (non-reporting area)

7% of the total area is not covered or classifiable under the nine-fold classification

Key Terms

- Ⓞ **Geographical Area:** Data from the Surveyor General of India on state/union territory size
- Ⓞ **Reporting Area:** Area with land use data available
- Ⓞ **Gross Cropped Area:** Total area sown once or more in a year
- Ⓞ **Area Sown more than once:** Land with multiple crop plantings in a year
- Ⓞ **Irrigated Area:** Land irrigated by canals, tanks, wells, etc
- Ⓞ **Total/Gross Irrigated Area:** All land is irrigated one or more times
- Ⓞ **Total/Gross Un-Irrigated Area:** Area without irrigation
- Ⓞ **Cropping Intensity:** Total Cropped Area divided by Net Area Sown
- Ⓞ **Agricultural Land:** Includes net area sown, fallows, wasteland, and more
- Ⓞ **Total Un-Cultivable Area:** Area minus cultivable land
- Ⓞ **Total Cultivated Area:** Net area is sown and current fallows
- Ⓞ **Total Un-Cultivated Area:** Area minus cultivated land

Nine-Fold Classification

- Ⓞ **Forests:** All lands, whether state-owned or private, wooded or potential forest land, as per forest-related laws (23.44%)
- Ⓞ **Non-agricultural Uses:** Land occupied by buildings, roads, railways, or underwater (9.03%)
- Ⓞ **Barren and Unculturable Land:** Includes mountains, deserts, etc. (5.43%)
- Ⓞ **Permanent Pastures and Grazing Lands:** All grazing lands, whether pastures or not (3.36%)
- Ⓞ **Culturable Waste Land:** Land available for cultivation but not used for +5 years (3.87%)
- Ⓞ **Fallow Lands (excluding Current):** Temporarily unused for 1-5 years (3.52%)
- Ⓞ **Current Fallows:** Cropped areas kept fallow in the current year (4.23%)
- Ⓞ **Misc. (Trees, Crops, etc.):** Cultivable land not in 'Net Area Sown' but used agriculturally (0.98%)
- Ⓞ **Net Area Sown:** Total area with crops and orchards (46.10%)

Land-use Pattern in India from 2005-06 to 2020-21

Source: Department of Agriculture and Farmers Welfare, Ministry of Agriculture and Farmers Welfare

Causes for Land Use Change

- Ⓞ Increasing population and developmental activities
- Ⓞ Climate change
- Ⓞ Agricultural expansion
- Ⓞ Mining
- Ⓞ Land degradation

Drishhti IAS

▪ **India's Initiatives to Tackle the Issue of Land Squeeze and Food Insecurity:**

- **Land Management and Utilisation:**

- [National Land Records Modernization Programme \(NLRMP\)](#)
- [Formation & Promotion of 10,000 FPOs](#)
- **Improving Productivity and Reducing Food Wastage:**
 - [National Food Security Act \(NFSA\), 2013](#)
 - [Mission for Integrated Development of Horticulture \(MIDH\)](#)
 - [Pradhan Mantri Gareeb Kalyan Anna Yojana \(PMGKAY\)](#)
- **Programs for Land and Soil Conservation:**
 - [Soil Health Card Scheme](#)
 - [Pradhan Mantri Krishi Sinchayee Yojana \(PMKSY\)](#)
 - [National Mission on Sustainable Agriculture \(NMSA\)](#)

What are the Key Impacts of Land Squeeze?

- **Loss of Access and Control for Farmers and Rural Communities:**
 - **Displacement and Dispossession:** Land grabs and other pressures force small-scale farmers and indigenous communities off their land, disrupting their livelihoods and traditional ways of life.
 - **Threatens Food Security:** With **fewer farmers and less land available** for food production, overall food security becomes threatened, particularly for local communities.
 - **Weakened Bargaining Power:** Loss of [land ownership](#) puts farmers at a **disadvantage in negotiating fair prices** for their products from powerful agribusinesses.
 - **Exacerbated Rural Poverty:** Limited access to land restricts opportunities for [rural populations](#), trapping them in a cycle of poverty.
- **Environmental Degradation:**
 - **Unsustainable Practices:** The focus on **large-scale, export-oriented agriculture** often leads to unsustainable land use practices, such as [deforestation](#), soil depletion, and overuse of water resources.
 - **Loss of Biodiversity:** Land conversion for mining, infrastructure, and industrial agriculture **destroys natural habitats** and threatens biodiversity.
 - **Increased Vulnerability to Climate Change:** Degradation of soil health and loss of natural vegetation **weaken ecosystems**, making them more vulnerable to [climate shocks](#).
- **Social Unrest and Conflict:**
 - **Competition for Resources:** Competition for scarce land resources can lead to **social tensions and conflicts** between communities and investors.
 - According to the report by **IPES-Food**, **over half of the land** designated by governments for [carbon removal projects](#) presents a potential risk of interference with the livelihoods of small-scale farmers and indigenous people.
 - **Instability and Outmigration:**
 - Loss of land and livelihood opportunities triggers [rural-urban migration](#), putting pressure on urban resources and social services.

What are the Recommendations of the Report?

- **Halt Land Grabs:** Policies and regulations are **needed to prevent land grabs** and ensure land use decisions prioritise local communities and food security.
- **Support Small-Scale Farmers:** Investments in rural infrastructure, secure land tenure, and access to financing are crucial for empowering small-scale producers.
- **Sustainable Land Management:** Promote practices that protect soil health, conserve biodiversity, and ensure long-term food production.
- **Fair Trade Policies:** Trade agreements should be reformed to promote sustainable agriculture and protect the livelihoods of small-scale farmers.

Conclusion

The land squeeze is a complex issue demanding a multifaceted solution. By addressing the underlying causes and supporting small-scale food producers, we can ensure equitable access to land, protect our environment, and build a more sustainable food system for the future.

Drishti Mains Question:

Q. Highlighting the threats of land squeeze discuss the land use pattern of India and challenges associated with it.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. With reference to the provisions made under the National Food Security Act, 2013, consider the following statements: (2018)

1. The families coming under the category of 'below poverty line (BPL)' only are eligible to receive subsidised food grains.
2. The eldest woman in a household, of age 18 years or above, shall be the head of the household for the purpose of issuance of a ration card.
3. Pregnant women and lactating mothers are entitled to a 'take-home ration' of 1600 calories per day during pregnancy and for six months thereafter.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 3 only

Ans: (b)