



## 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 an 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

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▪ **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)**