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**1. Make in India**

**Syllabus: GS-3, Economy: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.**

**Mains: Initiatives taken to promote domestic manufacturing and its significance**

**Context:**

Make in India yields positive results for the toy sector.

**Details:**

- The import of toys is down by 70% in the last three years.
- Additionally, the exports have jumped by 61.38% over the same period.
- Interventions by the government for the Toy Sector:
  - The [Directorate General of Foreign Trade](#) (DGFT) mandated sample testing of each consignment and no permission for sale unless the quality testing is successful. In case of failure, the consignment is either sent back or destroyed at the cost of the importer.
  - The Government issued the Toys (Quality Control) Order, 2020 in 2020 through which toys have been brought under compulsory Bureau of Indian Standards (BIS) certification with effect from January 2021. This QCO is applicable to both domestic manufacturers as well as foreign manufacturers who intend to export their toys to India.
    - The QCO was later amended to exempt goods and articles manufactured and sold by artisans registered with the Development Commissioner and also for goods that have a GI tag.
  - Special provisions made by the BIS grant license to micro-scale units manufacturing toys without a testing facility for one year and not to insist on establishing an in-house facility.

**Know more about [Make in India](#) in the link.**

## 2. State Ranking Index for NFSA

**Syllabus: GS- 3, Economy: Food Processing and Related Industries in India- Scope' and Significance, Location, Upstream and Downstream Requirements, Supply Chain Management.**

**Prelims: State Ranking Index for NFSA - Parameters and state performances**

**Context:**

The first edition of the State Ranking Index for NFSA has been released.

**About the State Ranking Index for NFSA:**

- The ranking was released by the Ministry of Consumer Affairs, Food & Public Distribution.
- The states and UTs were ranked based on three parameters for the year 2022. They are:
  - Coverage of [NFSA](#), rightful targeting, and implementation of all provisions under NFSA
  - Delivery platform while considering the allocation of foodgrains, their movement, and last-mile delivery to Fair Price Shops (FPS)
  - Nutrition initiatives of the department
- The index attempts to document the status and progress of the implementation of NFSA and various reform initiatives across the country, post consultation with states.
- It highlights the reforms undertaken by States and UTs and creates a cross-learning environment and scale-up reform measures by all states and union territories.
- Although currently the index analyses only NFSA distribution, in the future, [PMGKAY](#) will also be taken into account.

# IMPLEMENTING FOOD SECURITY

How the 20 'general category' states ranked in terms of NFSA implementation

## TOP THREE

Rank	State	Index score
1	Odisha	0.836
2	Uttar Pradesh	0.797
3	Andhra Pradesh	0.794

## BOTTOM THREE

18	Delhi	0.658
19	Chhattisgarh	0.654
20	Goa	0.631

Image source: <https://indianexpress.com/>

- Among the Special Category states/UTs, Tripura stood first followed by Himachal Pradesh and Sikkim.
- Among the 3 UTs where Direct Benefit Transfer (DBT) - Cash is operational, Dadra and Nagar Haveli & Daman and Diu is the top-ranked UT.

### 3. New material discovered can convert infrared light to renewable energy

**Syllabus:** GS-3, Science and Technology developments and their applications and effects in everyday life.

**Prelims:** Infrared light - Properties

**Context:**

Scientists have discovered a novel material that can emit, detect, and modulate infrared light with high efficiency making it useful for solar and thermal energy harvesting and for optical communication devices.

**Details:**

- Researchers from Bengaluru's Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), an autonomous institute of the Department of Science and Technology (DST) have discovered a novel material called single-crystalline scandium nitride (ScN) that can emit, detect, and modulate infrared light with high efficiencies.
  - They utilized a scientific phenomenon called **polariton excitations** that occur in tailored materials when light couples with either the collective free electron oscillations or polar lattice vibrations to achieve this feat.
  - They have carefully controlled material properties to excite polaritons (a quasi-particle) and achieve strong light-matter interactions in single-crystalline scandium nitride (ScN) using infrared light.
  - Significance:
    - These exotic polaritons in the ScN can be utilized for solar and thermal energy harvesting.
    - They are also compatible with modern complementary-metal-oxide-semiconductor (CMOS) or Si-chip technology and, therefore, could be easily integrated with on-chip optical communication devices.
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