

State Ranking Index for NFSA

Creating resilient food systems to
optimize the delivery of benefits

June 2022



Message from the Hon'ble Minister



Shri Piyush Goyal

In India, the Targeted Public Distribution System (TPDS) has a long history of delivering highly subsidized foodgrains across the country. It has continued to evolve over the years. Now the provisions of the National Food Security Act (NFSA), enacted in 2013, govern the TPDS. Ever since the enactment of NFSA, food security in India has advanced from a welfare-based to a rights-based approach. Our government has worked tirelessly to maintain transparency in implementing the NFSA and eliminate foodgrain leakages and diversion during the distribution process.

In this regard, ICT tools have found emphasis, while the end-to-end computerization of PDS operations has seen significant progress. Such reforms have paved the way for remarkable achievements in the past years. The most notable reform is the national-level implementation of the ambitious “One Nation, One Ration Card” plan, which enables beneficiaries to draw subsidized foodgrains from any fair price shop of their choice anywhere in the country.

I applaud the efforts of the Department of Food and Public Distribution in developing this Index. I am sure it will facilitate the adoption of good practices in TPDS operations across the states and union territories and promote healthy competition and learning.

<Signature>

Message from the Hon'ble Secretary



Shri Sudhanshu Pandey

India's Targeted Public Distribution System (TPDS) is a critical policy tool under NFSA 2013 to safeguard the food security of the nation's vulnerable population. It is the most extensive food assistance program globally. It provides 67% of the country's people with foodgrains at highly subsidized prices every month.

This Department has persistently worked to improve the system by undertaking timely initiatives and innovative reforms. Over the past years, the system has become more transparent, adaptable, and accountable. Digitization of systems, automation of fair price shops, and enforcement of different provisions of the National Food Security Act (NFSA), 2013, have helped minimize leakage and maximize the rightful delivery of entitlements.

Beneficiary convenience and satisfaction has been the core principle in designing these measures. The use of Aadhaar-enabled technical architecture now ensures that only the rightful beneficiary receives their intended benefit. The national rollout of ration card portability—"One Nation, One Ration Card" has further empowered beneficiaries and significantly improved the delivery of services under the TPDS.

This "State ranking Index for NFSA" attempts to document the status and progress of implementation of NFSA and various reform initiatives across the country, post consultation with states. It highlights the best practices undertaken in frontrunner states and union territories to create a cross-learning environment and scale-up reform measures by all states and union territories. We expect to accelerate the use of technology and further amplify the implementation of NFSA through the continuous evolution of the Public Distribution System. We foresee capturing these developments in the future iterations of the Index and transforming it into a vehicle to drive the adoption of novel reforms.

We hope that this document evokes further interest in states and guides them toward effective implementation of the reforms and provisions in the Act. I compliment the efforts of the various officials from the Department and the MicroSave Consulting (MSC) for bringing out this Index on Ranking of States. I hope that this document contributes toward the vision of the Government of India in ensuring food security for the citizens of the country.

<Signature>

List of abbreviations

AAY	Antyodaya Anna Yojana
DBT	Direct Benefit Transfer
DGRO	District Grievance Redressal Officer
eKYC	Electronic Know Your Customer
ePoS	Electronic Point of Sale
FPS	Fair Price Shop
GRM	Grievance Redressal Mechanism
ICT	Information and Communication Technology
NFSA	National Food Security Act
ONORC	One Nation One Ration Card
PDS	Public Distribution System
PHH	Priority Household
RC	Ration Card
SFC	State Food Commission
TPDS	Targeted Public Distribution System
UT	Union Territory
VC	Vigilance Committee

Table of contents

Executive summary	8
Introduction to NFSA and TPDS	12
Notable reforms and milestones	13
Objectives of the Index	16
Salient features of the Index	17
Summary of the framework	19
State rankings: 2022	20
Pillar 1: NFSA—Coverage, targeting, and provisions of the Act	24
Pillar 2: Delivery platform	27
Pillar 3: Nutrition initiatives	30
Approach and methodology	32
● Developing the framework	
● Selection of pillars, sub-parameters, and indicators	
● Consultation with stakeholders	
● Assigning weightages	
● Developing the Index	
Annex I: List of indicators	36
Annex II: Definitions and measuring criteria	38

Executive summary

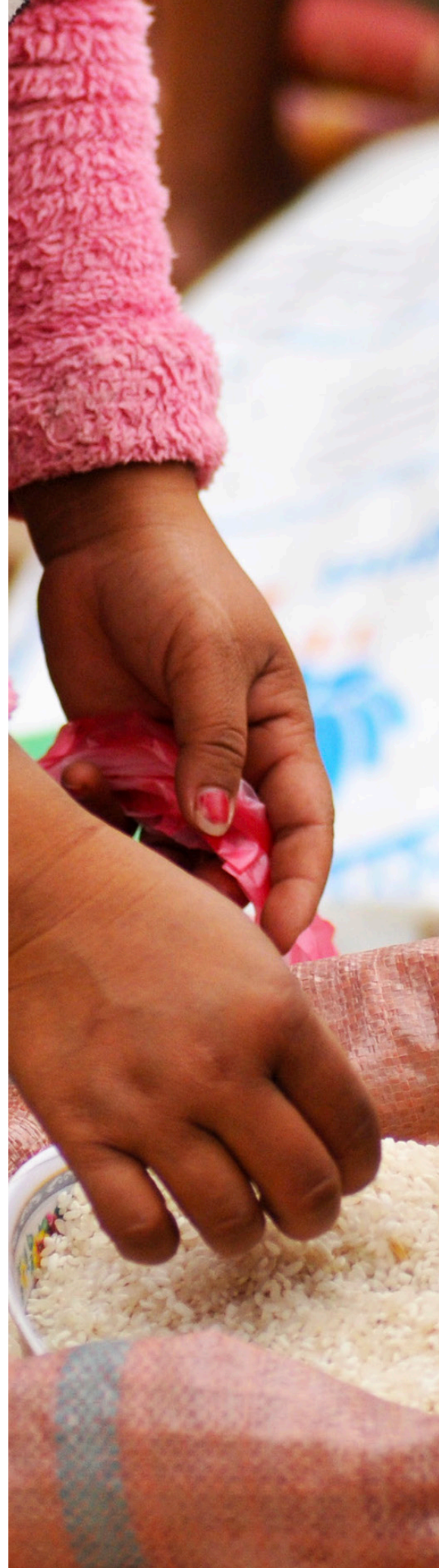
The National Food Security Act (NFSA), 2013, is foundational in guaranteeing the right to food to the population of India. It marks a shift away from a welfare-based to a rights-based approach that ensures food security for over two-thirds of the nation. NFSA covers up to 50% of India's urban population and up to 75% of India's rural population through a well-established Targeted Public Distribution System (TPDS). A joint responsibility between the Central and State/UT Governments, the scale of TPDS operations makes it one of the most extensive food assistance programs in the world.

NFSA follows a “lifecycle approach.” It pays particular attention to pregnant women, lactating mothers, and infants. The approach ensures appropriate and adequate nutrition for these groups and improves their health outcomes continuously. Apart from upholding the right to food, ensuring food security is crucial for developing healthy and productive human capital.

Some key TPDS reforms have had a tremendous impact on the design and implementation of the program. TPDS has become more efficient while leakages have been plugged due to digitization efforts. Digitization includes end-to-end computerization, Aadhaar seeding of ration cards, and the use of electronic Know Your Customer (eKYC). Additionally, the recent execution of the One Nation One Ration Card (ONORC) has enabled the portability of Ration Cards, which has empowered India's migrant population by providing them access to their entitled foodgrains anywhere in the country.

Given the scale and complexity of the program, the government needed to develop an Index that would evaluate the implementation of NFSA and TPDS operations across the states and union territories. A standard framework like this Index would create an environment of competition, cooperation, and learning among states, promote transparency, and publish verified data in the public domain for research and analysis.

The Index rests upon three pillars that consider various facets of food security and nutrition. Each pillar has





parameters and sub-parameters that support this evaluation. The first pillar measures coverage of NFSA, rightful targeting, and implementation of all provisions under NFSA. The second pillar analyzes the delivery platform while considering the allocation of foodgrains, their movement, and last-mile delivery to Fair Price Shops (FPS). The final pillar focuses on nutrition initiatives of the department.

Findings from the exercise revealed that most states and union territories have fared well in digitization, Aadhaar seeding, and ePoS installation, which reiterates the strength and scale of the reforms. However, states and union territories can improve their performance in a few areas. Exercises, such as conducting and documenting social audits thoroughly and operationalizing functions of state food commissions across states and union territories, will further bolster the true spirit of the Act.

Overall, Odisha, Uttar Pradesh and Andhra Pradesh scored the highest and secured the top three positions in the Index. The states performed very well on all the parameters and indicators governing the implementation of NFSA through TPDS. Among the special category states (the North Eastern states, Himalayan states, and the Island states), Tripura, Himachal Pradesh and Sikkim obtained the top positions. Despite the logistical limitations in these areas, they displayed a high degree of accomplishment in competing with the general category states as well.

In terms of coverage, targeting, and implementing provisions of NFSA—Jharkhand, Uttar Pradesh and Dadra & Nagar Haveli and Daman Diu scored the highest, with obtaining nearly full indicator level scores. Bihar, Andhra Pradesh and Telangana had the best delivery platform displaying the efficiency of TPDS supply chain.

It is envisaged that this Index will help offer unique insights and improve the TPDS continuously through innovation, lessons learned, and cooperation.

The background is a solid orange color with a faint, stylized line-art illustration of Indian architecture and art. It includes domes, minarets, and a lion capital of Ashoka in the lower left corner. A large, faint watermark of the Ashoka Lion Capital is visible in the center.

NFSA and TPDS

Introduction,
notable reforms,
and milestones

Introduction to NFSA and TPDS

The Public Distribution System (PDS) in India started as a way for India to manage the scarcity of foodgrain supplies in the open market. PDS intended to ensure stability in the prices and rationing of foodgrains in case of a supply deficit. The National Food Security Act, 2013 (NFSA) marked a shift from a welfare-based model toward a rights-based approach. A rights-based approach sees beneficiaries as active stakeholders rather than mere recipients of welfare. While the Constitution of India does not explicitly state a “right to food,” it is considered a part of the broader fundamental right to life.

Today, the Targeted Public Distribution System (TPDS) under the NFSA has become the world’s largest food assistance program. It ensures food security for two-thirds of India’s population. By distributing highly subsidized foodgrains every month, TPDS safeguards the right to food for most Indians.

The NFSA also emphasizes the importance of correct targeting to ensure maximum impact and reach vulnerable groups while maintaining the affordability of foodgrains. In particular, the Act has directed several actions to ensure food security for women and children and the population at large. For instance, as per NFSA the eldest woman in a household shall be recognized as the head of the household in ration card.

Additionally, one of the “guiding principles” of the Act is the lifecycle approach, which focuses on interventions at every life stage. Following this, NFSA has special provisions for pregnant women, lactating mothers, and children between six months and 14 years. These include hot, nutritious meals in schools and Aanganwadi centers and cash transfers for pregnant women and lactating mothers to provide additional nutritional benefits and compensate for wage loss.



Notable reforms and milestones

TPDS has continuously innovated and transformed across all levels in its platforms and processes. Mentioned below are some notable highlights that have shaped how India addresses issues around food security, nutrition, and poverty reduction.

2012

End-to-end computerization of TPDS: A key milestone in the modernization of TPDS was the end-to-end computerization of the system. Computerization was implemented on a cost-sharing basis between the central and the state governments. It was put in place primarily to enable the digitization of beneficiary databases. In particular, computerization flagged duplicate records and identified beneficiaries easily.



The system also helped with the online allocation of foodgrains, increasing efficiency in supply chain management—specifically combating leakages. It ensured the timely availability of foodgrains at the fair price shop (FPS). Further, it offered a convenient way to correctly target beneficiaries of the program and address the problem of data duplication by enabling the Aadhaar seeding of ration cards. It also helped create a robust grievance redressal mechanism (GRM) and upheld transparency by instituting a national toll-free number.

2015

Cash transfer pilot for Direct Benefit Transfer (DBT): In 2015, the central government conducted a DBT pilot in three union territories to test cash transfers for food subsidies. The cash transfer mode intended to resolve mobility challenges and provide greater autonomy and flexibility for beneficiaries—since they exercised choice over the food subsidies. In the process, cash transfers encouraged a diverse and nutritious consumption basket, reduced leakages in the system, and promoted financial inclusion.

Beneficiaries receive the cash transfer directly in their bank accounts. They can purchase foodgrains of their choice from the open market in the three union territories of Chandigarh, Dadra and Nagar Haveli (urban areas), and Puducherry.



Integrated Management of PDS (IMPDS): IMPDS has a crucial role in enabling portability of benefits under NFSA, the key objective of the scheme being seamless integration of data, applications, and services across states. Portability enables all eligible households to access foodgrains from FPS anywhere in the country after biometric identification. This is designed keeping in mind the large volume of migrant workers in the country. The system offers them unique flexibility and provision of foodgrains irrespective of their location.

Beneficiary eKYC at FPS using Aadhaar: Implementing electronic “Know your Customer” (eKYC) digitizes the manual and slow process of identifying beneficiaries at FPS. Using Aadhaar, eKYC ensures the program reaches target beneficiaries, thereby creating a seamless and efficient system that delivers maximum impact.

One Nation One Ration Card (ONORC): This was an ambitious effort by the Department in association with the governments of state and union territories to achieve nationwide portability of the benefits under the NFSA. The plan benefits the numerous migrant beneficiaries who change their place of dwelling across the country frequently in search of temporary employment or for other reasons. Due to migration, they eventually get deprived of their food security benefits.

Migrants can now avail their foodgrain entitlements from any FPS in the country using their existing ration card or Aadhaar card number. Additionally, this helps close gaps around bogus identities and reduces leakages.



Transformation of Fair Price Shops: The Department of Food and Public Distribution has undertaken various technology-based interventions in the Public Distribution System (PDS) to improve transparency in operations, prevention of leakages and diversion of foodgrains. Simultaneously, it has been the endeavor of the department to improve the financial viability of Fair Price Shops (FPS) by providing additional business avenues to FPS dealers and enhance beneficiary satisfaction through provision of value addition services at FPS.


The department has signed an MoU with Common Service Centre (CSC) in this regard. It has requested all State/UT governments to implement the following additional services at the FPS:

Common Service Centre (CSC) services, banking services through tie-up with banks/ corporate BCs, banking and citizen-centric services of India Post Payment Bank (IPPB), retail selling of small (5kg) LPG cylinders, sale of other commodities/ general store items, converting FPS into 'Public Data Office' under the PM-WANI scheme, providing MUDRA loans to FPS dealers for capital augmentation.

In addition, the department has been pursuing all States/UT governments to implement the following initiatives as part of FPS transformation:

Installation of Closed-circuit television (CCTV) cameras at FPS, linking automatic weighing scales with e-PoS machines, Installation of display/information boards at FPS, uniform branding/painting of FPS for easy identification.





State ranking Index for NFSA

Objectives, salient
features, and results

Objectives of the Index

NFSA is a crucial policy instrument to ensure food security, covering nearly 80 crore people. However, NFSA's implementation through TPDS has not been uniform in the country. While some states and union territories lead, others are yet to pick up in terms of coverage, beneficiary satisfaction, digitization, and overall system efficiency.

NFSA plays a critical role in combating hunger and safeguarding food security in the country. Yet, the uneven implementation of the Act across the states highlighted the need for a standard framework to measure the efficiency and impact of food security initiatives through NFSA across all states and union territories.

The Index has been developed with the following key objectives:

- **Create an environment of competition, cooperation, and learning among states**

States have a tremendous potential to learn from each other while addressing grave matters of food security and hunger. The framework offers a platform to consolidate lessons and best practices. The framework will give a unique insight into challenges and triumphs in different aspects of food security and open up communication channels between states.

- **Create transparency in the system to publish reliable and standard data in the public domain for citizens**

Processes and information dissemination that promote transparency are imperative in pursuing open and fair social protection programs. If transparency is lacking or not promoted, it can lead to many problems, including information asymmetry wherein stakeholders may not have complete information. A lack of clarity on the ground may result in poor implementation of policies.

- **Periodically publish data that global and Indian agencies can use for their research and analysis**

Currently, most agencies rely on third-party data, proxy data, or assumptions for their research and indexes. The lack of verifiable, large-scale public data on information around food security and nutrition makes it easy to misrepresent the state of affairs. This Index can plug that knowledge gap and offer a wealth of information to citizens, global and Indian agencies, and government bodies.

The framework helps rank states and union territories based on the availability of infrastructure, the readiness of systems, and effective implementation of the Act. It also aligns with the Sustainable Development Goals, most strongly with Goal 2—Zero hunger. The framework also aligns with Goal 1—No Poverty, Goal 3—Good Health and Well-Being, and Goal 5—Gender Equality. This ranking also intends to provide credible and verifiable sources of data to state and union territory governments, policymakers, multilateral organizations, as well as global indices.

Salient features of the Index

The key components of the Index are designed to provide a robust foundation, upon which the framework can be built and consequently modified. The features are in line with several global indices and other measuring tools for development. The outcomes presented in the Index can be compared and disseminated easily in several contexts. Listed below are the salient features of the Index.

- **A state-level tool to measure implementation of NFSA**

It will help create a framework to benchmark the implementation of the country's food security measures at a state level. At the same time, there will be special exceptions for hilly terrains and the North East region given the unique challenges these areas face.

- **A tool to capture concurrent improvements**

The development and release of this Index will be a routine annual exercise. This will allow states to improve the scores by enhancing performance. Over time, it will also provide critical insights into the progress and shifts states have made to address food security issues. Finally, a recurring exercise can potentially give enough data to predict and respond better to future challenges.

- **Covers quantitative as well as qualitative metrics**

The Index will comprehensively capture both quantitative and qualitative aspects while calculating the scores for each state. A mixed-methods approach will also ensure that states and union territories are judged holistically and thus will reflect a more accurate scenario of the food security in the region.

- **Flexible and evolving in nature**

The Index will be dynamic and shall evolve with new iterations every year. The weights of the pillars and indicators will be flexible and can be tweaked based on their relevance over time. A dynamic database will help recognize crucial milestones and achievements, for instance, 100% automation across the country. It will also make space for innovations that can transform food security in India.



What this Index does not reflect

01

The Index denotes only the efficiency of TPDS operations, it does not reflect the level of hunger, if any or malnutrition, or both, in a particular state or union territory.

02

The current version of the Index measures the effectiveness of NFSA implementation majorly through operations and initiatives under TPDS. It does not cover programs and schemes implemented by other Ministries and Departments under NFSA

03

The current version of the Index focuses on NFSA and TPDS reforms, which can be standardized across the states and union territories, hence it does not reflect specific initiatives and reforms undertaken by the states or union territories.



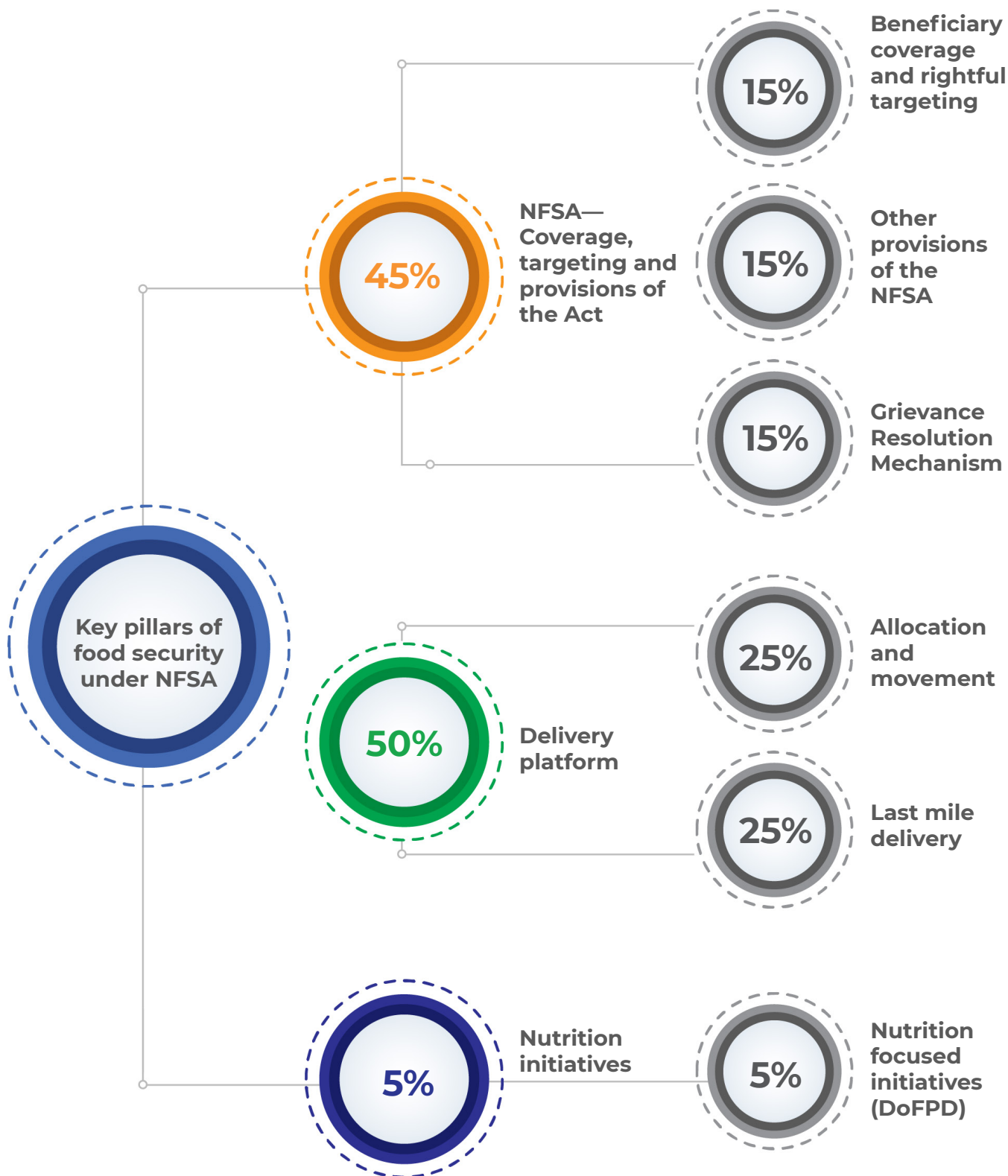
Vision for the future

The current version of the Index tries to capture a comprehensive picture of NFSA implementation. However, there are some indicators and reformative initiatives undertaken by various states and union territories which can still be captured to make the Index more robust and representative. The subsequent versions will incorporate details of such indicators more elaborately. Attempts to align indicators to global food security measurement tools will also be pursued. Indicators for which the data points have reached a saturation level will be replaced with more relevant and contextual criteria. Similarly, based on the relative significance of each pillar, the weightages may be suitably aligned in future iterations.

The subsequent version of the index will also be integrated with the DGQI initiative being undertaken by this department

Summary of the framework

The assessment framework¹ for ranking the states and union territories is built on three key pillars, which covers the end-to-end implementation of NFSA through TPDS



¹ Annex 1 contains an exhaustive list of all indicators and measurable criteria.

State rankings: 2022

Ranks and scores obtained by general category states and union territories

State or union territory	Index score	Rank
Odisha	0.836	1
Uttar Pradesh	0.797	2
Andhra Pradesh	0.794	3
Gujarat	0.790	4
Dadra & Nagar Haveli and Daman Diu	0.787	5
Madhya Pradesh	0.786	6
Bihar	0.783	7
Karnataka	0.779	8
Tamil Nadu	0.778	9
Jharkhand	0.754	10
Kerala	0.750	11
Telangana	0.743	12
Maharashtra	0.708	13
West Bengal	0.704	14
Rajasthan	0.694	15
Punjab	0.665	16
Haryana	0.661	17
Delhi	0.658	18
Chhattisgarh	0.654	19
Goa	0.631	20

*The UT of Dadra & Nagar Haveli and Daman & Diu is covered under both category—for urban areas under DBT category and for other areas under non DBT category.

Ranks and scores obtained by states and union territories belonging to special² categories (North Eastern states, Himalayan states, and the Island Regions)

State or union territory	Index score	Rank
Tripura	0.788	1
Himachal Pradesh	0.758	2
Sikkim	0.710	3
Nagaland	0.648	4
Uttarakhand	0.637	5
Mizoram	0.609	6
Assam	0.604	7
Arunachal Pradesh	0.586	8
Lakshadweep	0.568	9
Jammu & Kashmir	0.564	10
Andaman and Nicobar Islands	0.562	11
Manipur	0.522	12
Meghalaya	0.512	13
Ladakh	0.412	14

Ranks and scores obtained by union territories operating in DBT (cash transfer) mode

Union territory	Index score	Rank
Dadra & NH and Daman Diu	0.802	1
Puducherry	0.709	2
Chandigarh	0.680	3

² Based on complexity in providing services owing to geographical constraints

Comprehensive country level Index³

State or union territory	Index score	Rank
Odisha	0.836	1
Uttar Pradesh	0.797	2
Andhra Pradesh	0.794	3
Gujarat	0.790	4
Tripura	0.788	5
Dadra & Nagar Haveli and Daman Diu	0.787	6
Madhya Pradesh	0.786	7
Bihar	0.783	8
Karnataka	0.779	9
Tamil Nadu	0.778	10
Himachal Pradesh	0.758	11
Jharkhand	0.754	12
Kerala	0.750	13
Telangana	0.743	14
Sikkim	0.710	15
Maharashtra	0.708	16
West Bengal	0.704	17
Rajasthan	0.694	18
Punjab	0.665	19
Haryana	0.661	20
Delhi	0.658	21
Chhattisgarh	0.654	22
Nagaland	0.648	23
Uttarakhand	0.637	24
Goa	0.631	25
Mizoram	0.609	26
Assam	0.604	27
Arunachal Pradesh	0.586	28
Lakshadweep	0.568	29
Jammu & Kashmir	0.564	30
Andaman and Nicobar Islands	0.562	31
Manipur	0.522	32
Meghalaya	0.512	33
Ladakh	0.412	34

³ DBT cash UTs—Chandigarh and Puducherry have not been listed in the country level index due to variation in the scoring criteria, however separate ranks and scores have been generated for these UTs in all categories.



State ranking framework

Pillars, approach,
and methodology

Pillar 1: NFSA—Coverage, targeting, and provisions of the Act

NFSA is based on the idea of food security that ensures all people have access to basic food for healthy lives at all times. The availability, access, utilization, and stability of food are some key ways to characterize food security. This pillar helps measure a state or union territory's performance in covering the various provisions of NFSA in practice. Listed below are vital indicators that explain the rationale behind the pillar.

Beneficiary coverage and rightful targeting: This sub-parameter ensures that all eligible beneficiaries are duly covered under NFSA. Eligible beneficiaries here imply up to 75% of the rural population and 50% of the urban population under Antyodaya Anna Yojana (AAY) and Priority Households (PHH). With this indicator, it is analyzed that how states adequately identify and provide coverage to vulnerable households. The correct identification of scheme beneficiaries is one of the most crucial elements in designing any social security program. Ensuring that the benefits reach the deserving population exclusively with minimum leakages is a crucial determinant for the success of such programs. The NFSA guides that states and union territories shall adopt measures to undertake proper targeting and maximize impact. Using various technology-led digitization reforms, states and union territories have proactively implemented initiatives to optimize the delivery of benefits over the past few years.

Other provisions of the NFSA: One of the differentiating features of NFSA is the provisions around women empowerment and transparency. This sub-parameter captures the provisions related to women empowerment, transparency and storage of food grain. Under NFSA, central and state governments shall create



and maintain scientific storage facilities at various levels, sufficient to accommodate foodgrains required under the Targeted Public Distribution System and other food based welfare schemes. It aims to set up modern and scientific storage facilities for safe storage of foodgrains for distribution through TPDS

Grievance redressal mechanism (GRM): A robust GRM is also a channel through which the program can be continuously improved. Moreover, it brings participative inputs to the program design. It aids information access, holds government systems accountable, and gives opportunities to beneficiaries to register grievances. It provides a system to obtain feedback, as well as to measure the efficiency and effectiveness of the state's implementation of TPDS and other policies related to food security.



State rankings for Pillar 1: NFSA—Coverage, targeting, and provisions of the Act

General category states and union territories

State or union territory	Index score	Rank
Jharkhand	0.891	1
Uttar Pradesh	0.876	2
Dadra & Nagar Haveli and Daman Diu	0.874	3
Odisha	0.870	4
Kerala	0.858	5
Tamil Nadu	0.853	6
Karnataka	0.849	7
Andhra Pradesh	0.813	8
Goa	0.813	9
Rajasthan	0.812	10
Punjab	0.809	11
Gujarat	0.804	12
Bihar	0.793	13
Maharashtra	0.786	14
Madhya Pradesh	0.776	15
Delhi	0.774	16
Chandigarh	0.770	17
West Bengal	0.710	18
Chhattisgarh	0.710	19
Puducherry	0.708	20
Telangana	0.705	21
Haryana	0.700	22

Special category states and union territories

State or union territory	Index score	Rank
Tripura	0.932	1
Manipur	0.871	2
Himachal Pradesh	0.863	3
Sikkim	0.863	4
Arunachal Pradesh	0.848	5
Nagaland	0.844	6
Mizoram	0.745	7
Uttarakhand	0.744	8
Andaman and Nicobar Islands	0.705	9
Lakshadweep	0.695	10
Assam	0.676	11
Jammu & Kashmir	0.666	12
Meghalaya	0.621	13
Ladakh	0.396	14



Pillar 2: Delivery platform

TPDS operates under the joint responsibility of the central government and states and union territories. The Central Government ensures procurement, allocation, and transportation to states and union territories. In turn, the state and union territories are tasked with intrastate transportation, distribution within states, identifying beneficiaries, issuing ration cards, and managing distribution through FPS. This pillar evaluates this crucial process in two parts:

Allocation and movement: Transporting foodgrains across the country is a massive logistical exercise, depending on the need of states and union territories. State and union territory governments have implemented the end-to-end computerization of operations in the supply chain. However, the states have adopted different technological infrastructure and are at different stages of implementing the schemes. This indicator looks at processes of automation across the supply chain. In particular, it evaluates the process of allocation, movement, recording inventory, and transactions.

Last-mile delivery: This is the last stop in the distribution system before grains reach intended beneficiaries at the fair price shops. Effective delivery of entitlement to beneficiaries is highly dependent on the quality of service provided at the last mile service point, that is, the FPS. This parameter evaluates the level of FPS automation in states and union territories. In particular, it helps maximize transparency in delivering benefits by looking at the availability of digital infrastructure at the FPS, such as installing and implementing the electronic point of sale device, electronic weighing scales, etc.



State rankings for Pillar 2: Delivery platform

General category states and union territories

State or union territory	Index score	Rank
Bihar	0.852	1
Andhra Pradesh	0.807	2
Telangana	0.802	3
Odisha	0.790	4
Madhya Pradesh	0.775	5
West Bengal	0.770	6
Dadra & Nagar Haveli and Daman Diu	0.762	7
Gujarat	0.756	8
Tamil Nadu	0.738	9
Kerala	0.728	10
Uttar Pradesh	0.706	11
Karnataka	0.694	12
Rajasthan	0.657	13
Jharkhand	0.656	14
Haryana	0.643	15
Chhattisgarh	0.619	16
Delhi	0.619	17
Maharashtra	0.609	18
Punjab	0.577	19
Goa	0.531	20

Special category states and union territories

State or union territory	Index score	Rank
Himachal Pradesh	0.689	1
Tripura	0.686	2
Assam	0.599	3
Sikkim	0.594	4
Uttarakhand	0.554	5
Jammu & Kashmir	0.528	6
Lakshadweep	0.511	7
Mizoram	0.497	8
Andaman and Nicobar Islands	0.489	9
Nagaland	0.487	10
Ladakh	0.418	11
Meghalaya	0.416	12
Arunachal Pradesh	0.358	13
Manipur	0.210	14

For union territories operating in DBT (cash transfer) mode⁴

Union territory	Index score	Rank
Dadra & Nagar Haveli and Daman Diu	0.656	1
Puducherry	0.656	1
Chandigarh	0.567	3

⁴As the supply chain parameters are not comparable in case of DBT cash UTs, the second pillar has been suitably modified and Index scores have been generated separately. Details of indicators used are available at Annex I.

Pillar 3: Nutrition initiatives

This pillar only captures nutrition initiatives of the Department of Food and Public Distribution. The distribution of foodgrains through TPDS ensures that vulnerable households have access to food. However, improving access to food is not the same as ensuring optimal nutrition. Enhancing the nutrition status is imperative to ensure a robust, healthy, and productive population, especially among children. This enhances the focus on not just food security but also nutrition security. There is a growing recognition of this reality, that it is also a key measure to increase the effectiveness and outcomes of food security programs.

Nutrition focused reforms (DoFPD): Under TPDS the key focus areas for extending nutrition security are introducing dietary diversity and fortifying the existing PDS entitlements with micronutrients. Dietary diversity can be promoted by incorporating the distribution of local millets and coarse grains through PDS. Whereas, the addition of critical minerals and vitamins, and other nutrients in grains can combat food insecurity and provide well-balanced and nutritious food to the country, especially for the most vulnerable sections of the population. This indicator looks at programs implemented in the country that intend to diversify the PDS food basket and supply fortified foodgrains to beneficiaries through the established network of food assistance programs.

This is an evolving pillar; accordingly, a minimalistic weightage has been assigned to the same in the current version of the Index.



State performance for Pillar 3: Nutrition initiatives

State or union territory	Distribution of coarse grains under NFSA	Distribution of fortified grains through TPDS
Andhra Pradesh		✓
Arunachal Pradesh		✓
Chhattisgarh		✓
Gujarat	✓	✓
Haryana	✓	
Himachal Pradesh		✓
Jharkhand		✓
Karnataka	✓	✓
Ladakh		✓
Madhya Pradesh	✓	✓
Maharashtra	✓	✓
Manipur		✓
Meghalaya		✓
Mizoram		✓
Nagaland		✓
Odisha	✓	✓
Sikkim		✓
Tamil Nadu		✓
Telangana		✓
Tripura		✓
Uttarakhand		✓
Uttar Pradesh	✓	✓

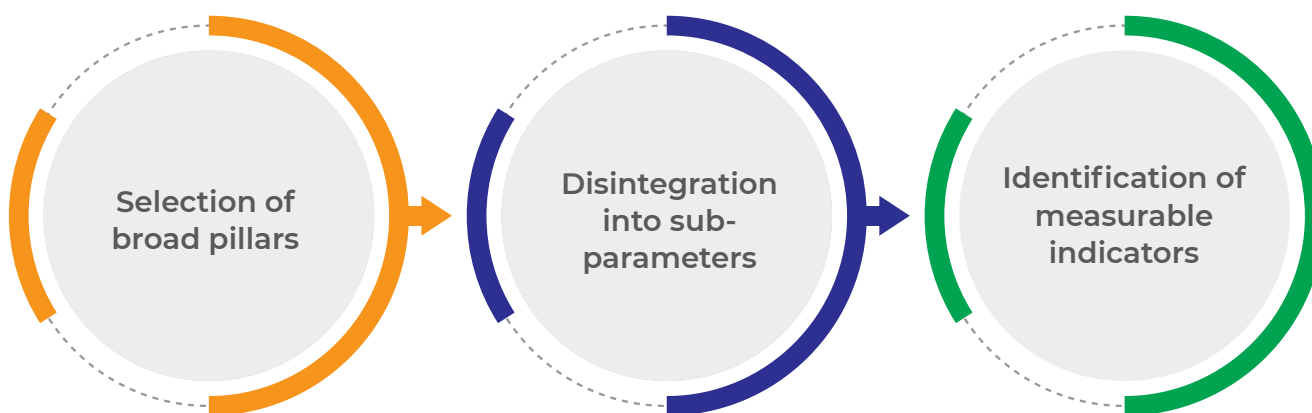
Approach and methodology

The State Ranking Index for food security is a tool designed to comprehensively measure and track states' progress in ensuring the food security of India's population, particularly the needy and vulnerable sections of society. Assessing food security is a complex process. The State Ranking Index will be used to assess and rank states' progress across various parameters of NFSA and TPDS.

The Index generates composite score that is easy to understand and can be used to compare states' performance. It is based on a data-driven framework, created from an exhaustive list of indicators to accurately represent states' development, the coverage and targeting under the provisions of NFSA, progress on the delivery platform, and nutritional initiatives. It is constructed from 43 unique indicators that measure drivers of food security in India through the implementation of NFSA.

Developing the framework

The framework for developing the State Ranking Index was created in a three-step process. Firstly, the broad pillars of assessment were identified to cover the end-to-end implementation of NFSA and other parameters of food security. As a second step, the identified pillars were disintegrated into sub-parameters to measure the efficiency of each pillar. Finally, to quantify the sub-parameters, they were disintegrated into measurable indicators.



Selection of pillars, sub-parameters, and indicators

Taking guidance from the provisions prescribed under the NFSA and extensive consultations with stakeholders, that is the states and union territories, three key pillars and a list of 43 indicators were identified. These indicators were further refined to enable effective measurement and comparison. Criteria-based indicators were chosen to determine suitable metrics for the Index. These indicators had:

- Relevance to the provisions of NFSA and TPDS
- Alignment with the international food security indicators and frameworks
- Availability of data at the national level for states and union territories from official systems

Consultation with stakeholders

The latest data on the selected indicators was collected in collaboration with the respective Food and Civil Supplies Departments in the states and union territories. Consultations with the Department and states and union territories were also organized to arrive at suitable indicators and assign adequate weightages to the critical pillars of the Index. Intensive rounds of consultations with all the key stakeholders preceded the refinement and selection of the indicator. The list of indicators was circulated to all states and union territories for their concurrence and for them to share the latest information. A detailed workshop with all states and union territories, with Food Secretaries, and concerned senior officials was also conducted.

Assigning weightages

The weightages assigned to each pillar were decided in consultation with the Department based on the technical significance of each pillar. The effective implementation of NFSA provisions forms the foundation for ensuring food security of the vulnerable sections through TPDS. Accordingly, the pillar one has been assigned a majority share in the weightage—45 percent weight. Similarly, as the delivery platform is key to ensuring that benefits reach to beneficiaries in the most effective manner, the pillar two has been assigned a 50 percent weightage. Though, nutritional reforms and initiatives cannot be directly attributed to effective implementation of the Act, their significance and role of NFSA in affecting them cannot be undermined. Hence, for the current version of the Index a weightage of 5 percent is assigned to the third pillar. With subsequent iterations and enhancement in the significance of the pillar the weights shall be revised accordingly.

Further, each pillar has been disintegrated down into sub-parameters and indicators carrying equal weights. In cases where indicators were further divided into measurable sub-indicators, the weightages have been distributed uniformly.

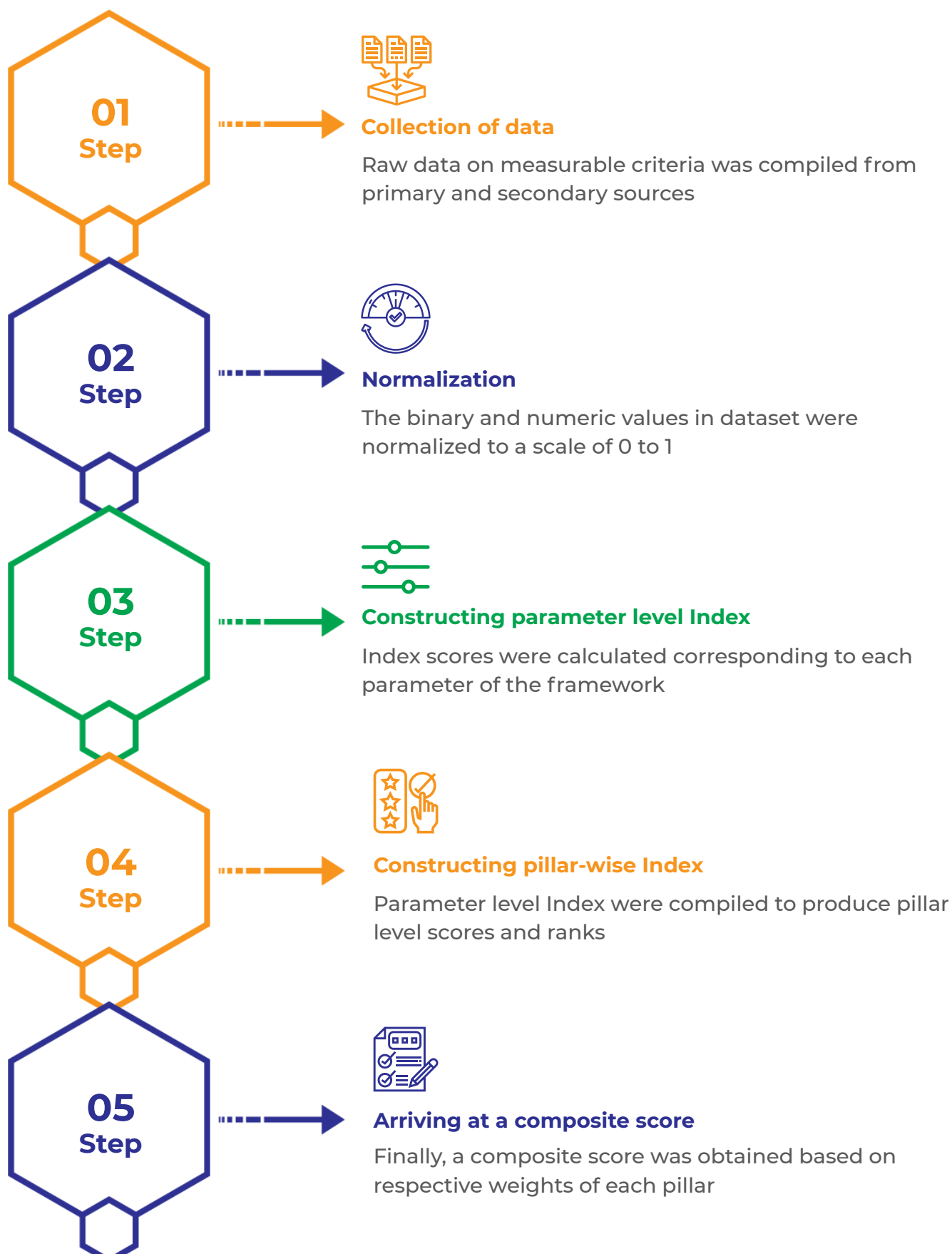
Developing the Index

A multidimensional approach to construct the Index was followed. The approach used was similar to UNDP's approach to computing well-known development Indexes, such as the Human Development Index (HDI), Human Poverty Index (HPI), and Gender Development Index (GDI). As listed in the latter part of the section, the measurable indicators had both numeric and binary variables. While the numeric variables measured the extent of coverage of the indicator of interest, the binary variables detailed out their availability or non-availability.

Indicator scores were normalized and then aggregated across categories to compare broader parameters across states or union territories. The indicator values were normalized to a standard scale of 0 to 1. Normalization helped reduce the raw indicator data to a common unit so that it could be aggregated easily.

Index rankings for general and special category states—the North Eastern states, Himalayan states, and the Island states have been kept separate. Also, the Index for the union territories implementing cash transfer instead of foodgrains under NFSA has been generated separately. Suitable modifications have been made in the framework to rank them accordingly.

Methodology for constructing the Index





Annexes

Annex I: List of indicators

The categories and indicators included in the Index are:

Pillar	S. No.	Sub-parameter	S. No.	Indicators	S. No.	Sub-indicators (if any)
(A) NFSA— Coverage, targeting and provisions of the Act (45%)	A1	Beneficiary coverage and Rightful tar- geting (15%)	A1.1	Households identified and covered by state under NFSA (7.5%)	A1.1.1	Coverage and identification of AAY families
					A1.1.2	Coverage and identification of all eligible beneficiaries
			A1.2	Rightful targeting (7.5%)	A1.2.1	Aadhaar seeding at RC level
					A1.2.2	Aadhaar seeding at beneficiary level
					A1.2.3	Mobile number seeding at RC level
					A1.2.4	Frequency of data reporting in cen- tral repository
	A2	Other Provi- sions of the NFSA (15%)	A2.1	NFSA provisions (transpar- ency and women empow- erment) (7.5%)	A2.1.1	Women identified as head of house- hold
					A2.1.2	Constitution of vigilance committee at four levels
					A2.1.3	Conduct of Social Audit
					A2.1.4	Number of rules notified U/S 40 of NFSA
			A2.2	Provisions relating to foodgrain storage (7.5%)	A2.2.1	State coverage of storage infrastruc- ture in aspirational districts
					A2.2.2	Registration of State Warehousing Corporation godowns with WDRA
					A2.2.3	Online warehouse/inventory man- agement system in all SWC ware- houses
					A2.2.4	Type of storage capacity available (Coventional, Silo, Silo bags)
	A3	Grievance Resolution Mechanism (GRM) (15%)	A3.1	Provisions relating to grievance resolution under NFSA	A3.1.1	State Food Commission (Constitution, Functioning, and Transparency)
					A3.1.2	Composition of SFC (1 Chairperson, 5 Members, 1 Member Secretary)
					A3.1.3	Appointment of DGRO
					A3.1.4	Online facility to register grievances (related to NFSA)
					A3.1.5	Functionality of toll free number 1967/1800
					A3.1.6	Feedback mechanism to assess quality of grievance resolution
					A3.1.7	Transparency in reporting grievance data on state portals
					A3.1.8	Integration of GRM data with CGRM and timeliness of data reporting

(B) Delivery platform (Supply chain) (50%)	B1	Allocation and movement (25%)	B1.1	Supply chain automation (12.5%)	B1.1.1	Online allocation of food grains
					B1.1.2	Consideration of real-time closing balance in calculating allocation
					B1.1.3	Online generation of indent and release order
					B1.1.4	Online payment option for FPS dealer
					B1.1.5	Online generation of dispatch order issued to FPS dealer
					B1.1.6	Online generation of truck challans and gate pass
	B1.2	Offtake, distribution and provisions related to FPS (12.5%)			B1.2.1	Offtake of food grains under TPDS (against the allocated quantity)
					B1.2.2	FPS licensed to public institutions, panchayats, SHGs, and cooperatives
					B1.2.3	Implementation of door step delivery of ration till FPS
					B1.2.4	Predictive stock allocation (for ON-ORC transactions)
	B2	Last mile delivery (25%)	B2.1	Status of FPS automation (8.33%)	B2.1.1	Shops equipped with operational ePoS
					B2.1.2	Shops equipped with electronic weighing scale
					B2.1.3	Shops equipped with weighing scale integrated to ePoS device
					B2.1.4	Shops equipped with Iris device for beneficiary authentication
			B2.2	Beneficiary centric services (8.33%)	B2.2.1	Shops equipped with Aadhaar OTP based facility for authentication
					B2.2.2	Shops equipped with online payment facility for beneficiaries
					B2.2.3	Online facility to add/modify beneficiary details
					B2.2.4	Enabling FPSs as CSC
			B2.3	Rightful distribution (8.33%)	B2.3.1	Aadhaar authenticated transactions for distribution of foodgrain
(C) Nutrition initiatives (5%)	C1	Nutrition initiatives (5%)			C1.1	States distributing coarse grains
					C1.2	States distributing fortified grains under TPDS

Pillar 2: Delivery Platform (Modified for cash transfer UTs)

(B') Delivery platform (50%)	B'1	Cash Transfers	B'1.1	Operational efficiency of Cash Transfer program	B'1.1.1	Timeliness in sharing monthly proposal
					B'1.1.2	Timeliness in sharing utilization certificates
					B'1.1.3	Number of beneficiary centric services on UMANG
					B'1.1.4	Percentage of successful transaction
					B'1.1.5	Aadhaar based transaction

Annex II: Definitions and measuring criteria

S. No.	Indicator or measuring criteria	Definition and rationale	Measurement
A1.1.1	Coverage of AAY families	Antyodaya Anna Yojana covers 2.50 crore poorest of the poor households. Eligible families under AAY are identified as per the criteria evolved for the said scheme.	Percentage of AAY households identified against the ceiling
A1.1.2	Coverage of eligible number of persons	The National Food Security Act legally entitles up to 75% of the rural population and up to 50% of the urban population to receive subsidized foodgrains under TPDS. This is based on the population census 2011 and 2011-12 NSSO consumption expenditure data.	Percentage of beneficiaries covered against the ceiling
A1.2.1	Aadhaar seeding at RC level and beneficiary level	Aadhaar Seeding means linking Aadhaar holder's Unique 12-digit Aadhaar number with their identification documents, Aadhaar seeding of ration cards helps to identify and eliminate duplicate/bogus ration cards from the system.	Number of Aadhaar seeded ration cards against the total number of ration cards At RC level- at least one member's Aadhaar seeded to the RC At beneficiary level- total beneficiaries with Aadhaar seeded to RC
A1.2.2	Mobile number seeding (at RC level)	Mobile numbers are used to communicate with the beneficiaries	Number of mobile numbers seeded against the total number of ration cards
A1.2.3	Frequency of data reporting in Central repository	As per IMPDS scheme guidelines, States/UTs are required to share beneficiary level data once, at least every month. This ensures smooth operation of ONORC	Frequency of data sharing by States/UTs
A1.2.4	Women identified as the head of household	As per Section 13(1) of NFSA 2013, the eldest woman who is not less than 18 years of age in every eligible household shall be head of the household for the issue of ration cards.	Percentage of households with women as head of household against the total number of Ration Cards
A2.1.1	Constitution of vigilance committee at all levels	As per Section 29(1) of NFSA 2013, For ensuring transparency and proper functioning of the Targeted Public Distribution System and accountability of the functionaries in such system, every State Government shall set up Vigilance Committees as specified in the Public Distribution System (Control) Order, 2001, made under the Essential Commodities Act, 1955 (10 of 1955), as amended from time to time, at the state, district, block, and fair price shop levels.	Whether vigilance committees have been set up at all four levels as per the act
A2.1.2	Conduct of social audit	As per Section 28(1) of NFSA 2013, every local authority, or any other authority or body, as may be authorized by the state government, shall conduct or cause to be conducted, periodic social audits on the functioning of fair price shops, Targeted Public Distribution System and other welfare schemes, and cause to publicize its findings and take necessary action.	Conduct of Social Audit in last one year and sharing of a report of social audit
A2.1.3	Number of rules notified under Section 40 of NFSA	The state government may, by notification, and subject to the condition of previous publication, and consistent with this Act and the rules made by the Central Government, make rules to carry out the provisions of this Act.	Number of rules framed against 11 listed areas
A2.2.1	State coverage of storage infrastructure in aspirational districts	AD program aims to quickly and effectively transform some of the most underdeveloped districts of the country. Whether there is adequate coverage of storage facilities in ADs	Number of Aspiration Districts having godowns against the total number of Aspirational Districts in the State/UT

A2.2.2	Registration of State Warehousing Corporation godowns with WDRA	Whether the SWC godowns are registered with WDRS	Number of SWC warehouse registered with WDRA against the total number of SWC godown in the State/UT
A2.2.3	Online warehouse/inventory management system in all SWC warehouses	Online warehouse/inventory management enables better decision making and optimal utilization of resources. CWC has sent the proposals to all the SWC to implement the Warehouse Management System	Whether online inventory management system is implemented in SWC godowns
A2.2.4	Type of storage capacity available (Conventional, Silo, Silo bags)	Whether the State has modern and scientific foodgrain storage facilities for safely storing the foodgrains	Type of storage available
A3.1.1	State Food Commission (Constitution, Functioning, and Transparency)	As per Section 16 (1) of NFSA 2013, every State Government shall, by notification, constitute a State Food Commission for monitoring and review of the implementation of this Act. The SFC shall prepare annual reports which shall be laid before the State Legislature by the State Government. Availability of SFC details in public domain is key to beneficiary empowerment under NFSA	Whether the state or union territory has set up the SFC. Whether the details of SFC are available in public domain. Whether annual report of SFC is available?
A3.1.2	Composition of SFC	State Food Commission shall constitute of 1 Chairperson, 5 Members and 1 Member Secretary	Number of members appointed out of 7
A3.1.3	Appointment of DGRO	As per Section 15(1) of NFSA 2013, the State Government shall appoint or designate, for each district, an officer to be the District Grievance Redressal Officer for expeditious and effective redressal of grievances of the aggrieved persons in matters relating to the distribution of entitled foodgrains or meals under Chapter II and to enforce the entitlements under this Act	Whether independent DGRO has been appointed as per provisions of the Act
A3.1.4	Online facility to register grievances (repeated to NFSA)	Empowering the beneficiaries with various modes to register their grievance is key to seamless operations	Whether state or union territory have dedicated portal for beneficiaries to register their grievances online
A3.1.5	Functionality of toll-free number 1967/1800 series	A nation-wide uniform number provides ease and convenience to the beneficiaries to reach out to the department	Whether the state or the union territory has functional toll free number
A3.1.6	Feedback mechanism to assess the quality of grievance redressal	Quality of grievance resolution and the satisfaction of end consumers are key for proper functioning of any system	Whether the state or the union territory has a mechanism to back check the level of satisfaction with beneficiaries post resolution of grievance
A3.1.7	Transparency in reporting grievance data in the public domain	Grievance data shared in public domain creates accountability and transparency in the operations of TPDS	Whether the state or union territory have displayed in public domain, the number of complaints received, resolved, and pending
A3.1.8	Integration of GRM data with CGRM and timeliness of data reporting	Visibility of grievance data at central level helps the policy makers assess the efficiency in functioning of the TPDS operations at lower level. Apart from integration, regular data sharing enables real time monitoring at higher level	Whether the state or union territory has integrated with the CGRM module on NFSA portal. Whether the states and union territories are regularly sharing the grievance data with central government

B1.1.1	Online process for allocation of foodgrains	As per the implementation guide- lines of the 'Scheme on End-to-End Computerisation of TPDS Operations', computerization of supply chain management forms the key component of the scheme. With the main activities being—online allocation, utilization reporting, monitoring of supply chain operations of TPDS at state and union territory headquarters level	Whether the states and union territories have system for on-line allocation of foodgrains
B1.1.2	Consideration of real-time closing balance for calculating allocation		Whether the states and union territories consider the real time closing balances while computing allocation for next month
B1.1.3	Online generation of indent and release order		Whether the states and union territories are generating the indent and release orders on-line
B1.1.4	Online payment option for FPS dealer		Whether the states and union territories are providing FPS dealers with an option to pay online to the department
B1.1.5	Online generation of dispatch order to FPS dealer		Whether the states and union territories are generating dispatch order of foodgrains to FPS online
B1.1.6	Online generation of truck challans and gate pass		Whether the states and union territories are generating truck challans and gate pass online
B1.2.1	Offtake of foodgrains under TPDS (as compared to the allocated quantity)	Offtake of foodgrains under TPDS is a key metrics to determine the efficiency of operations	Quantity of foodgrains lifted by the state or union territory against the allocated quantity
B1.2.2	Preference to public institutions— panchayats, SHGs, cooperatives in licensing of FPS	As per Section 12(2)(e) of NFSA, 2013, preference to be given to public institutions or public bodies such as Panchayats, selfhelp groups, co-operatives, in licensing of fair price shops and management of fair price shops by women or their collectives	Number of FPS licensed to public institutions against the total number of FPS in the state or union territory
B1.2.3	Implementation of doorstep delivery at FPS	Under Section 24(2) of NFSA, 2013 it is the responsibility of the state government to take delivery of foodgrains from the designated depots of the Central Government in the State, at the prices specified in Schedule I, organise intra-State allocations for delivery of the allocated foodgrains through their authorised agencies at the door-step of each fair price shop	Whether the state or union territory has implemented the door step delivery as per the provisions of the Act
B1.2.4	Predictive stock allocation (for ONORC transactions)	With an increase in ONORC transactions, effective mechanism to be put in place to cater to ONORC beneficiaries in timely manner	Whether the state or union territory has option to supply extra stock based on prediction of sales for past period?
B2.1.1	Shops equipped with operational ePoS	ePoS devices ensures that foodgrain distribution is being electronically recorded and reduces chances of human error	Number of FPS equipped with operational ePoS device against the total number of FPS in the state or union territory
B2.1.2	Shops equipped with electronic weighing scale	Electronic weighing scale ensures that the beneficiary is receiving the entitled quantity of foodgrains	Number of FPS equipped with electronic weighing scale against the total number of FPS in the state or union territory
B2.1.3	Shops equipped with weighing scale integrated to ePoS device	Integration of ePoS with electronic weighing scale ensures that the beneficiary is receiving the quantity of foodgrain which he/she is entitled to	Number of FPS equipped with weighing scale integrated to ePoS device against the total number of FPS in the state or union territory
B2.1.4	Shops equipped with Iris device for beneficiary authentication	Iris devices act as effective mode of biometric authentication apart from fingerprint, which at times does not work in case of old and differently abled beneficiaries	Number of FPS equipped with functioning Iris device for biometric authentication of beneficiaries against the total number of FPS in the state or union territory

B2.2.1	Shops equipped with Aadhaar OTP based facility for authentication	Aadhaar OTP facility ensures effective exception management in cases where biometric authentication does not work	Number of FPS equipped with Aadhaar OTP based authentication mode for beneficiaries against the total number of FPS in the state or union territory
B2.2.2	Shops equipped with online payment facility for beneficiaries	With increase in smartphone penetration and increasing reliance on digital modes of payment, beneficiaries should have an option to pay online for the foodgrains	Number of FPS equipped with online payment facility for beneficiaries against the total number of FPS in the state or union territory
B2.2.3	Online facility to add/modify beneficiary details	With increase in smartphone penetration and increasing reliance on digital technology, it is important that all beneficiary centric services be provided online	Whether the beneficiaries have the option to add/edit/modify their details online
B2.2.4	Enabling FPSs as CSC	The department has signed an MoU with CSC to provide banking and other services through FPS. This would also help in enhancing the viability of the FPS	Number of FPS enabled as CSC as against the total number of FPS in the State/UT
B2.3.1	Aadhaar authenticated transactions for distribution of foodgrain	Distribution of subsidized foodgrains to eligible NFSA beneficiaries after successful authentication through UIDAI via beneficiary bio-metrics (finger print or iris) or Aadhaar based OTP.	Percentage of Aadhaar authenticated transactions out of total TPDS transactions conducted in the state or union territory in a given month
C1.1	Distribution of coarse grains under TPDS	As per Schedule I of NFSA, 2013, states and union territories may distribute coarse grains under NFSA	Whether the state or union territory is distributing coarse grains (nutri-cereals) under NFSA
C1.2	Implementation of rice fortification under NFSA	Rice fortification scheme, aims to improve the nutritional outcomes of the PDS beneficiaries	Whether the state or union territory has started the distribution of fortified rice under NFSA

Pillar 2: Delivery platform (Modified for cash transfer union territories)

B'1.1.1	Timeliness in sharing monthly proposal	As per the timelines contained in the handbook for implementation of cash transfer of food subsidy, UTs shall furnish the financial proposal along with digitally signed payment file latest by 10th day of the preceding month	Based on adherence to prescribed timelines in proposal sharing by UT in last six months
B'1.1.2	Timeliness in sharing utilization certificates	UTs shall furnish the Utilization Certificates on a monthly basis for the preceding month for which the payment has been made	Based on adherence to prescribed timelines in sharing utilization certificates by UT in last six months
B'1.1.3	Number of beneficiary centric services on UMANG	The department has identified 11 citizen centric services to be onboarded on the UMANG platform of Central Government	Number of services onboarded against the identified services have been considered
B'1.1.4	Percentage of successful transactions	Credit of cash transfer amount in beneficiary account every month	The number of households for which amount has been successfully credited against the total number of households for which the cash transfer was initiated
B'1.1.5	Aadhaar based transaction	Aadhaar based transactions indicate transfer of cash subsidy amount to the Aadhaar seeded bank account of beneficiary through Aadhaar Payment Bridge	Percentage of households where the cash transfer amount has been transferred through Aadhaar against the total number of transactions taking place in the UT



Government of India

Department of Food & Public Distribution

Ministry of Consumer Affairs, Food & Public Distribution



This report is brought out by the Department of Food and Public Distribution, Ministry of Consumer Affairs, Food & Public Distribution (MoCAF&PD), Government of India (GoI) in technical collaboration with MicroSave Consulting (MSC), www.microsave.net.

Attribution - Please cite the work as follows:

Department of Food and Public Distribution, 2021, State Ranking Index for NFSA: Creating resilient food systems to optimize the delivery of benefits