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PUBLIC FOOD PROCUREMENT FOR SUSTAINABLE FOOD SYSTEMS AND HEALTHY DIETS

VOLUME

2





PUBLIC FOOD PROCUREMENT FOR SUSTAINABLE FOOD SYSTEMS AND HEALTHY DIETS

VOLUME

2

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31 DIVERSIFICATION OF THE PUBLIC DISTRIBUTION SYSTEM IN INDIA

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ABSTRACT

In 2013, the Indian Government approved the National Food Security Act, which included small millets in the country's Public Distribution System (PDS). This represents a major policy change for the world's largest procurement system, which since its establishment in 1939 has focused largely on rice and wheat. This chapter offers reflections on challenges, needs and opportunities linked to this important policy, with a view to contributing to its sustainable and socially equitable implementation. The decision to include small millets was made based on the multiple strategic benefits that these underutilized species can offer in terms of resilience, nutrition, income generation and empowerment of smallholder farmers. However, seven years after the approval of this policy, its effective implementation is slow and challenged by several issues. Several recommendations are made to help realize the societal benefits of the distribution of millets through the PDS.

31.1 Introduction

The inclusion of small millets in the Indian Public Distribution System (PDS) in 2013 represents a major policy change for the world's largest procurement system, which has historically focused on rice and wheat. The decision to include small millets was made based on the multiple strategic benefits that these underutilized species can offer in terms of resilience, nutrition, income-generation and empowerment of

smallholder farmers. This chapter traces the background of this policy change and discusses some of the challenges, needs and opportunities for its implementation.

The Public Distribution System in India

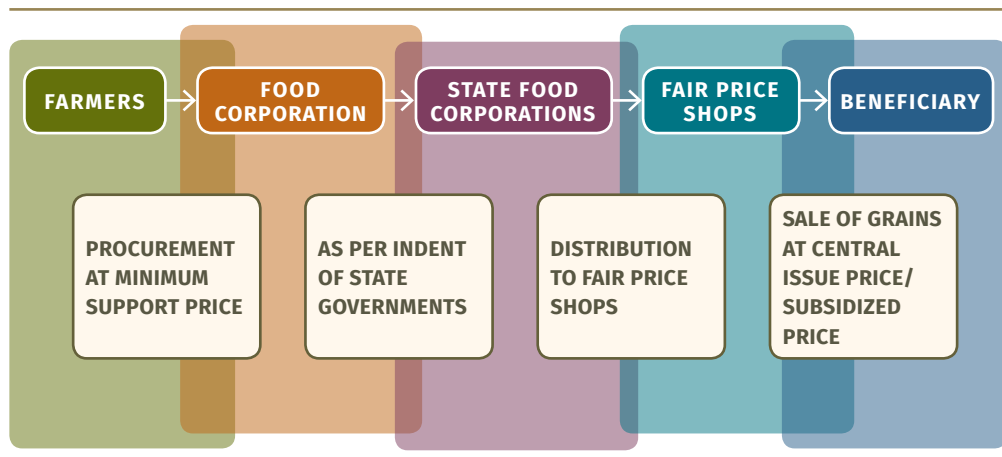
The Indian PDS was created as an official continuation of the rationing system adopted by the British during World War II. It started in 1939 in Bombay and later extended to other cities and towns; by 1946, it reached as many as 771 cities and towns (Nawani, 1994). For close to 40 years, it was universal in nature. In 1997, it evolved into the Targeted Public Distribution System (TPDS). Under TPDS, beneficiaries were divided into two categories: households below the poverty line, and households above the poverty line. The poverty line was set for each state based on price estimates, following the method defined by an expert group chaired by Professor D.T. Lakdawala (More and Singh, 2014). Throughout its evolution, the PDS maintained its nature as a deliberate social policy of the government to pursue three main objectives to:

- provide food grains and other essential items to vulnerable sections of the society at reasonable (subsidized) prices;
- have a moderating influence on the open market prices of cereals; and
- attempt socialization of the distribution of essential commodities, i.e. their distribution to the whole community, irrespectively of differences in social order (Nawani, 1994).

Today, the scheme continues to represent an important effort in India's strategy for poverty eradication by providing a safety net for more than 330 million poor who are nutritionally insecure, making it the largest system of its kind in the world. Until 2013, items supplied by PDS were limited to rice, wheat and basic commodities such as sugar, edible oil and kerosene oil. Under the PDS scheme, each family below the poverty line is eligible to receive 35 kg of rice or wheat every month for free, while a household above the poverty line is entitled to 15 kg of food grains on a monthly basis at a subsidized rate. Households above the poverty line can also purchase wheat and rice at government prices in quantities that vary according to their income level, although different rules exist for each state (India has 28 states and eight union territories).

The Food Corporation of India (FCI) is a corporation owned by the central Government that is in charge of procurement, storage, transportation and bulk allocation of commodities under the PDS scheme. FCI is also responsible for distribution through a network of fair price shops, which numbered 513 000 in 2013 (India, Ministry of Consumer Affairs, Food and Public Distribution, 2013). FCI is managed at ground level by the state governments, while the fair price shops are managed by cooperative societies or the government. FCI is in charge of identifying families that are below the poverty line, issuing ration cards and supervising and monitoring the fair price shops. Apart from purchasing grains for immediate distribution, FCI is also responsible for maintaining minimum buffer reserves of food stocks for emergencies.

Figure 1 **Main actors and process steps of the Public Distribution System in India**



Source: Authors' own elaboration.

Figure 1 shows the process of and main actors involved in the procurement and distribution of grains in PDS from farmers to beneficiaries. The process begins with the FCI centre, which is responsible for purchasing grains from farmers. The grains are purchased at the minimum support price (MSP) that is declared by the Commission for Agricultural Costs and Prices (CACP). Grains are procured either directly from farmers by FCI or they are procured on behalf of FCI by state/union territory agencies. Typically, the MSP for procured grains is set higher than the market price as an incentive to farmers to augment their production. Upon receiving an order for grains

from a state/union territory, FCI supplies them for storage in warehouses managed by FCI/state food corporations. The state food corporations in turn distribute the grains to fair price shops. The fair price shops distribute the grains according to the entitlements of the beneficiaries at the central issue price or subsidized price, as per the PDS policy of the state in question. Fair price shops are given a small retailers' margin as service charges for distribution, which in the case of millet amounts to INR 100 per quintal (100 kg).¹

The National Food Security Act (2013)

An important change was made to PDS in 2013 to strengthen food and nutrition security in the country. That year, the Government of India approved a legislative act that changed PDS from a system targeting food security to a system targeting nutrition. This historical amendment was realized through the National Food Security Act (NFSA), passed by Parliament on 12 September 2013. A key element of the NSFA act was the inclusion of coarse cereals (maize, sorghum, pearl millet and small millets) in PDS to strengthen nutrition security in the country. Sorghum (jowar, *Sorghum bicolor*) and pearl millet (bajra, *Pennisetum glaucum*) are considered major millets because they are widely cultivated and used compared to small millets. The small millet species included in PDS are finger millet (ragi or mandua, *Eleusine coracana*), foxtail millet (kangani or kakun, *Setaria italica*), proso millet (cheena, *Panicum miliaceum*), kodo millet (kodo, *Paspalum scrobiculatum*), barnyard millet (sawa, or sanwa or jhangora, *Echinochloa frumentacea*) and little millet (kutki, *Panicum sumatrense*), as well as two pseudo-millets, which are buckwheat (kuttu, *Fagopyrum esculentum*) and amaranth (chaulai, *Amaranthus* spp.). Full-fledged acceptance of the inclusion of coarse cereals into PDS was granted by the central Government in 2018. All households eligible under PDS will be able to purchase coarse cereals at INR 1 per kilogram.²

Karnataka is the first state in India to have started sourcing and distributing millets through PDS at a large scale, and specifically finger millet in south Karnataka and sorghum (jowar) in north Karnataka. This was realized in 2013/2014 through a scheme entitled *Anna bhagyadinda Krishi Bhagya* (food and farmers' welfare).

¹ INR 100 is equivalent to USD 1.36, according to the UN Operational Rates of Exchange on 31 December 2020.

² Equivalent to USD 0.014, according to the United Nations Operational Rates of Exchange on 31 December 2020.

The introduction of sorghum and pearl millets in PDS was piloted in the states of Rajasthan, Andhra Pradesh, Telangana and Chhattisgarh between 2009 and 2017. Most recently, the Government of Odisha initiated large-scale procurement of finger millet in 2018; it started introducing finger millet through PSD at a broad scale in 2019.

31.2 Analysis and discussion

Inclusion of millets in PDS

The inclusion of small millets in PDS by way of the NSFA deserves special attention because of their great capacity to adapt to climate change, rich nutritional profiles and high relevance for India's traditional food culture. Small millets are small-grained cereals that are important sources of food and fodder in semi-arid regions around the world. In India, they have been cultivated predominantly by farmers in hilly regions and dry lands, including many tribal communities. Small millets are well adapted to poor soils, hot weather and limited rainfall conditions. Thus, they grow well in drylands, helping millions of male and female subsistence farmers combat harsh growing conditions with the help of few external inputs. Today, small millets can continue to play a strategic role by strengthening nutrition security in the face of climate change, as well as by providing a relevant source of income for millions of farmers and value chain actors across India. The contribution of small millets to the empowerment of women and vulnerable groups has been well documented (King and Padulosi, 2017).

Historical decline in small millets

It is worth recalling the reasons behind the marginalization of small millets. Their steady decline started in the aftermath of the Green Revolution, at a time when high-yielding varieties of wheat and rice started to replace all other cereals in farmers' fields in India (as in other countries across Africa and South Asia) and dietary habits started to change (Chera, 2017). Small millets lost the competition with wheat and rice due to their low productivity, tedious postharvest operations and lack of attractive farm-gate prices. The fact that the Green Revolution did not focus on these species caused them to fall behind the major cereals in terms of productivity, harvest and

postharvest technology and value chain efficiency. Furthermore, the easy availability of rice and wheat through PDS contributed to a shift in food consumption patterns in millet-producing regions. With the exception of finger millet, which benefited from fast advances in technology and crop improvement, the drudgery of hulling small millets discouraged their household use. Inadequate investment in product development and commercialization, as well as the low social status associated with small millet foods, are other disabling factors. The lack of knowledge – especially among young consumers – regarding ways to use small millets in daily diets has played an important role in their declining use. Poor availability of small millet food products in local markets and high prices also have worked against their popularization.

Inclusion of millets in PDS: challenges and possible solutions

Although the Indian Government achieved a major milestone by including small millets in PDS through the NFSA, a number of challenges are hindering the effective implementation on the ground of this policy. The following paragraphs describe bottlenecks in implementation that have emerged to date, along with suggestions as to how these bottlenecks may be tackled. A specific analysis of experiences in Odisha is presented in Box 1.

Box 1. The Odisha Millets Mission

Established in 2017, the Odisha Millets Mission is aiming to increase the household consumption of millets by 25 percent from 2017 to 2022, enhance the nutrition security of households and create more demand for millets, with a special focus on women and children. Under current subsistence conditions, growers in Odisha tend to store most of their millet harvests to meet family needs, leaving only a small portion of the harvests for the market. The introduction of a MSP of INR 28.97/kg for finger millet has motivated farmers to sell their millet to agricultural markets regulated by the Agricultural Produce Marketing Committee and then buy millet at a much cheaper price from fair price shops.* Though farmers thus receive subsidized finger millet, there are concerns about the quality of the grains, as the millet in the fair price shops is of much lower quality.

>>>

In Odisha, the grain procurement system is rigid. It involves a number of checks that are time-consuming and tiring for farmers, and thus lead to corrupt practices by intermediaries. For instance, Koraput is one of the districts where grain procurement is lowest, which has caused numerous complaints from citizens. In 2018, the procurement target for finger millet for the district administration of Koraput was 200 tonnes, but only 89 tonnes were procured. Finger millet is procured not from farms but from mandis (rural markets), where farmers have to bring their products, thus incurring transportation costs, and where they have to wait long hours before sales are concluded.

The procurement system for millet in Odisha is called the Millet Procurement Automation System (MPAS). It is similar to the procurement system of rice, with some differences in the details. In the case of finger millet, the government has set up finger millet procurement centres (small subcentres) at the local level, to ensure that the distances between those centres and areas where finger millet is grown are less than 20 km. This intervention was necessary due to the fact that the mandis that were established for rice are not suitable for finger millet, as finger millet fields and paddy fields tend to be located in different areas. In addition, the government understood that the procurement of finger millet required the mobilization of communities; to this end, it partnered with civil society organizations and created separate structures. These efforts ensure that information on the procurement of crops such as millet reaches people in remote areas. Unlike for paddy procurement, the MPAS system used for millets ensures that farmers receive their money within only three to seven days. The programme of the Odisha Millets Mission is being implemented in the seven districts where tribal populations are predominant. Both millet production and consumption are concentrated in the Koraput and Rayagada districts.

* INR 28.97/kg is equivalent to USD 0.394/kg, according to the UN Operational Rates of Exchange on 31 December 2020.

Source: Odisha Millets Mission. 2018. *Annual Report 2018-19*. Bhubaneswar, India. (Also available at www.milletsodisha.com/resources/publications).

Procurement policy versus the diversity of millet species

The inclusion of millets in PDS and the encouragement of their local sourcing is a key measure proposed by the 2013 NFSA. According to the act, the price of millets/coarse cereals in PDS should not exceed INR 1/kg.³ The procurement rate is the MSP that is declared by the CACP on a regular basis. However, to date there has been a huge gap between the MSP and the actual cost of production of various millet grains, which demotivates farmers from producing and supplying the grains to PDS. A separate MSP policy should ideally be developed for each small millet species, because the production environment, processing requirements, transactions and market demand vary greatly across species, and the production and consumption of many species are currently very localized. MSPs set by the respective states, instead of a centrally established MSP, would be a key driver towards effective operationalization. In addition, different species of millets are consumed in different parts of the country; a decentralized mechanism of procurement and distribution is thus required to make the process more efficient. Decentralized procurement and local level processing and supply through a block-level PDS is needed to offer diversified millets in fair price shops.⁴

Research on product diversification and productivity enhancement

Low productivity and low prices discourage farmers from allotting more land to millets. Improving varieties and promoting small millets as climate-smart crops would encourage farmers to grow millets in a sustainable way. High-yielding varieties and locally adaptive and preferred varieties are especially needed. Rural advisory services involving non-governmental organizations and farmer producer organizations are also needed for the promotion of millets among farmers.

³ Equivalent to USD 0.014, according to the UN Operational Rates of Exchange on 31 December 2020.

⁴ Blocks are the smallest administrative division in rural areas of India, below district and subdistrict levels.

Improved transparency and effective payments of the minimum support price

Procurement prices should be announced well before the sowing season, to ensure that farmers allocate adequate land to millet crops. Farmers must feel assured that the MSP will indeed be paid at the time of harvest. Farmers have to be assured of immediate payment to ensure that they sell to government procurement agencies.

Tailored processing

In Karnataka, sorghum and finger millet have been made available through PDS as whole grains (Rajshekar and Raju, 2017). Consumers can have these small millet species pulverized at local flour mills to enable their consumption. This is not the case for little millet, foxtail millet, barnyard millet, proso millet and kodo millet, since the grains of these species must be dehulled (i.e. the several hard layers enveloping the seeds must be removed) prior to pulverization. For PDS to be more effective at promoting the use of these nutritious crops, dehulling must be done before selling the grains in fair price shops. The lack of local/regional processing infrastructure in millet growing zones represents an important bottleneck that calls for swift attention and action. The establishment of regional integrated-processing units (with destoners, graders, dehullers and pulverizers) by the government is very much needed. The creation of such units would have very positive effects, as it would promote the production of various types of millets and boost local and regional consumption through PDS.

Processing technology must be optimized to dehull different small millet species, which have different grain sizes. More research is needed to improve the separation mechanism in hullers, so that grits and other usable materials can be removed. The sieving efficiency of graders must also be improved. Equipment must be tailored to the use by communities or small and medium enterprises, to encourage decentralized procurement and support local food culture.

Improving the shelf-life of produce

Another area that calls for state support is increasing the shelf-life of millet rice, semolina, flour and value-added products without compromising their quality and nutritional value. Additional research is needed into ways to increase the

bioavailability of micronutrients in small millet products; new techniques must be promoted among suppliers. Soaking the grains, for example, helps reduce anti-nutritional compounds such as phytic acid and reduces phytase activity, which inhibits the bioavailability of minerals.

Quality standards

Codex Alimentarius standards are available for rice and wheat;⁵ however, there are currently no standards for millet concerning the level of bran retention or the presence of broken or shattered kernels and semi-filled grains that procurers, processors and stockers must adhere to. It is common to find millet rice in the market that contains non-dehulled grains, seeds of weeds or small stones or that is infected with pests. Thus, there is a need for product standards for the procurement and processing of millet, with a focus on nutrition and food safety; such standards would ensure product quality and product differentiation. As many millet species have a short shelf-life once processed, quality standards are key to improving the inclusion and adoption of millet in PDS.

Nutrition awareness

Most importantly, strong policy support and political will would provide a push for the promotion of millets through PDS. Raising awareness among the general population of the benefits of millets is of strategic importance; it would particularly benefit women (especially anaemic and pregnant women), children (especially wasted or malnourished children) and those with medical conditions such as diabetes, high blood pressure and obesity. Different sections of society can be targeted through the provision of school meals through the Mid Day Meal Scheme of the Ministry of Education or of food for children in *anganwadi* (rural childcare centres), or by divulging diet plans for pregnant women in primary health centres. Nutrition awareness campaigns for these target groups are needed to promote millet rice as a nutrient-dense food that can help tackle the triple burden of malnutrition (i.e. the coexistence of overnutrition, undernutrition and micronutrient deficiencies) facing the country today (Meenakshi, 2016).

⁵ The Codex Alimentarius is a collection of international food standards, guidelines and codes of practice that contribute to the safety, quality and fairness of international food trade. For more information, see www.fao.org/fao-who-codexalimentarius/codex-texts/list-standards/en

31.3 Conclusion

Small millets have long been neglected and underutilized species (Padulosi *et al.*, 2015). The inclusion of millets into India's PDS represents a major policy change for building a more resilient and nutrition-secure future for the people of India. Yet, seven years after the approval of this policy, many issues have arisen that hamper its effective implementation. Many of the states where millet is grown have yet to act upon it; in many of these states, the MSP for millets is low or not yet fixed. If the situation continues as is, farmers may not be inclined to grow millets at a large scale.

Technological solutions for the processing of different millet species must be fine-tuned to promote the consumption of millet by households. In addition, more efforts are needed to make consumers aware of the health benefits of eating millet. Although PDS is a government-led food scheme, all civil society actors should be equally involved in the policy and contribute to the promotion of millet production and consumption.

The inclusion of small millets in PDS through the NFSA represents an important signal of change in the way neglected and underutilized species are being viewed by decision-makers today. The case of small millets will hopefully set an example for other supportive policy interventions to bring highly valuable crops that are currently being marginalized by markets and risk being lost, into mainstream agriculture and food systems.

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**PUBLIC FOOD
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PART A PUBLIC FOOD PROCUREMENT AS A DEVELOPMENT TOOL

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