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Public Stockholding for Food Security Purposes:

Options for a Permanent Solution

ICTSD



International Centre for Trade
and Sustainable Development

Issue Paper

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Options for a Permanent Solution

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LIST OF ABBREVIATIONS

| | |
|-----------|--------------------------------------------------------|
| AMS | aggregate measurement of support |
| BULOG | Badan Urusan Logistik |
| CACP | Commission of Agricultural Costs and Prices |
| EFSR | Emergency Food Security Reserve |
| EGTE | Ethiopian Grain Trade Enterprise |
| FCI | Food Corporation of India |
| FRA | Food Reserve Agency |
| FSSR | Food Staples Self-sufficiency Roadmap |
| LDC | least developed country |
| MAV | Minimum Access Volume |
| NCPB | National Cereals and Produce Board |
| NDRC | National Development and Reform Commission |
| NFA | National Food Authority |
| NFRA | National Food Reserve Agency |
| NGA | National Grains Authority |
| NSFR | National Strategic Food Reserve |
| OECD | Organisation for Economic Co-operation and Development |
| PASSCO | Pakistan Agricultural Storage and Services Corporation |
| PSNP | Productive Safety Nets Programme |
| Raskin | Beras Untuk Rakyat Miskin |
| SINOGRAIN | China Grain Reserves Corporation |
| WTO | World Trade Organization |

FOREWORD

The new sustainable development agenda that was finalised last year in New York commits governments to a bold new set of objectives, including ending hunger and malnutrition by 2030. Among other things, governments also agreed to take a range of steps to improve the functioning of global markets for food and agriculture as a means to achieving the new goals, including measures that would improve environmental sustainability.

Significant progress has been made in recent years in reducing the prevalence and incidence of malnutrition, including in particular meaningful inroads into levels of undernourishment. Rapid economic growth, especially in Asia, has played a critical role in enabling this progress to occur. However, new challenges—not least those resulting from climate change—mean that “business as usual” is not an option. Governments will have to redouble their efforts to ensure that changing temperature and precipitation patterns and more frequent and intense extreme weather events do not compromise the ability of all people to be able to access safe and sufficient nutrition at all times, and in all places—including through collaborating with one another to ensure that food and agricultural markets function effectively, and in an equitable and sustainable way.

Better rules on global trade will be an integral part of achieving the objectives set out under the 2030 Agenda. Indeed, a lively discussion has already begun on how best governments at the World Trade Organization (WTO) can ensure that they contribute towards turning the Sustainable Development Goal commitments into reality. At the same time, these commitments also relate to a number of ongoing debates in the multilateral context, such as the discussion on public stockholding for food security purposes.

In the run-up to the Bali Ministerial meeting in December 2013, the issue of these public stockholding schemes rose to the top of the trade policy agenda. A number of developing countries in the G-33 coalition called for greater flexibility in WTO rules on farm subsidies, arguing that this would be necessary in order for them to safeguard their ability to administer public stockholding schemes for food security purposes. Other countries—including some developing countries—expressed concern that these schemes could distort trade, undermining producers in other countries, and even threatening food security elsewhere.

Presently, countries’ market price support is calculated using an external reference price which is based on 1986-88 prices. Proponents of greater flexibility for developing countries have argued that this fails to take into adequate consideration the impact of price inflation that has taken place since this base period. They have also expressed concern that the current methodology for calculating farm support may mean they risk breaching their “de minimis” ceilings under existing WTO rules.

At Bali, governments agreed upon an interim solution whereby WTO members will refrain from challenging the compliance of developing countries with the relevant provisions of the Agreement on Agriculture until a permanent solution has been negotiated to resolve this problem. More recently, at the Nairobi ministerial conference in 2015, WTO members agreed they would engage constructively “to negotiate and make all concerted efforts to agree and adopt a permanent solution on the issue of public stockholding for food security purposes.” However, there remains limited empirical analysis on how these programmes operate in practice, and on their possible effects on markets at home and abroad.

This paper therefore aims to examine the operation of existing public stockholding programmes in a cross-section of the WTO’s membership, bearing in mind the methodology for calculating

the market price support component of countries' aggregate measurement of support (AMS) commitments at the WTO. It builds on previous ICTSD work in this area to look at how governments procure, hold and release food stocks; the extent to which administered prices are set at levels that are below international market prices; and the possible implications of the fall in international commodity prices that has taken place since 2011.



Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

At the World Trade Organization (WTO), trade ministers have agreed to redouble their efforts to find a “permanent solution” to the problems that a number of developing countries face in addressing their food security objectives under existing rules on agricultural domestic support.

While the WTO’s Agreement on Agriculture sets no limit on how much food governments can buy at market prices as part of their public food stockholding schemes, nor on domestic food aid to poor citizens, it does require purchases made at administered prices under these programmes to count towards the country’s overall ceiling on trade-distorting support.

The challenge now for WTO members is to construct an equitable and sustainable solution to the problems that countries have raised: one that takes into account food security objectives, and which is based on concrete evidence about the operation of public stockholding programmes, and the extent to which they might affect the functioning of global markets.

This paper seeks to contribute to this process by surveying the extent to which this evidence is available, analysing the data which does exist, and drawing some initial conclusions about options that negotiators might fruitfully be able to explore. It does not seek to assess the effectiveness of existing schemes in reaching their stated objectives, nor does it review whether individual WTO members are in compliance with their existing obligations.

The paper consists of a series of “fact sheets” on different schemes. The first part summarises the main conclusions of a comparative analysis.

The study finds that public stockholding for food security programmes in the countries examined are clearly focused on a limited number of staple foods: wheat, rice, and (in Africa) maize.

It also finds that for the most part administered prices have tended to mirror trends in international prices, especially for rice, although administered prices for wheat have remained high despite the fall in prices since 2011. The methodology used at the WTO to calculate distortions tends to over-estimate the degree of trade distortion when world prices increase above the fixed external reference price, but also tends to under-estimate distortions when prices fall below this benchmark. Options could include setting the reference price at the current international market price; using a moving average of past prices; or calculating support in US dollars or Special Drawing Rights.

The study finds that under different schemes governments purchase significantly different volumes of food—ranging from 2 percent of domestic production in the Philippines to 32 percent in China. WTO jurisprudence indicates that total domestic production should be used to calculate support levels, unless purchased volumes are announced in advance. WTO members might usefully seek to explore this option, as well as special treatment for countries purchasing only small volumes of food, and for least developed countries.

The study also finds that any permanent solution should include safeguards to protect countries from possible adverse effects resulting from exports of food from stocks.

Finally, more transparent data on the functioning of public stockholding schemes could help other countries to understand better how they work and to assess their practical impacts on markets.

1. INTRODUCTION

In December 2015, trade ministers met in the Kenyan capital Nairobi for the tenth ministerial conference of the World Trade Organization (WTO), where they restated their determination to negotiate and adopt a “permanent solution” on the issue of public stockholding for food security purposes.¹ Ministers also noted and reaffirmed two previous decisions on this topic, which were reached at the trade body’s Bali ministerial conference² in 2013 and in Geneva in November 2014.³

At issue is the extent to which developing countries are able to purchase food at administered prices—those set by the government—under current WTO rules on farm subsidies. While the trade body’s Agreement on Agriculture sets no limit on the ability of governments to buy food at market prices as part of their public food stockholding schemes, nor on their ability to provide domestic food aid to poor citizens, it does require purchases made at administered prices under these programmes to count towards the country’s overall ceiling on trade-distorting support.⁴

In 2012, the G-33 group of developing countries tabled a proposal (ICTSD 2012) to allow developing countries to purchase food at administered prices without having to count towards this overall limit, known as the “aggregate measure of support” (AMS) under WTO rules.⁵ (Countries without an allowed AMS ceiling would instead be limited by the “*de minimis*” threshold, which for

most developing countries is 10 percent of the value of production⁶). Exporting countries nonetheless expressed concern that the G-33 proposal could potentially allow unlimited amounts of trade-distorting support to affect the functioning of global markets for food and agriculture, and even affect the food security of producers or consumers in other countries. Negotiations led eventually to the Bali decision, which saw WTO members agree to refrain from bringing legal challenges in relation to certain types of support under developing countries’ public stockholding programmes,⁷ in exchange for the countries concerned complying with various terms such as notifying additional information about its schemes to the trade body’s Committee on Agriculture.

Subsequent discussions have proved inconclusive, with many WTO members remaining polarised on the issue. A proposal submitted by the G-33 shortly before the Nairobi ministerial conference called for a new Annex to be agreed that would allow developing countries and least developed countries (LDCs) to account for food bought at administered prices to be exempt from counting towards the AMS ceiling, so long as the programme’s objective was to support low-income or resource poor producers. Similarly, subsidised food purchases would be exempt if the programme objective was to meet the food security requirements of the urban and rural poor, maintain adequate availability of foodstuffs, or ensure food price stability.⁸ In

1 Ministerial Decision of 19 December 2015, Public Stockholding for Food Security Purposes. WT/MIN(15)/44 – WT/L/979.

2 WT/MIN(13)/38 and WT/L/913.

3 WT/L/939.

4 Footnote 5, Paragraph 3 of Annex 2 to the WTO Agreement on Agriculture.

5 Paragraph 8 of Annex 3 to the WTO Agreement on Agriculture specifies how the market price support component of the Aggregate Measure of Support should be calculated. Amongst other things, the provision states that “market price support shall be calculated using the gap between a fixed external reference price and the applied administered price multiplied by the quantity of production eligible to receive the applied administered price.”

6 Article 6.4 of the WTO Agreement on Agriculture provides further details. China committed to a *de minimis* limit of 8.5 percent when it joined the WTO.

7 The full text of the decision provides further details of the agreement that was reached.

8 G-33, “Proposed permanent solution on public stockholding for food security purposes”. WT/MIN(15)/W/22, JOB/AG/54. 24 November 2015. WTO, Geneva.

the face of exporting countries' concerns that this proposal could allow countries to provide potentially unlimited amounts of trade-distorting support to their agricultural sectors, the proposal was not adopted at the Nairobi ministerial conference, although members did restate their commitment to negotiating and adopting a permanent solution.

The challenge now for WTO members is to construct an equitable and sustainable solution to the problems that countries have raised: one that takes into account food security objectives, and which is based on concrete evidence about the operation of public stockholding programmes, and the extent to which they might affect the functioning of global markets. This paper seeks to contribute to this process by surveying the extent to which this evidence is available, analysing the data which does exist, and drawing some initial conclusions

about options that negotiators might fruitfully be able to explore. It does not seek, however, to assess the effectiveness of existing schemes in reaching their stated objectives nor does it review whether individual WTO members are in compliance with their existing obligations.

To achieve this, the paper examines the operation of existing public stockholding programmes in a cross-section of the WTO's membership, bearing in mind the methodology for calculating the market price support component of countries' AMS commitments at the WTO. It builds on previous ICTSD work in this area⁹ to look at how governments procure, hold and release food stocks; the extent to which administered prices are set at levels that are below international market prices; and the possible implications of the fall in international commodity prices that has taken place since 2011.

⁹ In particular the ICTSD study by Raul Montemayor (2014); but also the paper by Alan Matthews (2014), and more recent analysis by Joseph Glauber (2016).

2. PUBLIC STOCKHOLDING AND FOOD SECURITY

Previous ICTSD analysis has looked at some of the issues around trade, public stockholding and food security (e.g. Bellmann et al. 2013).¹⁰ Over the years, G-33 countries have repeatedly underscored that food security is a non-negotiable concern, and that the importance of existing public stockholding schemes for food security means that it is essential that other countries take into account their priorities in this area. At the same time, other developing countries have voiced fears that the food security of their own producers could be adversely affected if food stocks are purchased at administered prices and then released onto world markets, pushing down global prices and hurting producers elsewhere.

Some of the larger G-33 countries have also emphasised that spending on public stockholding and other support programmes is relatively insignificant when portrayed in *per capita* terms rather than seen as absolute values. As the group is mostly composed of food-importing countries, officials from the countries concerned also argue that these programmes do not tend to directly affect other countries in the way that they would if subsidised output was being exported overseas. Furthermore, the group's members have often emphasised that their own farmers need to be able to benefit from food purchases at administered prices in order to compete with subsidised food imports on domestic markets, and have pointed to the unequal ceilings on domestic support for agriculture under existing WTO rules. Other WTO members have argued that the best solution to this problem is to develop lower ceilings on trade-distorting support in order to ensure that global markets function effectively. They point out that, even

if a country is not a net exporter, its policies can still affect global markets and international prices, including in ways that may affect food security overseas.

Exporting countries have also argued that trade distortions can undermine food security on domestic markets as well as overseas. At the same time, many G-33 country governments have acknowledged that there are often difficulties in ensuring that public stockholding programmes operate efficiently and are effective in assisting poor people in rural and urban areas, but have made the case that other alternatives are often complicated, costly and time-consuming to introduce—especially in large, populous countries. They point out that less trade-distorting options such as direct payments targeted to poor consumers and functioning social safety nets cannot be quickly and easily established at scale.

Indeed, some countries that purchase food at administered prices under public stockholding schemes are now reviewing or reforming how these function. While fiscal costs are often an important motivation, concerns about the effectiveness of the programmes in addressing food security and rural employment are often significant too. In the meantime, many G-33 members have sought to defend their “policy space” to operate particular programmes at the international level, while simultaneously examining ways in which to improve how these schemes function or pursuing alternative approaches to food security goals. New commitments on hunger and malnutrition under the Sustainable Development Goals have also intensified the need to find workable solutions in order to deliver on the 2030 Agenda.¹¹

¹⁰ Glauber (2016) includes a detailed bibliography for readers wishing to explore this issue further.

¹¹ See Díaz-Bonilla and Hepburn (2016) for a more detailed discussion of trade, food security and the 2030 Agenda.

3. METHODOLOGY

In conducting this study, ICTSD sought to apply a common methodology across the different countries examined, despite significant differences in the characteristics of the public stockholding programmes in operation, the size of countries' markets, the design of countries' agriculture and trade policies, and the nature of food security challenges faced by the domestic population.

The countries selected for the study were developing countries with existing public stockholding programmes that provide price support to producers, all of which were either in Asia or Africa. These were identified and filtered on the basis of the availability of relevant data for the study, drawing on WTO notifications, prior ICTSD research and publicly available data published by government sources domestically. Differences in the availability of data between countries complicated the task of characterising and understanding the programmes in operation in some of the countries, and therefore the ease with which it was possible to reach overall conclusions about the broader implications of these schemes for trade, markets and food security.

In accordance with the Bali Ministerial declaration, only primary food staples were selected for analysis. The study examined in particular the implications of public stockholding programmes for wheat, rice and maize.

ICTSD used WTO notifications and domestic policy announcements to determine administered prices, as well as using both international and domestic sources to establish the volume of production that was procured under the stockholding programme and the total production volume for a given product.

For each country, the analysis reviewed several aspects of the schemes starting with the evolution of administered prices, comparing them with international market price as an indicator of the potential trade-distorting effect of such price support scheme.¹² ICTSD also examined the volume of food procured under public stockholding schemes as a percentage of total food production in the country, and compared the share that was procured across commodities and the different countries analysed in this study.

Besides the level of administered prices and the amount purchased, the level of guarantee offered by those schemes also depends on how and when governments announce administered prices and volumes to be purchased, where they purchase the food, or how they release the stocks. A second step therefore consisted in reviewing domestic procedures for the procurement, holding and release of stocks. In doing this, data from the Index Mundi website was used to determine the level of imports and exports for a given commodity, while domestic policy statements were used to establish whether the government procured public stocks from both domestic and international sources, and also to establish whether food from public stocks was exported to overseas markets.

Finally, the study analysed the extent to which countries made information available to other WTO members, on the basis of WTO notifications. Findings from the analysis are presented both in the form of cross-cutting conclusions based on comparative analysis of how public stockholding programmes operate in different markets and jurisdictions, and in the form of a narrative description of how the schemes function in different countries. The latter is included in the Annex.

¹² For this analysis, rice Thai 25% was used to establish international rice prices, using data from the World Bank Commodity Price Data Pink Sheet. Wheat prices were also based on World Bank Commodity Price Data available on Index Mundi. Official exchange rates from the World Bank database were used to convert currencies into USD where necessary.

4. MAIN FINDINGS

4.1 Programme Description

The countries covered in this study have developed specialised agencies that are responsible for the stockholding of grains. Many of the programmes are relatively recent, established over the past two decades at a time of volatility in food prices in the international market. Many of the public stockholding agencies covered in this study, both in Asia and in Africa, have a multitude of objectives, making it unclear at times how or when a stockpiling programme diverges. These agencies are responsible for the procurement, storage and release of food grains, often in conjunction with provincial governments and private companies.

All of the countries covered in this study operate buffer stocks to stabilise commodity prices to protect consumers from price hikes and guarantee a minimum price for producers in times of low prices. In addition, the countries covered operate emergency stocks, like Ethiopia or the Philippines, which is often impacted by typhoons and has a mandate for providing rice to calamity-stricken areas. Some countries also operate variations of social safety net stocks. India and Indonesia have recently enacted legislation to provide a majority of their population with a set amount of rice, and Ethiopia created a food transfer programme. In practice, it is often unclear whether food purchases are destined to be used as part of a buffer stock, for an emergency reserve or for public stockholding for food security purposes.

4.2 Product Coverage

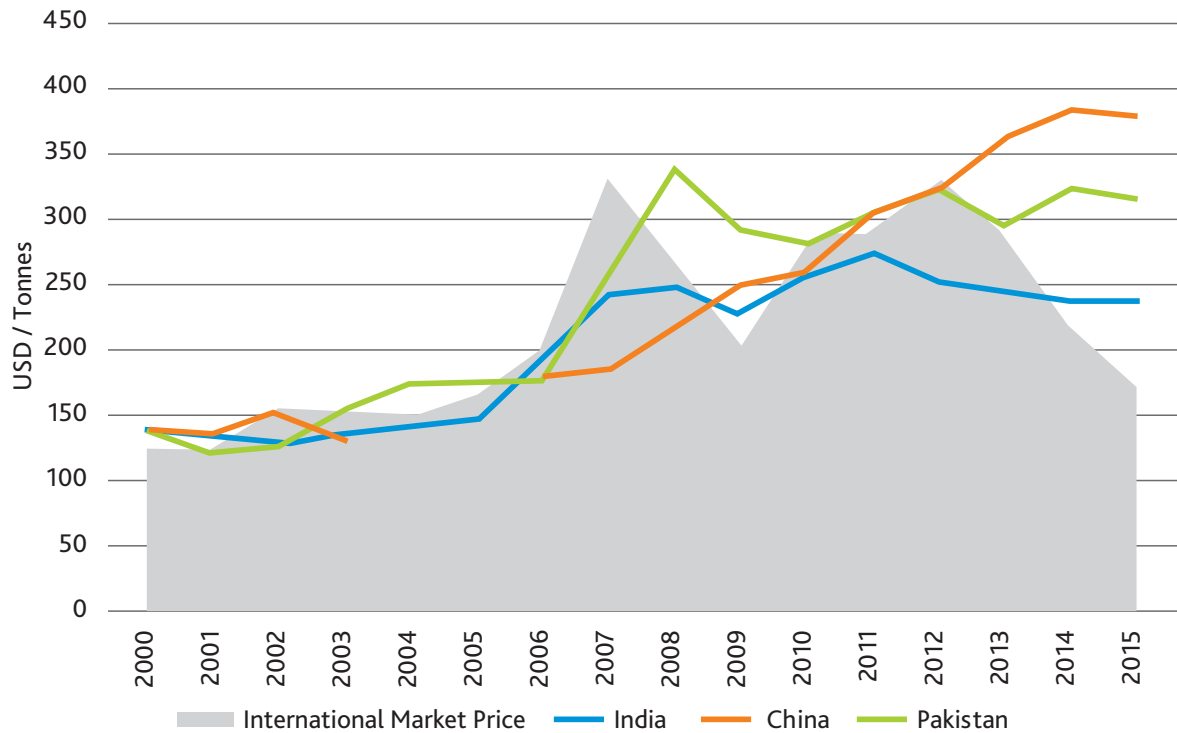
There are three main commodities covered under the stockholding agencies. Rice is the most common grain, covered by India, China, Indonesia and the Philippines. Wheat is also common, covered in Pakistan, China, Ethiopia and India. In Zambia, Kenya and Tanzania, the primary grain that is supported is maize.

4.3 The Evolution of Administered Prices

In data collected from the five countries in Asia, administered prices have tended to move upward since 2000—the first year covered in the study. In most of the countries in this study this upward trend is not necessarily always related to changes in international market prices of rice or wheat. The most significant example is the case of wheat.

As Figure 1 shows, the international market price for wheat witnessed a steady upward trend until 2007, when wheat prices became increasingly volatile. The price of wheat jumped from US\$199 per tonne in 2006 to US\$332 per tonne in 2007, only to drop to US\$264 per tonne in 2008 and US\$204 per tonne in 2009. In 2010, the price increased again from US\$283 per tonne to US\$332 in 2012. Since then, the price has continued to decrease, reaching US\$169 per tonne in 2015. But although the international market price for wheat remained volatile between 2007 and 2015, the administered price for wheat in India, China and Pakistan did not fluctuate by nearly as much.

Figure 1: The evolution of international and administered prices for wheat in India, China and Pakistan



Source: ICTSD compilation based on WTO notifications, IMF price data and government sources.

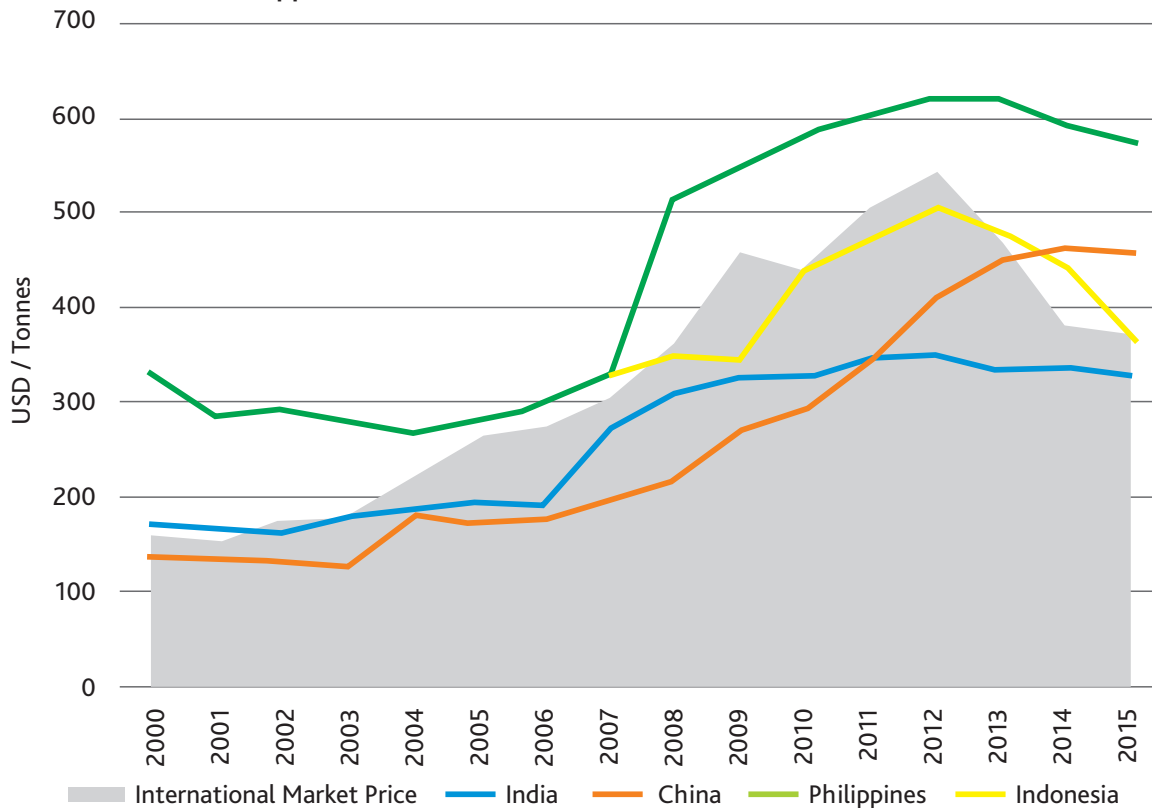
In China, up until 2009, the administered price remained mostly below the market price, slightly increasing above the market price in 2010 as prices bottomed out. In 2011 and 2012, the administered price followed broadly the increase in world market prices, until 2013 when prices dropped again. Since then, administered prices and market prices seem to divorce with the gap between the two growing rapidly. In 2013, the price difference increased to US\$73 per tonne, US\$166 per tonne in 2014 and US\$208 per tonne in 2015. A similar trend is seen in Pakistan, where the price gap increased as prices fell in 2014 and 2015 to US\$140 per tonne and US\$147 per tonne, respectively.

Price trends for rice have been less volatile than for wheat, but a similar price gap is apparent. Between 2000 and 2012, the international market price for rice witnessed a steady upward trend, tripling from US\$160 per tonne to US\$540 per tonne. In 2013, the price of rice began a

downward shift, dropping to US\$370 per tonne in 2015. Administered prices for rice in India, China and Indonesia generally stayed below the market price between 2001 and 2012. Indonesia and China increased their administered prices as market prices fell. In China, up until 2013, the support price remained below the market price, slightly increasing as market prices bottomed out. The administered price in the Philippines has stayed above the market price for the entire period, and has been on average US\$103 per tonne above the market price.

It is nonetheless worth bearing in mind that there are limitations to the extent to which it is possible to meaningfully compare international and administered prices for food stuffs using the data analysed in this paper. A more accurate approach would be to adjust domestic prices to farm gate level, by including transportation costs, mark-ups and other factors which may affect price transmission at the domestic level.

Figure 2: The evolution of international and administered prices for rice in China, India, Indonesia and the Philippines



Source: ICTSD compilation based on WTO notifications, IMF price data and government sources.

Data on the countries in Africa is much more limited, and it is difficult to provide solid analysis on their administered prices.

4.4 Volume and Share Purchased

The procurement rate patterns observed among the different schemes can be separated into two categories: countries that procure roughly a quarter of a commodity, and those that procure a much smaller percentage. Procurement rates in India, China and Pakistan are relatively high, accounting for more than 20 percent of the total production in each country. India procured on average 26 percent of the total wheat produced in the country between 2000 and 2015, as well as 30 percent of the total rice production. Similarly, between 2000 and 2010, China procured on average 27 percent of the total wheat produced. Rice procurement was substantially lower, accounting for only 6 percent of the total production. Pakistan procured 23 percent of the wheat produced in the country between 2000 and 2015.

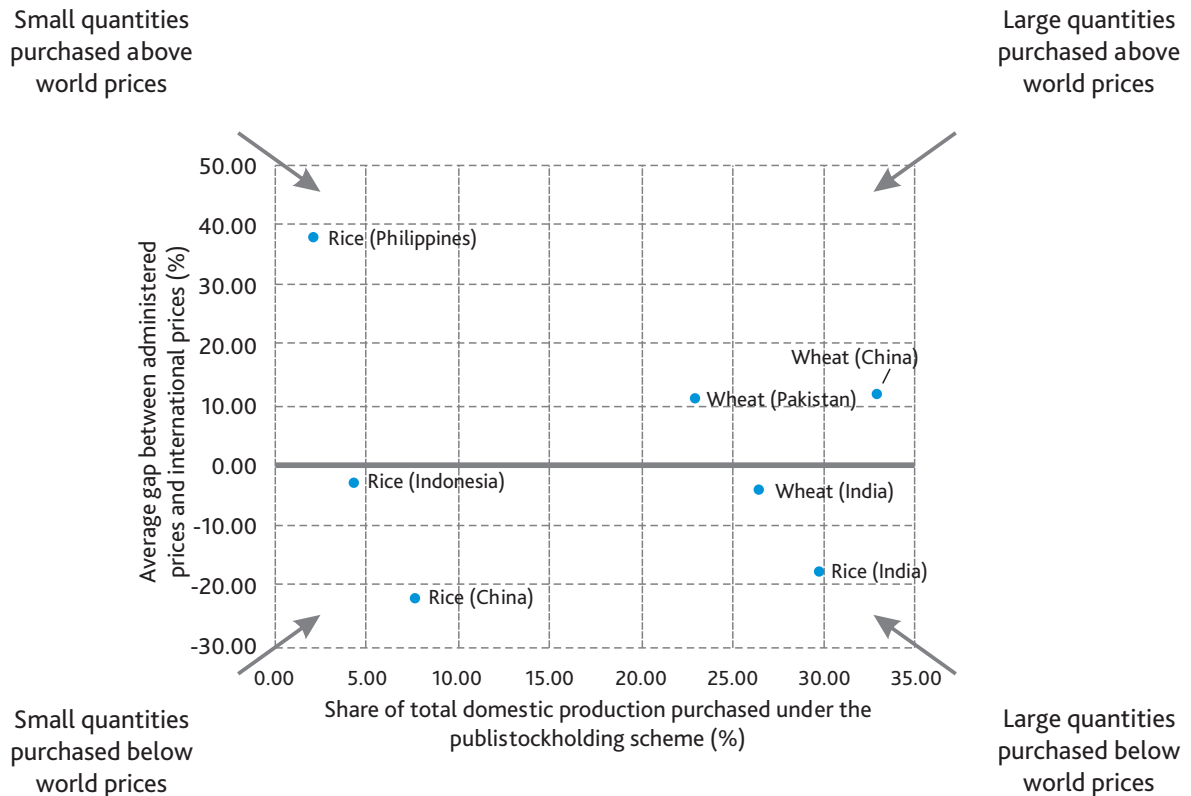
Indonesia, Ethiopia, Kenya, Zambia, Tanzania and the Philippines procured a low percentage of the total rice produced in the country. In Indonesia, the share procured accounted for only 4.4 percent between 2002 and 2015 while in the case of the Philippines, this proportion did not exceed 2.5 percent on average between 2000 and 2015. The low procurement levels in the Philippines has been attributed to multiple factors, including the large fiscal cost of the rice self-sufficiency programme—between 2000 and 2005, the agency's deficit accounted for P44.2 billion (Cororaton 2013).

Figure 3 compares the average share of total production purchased between 2000 and 2015 with the average deviation from international prices. While in India purchases of wheat and rice represented on average 26 and 30 percent of total production, the fact that administered prices were set on average below international prices suggests that trade distortions resulting from these schemes have remained limited. The relatively small quantities of rice purchased

by Indonesia, China or the Philippines may also limit the potential scale of trade distortions arising from these programmes, even if in the Philippines prices were nearly 40 percent above international prices. Finally, the case of wheat in

Pakistan or China may raise more concern given the relatively large quantities purchased—on average 23 and 33 percent of total production respectively—at prices set on average 11 to 12 percent higher than world prices.

Figure 3: Volume purchased and deviation from international prices (Average 2000-2015)



Source: ICTSD compilation based on WTO notifications, IMF price data and government sources.

Reliable data is not available for the four countries in Africa, although it is known that procurement rates have been low (Minot 2010). In Tanzania, estimates place the levels at around 1 percent of total production (ibid).

4.5 Procedure for Announcing Administered Prices and Volumes

Price announcements are made at the beginning of each harvest season. Volume announcements are varied. Some countries announce a volume target for the year, while others make no announcements about volume targets. In some of these cases, the government concerned will procure as much grain as farmers sell to them, as is the case in India; in others, the practice is simply not to announce the volume, as in China. Many

of the countries examined in this study also revise the purchasing price throughout the season. Kenya revises purchase prices every two months, and China and Indonesia have on occasion revised support levels after the original price was set.

4.6 Domestic Procurement and Imports

Food for public stockholding programmes is not necessarily procured exclusively from domestic grains. Indeed, the African countries covered in this study all procure imported food in order to maintain their stocks. For several countries in Asia, however, imports only account for a small percentage of their stocks. Low import levels have in part been a result of import restrictions in countries that support farmers in a push for grain self-sufficiency.

More specifically, India, Pakistan and China tend to procure a large percentage of the overall grain stocks in their countries, and only import a small percentage of their stock. The Indian government imported wheat between 2006 and 2008 to meet shortfalls in its Central Pool reserves, but has not imported rice since 2008 (Government of India 2016). China's wheat and rice import levels are also low in comparison to its domestic procurement.

Import levels in Ethiopia, Indonesia and the Philippines are much higher than their domestic procurement levels. The Philippines in particular imports the majority of its stock. At 2 percent, domestic procurement in the country remained low between 2000 and 2015. During the same period, the average rice import rate was 16 percent of domestic production, despite quantitative restrictions on rice imports. In 2014, the WTO extended the country's quantitative restriction programme on rice until July 2017.

Indonesia's rice imports and domestic procurement levels have also remained low in proportion to the country's domestic production. Between 2002 and 2015, the average import rate for rice was 2 percent. During the same period, the average procurement rate was 4 percent. Since 2007, rice imports have carried a tariff of Rp 450 per kilogram (U.S. Department of Commerce). Domestic wheat prices in Ethiopia are twice the price of imported wheat. Despite being the second largest producer of wheat in Africa, imports make up the largest share of the country's stockholding programme. This is for multiple reasons, including food security requirements in cases of drought—the country is currently facing one of the worst droughts in decades, substantially reducing wheat production, and leading to large imports of wheat.

Zambia's public stockholding mandate includes a minimum procurement rate of 25 percent of total production in the country, though it is difficult to verify how much of that is actually procured. However, due to large variations in production levels, Zambia's imports and exports fluctuate depending on the harvest. In 2005, the government restricted imports when there was a deficit harvest. The following year, when there was a good harvest, the government set up controls on exports (ibid).

4.7 Procedure for Releasing Stocks

The procedure for releasing stock is unclear in the majority of the countries covered in this study. Part of the reason for this is that some of the programmes have multiple functions—price stabilisation, food distribution to poor consumers, and farmer support—blurring where one programme starts and the other begins. In both India and Indonesia, the food distribution system accounts for the largest proportion of stock released. For price stabilisation, countries release stock when prices are high, but information on how much is released and the price floor are not always publicly available. This is especially the case in China, Kenya, Zambia, Ethiopia and Tanzania.

Exports are approved by governments when there is a surplus in country buffer stocks. The procedure for these types of exports is also unclear, and the tools used to export the excess stock vary. Pakistan has used export subsidies to facilitate the export of excess wheat, most recently in 2015, when it allocated US\$60 million to export 1.2 million tonnes of wheat from government stocks.¹³ Exports have also been restricted in cases of low harvest yields, as was the case in Zambia. Indonesia and the Philippines have not

13 USDA Foreign Agricultural Service (2015) *Global Agricultural Information Network (GAIN) Report (PK1504)*, 2 March 2015. Online at: <http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Pakistan%20Announces%20Subsidy%20for%20Wheat%20Exports%20Islamabad%20Pakistan%202-3-2015.pdf>

exported rice from their stocks, according to available data.

4.8 WTO Notification

In May 2016 of this year, the chair of the WTO's agriculture talks told members that delays in reporting farm subsidies to the WTO were holding up efforts to negotiate new trade rules—about 85 percent of the 162 members are behind on their commitments (ICTSD 2016).

The majority of the countries in Asia, covered in this study, are five years behind in reporting domestic support to the WTO, and three out of the four countries in Africa have never submitted a domestic support notification. India, China, Indonesia and the Philippines have reported some form of farm support up until 2010, with Pakistan reporting up until 2011. Their submissions have included the support price for the commodities in their programmes. Indonesia and Zambia submit the total amount spent on their stockholding programmes, but do not provide the price for individual commodities or the quantity of commodities covered in their programmes. Kenya and Tanzania did not submit any domestic support notification in the period covered.

The lack of reporting leaves negotiators in the dark on domestic support as prices have become increasingly volatile since 2007.

4.9 Transparency

Despite a lag in reporting domestic support to the WTO, many of the countries in this study announce aspects of their domestic support through their government agencies. India, Pakistan and the Philippines publish an

annual compilation of data on the agricultural sector, with updated information through 2015, providing the procurement price, the procurement amount, the production amount, import levels, and the export levels of wheat and rice.

To the extent that China and Indonesia provide information on their stockholding policies and reserves, the majority of the information provided is in their respective languages. China does not provide public data on its stockholding reserves, and administered prices for rice and wheat are announced in press releases, mostly in Chinese. Indonesia provides the current policies that guide the stockholding agency's work on its website, including presidential instructions, government regulations and ministerial regulations. The agency does not release multi-year summaries of the results of its stockholding and procurement programmes, providing statistics on monthly procurement of rice for 2014 for May to June only. Badan Urusan Logistik (BULOG) provides all of this information in Indonesian only, though it used to have an English option up until mid-2014.¹⁴

The countries covered in Africa vary much more. None of the countries provide a detailed list of their public stockholding policies. Like Indonesia, the countries provide current policies underlying the operation of their agencies, and in the case of Zambia, provide detailed reports submitted by the government that give an overview of the public stockholding programme. The information that is available often comes from sources from outside the government, including United States Department of Agriculture reports, making it difficult to verify the figures independently.

¹⁴ This is based on a brief analysis of cached versions of the agency's website over the past two years, which can be found at https://web.archive.org/web/20140501000000*/http://www.bulog.co.id.

5. CONCLUSION

The different public stockholding schemes described here vary considerably in their design and objectives. Some of the programmes seem to have multiple functions—e.g. price stabilisation, food distribution to poor consumers or farmer support. It is also often unclear whether the food is purchased as part of a buffer stock, an emergency reserve or for public stockholding for food security purposes. The amount of food purchased and the operations of such schemes (e.g. procedures for setting the administered prices, or for releasing the stocks) also vary widely. In spite of this diversity, certain broad lessons can be drawn for the negotiation of a permanent solution in the WTO as mandated in Bali.

Firstly, the set of products covered by public stockholding schemes for food security appears to be relatively consistent, with a clear focus on wheat, rice and—in the case of Africa—maize. This focus on staple food is not surprising and perfectly in line with the approach adopted in the interim solution.

Secondly, with respect to the price support element of such schemes, overall, the evolution of administered prices has tended to follow international prices. At the least, administered prices have not been completely divorced from international fluctuations. This is true for rice, even if in some cases (e.g. the Philippines) administered prices have been set largely above international prices. It is, however, less true in the case of wheat, particularly since 2011, when administered prices have generally stagnated or even increased while international prices have declined consistently. How administered prices will continue to evolve is unclear at this stage, but this apparent divorce should be a matter of concern.

Notwithstanding those exceptions, administered prices have generally tended to remain below world prices, thus limiting significantly their potential trade-distorting effect. However, in the WTO, the use of a fixed external reference price based on the period 1986-88 for the calculation of the subsidy elements of those schemes results in countries at the WTO overestimating the trade-distortive impact of administered prices when world prices are above the reference price. Similarly, the methodology in use at the WTO tends to underestimate such distortions when world prices fall below the reference price. While this latter situation is unlikely to occur in the immediate future for most WTO members, it is worth recalling that countries which joined the WTO recently, like China or the Russian Federation, use more recent reference periods (1996-98 for China and 2006-08 for Russia) with current prices already below or close to such levels.

Several proposals have been put forward to deal with these concerns. One option would be to set the external reference price at the level of the current year price, following, for example, the approach used to calculate the Producer Subsidy Equivalent by the Organisation for Economic Cooperation and Development. Others have suggested a moving average of past prices (Montemayor 2014)¹⁵ or to calculate price support in a more neutral currency such as using USD or Special Drawing Rights to account for price inflation. This would certainly constitute a more accurate way of calculating trade distortions, at least from an economic perspective. However, the fact that administered prices are set below world prices does not automatically mean that no distortions occur. For farmers, the simple fact that a minimum price is guaranteed by

15 This approach has however been criticised by some experts, as it could result in overshooting prices when prices begin to decline and underestimate support. See Glauber (2016).

the government for certain commodities may in itself affect production decisions. Measuring these distortions is nonetheless challenging, and the effect is probably not very different from the risk or insurance effects associated with certain green box subsidies that are considered to be no more than minimally trade distorting in the WTO. The level of guarantee offered by those schemes also depends on the procedure that governments use to announce administered prices and volumes to be purchased. For example, many countries tend to revise the purchasing price for a given product throughout the season. In the case of Kenya, the purchased price is revised every two months—potentially reducing the level of certainty associated with the scheme, and therefore its insurance effect.

Thirdly, another striking feature of the various schemes reviewed here is the significant differences in the amount of food purchased by the government. On average, this ranges from 2 percent of domestic production for rice in the Philippines to over 32 percent for wheat in China. WTO rules require governments to calculate the subsidy element of their public stockholding schemes by multiplying the gap between the administered price and the fixed external reference price by the volume of “eligible production.”¹⁶ WTO jurisprudence indicates that this should usually be understood to mean total domestic production. However, according to the WTO ruling in the Korea beef case,¹⁷ by specifying in advance the amount that would be purchased or supported by the government (i.e. the eligible production), members could limit the amount of price support notified to the WTO by only taking into account the announced quantity instead of total production in the calculation of the subsidy element of the scheme. In practice, while some governments announce a volume target for purchases for the year, most make no announcements at all.

If such an approach is not practical, members might consider establishing a minimal threshold under which countries would not be obliged to notify their support. This approach would make sense when governments only purchase a very small share of domestic production and rely largely on imported food to build their stocks—as in the case of the Philippines, Indonesia and arguably most African schemes. As highlighted above, about half of the countries covered in this study import a significant amount of their stock for multiple reasons such as low harvest yield levels and emergency situations. Such an exclusion could by extension be applied to possible public stockholding schemes in LDCs, not least because such policies are unlikely to affect world prices or significantly harm the trade interests of other WTO members.

Fourthly, based on the limited number of cases reviewed here, the process of releasing stocks could have problematic effects on trade, as a result of the lack of clarity and predictability in the policies applied by governments. In some countries, exports are approved by governments when there is a surplus in buffer stocks. The procedure for these types of exports is, however, unclear, and the tools used to export the excess stock vary. This highlights the importance of establishing effective safeguards in any permanent solution to ensure that excess stocks are not exported onto world markets at artificially low prices.

Finally, it is clear that governments need to become more transparent in the information they provide about national food stockpiling schemes, including through regular notifications. This is apparent in the difficulty in accessing reliable information on stocks, administered prices, purchased volumes or more generally on the functioning of these schemes. Over the last five years, prices of several agricultural commodities have experienced a continuous decline from

16 WTO Agreement on Agriculture, Annex III, paragraph 8.

17 DS161: Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef.

their 2011 peaks. As these prices reach their lowest level since 2006, domestic pressures for enhanced price support are likely to come from producers concerned about remunerative prices and the need to maintain farm income. In an environment of declining prices, high administered prices may potentially create

distortions and push prices even lower. While countries like India, Pakistan or the Philippines make such data available in a comprehensive and updated manner, in most other cases, detailed information is not readily available in English, making it difficult for third countries to assess the potential impacts of such schemes.

ANNEX: COUNTRY DESCRIPTIONS

A.1 India

Over the last six decades, India has made remarkable progress in agricultural production, moving from a food deficit to a food surplus country. This is despite a massive increase in its population, from 361 million in the 1950s to over 1.26 billion in 2014. Yet, with 30 percent of children underweight, and nearly 200 million undernourished people, the primary goal of agricultural policies is to ensure adequate supply of food at affordable prices. With the largest number of poor consumers in the world, India's overriding concern has been to keep food prices under control through different means including high stockholding to feed the public distribution system, and large food subsidies to the poor. To incentivise production, on the other hand, India has traditionally supported producers with input subsidies and minimum price schemes for some products. This twin-track approach of keeping food prices low for the consumer and incentivising production through domestic support has been the hallmark of India's agricultural policies.

In 1964, India enacted the Food Corporations Act 1964, establishing the Food Corporation of India (FCI) to coordinate operations for food security with three objectives: provide support to farmers through a support price, establish a public distribution system, and create a food stock reserve. The corporation's current objectives include: provide support prices, stabilise prices for food grains, maintain buffer stocks for food security and intervene in the market if needed for price stabilisation (Government of India 2015).

The FCI, in conjunction with state agencies, is responsible for the procurement of wheat and paddy through a minimum support price. Before the harvest each season, the government announces minimum support prices for procurement, set by the Commission of Agricultural Costs and Prices (CACP).

In 2013, the government passed the Right to Food Act, setting a guarantee of grains, including wheat and rice, for nearly 70 percent of the population (Government of India 2013). The programme provides five kilograms of subsidised grains through a public distribution system for one to three rupees.

The support price is calculated based on a number of factors, including: (i) cost of production, (ii) changes in input prices, (iii) input/output price parity, (iv) trends in market prices, (v) inter-crop price parity, (vi) demand and supply, (vii) effect on industrial cost structure, (viii) effect on general price level, (ix) effect on cost of living, and (x) international market price situation (Government of India 2010). The government, informed by the CACP, announces the minimum support prices on an annual basis. The government is mandated to purchase all marketable grain at the support price.

Domestic procurement of wheat and rice are handled through two different systems: a centralised procurement system and a decentralised procurement system.

Under the centralised procurement system, the procurement is handled by either FCI or state agencies. The grain procured by state agencies is sent to FCI for storage and distribution. Under the decentralised procurement system, state agencies store and distribute rice and wheat within each state. Through the system, excess stocks of wheat and rice that were procured in each state are sent to FCI for distribution (Food Corporation of India 2016).

The support price for wheat and rice has generally remained below the international market price, except when there has been a sharp drop in the market price. Over the past decade, the purchase price has doubled.

India's stockpiling programme is intended to operate as a food security initiative for poor

consumers, provide a subsidy to farmers, regulate domestic supply and ensure price stability. The storage requirements and stock levels are meant to be set so as to fulfil the government's food security objectives. FCI releases wheat into the market to control prices, and releases wheat and rice for exports.

The government has not used imported rice for its Central Pool since 2003. The government imported wheat between 2006 and 2008 to meet shortfalls in its Central Pool reserves, but has not imported wheat for its Central Pool since 2008 (Government of India 2016).

India's import policies for wheat and non-basmati rice have shifted over the past few years. Between 2008 and 2009, the government did not have an import duty for rice, abandoning the policy in 2009 when it shifted to using a basic custom tariff of 70 percent *ad valorem* on milled or semi-milled rice. The government reduced the import duty for wheat from 50 percent to 5 percent in 2006, further reducing it to zero in late 2006. In July of 2015, the government implemented a 10 percent import duty on wheat, increasing it to 25 percent a few months after (Government of India 2016). Since then, the duty has been extended twice, most recently indefinitely.

India releases excess stock of grains through two processes: a domestic open market scheme and through central public sector enterprises. The government approves exports from its stock when there is a surplus of wheat or rice in the country's buffer stock norms. Buffer stock levels are designed to meet quarterly requirement targets. India releases wheat and rice into the domestic market in order to moderate open market prices, and the scheme has been handled through an e-auction since 2014, where state governments and private traders can buy wheat or rice. The price is set on an *ad hoc* basis, but it is generally higher than the support price.

India is one of the largest producers of rice in the world and became the world's largest exporter of rice in 2012. Over the past five years, India has exported 10 million tonnes into the world market. Since the year 2000, wheat and rice exports have fluctuated. From 2000 to 2003, exports were on average above 11 percent, dropping below 10 percent between 2004 and 2011. From 2007 to 2011, the government set export bans on wheat and non-basmati rice, protecting them from spikes in the international market. Since then, exports for both grains have increased. This increase can be attributed to various factors, most notably growing stocks and shifting consumption patterns.

The Indian Ministry of Agriculture and Farmers Welfare publishes an annual compilation of data on the agricultural sector. The most recent publication is for the year 2014. The ministry also publishes an abridged version of the report, known as the Pocket Book of Agricultural Statistics, and is available up until the year 2014. The report provides the procurement price, the procurement amount, the production amount, import levels and the export levels of wheat and rice. The 2014 publication, Agricultural Statistics, also provides the stocks for wheat and rice in the Central Pool up until the year 2013. FCI also provides the storage capacity for Central Pool stocks for the last five years, including 2016, and the stock by month for the past five years.

India's most recent domestic support submission to the WTO Committee on Agriculture was in 2014. In this, New Delhi provides the applied administered price for wheat and rice in USD and eligible production up until 2010. In the country's submission, a coefficient of 1.5 is used to convert paddy to the equivalent price of rice.¹⁸

18 G/AG/N/IND/10. For a detailed discussion of India's agricultural domestic support notifications, see Brink (2014).

A.2 China

Since 2004, China has become a net importer of agricultural products, with exports essentially focusing on labour-intensive products like vegetables and fruits. Today, imports represent roughly 15 percent of total food supply, with the rest produced domestically. In spite of impressive progress in reducing undernourishment, China is still home to an estimated 134 million food insecure people. With relatively limited land endowments per capita, China's agriculture is dominated by smallholders with households holding on average between 3ha in the most land-abundant provinces to 0.73ha in the 13 major grain producing provinces. With a rural population of 670 million depending largely on agriculture, the sector remains a critical source of income and livelihood. However, income disparities between urban and rural areas have increased in the 1990s to reach a worrying ratio of 3 to 1, with over 120 million living with less than a dollar a day in rural areas. From a consumption perspective, China can hardly rely on imports to feed its population of 1.34 billion people: the total volume of rice traded internationally only represents 20 percent of Chinese consumption. For these reasons, securing domestic supply of major crops while increasing farm income to reduce urban and rural disparities has been for some time the primary characteristic of Chinese food policy.

China's current grain support programme began between 2000 and 2004, when the government began to eliminate an agricultural tax on farmers and introduced four subsidies: a direct payment, a seed subsidy, a farm input subsidy and a subsidy for farm equipment (Ni 2013). The shift changed the role of the central government from a direct role, setting centrally fixed prices, to an indirect role, as it began to focus on two food security measures: price support and stockpiling. The new role was handled by the China Grain Reserves Corporation (SINOGRAIN) with three objectives: manage stocks, procure grains and engage in trade (Gale 2013).

A minimum purchase price provides price support to producers of key crops (OECD 2015). In 2004, the government began issuing support prices for early indica rice and japonica rice, followed by middle and late indica rice the following year. In 2006, the support pricing was extended to include wheat.

Support prices are announced yearly by the National Development and Reform Commission (NDRC), and are set jointly by the NDRC and four other state agencies: the Ministry of Finance, the Ministry of Agriculture, the State Administration for Grains, and the China Agriculture Development Bank. Prices for rice and wheat are set to ensure that prices are sufficient to cover production and marketing costs, but the government does not announce how support prices are determined. Prices are announced before the beginning of the crop season and are in effect during peak months for crop purchases and only in major producing regions.

Support prices and stocks have followed the 2008 government "Outline of Middle and Long Term Plan for Grain Security (2008-2020)," where the government set a target of achieving at least 95 percent grain self-sufficiency by 2020, and stock at least 70 percent reserves of wheat and rice.

Wheat and rice purchases under the support price occur only in major producing regions that are responsible for 80 percent of the marketable grain, and are based on a fixed period, several months after the initial harvest. Minimum grain levels are set to hold at least three months of grain stock.

Since 2004, support prices have more than doubled for wheat and rice. Prices were at (or below) international market prices for wheat before 2012; however, since 2012, support prices have continued to increase despite a large decrease in the market price. Support prices for rice stayed below the international market price until 2013, but increased between 2013 and 2015.

State purchases are made by SINOGRain when the market price falls below the minimum purchase price. Between 2000 and 2008, the government engaged in large-scale procurement of wheat as market prices continually fell below the minimum support level set for each year. The resulting purchases accounted for about 34 percent of total wheat production between 2006 and 2008.

State purchases of rice have fluctuated more significantly, but have remained smaller in comparison to wheat. Between 2003 and 2008, the average procurement rate was 3.5 percent of domestic production, down from 35 percent between 2000 and 2008.

Minimum grain levels for food security are not formally announced by the government.

The NDRC sets targets for rice and wheat imports and exports. The China National Cereals, Oils and Foodstuffs Corporation is the primary trader of rice and wheat in the country.

When China joined the WTO, it established tariff rate quotas for rice and wheat. The quotas for both commodities have remained the same since 2004. The tariff rate for wheat within the quota, 9.6 million tonnes, is 1 percent. The tariff rate outside the quota is set at 65 percent. The tariff rate for rice is also 1 percent with a quota of 5.3 million tonnes. Out of quota tariffs are set to 65 percent.¹⁹

The NDRC announces the price of wheat and rice annually through its website, but does not provide a summary of its stockholding programme. The NDRC website is available in Chinese and English, but the information is limited in the English version. The SINOGRain website is also in Chinese and English, but technical problems with the English version of the website meant that it was not possible to access the English-language material during

the period in which this analysis was being researched. The National Bureau of Statistics of China releases annual compilations of government statistics for each sector, but it does not provide information on its stockholding programmes.

China's most recent domestic support submission to the WTO Committee on Agriculture was in 2015. China provides the applied administered price for wheat and rice in Chinese Yuan Renminbi and eligible production up until 2010. The applied administered price of rice is the weighted average of the prices of japonica and indica rice with the ratio of 1:2. The data is provided by the State Administration of Grain.²⁰

A.3 Indonesia

Indonesia's current stockholding and food security policy is based on presidential instructions that establish general guidelines for the procurement and distribution of rice. The country's current rice procurement and distribution scheme has five stated objectives: provide economic stability, protect farmers' incomes, ensure rice price stability, ensure stock levels and set a rice distribution policy.²¹ In 2012, the government set a target of rice self-sufficiency by 2017.²²

The country's stockholding programme is managed by BULOG, created in 1967 to manage rice price stabilisation policy, and operates three types of public stocks: a buffer stock, a social safety net stock and an emergency stock. BULOG's policy for rice has gone through two phases. Prior to 2005, the agency used a price band on rice, setting a price floor and price ceiling. Since 2005, BULOG has used a procurement price. BULOG is the primary agency responsible for procuring and distributing rice to more than 50,000 distribution points.

19 Tariff Download Facility. WTO.

20 G/AG/N/CHN/28

21 Presidential Instruction No.5/2015. Government of Indonesia.

22 Law No. 18/2012 on Food. Government of Indonesia.

The country's main food security programme and distributor of rice is Beras Untuk Rakyat Miskin (Raskin). In 1998, the government implemented the Raskin programme, which was designed as a food security programme to provide poor households with subsidised rice. The programme has allotted 15 kilograms of rice per household per month.

Stocks of rice are released for three reasons: for price stability, in the event of a disaster, and as part of the Raskin programme. The largest proportion of the country's public stockpiling programme is for the Raskin programme for rice distribution. The programme accounts for about 3 million tonnes of rice per year. The country also holds 300,000 tonnes as a buffer stock and 300,000 tonnes as an emergency stockpile under the control of BULOG (Caballero-Anthony et al. 2016).

The Ministry of Trade is in charge of releasing rice stocks to ensure price stability.²³ The rice stock is released when consumer prices increase by 10 percent or more when compared to the average medium-quality consumer price three months before.

Indonesia relies on domestic production for the majority of its procurement. The country imports rice when there is a gap between domestic production and domestic consumption, but does also import a small share for its stockholding programme. Over the past five years, the average has been 1,650,000 tonnes. In 2004, the government implemented an import ban to increase domestic production, increasing domestic prices. In 2015, the government prohibited imports of rice except when domestic production is unable to meet domestic requirements or to stabilise rice prices.

In 2008, BULOG was given authority to import rice. Imports by BULOG are limited, and the agency restricts imports of rice in the month before, during and the month after the main harvest period.²⁴ Since 2007, rice imports have been subject to a tariff of Rp 450 per kilogram.²⁵

The government of Indonesia has reported that BULOG has never exported rice held in its stock.²⁶

The purchase price of rice is announced by the president through "presidential instructions." The main agency in charge of the stockholding and procurement of rice, BULOG, provides details on its website of the current government policy guiding its work, including presidential instructions, government regulations and ministerial regulations. BULOG does not release multi-year summaries of the results of its stockholding and procurement programmes, providing statistics on monthly procurement of rice for 2014 for May to June only. BULOG provides all of this information in Indonesian only, although an English option was also previously available.

Indonesia's most recent domestic support submission to the WTO Committee on Agriculture was in 2012. This submission does not provide the applied administered price for rice or eligible production. Instead, it provides the total public stockholding spent each year in Indonesian rupiahs, up until 2010. In 2013, the country provided a summary of its stockholding programme in response to a questionnaire on the public stockholding programmes of countries by the chair of the Committee on Agriculture, including the procurement price and procurement amount, for 2010 to 2012.²⁷

23 Decree of Minister for Trade No.04/M-DAG/PER/1/2012.

24 Indonesia National Trade Estimate Report (2013). US Trade Representative. Online at: <https://ustr.gov/sites/default/files/2013%20NTE%20Indonesia%20Final.pdf>

25 U.S. Department of Commerce (2016).

26 Indonesia's submission of information to the WTO on its public stockholding programme.

27 G/AG/N/IDN/34.

A.4 Pakistan

There are four agencies and departments in Pakistan that are involved in the procurement, stockholding and price-setting process for grains. The Ministry of National Food Security and Research is responsible for the coordination and planning of economic policy for agriculture.²⁸ Under this mandate, the ministry is also responsible for the procurement of imported grains, for a federal requirement (food security) and for export and storage. The same ministry is also responsible for setting administered prices for grains.

The ministry furthermore has administrative control over two organisations that coordinate these responsibilities: the Pakistan Agricultural Storage and Services Corporation (PASSCO) and the Agricultural Policy Institute.

The PASSCO was created in 1973 with two functions: to maintain reserves of wheat, the primary commodity, as well as secondary commodities; and to provide support to farmers. The Agricultural Policy Institute sets support prices. Separately, the Trading Corporation of Pakistan assists with support prices, buffer stocks and trading. The Ministry of Commerce sets import and export policies (Prikhodko and Zrilyi 2013).

Wheat is the main commodity produced and covered under the country's stockholding programme. Over the past decade, the government has procured close to 25 percent of total wheat production. Wheat is procured, stocked and distributed mainly at the provincial level and by PASSCO, which releases the wheat to mills at a government-set price. The government uses commercial loans to finance the purchase, storage and sale of wheat, which adds more than 10 percent to the cost of wheat procurement due to high interest rates (Prikhodko and Zrilyi 2013).

The Agricultural Policy Institute establishes the procurement price for wheat at the beginning of each marketing year, together with targets

for wheat procurement by provincial food departments and federal agencies. The government also sets the release price, which can be adjusted later during the marketing year. Starting in 2008, the government began to issue support prices that were higher than the market price (Prikhodko and Zrilyi 2013).

Wheat stock figures are not readily available, and estimates vary greatly. The UN Food and Agriculture Organization estimates placed the country's wheat stocks in 2010 at nearly 1 million tonnes—a figure which is substantially lower than the estimate from the State Bank of Pakistan, which considers the amount to be closer to 7 million tonnes (Prikhodko and Zrilyi 2013).

Imports are used in years where there is a deficit in the country. The country has a bound tariff rate of 150 percent for wheat, and has remained below this rate. In 2014, the country increased the tariff for wheat imports into the country to 20 percent to control imports. In 2015, the government further increased the tariff, temporarily, to 40 percent as international market prices continued to fall (USDA 2014).

Exports are handled by the Trading Corporation of Pakistan. Exports over the past three years have declined as the support price has remained above the international market price. Between 2014 and 2016, the support price for wheat was on average US\$135 above the international market price—significantly higher when compared to the price difference between 2011 and 2013, which was on average US\$3 higher. The government has also used export subsidies to facilitate the export of excess wheat, most recently in 2015. The Economic Coordination Committee approved a US\$60 million (Rs6 billion) subsidy to facilitate the export of 1.2 million tonnes of wheat from government stocks (USDA 2015).

Pakistan releases yearly publications under the Ministry of National Food Security and Research that provide detailed statistics on the

28 SRO 1088(I)/2011. Government of Pakistan.

country's agricultural sector. The most recent publication that is provided, *Agricultural Statistics of Pakistan 2014-15*, lists information up until the year 2014, and provides the procurement price, the procurement amount, the production amount and the export prices of wheat for the past two decades. The publication also provides the storage capacity for wheat at the provincial and federal level until the year 2012.²⁹

Pakistan's most recent domestic support submission to the WTO Committee on Agriculture was in 2015. Pakistan provides the minimum guaranteed price for wheat in USD per tonne and eligible production up until 2011. The country notes in its submission that minimum guaranteed price is used instead of administered price because producers are only required to sell their product to the government when the market price falls below the support price amount. The minimum guaranteed price data comes from the Ministry of National Food Security and Research.³⁰

A.5 Philippines

In 1972, the National Grains Authority (NGA) was created to develop and promote key grains within the country.³¹ In 1975, NGA's mandate was expanded to include the processing and storage of grain.³² Subsequently, the NGA was renamed the National Food Authority (NFA) in 1981,³³ expanding the product coverage and mandate to promote food security and price stability for rice.

Under the food security mandate, the NFA is responsible for the procurement and distribution of rice (including subsidising rice

prices for farmers); is required to provide an immediate supply of rice to calamity-stricken areas; and must ensure that rice prices are restored to pre-emergency levels within two weeks. Under the price stability mandate, the NFA is responsible for stockholding and importing rice. In 1985, price controls were eliminated on rice.³⁴

The country has also set a target for rice self-sufficiency under the Philippine Food Staples Self-sufficiency Roadmap (FSSR) 2011-2016. Through the FSSR, the government set a goal of achieving self-sufficiency in rice by 2013, and maintaining it for three years until at least 2016. Two of the objectives for FSSR include: produce at least 21.11 million tonnes of rice by the end of 2013, and 22.49 million tonnes by 2016; and maintain per capita rice consumption at 120kilograms per year.

The procurement price for rice is set through two processes. The Rice Inter-Agency Committee determines a procurement price before the beginning of each season and recommends it to the Department of Agriculture. The NFA also submits a price to the NFA Council. Both agencies submit their suggestions to the president who ultimately determines the final price. The support price is designed to provide a reasonable return on investment to farmers, usually 30 to 35 percent.³⁵

NFA procures rice during the peak harvest season, from October to December, when prices are lowest. The procurement is designed to provide support to farmers and to maintain a buffer stock to ensure a continuous supply of affordable rice to consumers.

29 *Agricultural Statistics of Pakistan 2014-15*, Ministry of National Food Security & Research (Economic Wing). Online at: <http://202.83.164.29/mnfsr/userfiles1/file/Agricultural-Statistics-of-Pakistan-2014-15.xls>

30 G/AG/N/PAK/16.

31 Presidential Decree No. 4.

32 Presidential Decree No. 699.

33 Presidential Decree No. 1770.

34 Executive Order No. 1028.

35 Support to Farmers and Subsidies, Policies and Programs. Philippine Food Security Information System. <http://philfsis.psa.gov.ph/index.php/id/25/policy/12>

Since 2008, the procurement price has increased five times. Between 2000 and 2001, the price was set at ₱14.62 per kilogram, increasing to ₱15 per kilogram between 2002 and 2004, ₱15.38 per kilogram between 2005 and 2007, and ₱22.56 per kilogram in 2008. In 2009, the price was increased again to ₱26.15 per kilogram, and has remained the same since. The large increase in the procurement price in 2008 was in response to the international rice price spikes that began that same year, when the price of rice mushroomed by 300 percent. At the time, the Philippines was the largest rice importer in the world.

Overall rice procurement levels remain low. Over the past decade, the procurement rate has been under five percent. From 2000 to 2015, the NFA procured a total of 3.36 million metric tonnes of rice.³⁶ The majority of the rice is procured from regions with surpluses. For 2015, 85 percent of the rice procured originated from regions with surpluses (National Foods Authority 2015).

The NFA is mandated to hold enough rice for two different seasons each year. Between 1 November and 30 June, the NFA is mandated to have a buffer stock of 15 days' worth of rice consumption, known as a 15-day Strategic Rice Reserve. Between 1 July and 31 October, the required amount is set at 30 days. The determination is based on average consumption per person per year, which under the FSSR 2011-2016 was set at 120 kilograms of rice per capita, per year.

Imports are made when there is a projected shortage in the emergency rice stocks during one of the two minimum requirement periods, January and July. At the beginning of the year, a 120-day consumption supply is required, and by July, a 90-day consumption supply is required. Over the past five years, the average amount of rice imported has been 1.5 million tonnes, significantly higher than the amount procured domestically for its stockholding

programme. When comparing the shortfall in domestic procurement for the country's public stockholding reserves, imports account for the largest share of rice in the reserve. Between 2009 and 2013, the average procurement level of rice was 256,659 tonnes. During the same time period, the average amount of rice imported was 1,580,000 tonnes of rice.

As the government continues to pursue food security objectives through increased domestic production, it has set various measures affecting imports into the country. The government makes use of quantitative restrictions for rice imports, limiting the amount of rice that can be imported, and petitioned to continue its programme under the WTO. In 2014, the WTO extended the Filipino programme of quantitative restrictions on rice until July 2017. As a result, the country reduced in-quota tariffs on rice from 40 percent to 35 percent, and raised the minimum access volume (MAV) for rice from 350,000 tonnes to 805,200 tonnes. Out of quota imports remain subject to a 50 percent tariff (WTO 2014).

There have been no exports within the past decade. The last year rice was exported was in 1988.

The Philippines releases annual reports under the NFA that provide detailed statistics on the country's stockholding and food security programmes for each year. The most recent publication provided, 2015 NFA Annual Accomplishment Report, lists information up until the year 2015. The report provides a list of all government-to-government contracts for rice imports, including the country of origin and the amount that was imported, as well as rice imports under the MAV programme. The report lists the amount of rice in each of the country's buffer stocks, the 30-day buffer stock and 15-day national average buffer stock, as well as the total rice procurement by month and the price of procurement, listed in pesos per kilogram (National Food Authority 2015).

36 Self-calculated from data sheet.

The most recent domestic support submission to the Committee on Agriculture was in 2013. Pakistan provides the applied administered price for rice in Philippines pesos per kilogram and eligible production up until 2010. The applied administered price is the procurement price for paddy. In the country's submission, paddy rice is converted to rice by multiplying by 65 percent to calculate the milling recovery rate. The data is provided under the NFA.³⁷

A.6 Kenya

Kenya's current public stockholding programme began in 1979, when the government established the National Cereals and Produce Board (NCPB). The NCPB is the primary agency that procures grains, imports and exports grain, maintains stocks and markets grain under a controlled price system (NCPB 2015a).

As food production increased, the cost of managing this subsidised cereal marketing system turned to be a heavy financial and administrative burden on the government. Consequently, grain sector reform was introduced in 1988, and led to full liberalisation as of 1993. To date grain marketing in Kenya is fully liberalised allowing producers to dispose of their products to willing buyers at market driven prices (NCPB 2015b).

In 2002 the government of Kenya established a Strategic Grain Reserve, which is operated by the NCPB. The mandate prescribes the accumulation of a stock of 4 million bags (of 90 kilograms each) and a cash equivalent of a similar volume—a total of 8 million bags. In total the Agency has a storage capacity for 28 million bags—in 2014 only 13 percent of this capacity was used (Short, Mulinge and Witwer 2012).

The primary grain NCPB procures is maize.

There is no extensive information on purchasing prices available online. NCPB's

purchasing price for 2008 was set at KES 1,950 per 90 kilogram bag. The government of Kenya revises the purchasing price at which the NCPB buys from farmers every two months. In January 2011, the purchasing price was KES 1,800 per 90 kilogram bag, and in July 2011 the purchasing price was KES 3,000 per 90 kilogram bag (Short, Mulinge and Witwer 2012).

Upon request by the government, NCPB will release stocks to commercial outlets and/or social functions.

Generally, the wholesale price is the price at which millers and NCPB purchases maize from medium and large-scale farmers. A second set of domestic prices for maize is the farm gate price, which is calculated by subtracting the estimated transport costs of maize from medium and large-scale farmers to Nairobi from the wholesale price (Short, Mulinge and Witwer 2012).

NCPB is not required to publish the total volume of stocks or total volume of annual purchases or stock release.

Kenya has not submitted a domestic support notification to the WTO since 1998.

A.7 Tanzania

In 2008, Tanzania established the National Food Reserve Agency (NFRA) as the primary stockholding agency following the 2007 food price crisis, with a mandate to stabilise prices and procure grains to maintain a stock (Mhlanga, Anaadumba and Ngaiza 2014). The primary commodity that the NFRA procures is maize.

Purchase prices are announced annually during the Minister of Agriculture's budget speech in April or May, though the specifics of the purchase prices have varied. The announcements have included either the total budget spent on procurement in a given year, TZS 43 billion for 53,000 tonnes of cereal in 2012,³⁸ or the

37 G/AG/N/PHL/42

38 Tanzania Budget Speech 2013/2014. <http://www.kilimo.go.tz/speeches/budget%20speeches/Hotuba%2016%20April%202013%20-Final%20media.pdf>

purchase price for grain.³⁹ The budget speech also provides from which regions in Tanzania NFRA will purchase the grain. This decision is based on the predicted harvest outputs.

The purchasing prices announced have tended to be higher than the wholesale prices in purchasing areas, especially when purchases are made during the harvest season. Between 2005 and 2011, the government set price floors 10 percent higher than the market price to incentivise production (FAO 2013). However, the actual purchasing prices announced by the Minister of Agriculture in his budget speeches are actually higher than the NFRA calculated prices.

The NFRA is responsible for setting the annual floor price for maize based on production costs plus a 5 percent margin (Barreiro-Hurle 2012). A relation to international market prices is not mentioned.

The NFRA procures maize on an annual basis from July to December, announcing the procurement prices at the beginning of the buying season. The NFRA sets a procurement target of 150,000 million tonnes of maize, millet and rice, to cover a three-month reserve stock, compared to an average production of 3 million tonnes of maize (FAO 2013). But continuous data on the volume purchased annually is not available. Estimates place NFRA purchases at less than 10 percent (Curtis 2014).

While the amounts purchased in the previous marketing year and the amounts to be purchased in the following years are announced in budget speeches of the Minister of Agriculture, the purchase price is not always announced for individual commodities, unless all commodities are purchased at market price.

The Disaster Management Department at the Prime Minister's Office is in charge of policy decisions to release food stocks (Curtis 2014).

Recent delays in payments by the government have made farmers hesitant to sell their grain to the NFRA. In a budget speech, the Minister of Agriculture announced that the NFRA owed farmers TZS 12 billion in total for their produce.

Tanzania has set up export restrictions in multiple occasions to ensure the volume available in the country is sufficient to meet food security requirements, though Tanzanian farmers find ways to export their products for a higher price.

Tanzania has not submitted a notification to the WTO on domestic support to the agriculture sector.

A.8 Zambia

In 1995, Zambia established the Zambian Food Reserve Agency (FRA) as a public stockholding programme to maintain stocks and to procure grains as a buyer of last resort. In 2005, FRA's mandate was expanded to include crop marketing.⁴⁰ The primary grain procured in Zambia is maize.

The Minister of Agriculture is mandated to announce annually the commodities covered in National Strategic Food Reserve (NSFR) before 31 October. Following the announcement, the FRA is mandated to announce the guidelines for the procurement of maize, including the volume, the method of procurement and payment, and locations of planned purchases, in a public notice and print media before 1 May.⁴¹

39 Tanzania Budget Speech 2015/2016. <http://www.kilimo.go.tz/speeches/budget%20speeches/HOTUBA%20YA%20BAJETI%20-%20KILIMO.pdf>

40 Report of the Committee on Agriculture (2011). Fifth Session of the Eleventh National Assembly. Republic of Zambia. http://www.parliament.gov.zm/sites/default/files/documents/committee_reports/REPORT%20OF%20THE%20COMMITTEE%20ON%20AGRICULTURE%20FOR%202012.pdf

41 Food Reserve Act, Cap 225. (1995) Republic of Zambia.

Similar to the mandate covering the NSFR, the FRA publishes the agricultural commodities, quantities, places of purchase, procurement methods and methods of payment in a public notice.⁴² Price setting and market support for certain agricultural products is limited to rural areas where private sector activity is minimal.⁴³

Maize accounts for an outsized percentage of the overall budget of the country's agriculture budget, as well as the poverty reduction budget. Maize purchases by the FRA, along with the Farmer Input Support Programme, a seed subsidy programme that is largely used for maize, accounted for 93 percent of the total budget allocated to the Ministry of Agriculture's Poverty Reduction Programmes. This is due in part to increasing maize production levels. In 2011, maize production levels were more than double the average level from 2006 to 2008 (Republic of Zambia 2015).

FRA's current storage capacity is 1.3 million tonnes, about half the amount that is required to meet the demand in the country. Of the storage capacity available, a large percentage is not fit for use. In 2006, FRA lost 2.3 million tonnes of maize due to poor storage.

It is unclear how the procurement price of maize is set. The price does not reflect the cost of production by small-scale farmers, encouraging commercial farmers from Zambia and other countries to sell maize to FRA. On average, producer prices of maize increased by 17 percent between 1995 and 2004, and during the same period, consumer prices rose by 19 percent (Mason and Myers 2013)—suggesting the price support set by FRA negatively affects consumers.

A release of food reserves for export is hardly possible in Zambia. Only in times of surplus

and satisfied national strategic food storage can the FRA upon directive from the Ministry of Agriculture and Livestock release designated agricultural commodities on regional markets.

The regulatory, legal framework governing the operations of FRA is available online and speaks for a first level transparency. The Ministry of Agriculture and Livestock also announces the procurement price and products covered through press releases (Republic of Zambia 2013). But a comprehensive list of prices and quantities procured by the FRA is not available.

Zambia does not provide a detailed list of the country's stockholding programme nor annual prices for individual commodities in domestic support notifications to the WTO. The most recent notification provides the total amount spent on the country's stockholding and food security programmes.⁴⁴

A.9 Ethiopia

Ethiopia's stockholding scheme has three functions. The primary function is as an emergency stock. The Emergency Food Security Reserve (EFSR) is the main stockholding programme in the country, and is responsible for the stockholding of food grains for release in case of emergencies. The reserve is made up of grains from imports and donor and government food aid. The agency relies on donors and governments for buying, selling, transporting and distribution of grain.

In case of an emergency the EFSR immediately releases the required quantities on the basis of a formal promissory note by an eligible donor agency to replace this quantity within an agreed period of time. National and international agencies can borrow from EFSR once its stocks are filled, guaranteeing to replenish the stock within an agreed time frame.

42 Ibid

43 Ibid

44 G/AG/N/ZMB/8, 2013

EFSR sets a target stock level of 407,000 tonnes to be stored in seven warehouses across the country with an actual capacity of 315,000 tonnes.⁴⁵

The Productive Safety Nets Programme (PSNP) was established in 2005 as a food self-sufficiency programme. PSNP covers more than 7 million households and functions essentially as a work for food scheme—providing work after the peak season of a harvest when incomes and food sources are lowest. The work is paid as a cash or food transfer, which comes from the EFSR stock.

The Ethiopian Grain Trade Enterprise (EGTE) acts as a buffer stock, and helps to stabilise consumer and producer prices, export grains and maintain food reserves. The EGTE procures wheat domestically and from imports to supply wheat at subsidised prices to millers to lower bread prices in case of a spike. Wheat prices are being set per government decree for EGTE stock purchases as well as stock release to target users (millers and bakers) (EGTE 2014). In an emergency, EGTE can borrow stock from EFSR (Haeberli 2013). EGTE also owns warehouses with a total capacity of 800,000 tonnes.

Prices are fixed by government decree for EGTE's stocks, as well as for sale to consumers and millers. Information on the intervention prices and triggers for the release of stock operated directly by the EGTE or by EFSR is not available.

Besides setting the price, the government of Ethiopia also sets fixed import quantities; these are based on EGTE estimates of supply and demand (Haeberli 2013).

Food price stabilisation strategies by EGTE and EFSR affects farm gate prices negatively because food aid deliveries and wheat imports often take place during good harvests (Lemma and Rashid 2011).

Ethiopia is not a WTO Member and therefore has not provided any notification on the country's stockholding to the WTO.

45 <https://www.dppc.gov.et/Pages/about3.html>

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