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**Groups of countries in special situations: follow-up
to the Fifth United Nations Conference on the Least
Developed Countries**

Food insecurity in the least developed countries: options for a system of stockholding and complementary means at the global, regional and subregional levels

Report of the Secretary-General

Summary

The present report is submitted in response to a request by the General Assembly in the Doha Programme of Action for the Least Developed Countries (resolution [76/258](#)). In paragraph 42 of the Programme of Action, the need to address severe food insecurities was recognized, and the Secretary-General was requested to explore the feasibility, effectiveness and administrative modalities of a system of stockholding for the least developed countries on a regional and subregional basis, or alternative means, taking into account possible economic implications and risks, and to report thereon to the Assembly for its consideration at its seventy-seventh session.

* [A/77/150](#).



A. Introduction

1. Food security in the least developed countries had shown signs of improvement at the beginning of the new millennium, after a steady reduction in the prevalence of undernourishment over several years. The trend has been reversed, with an increasing proportion of people suffering from hunger. With record food prices in 2022¹ that could further increase owing to the armed conflict in Ukraine in addition to the cascading crises of the coronavirus (COVID-19) pandemic and climate change, there is a risk that hunger will increase further in the coming years. Notwithstanding the commitment of the international community to foster the food security, good nutrition and sustainable agriculture reflected in the Sustainable Development Goals and the Doha Programme of Action for the Least Developed Countries, the number of people living in extreme poverty remains very high, and the poverty gap between the least developed countries and the rest of the world, as well as within the least developed countries, is widening.

2. While food security problems in the least developed countries are deep-rooted and multidimensional, the external market environment is of critical importance for countries that depend on the world market for a considerable part of their consumption year after year. Uncertainty and volatility in world food markets, along with balance-of-payment challenges, adversely affect the capacity of food import-dependent least developed countries to gain access to critical supplies. Poor households in these countries, which already spend much of their income on food and have limited coping mechanisms at their disposal, suffer in the process.

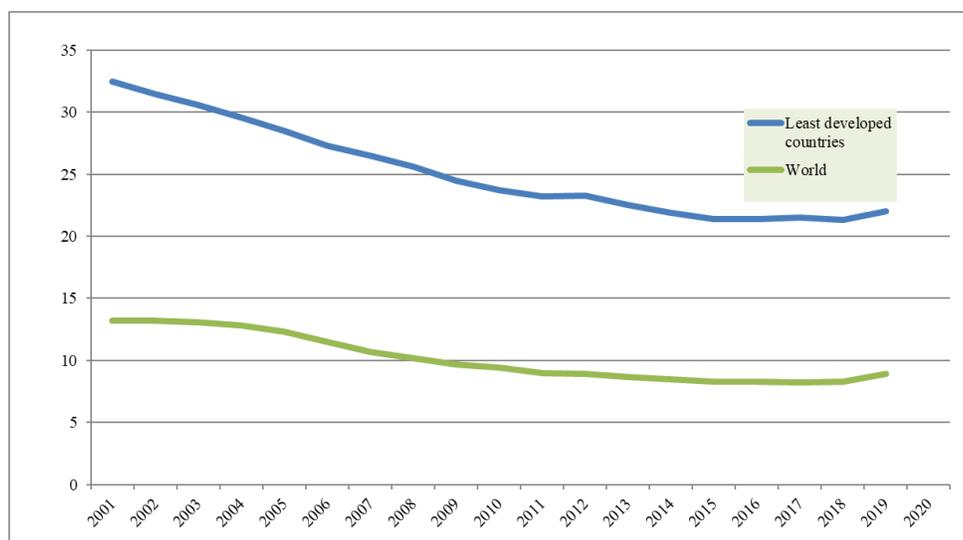
3. The present report is focused on the role that food stockholding at various levels, complemented by alternative means, such as trade measures and financial instruments, can play to address some of the risks and volatilities in food production and consumption from the national to the global levels in order to reduce food emergencies in the least developed countries.

B. Overview of severe food insecurities in the least developed countries

4. On average, the prevalence of undernourishment in the least developed countries has hovered at around 22 per cent since 2010, while that of the world has been at under 10 per cent and currently stands at about 8 per cent (see figure I). For 10 least developed countries, undernourishment rates have remained persistently above 40 per cent, and for some of them well over 50 per cent, during the same period.

¹ In June 2022, the Food Price Index of the Food and Agriculture Organization of the United Nations was 23.1 per cent above its value one year earlier. See www.fao.org/worldfoodsituation/foodpricesindex/en/.

Figure I
Prevalence of undernourishment in the least developed countries
 (Percentage)



Source: Compiled from Food and Agriculture Organization of the United Nations, Corporate Database for Substantive Statistical Data food security indicators.

5. The prevalence of undernourishment in the least developed countries becomes evident in view of the insufficiency of the average available calories (close to 25 per cent below world average), as well as a similar deficiency in protein availability, which, notwithstanding progress in the past two decades, is still 30 per cent lower than the world average.²

6. The structural features of the economies of the least developed countries contribute to their vulnerability as food-insecure countries. Among these structural features are low productivity in food production and high post-harvest losses, both of which result in an increasing dependency on food imports.

7. Many least developed countries depend on the world market for a large and growing part of their food needs. Cereals comprise the largest item in the food import basket, accounting for approximately 42 per cent of the value of their food imports, followed by oils and fats, and sugar. Together, the three commodities account for over three quarters of the value of the food items imported by the least developed countries. The share of food aid in their total food imports has declined sharply compared with the high levels of the 1990s and earlier years and, aside from food assistance for emergencies, most of the food imported is now on commercial terms. Over 90 per cent of the cereal needs of several least developed countries are met by the world market.

8. The share of food imports in total merchandise exports was 25 per cent on average for the least developed countries as a whole in recent years, substantially higher than the world average of about 5 per cent (see figure II). The difficulties of many least developed countries in affording adequate quantities of food from the world market are influenced, inter alia, by the poor performance of their export sectors. As a group, the least developed countries are net agricultural importers and highly dependent on agricultural trade.

² Based on Corporate Database for Substantive Statistical Data food security indicators.

Figure II
Value of food imports in total merchandise exports of least developed countries,
three-year average
 (Percentage)

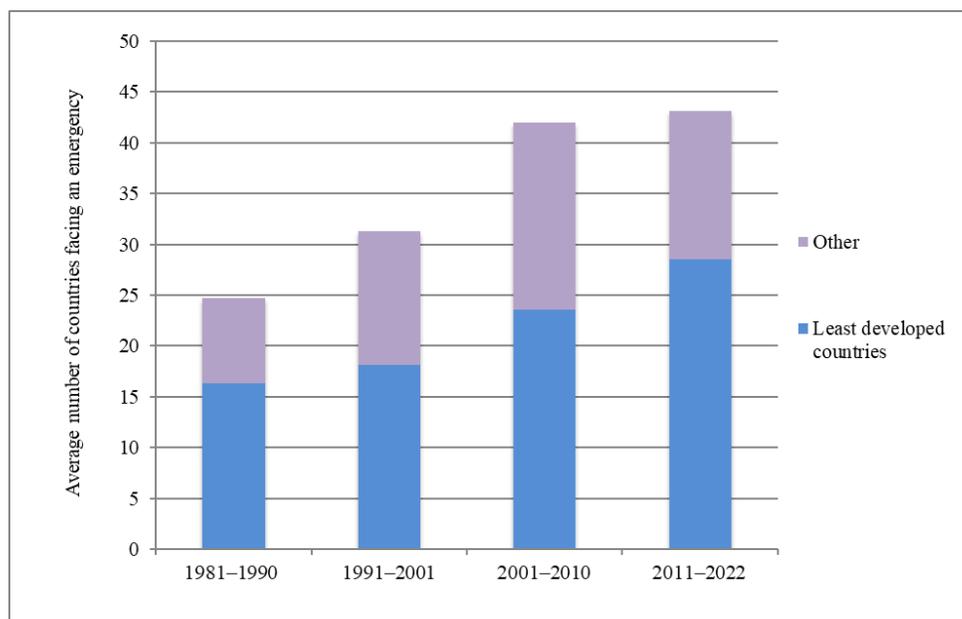


Source: Compiled from data from the Corporate Database for Substantive Statistical Data.

9. The high concentration of merchandise exports on a small number of agricultural products makes the least developed countries vulnerable to volatility in world agricultural markets. Disruptions of international transportation infrastructure and supply chains, such as those experienced during the COVID-19 pandemic, increase their vulnerability and make them prone to frequent food emergencies that aggravate an already precarious situation.

10. Figure III shows a considerable increase in the number of food emergencies in least developed and non-least developed countries in the period 1981–2022. They are the most affected group of countries, accounting for close to 70 per cent (on average, 28 least developed countries per year) of all global food emergencies in the period 2011–2022.

Figure III
Food emergency situations in least developed and non-least developed countries, 1981–2022



Source: Compiled from data from the FAO Global Information and Early Warning System.

11. Half the least developed countries experienced a continuous food emergency for at least 13 consecutive years of the 42-year period (1981–2022). Of those countries, 10 experienced a continuous food emergency for at least 22 years, 5 were in a continuous food emergency for at least 35 years and 1 country was in such an emergency every single year of the 42.³

12. A broad range of measures based on a food systems approach is needed to enhance food security in least developed countries, including enhancing productivity and reducing post-harvest losses. Investment in agriculture needs to increase, including for necessary yield-increasing inputs, such as irrigation, chemical fertilizers and improved seeds, as well as in storage and local transport. Such measures should be complemented by food stockholding and alternative means to address food emergencies in least developed countries.

C. Food import dependency under increasing volatility

13. After decades of relatively low prices of basic foodstuffs, the world entered a period of tight food supplies at the beginning of the new millennium while operating increasingly under greater market openness in response to the implementation of agricultural reforms agreed under the World Trade Organization (WTO) Agreement on Agriculture, which came into effect in 1995. In the Agreement, the establishment of a fair and market-oriented agricultural trading system and the fostering of more predictable production and trade policies were sought, to thus reduce world market volatility. However, Agreement rules have favoured greater market access while not addressing weak discipline regarding export prohibitions and restrictions. As a result, starting with the 2008 food crisis, and more recently during the COVID-19 pandemic

³ Compiled from data from the FAO Global Information and Early Warning System.

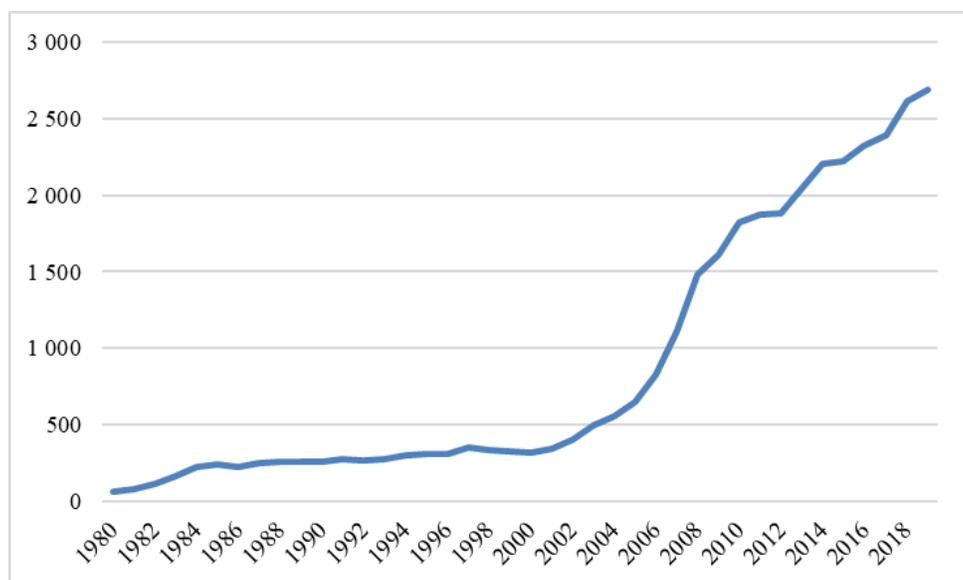
and as a consequence of the armed conflict in Ukraine, several countries resorted to the use of export prohibitions and restrictions in an attempt to preserve limited supply.

14. The dependence of least developed countries on the Russian Federation and Ukraine for food commodities is large. Prolonged restricted access to sources of supplies from these countries is likely to have serious adverse effects on food security in least developed countries. Of particular concern is the current tight and uncertain supply of basic food commodities and fertilizers, as well as the high cost of fuel owing to the high dependence of least developed countries on the world market for a large share of their food needs. Fertilizer is a major input to agricultural and food production, and disruptions of the supply chain for this critical input would have serious implications for crops already on the ground and as well as those to be planted in the seasons ahead.

15. The increasing links between the food and energy sectors became much more evident after the 2008 food crisis and its high energy prices, which resulted in extra demand for large quantities of foodstuffs for biofuel production (see figure IV). The trend continues unabated, competing with the demand for human consumption. The links to the energy sector have an impact on not only the price of food crops but also the input side of the food system as a result of the increased costs of fertilizer and fuel owing to higher energy prices. Speculative activity in food commodities from the financial sector, as well as unilateral export restrictions put in place by several exporting countries, have fuelled additional pressure on the increase in food prices and aggravated an already critical situation.

Figure IV
World biofuel production

(Thousands of barrels per day)



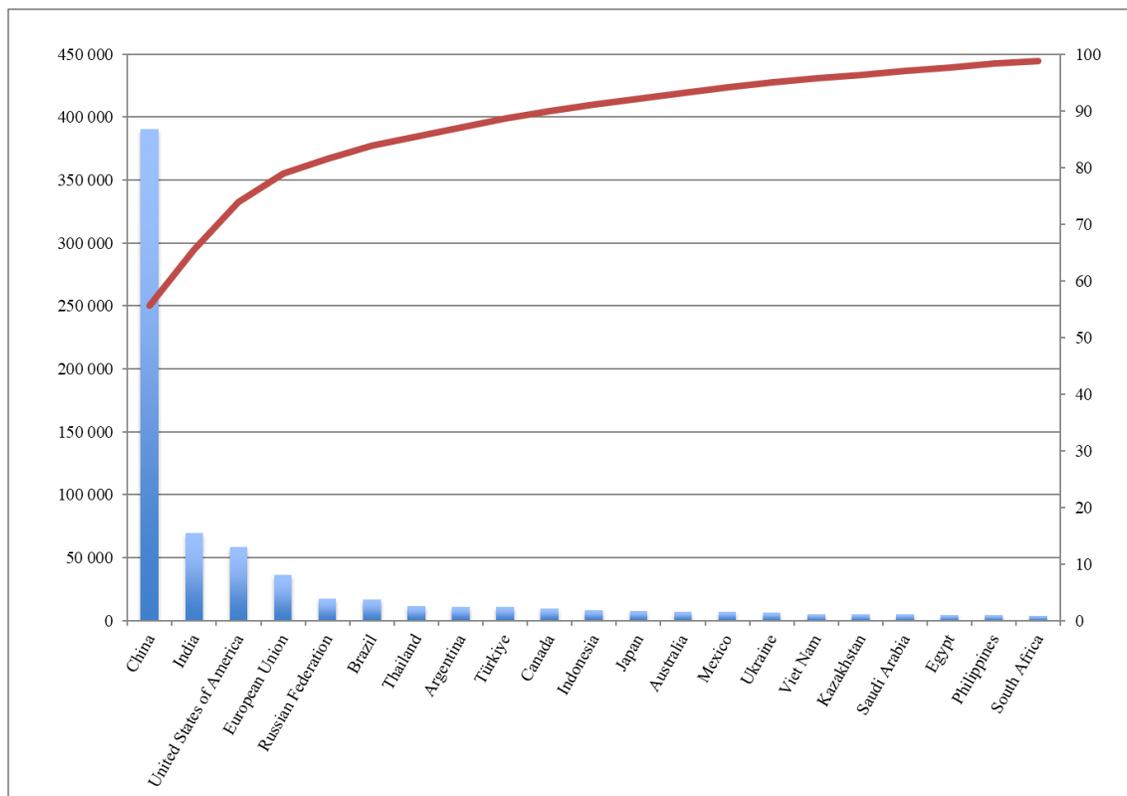
Source: United States Energy Administration.

16. The world food system continues to display a high concentration of food stocks and exports in a few supplying countries (see figure V). This has always been the case. However, as several major developed countries reduced their domestic support programmes, their stockholding activity also declined, and other countries stepped in to fill the vacuum. This new stockholding activity resulted in an increased concentration of global stocks, as well as shifts in their geographical distribution. It

remains to be seen whether this new configuration would be amenable to counter a global food accessibility situation or destined primarily for domestic use, as some commodity analysts speculate.

Figure V
Concentration of cereal stocks, in 1,000 metric tons, 2020–2021

(Percentage)



Source: Corporate Database for Substantive Statistical Data.

17. In recent years, a number of factors have worsened the position of the least developed countries. Global food markets have entered a period of constrained supply and increased volatility. While dependence on food imports remains high for the least developed countries, ensuring food security requires exploring options to reduce volatility originating in the world food market, including various forms of food stockholding options supplementing trade and financial instruments and mechanisms, as well as complementary policy measures at all levels.

D. Stocks for food security and against market volatility

18. Stockholding operations are generally of two types: (a) those aimed at price stabilization; and (b) those aimed at safeguarding food security. Price stabilization stocks, also referred as “buffer stocks”, include purchasing commodities at harvest, when prices are low, thus supporting prices for producers, and releasing stocks into the market during the lean season, when prices are high, thus keeping prices in check for consumers.

19. Public interventions that are aimed at safeguarding food security are often referred to as “food security stocks” or “emergency stocks”. They target vulnerable

segments of the population through social safety net programmes (i.e. direct distribution outside the market) or release food supplies into the domestic market during years of national shortages owing to either domestic production shortfalls or import difficulties. Short-term food security is the main objective of food security stocks.

20. Holding stocks is an expensive and often complex operation, tying up capital and also increasing the likelihood of physical deterioration and losses. Thus, their management under a transparent and accountable structure according to unambiguous rules and on the basis of clear objectives is of critical importance for containing costs. Such costs must also be weighed against the potential for hardship for the population, as well as social disruption, if strategic food reserves are too small to fend against possible risks. Therefore, it is necessary to gauge carefully which food commodities may be considered for inclusion in the strategic reserve by assessing their strategic importance, taking into account, inter alia, factors such as the needs of the target population, the historical variability of domestic production, import dependency, delays in securing imports and the dependability of suppliers, as well as realistic options for resorting to financial hedging instruments.

Experience of public stockholding in selected least developed countries

21. The 2008 food crisis led many countries, including some least developed countries, to re-establish or scale up food reserve schemes. Bangladesh, for example, nearly tripled the size of its food reserve within a few years.

22. In the Sahel, following millet and sorghum shortfalls in 2005 owing to drought and locust outbreaks, there was a resurgence in public stockholding programmes for price stabilization. For example, Burkina Faso, Mali and the Niger built additional intervention stocks that were directly managed by the Government, as well as local stocks or cereal banks managed by local communities.

23. In Eastern and Southern Africa, several countries have implemented public stockholding schemes (mainly for maize) for price stabilization purposes. They include Malawi and Zambia, which operate price stabilization buffer stocks, together with strategic reserves for emergency purposes, through subsidized or free food distribution to the most vulnerable populations. Other countries in the region (Ethiopia, Rwanda and the United Republic of Tanzania) operate strategic reserves for emergency purposes only.

24. Most national food stocks schemes are based on one or two main grains, notably wheat and rice. In the Economic Community of West African States (ECOWAS) and other parts of Africa, programmes include local grains, such as millet and sorghum, as well as local varieties of maize. The recognition of the importance of a diversified basket has led to the inclusion of more food items, although storage considerations make diversification more feasible at the subnational level.

Regional stockholding experiences

25. Regional food reserves are arrangements of regional country groupings for pooling resources into a common regional reserve, to be drawn upon on the basis of pre-agreed rules. The constitution of such regional reserves typically entails the earmarking of a certain percentage of each country's national reserve in the regional food reserve. The benefits of pooling resources at the regional level are economies of scale, greater price stability, enhanced regional cooperation and integration, facilitation of the movement of supplies across borders, and enhancing both regional market information and the monitoring of available food supplies.

26. There are currently three regional food reserves operating in South-East Asia, South Asia and the ECOWAS region, organized under respective regional trade and

cooperation bodies. The first, the ASEAN-Plus-Three Emergency Rice Reserve, which includes the States members of the Association of Southeast Asian Nations (ASEAN) plus China, Japan and the Republic of Korea, was created as part of an integrated food security framework formulated following the global food crisis of 2007–2008, with the Reserve itself coming into force in 2012. The Reserve has three programmes for releasing rice: tiers 1, 2 and 3. Under tier 1, earmarked reserves are pre-positioned on a standby basis between a supplying and a receiving country in case of an emergency in the receiving country. The standby arrangement specifies quantity, grade and terms and conditions for release. The delivery is formalized by a forward contract valid for three years and renewable. The contracts and commitments under tier 1 cannot be breached, unlike those in bilateral government-to-government deals. Tier 2 is used when earmarked stocks are requested in the absence of a forward contract, with sales terms and others open to bilateral negotiations. Under the tier 3 window, rice is provided on a voluntary basis and used for pre-positioning for both anticipated calamities and unexpected disasters. Stocks are released when a request is made or through an automatic trigger system managed by the Reserve’s secretariat. In 2020, the tier 3 window was used 33 times, from five donors to seven recipients. The quantities involved in tier 3 are mostly small, typically in the 200–300 metric ton range. Tier 1 has been activated only once (between Japan and the Philippines), while tier 2 has not yet been activated.

27. The South Asian Association for Regional Cooperation Regional Food Bank was established in 2004, and work on it continued until 2013, when the agreement to establish it entered into force. Members have met several times to try to finalize modalities, such as pricing guidelines, storage locations and quality control. The Food Bank was used for the first time in May 2020, when Bhutan sought and gained access to food grains from it for needs related to COVID-19 (drawn from the Food Bank reserve held by India).

28. The ECOWAS Regional Food Reserve was established by ECOWAS in 2013. The framework of the Reserve has three components: (a) building regional food reserves; (b) raising the levels of national food reserves; and (c) improving cooperation between national food reserves. One notable attribute of the approach to food stocks of the Reserve’s framework is that it seeks vertical coordination among different levels of reserves on the basis of what is called “three lines of defence” (local, national and regional), which is to be used successively on the basis of the principle of subsidiarity, with regional food reserves supporting national food reserves, and national food reserves in turn supporting local initiatives. Local reserves are linked to and coordinated with national reserves in several ways, including formal contracts between them for building and disposing of stocks. The regional food reserve project has the political objective of promoting the region’s food sovereignty and, compared with the two regional food reserves in Asia, it has a more diverse mix of foods – various grains (millets and sorghum, maize, rice and enriched cereals), as well as milled cassava. The regional food reserve was used for the first time in August 2017, when Nigeria received 1,130 metric tons of cereals (white maize, sorghum, millet and rice). This was followed by three interventions in 2018, for a total of 13,580 metric tons of cereals (for Burkina Faso, Ghana and the Niger), one in 2019 (5,000 metric tons for Nigeria) and four in 2020, for a total of 6,219 metric tons (for Burkina Faso, Mali, the Niger and Nigeria). The 2020 food and nutrition crisis was also related to COVID-19, and ECOWAS mobilized reserves at several levels.

E. Stockholding, financial and trade options, and policies

29. The magnitude, complexity and multidimensional nature of food insecurity in the least developed countries necessitate an array of responses employing all possible

tools, including not only stockholding options but also trade measures and financial instruments to help countries to finance needed imports. Alternative means beyond food stocks could include a food import financing facility, together with a global food security stocks mechanism, to assist least developed countries in addressing episodes of severe food insecurity. Given that the origins of food insecurity are not confined to national borders, responses would have to go beyond national action to include cooperation at the regional and international levels. Moreover, to be effective, necessary action should not only be aimed at stop-gap measures but also at targeting the causes of food insecurity, thus breaking the vicious circle of emergencies and chronic undernourishment and hunger.

Options at the national level

30. Least developed countries face price risks when world market prices reach levels that an importing country can hardly afford, as well as availability risks when supplies may not be available for import either because of major crop failures in producing countries or owing to export restrictions and other logistic constraints. While importing countries cannot do much unilaterally to reduce the incidence of these risks, they can employ various risk management tools to minimize their effects and ensure some degree of certainty regarding the availability of supplies in the short term.

31. The main instruments include physical stocks of food supplies, described above, and financial hedging instruments – often described as “virtual stocks”, such as forward contracts and options, which are rarely used by least developed countries. Both contribute to reducing the impact of both types of risks, with physical stocks aimed at countering the availability risk at the cost of the stockholder and virtual stocks countering the price risk more by transferring it to someone else at some cost. Bilateral agreements with major grain producers, to receive preferential access to supplies in the event of a world shortage, can also contribute to reducing availability risk.

Emergency food stocks

32. While the performance of food emergency stocks in different country situations varies, several examples, in particular targeted programmes, have been demonstrated to be a viable option to improve the food security of vulnerable people. Factors that have been identified as contributing to positive outcomes include good management and flexibility, compliance with rules and procedures, mechanisms to adjust reserves to needs, and functioning systems to detect emergencies. Creating unified databases of beneficiaries is an essential part of the administrative infrastructure to enhance the effectiveness of assistance and scalability.⁴

33. High-quality storage capacity is an obvious requirement for stockholding for food security purposes. Although public financing of storage capacity might not be justified on the basis of narrow economic considerations, it should be viewed as a public good with important externalities in terms of strengthening food security and providing possibilities for local communities to avoid the pressure of selling their crops immediately after harvest at depressed prices and of having to purchase, at much higher prices during the lean season, the same crops that they had sold.

34. The lack of efficient storage facilities provided by the private sector is one of the factors that limit temporal arbitrage and contribute to high seasonal price

⁴ See Joana Silva, Victoria Levin and Matteo Morgandi, *Inclusion and Resilience: The Way Forward for Social Safety Nets in the Middle East and North Africa* (Washington, D.C., World Bank, 2013).

variability. Private sector investment in storage infrastructure is often concentrated in urban areas and tends to support import/export trade rather than domestic trade in the food sector. In some cases, a lack of private investment in storage capacity reflects the riskiness of holding grain inventories in an environment of unpredictable government policies. Therefore, it is also necessary to address the underlying disincentives that prevent private investment in storage.

35. The lack of organized high-quality storage facilities accessible to farmers is a greater problem with regard to local grains. Compared with those for imported grains, trading enterprises for local grains are small, and quantities are hardly pooled for transport and storage, thus limiting returns to scale. Even where storage exists, a lack of formal grading standards makes it difficult to ensure credible valuation, thereby reducing the potential for collateralization of commodities. Improving the storage capacity of ill-equipped smallholder farmers would also reduce the exceedingly high post-harvest losses, a critical element in improving food security in poor rural areas.

36. The criteria and procedures in place to help intended beneficiaries of food emergency stocks are vital. An important humanitarian, efficiency and sustainability consideration is in aiming interventions not only at feeding people but also at building human capital and helping to lift people out of poverty, thus breaking the pattern of protracted emergencies and chronic food insecurity that afflicts most of the least developed countries. Prenatal and early childhood feeding programmes are widely regarded as among the most effective; equally effective are school feeding programmes, which typically have multiple objectives, including school enrolment and educational attainment, especially on the part of girls, as well as food-for-work projects to improve productive capacity, in rural areas in particular. Channelling assistance through women, including in rural areas, contributes to better nutritional outcomes and the lifelong development of children.

37. Cash transfers can be used under some circumstances to address food insecurity; they might present some cost advantages and promote a more diversified diet. However, in food emergencies, which are common in the least developed countries, cash transfers often lead to an increase in food prices, especially in the case of a regional or national food emergencies. In the least developed countries, cash transfers may not reach the poorest people owing to their limited financial inclusion. Thus, while cash transfers are well suited to provide social protection by addressing poverty more broadly, they need to be complemented by food stockholding and other relevant measures in emergency situations.

38. Emergency stocks should be replenished from domestic or imported supplies within a reasonable time frame to ensure preparedness. Their release should not interfere unduly with the discharge of privately held stocks to minimize disincentives and avoid crowding out.

39. Management of stockholding systems requires a transparent and accountable structure based on unambiguous rules and clear objectives. The costs of stockholding must be weighed against consequences to human welfare, should strategic food reserves not exist or not be of the size needed to fend against possible risks. Which food commodities should be included in the reserve requires an assessment of their strategic importance, taking into account factors such as the needs of the target population, the historical variability of domestic production, import dependency, delays in securing imports, and the dependability of suppliers, as well as realistic options for resorting to financial hedging instruments.

Virtual stocks

40. As an option to hedge against world price risks, physical stocks, other than of the emergency type discussed above, exceed the means of least developed countries.

A possible alternative is hedging options for this contingency, what are often described as “virtual stocks”. They include futures contracts, which require the purchaser to buy a fixed quantity of a commodity at a fixed price during a predetermined time period, and options contracts, which give the purchaser the right, but not the obligation, to purchase a fixed quantity of a commodity at a fixed price during a predetermined time period.

41. Futures and options contracts typically require credit guarantees up front and are accessible to countries that have ready access to credit. While several private agribusinesses in least developed countries have successfully used futures and options contracts to hedge against price risks, such financial instruments have been used much less commonly by the public sector.⁵ Consideration could be given to creating a credit guarantee facility, including within regional development banks, which least developed countries may turn to for credit guarantees necessary to enter into futures and options contracts for importing basic foodstuffs.

42. Some least developed countries may need commercial and technical legal assistance in drafting and negotiating futures and options contracts. Entities in the United Nations system could be leveraged to provide support in this regard. The World Food Programme (WFP), considering its long experience in purchasing food commodities from various sources worldwide over the years, could play a critical role. A virtual help desk at WFP, responding to calls from national importing agents on technical matters and actual market conditions in specific commodities, could provide such support, building on the commodity expertise and logistic facilities provided by WFP to countries during the COVID-19 pandemic.

Improving logistics to expedite food imports and reduce costs

43. There is considerable scope for reducing the cost of imported food and expediting the process by investing in infrastructure to store and transport the food, as well as by improving the management and logistics of the import supply chain. Depending on the geographic location of the various least developed countries, there are important differences between them in the performance of food supply chains fed by imported supplies, with some countries experiencing bottlenecks at the port and others being affected by inefficiencies and impediments in inland transportation systems.

44. Each country should identify problematic bottlenecks in the import supply chain and target them specifically with a view to reducing delays and their associated costs, which often take the form of losses and a deterioration of the quality of supplies. Reducing time delays in the arrival of imports in the country and their processing through ports translates directly into a reduction in the required level of national food stocks, whether they are emergency stocks or pipeline stocks necessary to maintain a regular flow in the national food supply chain.

Investing in increasing productivity in basic foodstuffs

45. Raising yields in food production in least developed countries is an issue that should be central in the array of measures to improve food security. The policy mix

⁵ However, some ideas have been proposed regarding how such options can work in a least developed country setting. For example, in the case of the Food Reserve Agency of Zambia, it has been argued that, by embracing innovative grain trading systems such as commodity exchanges, the Agency can reduce the cost of managing food reserves, as well as diversify the strategic food reserve portfolio of Zambia, by splitting the recommended volume of strategic grain reserves into physical stocks and grain options (virtual reserves). See Brian P. Mulenga and Antony Chapoto, “Exploring the feasibility of the food reserve agency to implement virtual grain reserves”, Indaba Agricultural Policy Research Institute, December 2020.

that individual countries may use would depend on their specific circumstances, but one policy that has proven effective in achieving rapid increases in output is targeted investment assistance to agriculture, coupled with “smart” input subsidies to resource-poor farmers. Effective limitations come from the side of government budgets of least developed countries themselves, hence the need to prioritize strategically the limited resources available to basic food crops, with the highest priority given to the resources that contribute the most to alleviating food insecurity. The inclusion of technical and financial assistance to increase agricultural productivity and infrastructure among the instruments of the Marrakesh Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries⁶ reflects the wider recognition of this problem by the international community (see the section “Promoting value chains for basic foodstuffs and market organization”).

Promoting value chains for basic foodstuffs and market organization

46. Agricultural chains in many least developed countries are still structured around the export of so-called industrial production (cash crops), a legacy dating back to the colonial period. Many former colonies with predominantly agrarian economies continue to produce cash crops as a result of the continued application of related bilateral trade agreements. The value chains for well-financed export products like cotton, coffee, cacao and groundnuts have benefited and continue to benefit from technical support, advisory services, research and dissemination, improved seeds and commercialization efforts by public authorities.

47. A lack of access to timely market information on basic foodstuffs hinders market transparency, price transmission and the efficiency of markets in many least developed countries, including in conducting cereal trading in organized commodity exchanges.

48. Warehouse receipt systems are considered as key instruments in facilitating commodity trade and trade finance elsewhere. They guarantee the existence and availability of a commodity of a particular quantity, type and quality at a specific storage facility owned by a named depositor. Although the importance of warehouse receipt systems has been recognized by many developing countries, including many least developed countries, thus far attempts have floundered for various reasons, including direct government operations in markets that have been incompatible with the development of these mechanisms. Ongoing national initiatives in this area should be encouraged, including consideration of the benefits of establishing regional commodity exchanges for cereals.

49. Procurement operations by WFP often include important market tools, such as warehouse receipt systems or commodity exchanges, to target small-scale farmers and encourage production. Under WFP smallholder agricultural market support activities, the Purchase for Progress pilot programme was launched in 2008, most notably in Africa, where WFP local and regional purchases of foodstuffs are aimed at supporting smallholders by linking them to local, national markets and regional markets. The programme supports building the capacity of smallholders and farmers’ groups to deliver foods meeting quality standards and linking procurement to feeding programmes, including in schools. Evaluation studies have been generally appreciative of these efforts and outcomes. In the East African Community, Rwanda has adopted the Purchase for Progress approach, with WFP playing the role of a large and reliable institutional buyer.

⁶ See World Trade Organization, Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least Developed and Net Food-importing Developing Countries.

Better information and links to regional and global market intelligence networks

50. Recent episodes of price volatility have revealed an important lacuna in the capacity of Governments and international assistance partners to assess the situation on the ground and respond with appropriate measures in a timely fashion. Market information on basic foodstuffs (especially on stock levels) is usually inadequate and slow, hindering informed responses. An important first step in improving the information base to better respond to price volatility would be to strengthen existing crop and market information systems capable of making reliable estimates of crop prospects and stock levels, including farmer-held stocks, and feeding the information to regional or subregional market information networks. Partnerships with global initiatives, such as the Global Information and Early Warning System of the Food and Agriculture Organization of the United Nations (FAO), to build national early warning systems for basic food commodities should be strengthened.

Options at the regional level

51. In all geographical regions of the world, well-established regional economic cooperation and integration bodies (e.g. ECOWAS and the East African Community in West Africa and East Africa, respectively, and the Southern African Development Community in Southern Africa) have made agricultural development and food security very high priorities. Hence, fertile ground exists for strengthening existing regional mechanisms and/or creating new ones to improve regional food security, especially for the least developed countries.

Improving market information and coordination at the regional level

52. All regional economic cooperation institutions encompass information-gathering functions covering all aspects of economic activity, including the food sector. Systems in place at the respective regional institutions could be revamped by developing more systematic market intelligence and trade surveillance capacity aimed at generating timely market information and providing early warning of impending problems, including by establishing strong links with the global Agricultural Market Information System, based at FAO. In addition, such regional systems could build analytical capacity to consider possible response options and assess possible regional and country-specific impacts. Also helpful would be a regional mechanism for technical consultations on possible national and regional policy responses and remedial actions in cases of external threats to food security, as well as for advocating strong political will to act regionally and not nationally.

Strengthening intraregional trade

53. Weak market integration in regions where the majority of least developed countries are located adds to their vulnerability to price volatility. The reasons for that include supply-side constraints related to quality and regularity of supplies, poor physical infrastructure, which adds to transaction costs, and numerous impediments to trade as a result of formal and informal rules and regulations. They are often serious impediments to the movement of supplies from surplus to deficit areas regionally, and even within the same country. The numerous roadblocks, charges and delays associated with moving supplies, even within a country's own borders, but much more so in the case of cross-border trade, are highly detrimental to food security. While improving physical infrastructure, such as road networks, is expensive and time-consuming, other "softer" interventions are easier to implement, and some, such as the facilitation of regional transport and transit formalities, including the simplification and harmonization of cross-border regulations and related documentation, are costless.

54. The least developed countries have made good progress towards regional trade integration within their regional context, such as ECOWAS in West Africa, the East African Community in East Africa and the Southern African Development Community in Southern Africa. This includes the removal of intraregional tariffs under the respective customs union agreements, as well as adopting common external tariffs. The African Continental Free Trade Area, which began operations in 2021, is expected to enable rapid progress, including through the removal of non-tariff barriers.

55. Greater integration in the trade area could also facilitate better collaboration between least developed countries at the regional level in promoting policies at international forums on issues of crucial importance to them, especially food security.

Cooperation on regional food reserves and trade facilitation

56. A concrete and natural progression with regard to regional cooperation is a regional food reserve. Regional food reserves are based on the concept of pooling resources into a common reserve, to be drawn upon on the basis of pre-agreed rules. The constitution of regional food reserves typically entails the earmarking of a certain percentage of each country's national reserve for the regional reserve. The benefits of pooling resources at the regional level are obvious, including economies of scale, greater price stability, enhanced regional cooperation and integration, facilitation of the movement of supplies across borders, enhancement of regional market information and monitoring of available food supplies.

57. Experience with existing regional food reserves demonstrates that they can play a very important role in complementing national emergency reserves, especially in periods of crisis. Particularly sensitive are issues of governance, which include funding, management and the trigger mechanism. Clarity on these issues at the design stage of a regional food reserve is critical for having a good chance of success. An important consideration in such reserves is a provision to ensure that export restrictions that a member of the reserve may enact during a period of crisis would not affect another member's access to supplies in the reserve.

58. Regional food reserves are usually seen as an additional component of the overall national food security structure that includes national and local storage and distribution policies and measures, as well as national (and in some cases regional) trade policies. In that sense, such reserves can be a platform for encompassing various aspects of regional food security cooperation, including, in addition to the above-mentioned intraregional trade, food imports from the world market. With regard to food imports, a regional food reserve is in a much better position to negotiate bulk purchases with the world market on behalf of several countries in the region, thus obtaining a better purchase price as well as saving on ocean transport costs, insurance, storage at ports and other logistical costs. A regional food reserve is also in a better position than national Governments to negotiate collective futures and options contracts and to seek credit guarantees from the respective regional development banks on behalf of the importing countries.

Options at the international level

59. The international community has an important role to play in supporting the national and regional efforts of the least developed countries to improve food security sustainably. The actions of the international community should be aimed at reducing the incidence of volatility in the world market – actions on which the least developed countries depend so heavily – and alleviating its adverse effects when it is unavoidable. They include, inter alia, improving the international policy environment, especially in the trade area, and providing technical support and material assistance to improve resilience.

Strengthening food assistance programmes

60. Food aid has been a valuable resource for helping food-deficit countries to meet their food needs. Over time, important improvements have been made in the food aid system in terms of assessing more precisely the specific needs of recipient countries and responding to them with more flexibility (with in-kind or cash resources), in addition to providing complementary resources to increase the efficiency of food aid. For several least developed countries, food aid remains an important source of imported supplies, especially in meeting emergency needs. In fact, with dwindling volumes of food aid, and growing emergencies worldwide, available food assistance resources are exclusively being used for meeting emergency needs owing to natural and human-made disasters, in addition to well-targeted nutrition intervention projects through WFP. Such strictly humanitarian uses of food aid have proven to be most effective and generally free from the dependency and disincentive effects associated with bulk food aid in the past.

61. In the past, food aid was supply-driven and linked to the domestic policy considerations of donor countries, and often, too much was provided. However, nowadays, food aid allocations are very demand-driven and linked to the requirements for meeting emergency operations, and often not enough aid is provided in relation to needs. An additional factor limiting levels of food aid is that annual donor commitments to the Food Assistance Convention are made in nominal national currencies with the implication that, when world prices rise, the quantities that can be bought decline. This creates a situation in which the availability of food aid declines when it is needed the most, although some donors, at their discretion, make extrabudgetary provisions to counter the decrease in the volume of food aid somewhat in such situations.

62. Under the Food Aid Convention, the predecessor to the Food Assistance Convention, donor commitments were made terms of in real volume, whereby a minimum amount of grain equivalent was pledged irrespective of the price. While retaining value commitments that add flexibility for donors with regard to the scope of the assistance provided (e.g. donating inputs to increase food production), consideration should be also given to adding a minimum commitment in grain equivalent volume terms to make allowances for years of high prices.

Reforming World Trade Organization export prohibitions and restrictions

63. Export prohibitions and restrictions have proven to be a very common but highly adversarial policy measure taken by many countries, including several major exporters, in response to domestic supply imbalances, beginning with the 2008 food crisis and also in recent times in response to COVID-19 and the armed conflict in Ukraine. While the increase in domestic prices may be contained somewhat in the countries imposing export restrictions, the burden of adjustment is carried by other countries as world prices increase further, thus exacerbating an already difficult situation for net food importers not only in terms of higher prices but also with respect to the physical availability of supplies.

64. An encouraging step has been the adoption by the twelfth session of the WTO Ministerial Conference, held in June 2022, of a decision by WFP to exempt food purchases from the application of export prohibitions and restrictions.⁷

⁷ See the Draft Ministerial Decision on World Food Programme Food Purchases, Exemption from Export Prohibitions or Restrictions.

Implementing the Marrakesh Decision as a food import financing facility

65. In the Marrakesh Decision, it is recognized that the least developed countries may be eligible to draw on the resources of international financial institutions under existing facilities, or such facilities as may be established, in the context of adjustment programmes, in order to address such financing difficulties. In addition, in recognition of the long-term dependence of the countries on imported food supplies, the Decision includes a call for the provision of technical and financial assistance to the least developed countries and net food-importing developing countries to improve their agricultural productivity and infrastructure.

66. Facilities created under international financing institutions, in particular the International Monetary Fund Compensatory Financing Facility, which includes a cereal import bill component, have not been able to fulfil the objectives of the Marrakesh Decision pertaining to the access of least developed countries to finance, owing in part to its ex post compensation and difficulties in the terms of financing considered stringent by eligible countries.

67. FAO has put forward a proposal for the creation of a food import financing facility from which the least developed countries and net food-importing developing countries would borrow through short-term loans in the event of soaring food import bills.⁸ An updated analysis of how the facility could be implemented was recently performed by FAO, in which eligibility criteria for countries were defined and overall costs of the facility were determined under various eligibility assumptions.⁹ The proposed facility could be extended to provide coverage for supply-side shocks, namely by providing finance to countries burdened with the necessity to import key agricultural inputs, such as fertilizers, seeds and pesticides, at elevated costs. This would respond to the other important provision of the decision calling for technical and financial assistance to improve agricultural productivity and infrastructure, recognizing the imperative to address fundamental longer-term vulnerability in these countries.

68. A functional multilateral instrument along the lines of a food import financing facility would be of great help to the least developed countries and deserves serious consideration, preferably in conjunction with a global food security stocks mechanism, discussed below. Credit guarantees are a major constraint for poor least developed countries wishing to enter into future contracts and options that would allow them to negotiate the terms and scheduling of food imports in bulk and in good time and thus to avoid the high costs that they incur today.

69. The modalities of a food import financing facility would entail specific conditions triggering assistance when food import bills were projected to exceed a certain threshold, as well as the level and form of ex ante financing to be provided, taking into account projected volumes and the prices of imports of basic food commodities.

Leveraging World Trade Organization rules on public stockholding for food security purposes

70. The WTO Agreement on Agriculture includes provisions on public stockholding for food security purposes.¹⁰ In the relevant text, it is stipulated that domestic support for the accumulation and holding of stocks of products, which form an integral part of a food security programme as identified in national legislation, are in conformity

⁸ See FAO, "Financing normal levels of commercial imports of basic foodstuffs in the context of the Marrakesh Decision" (Rome, 2003).

⁹ See FAO, "A global Food Import Financing Facility (FIFF): responding to soaring food import costs and addressing the needs of the most exposed" (Rome, June 2022).

¹⁰ See para. 3 and footnote 5 of annex 2 to the Agreement on Agriculture.

with the Agreement under certain conditions, including predetermined targets of stocks related solely to food security, financial transparency in stock accumulation and release, purchases at current market prices and sales at no less than the current domestic market price. In addition, regarding public stockholding programmes in developing countries, while governments have the right to acquire and sell food at administered prices, they are bound by each country's domestic support entitlement. Several difficulties have arisen in relation to the actual application of public stockholding rules.

71. Public stockholding rules within a global food security stockholding framework could be reformulated to provide flexibility to countries that assume the role of maintaining global food security stocks. This would entail a small number of producing and exporting countries (developing and developed) having the capacity and being willing to undertake extra food stockholding beyond what they would hold for their own targets for food security purposes, for which they may need some flexibility in exceeding existing limits of subsidization for food security purposes. However, such flexibility would be conditional on earmarking the extra accumulated stocks to be made available to vulnerable countries in need of food assistance, for example during emergency situations, under agreed terms and under the auspices of an international food authority. Existing expertise at WFP could be employed to oversee the logistics necessary to transfer global food security stock supplies to countries in need, the Agricultural Market Information System at FAO could maintain up-to-date information on global food security stocks in the context of its ongoing monitoring of overall food stocks globally and through WTO Agreement on Agriculture notification processes, the conditions under which the extra food stocks were produced and disposed of would be monitored. Engaging with WFP as part of this effort would facilitate the use of available global food security stock supplies in years in which there were fewer needs for emergencies by scaling up humanitarian assistance programmes such as school feeding and food-for-work.

Using the biofuel sector as a safety valve for global food security

72. While mandates in major biofuel-producing countries have been reformed following the food crisis of 2008 and its events that followed, the use of food commodities in biofuel production continues unabated. Biofuel production continues to drive demand for food commodities and to exert pressure on food prices.

73. Possibilities for innovative approaches based on flexible mandates have been suggested. Flexible mandates would imply making them conditional on the price of food so that mandated targets could be reduced or eliminated if food prices were to rise beyond a trigger level. Such safety valves would allow for the diversion of agricultural feedstocks from biofuel production to the food chain in times of acute need. The idea is to purchase call options on grain from biofuel producers so that a diversion from biofuel use to food use could be triggered by specified indicators of food shortages, and the biofuel supplier would commit to making a corresponding reduction in output. Such a mechanism may be considered in conjunction with the other two instruments of the food import financing facility and the global food security stocks discussed above.

F. Conclusions and recommendations

74. In the Doha Programme of Action for the Least Developed Countries, there is emphasis on the need to address food insecurity through renewed and strengthened commitments by those and their development partners.

75. Eliminating food insecurity requires a multidimensional approach that addresses deep-rooted structural factors preventing the least developed countries from being resilient against external shocks and food emergencies. Support measures should be established to assist those countries in responding to short-term emergency situations while addressing the long-term structural constraints that prevent them from eradicating hunger and gaining access to sufficient and nutritious food.

76. Stockholding is a vital part of the solution to food insecurity in the least developed countries, constitutes a critical instrument to improve the food security of vulnerable people and would serve as a crucial means to limit price volatility.

77. Stockholding, especially at the regional and subregional levels, should be accompanied by a set of actions and instruments that enable the least developed countries, their partners and the international community to combat hunger, increase resilience against food emergencies and leverage food systems as a key component of the strategy towards achieving the 2030 Agenda for Sustainable Development and the goals of the Doha Programme of Action.

78. Regional development banks should consider establishing a credit guarantee facility to support the least developed countries in gaining access to credit guarantees necessary to enter into futures and options contracts for importing basic foodstuffs.

79. Within regional integration organizations, regional reserve systems should be established, or existing ones strengthened, to promote cooperation in regional food security in support of the least developed countries. Such reserve systems would help the least developed countries to purchase essential commodities from the world market by strengthening their ability to negotiate futures and options contracts, as well as by seeking credit guarantees from regional development banks on behalf of the importing countries. That could become a platform for technical consultations on national and regional policy responses and remedial actions in cases of external threats to food security, as well as for advocating to address food security challenges at the regional level.

80. The capacities of least developed countries for market intelligence and trade surveillance should be strengthened by building on the existing initiatives of multilateral institutions and with the support of development partners.

81. Consideration should be given to guaranteeing an adequate level of volume commitments to meet the emergency needs of the least developed countries under the Food Assistance Convention to prevent a reduction in food aid in years of high prices, when those countries need it the most.

82. Building on the work of FAO, a food import financing facility should be established to facilitate access by the least developed countries to credit in the event of soaring food import bills and to address supply-side shocks by providing finance to countries burdened with the necessity to import key agricultural inputs, such as fertilizers, seeds and pesticides, at elevated costs.

83. A food import financing facility would be most effective in conjunction with adequate global food security stocks by affording a degree of flexibility to participating stockholding countries willing to produce and maintain extra stocks for food security purposes, earmarked for least developed countries in need of food assistance under agreed terms and under the auspices of an international food authority.

84. Under careful modalities of operation, the proposed global food security stocks arrangement could be market-neutral to the extent that the extra food stocks released to countries in need would be linked to the provision of finance by the food import financing facility. Subsidization of stockholding for food security purposes would be

monitored under the existing Agreement on Agriculture notification process, both in terms of margins of extra subsidization allowed and disposal of earmarked global food security stocks on the basis of agreed and monitorable conditions and criteria aimed at minimizing effects on the market.

85. In addition to the instruments and policies discussed above, a special food reserve system dedicated to the least developed countries could be created within existing relevant multilateral organizations to receive food and cash donations from Member States, the private sector, food-manufacturing entities, the business community, civil society organizations and philanthropic organizations supporting storage facilities across the least developed countries. Such resources dedicated to the least developed countries would assist in distributing food to poor and vulnerable people, including through school and community feeding programmes, when needed to respond to environmental threats, pandemics and other crises.
