

U.N. Conference on Trade and Development

# **The Potential Establishment of Emergency Food Reserve Funds**

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## 1. An emergency food reserve fund

The food price crisis of the last five years has drawn new attention to the problems of food supply in poor countries as well as the hollowness of previous advice to them to rely on world markets for any gaps in supply. Earlier concepts of food security, involving a greater reliance on domestic or regional supplies, are being reconsidered, including the deployment of public reserves of staple foods to meet pressing needs.

The Association of South-East Asian Nations (ASEAN) has had a regional food reserve for 32 years and recently reinforced its policy for it. It originally launched the ASEAN Food Security Reserve (AFSR) in 1979 and is now replacing it with an ASEAN Plus Three Emergency Rice Reserve (APTERR), which includes China, Japan and South Korea as members in addition to the ten members of ASEAN. This follows a five-year pilot project, from 2005-10, during which the international rice trade was seriously disrupted at the time of the surge in cereal prices in 2007-08, to the detriment of people in rice-importing countries. The renewed interest in food reserves follows the harsh experience of that episode. This short study examines whether and in what ways the plans for APTERR might be transferrable to other regions, particularly in sub-Saharan Africa.

There are various types of food reserve, with different systems and purposes. In a recent paper four possible purposes were discussed:<sup>1</sup>

1. 'To correct the basic market failure of aggregate food markets';
2. 'To smooth out volatile prices';
3. 'To complement or replace the private sector'; and
4. 'To prepare for food emergencies'.

The four purposes are not mutually exclusive. In particular, the second and fourth (smoothing out prices and preparing for emergencies) will often support each other. According to another recent paper, 'Historically, the common reasons [for public stocks or grain reserves] were price stabilization, producer support, or food security. Frequently, reserve policy has elements of each of the three purposes in mind.'<sup>2</sup> It adds that food reserves can stabilise prices even when meant primarily for emergency purposes:

'[G]rain stocks and reserves have an impact on prices for two reasons. First, the additional supply means that demand surges can be met and the supply and demand stay in some level of balance. Second, buyers can expect that supplies will be adequate so the uncertainty is reduced and an element of calm is provided to the market.'<sup>3</sup>

The terms of reference for this study, as well as the set-up of the APTERR programme itself, are concerned mainly with the fourth item on the list. The underlying aim then is to realise the 'right to adequate food and water' which is assured under Article 11 of the U.N. Covenant on Economic, Social and Cultural Rights. The U.N. Economic and Social Council considers that 'The human right to adequate food is of crucial importance for the enjoyment of all rights', and that it implies:

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<sup>1</sup> Murphy (2009), pp. 4-5.

<sup>2</sup> McCreary (2011), p. 26.

<sup>3</sup> *Ibid.*, p. 33.

- ‘The availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture;
- ‘The accessibility of such food in ways that are sustainable and that do not interfere with the enjoyment of other human rights.’<sup>4</sup>

In designing any policy of food reserves, it is helpful to do so in ways that will facilitate the development of agriculture and agricultural commerce, and in the long run reduce a country’s or region’s dependence on donors and other external influences. Therefore preference should be given to designs which generate these internal processes to the full, even if they take longer to reach their potential or are more expensive for the countries concerned in the short or medium term.

In general, food emergencies arise from three types of event:

1. Natural disasters such as droughts, floods and earthquakes.
2. The loss of normal supplies for economic, political or military reasons. Recent cases include trade embargoes, such as the Russian wheat export ban in 2010 and its effect on vulnerable importing countries such as Armenia, and similar rice export bans including India’s and Vietnam’s in 2007-08, which affected people in rice-importing nations like the Philippines as well as Senegal and certain others in Africa. Such events do not necessarily lead to emergencies but they can do. That depends whether any shortfall in imports can be replenished on acceptable commercial terms elsewhere.
3. An increase in *prices* of imported food to a level that causes unacceptable hardship. This has been a frequent cause of food emergencies since 2007, although it was quite a rare event before then.

The recent events in turn have arisen from three factors:

1. **Price shocks on world markets**, which were transmitted through the trading system to virtually every country in the world. This applied most of all to wheat, rice and maize, the world’s most important staple foods and by far the most widely traded between countries.
2. **A sharp change in the long-term ratios between the prices of cereals, agricultural inputs and export crops.** Over the last 30 years or so the prices of cereals have increased more slowly overall than those of oil and mineral fertilisers, but faster than those of poor countries’ main export crops. This has serious implications. The first is that it makes input-dependent forms of agriculture less profitable. Secondly, it casts doubt on recommendations to concentrate on export crops.
3. **Climate Change.** It is generally accepted that this is a background factor in many recent ‘natural’ emergencies, for example the floods in Pakistan in 2010 and the erratic incidence of rains in much of East Africa. Global price shocks have themselves been associated with climate change, for example in the severe drought in 2007 in Australia, the agricultural impact of which provoked the ‘spike’ in wheat prices in 2007-08.

The most serious shocks have resulted from a combination of all of these factors. Whatever its main purpose, a food reserve should take all three into account. They all affect the long-term sustainability of food supplies.

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<sup>4</sup> U.N. Economic & Social Council (1999), para. 8.

This paper has five more sections. The next section describes the new APTERR programme and it is followed by a discussion of four issues that would arise in adapting it to African conditions. This is followed by a discussion of a regional initiative in the Economic Community of West African States (ECOWAS), including a comparison between the principles for a food reserve laid down by ECOWAS and those underlying APTERR. This is somewhat longer than the discussion of APTERR since there is a wider range of options and analyses already available for it in the public domain. Further considerations affecting emergency food reserves are then discussed in section 5 and the last section makes some concluding comments.

It should be emphasised that this is not a research report but an extended commentary on recent plans to establish regional food reserves, in particular that of ASEAN and its three more northerly partners. There is not room in this paper for a deep examination of numerous regions in this respect. Instead, an attempt is made to put the main issues in perspective by comparing two rather different regions and their differing - but equally valid - approaches to the topic, both of which were immediately topical at the time the paper was prepared.

## 2. The ASEAN Plus 3 programme

In 1979 ASEAN's first agreement on regional food reserves created the ASEAN Food Security Reserve (AFSR) and the ASEAN Emergency Rice Reserve (AERR).<sup>5</sup> ASEAN had five members at the time: Indonesia, Malaysia, the Philippines, Singapore and Thailand. The AFSR was in effect the sum total of the five countries' national food reserves, which were to be kept at minimum agreed levels, while the AERR was a share of national reserves that each country had to make available to other members in cases of emergency. It could be either part of the national reserve or additional to it. Arrangements for use of the AERR were to be made bilaterally, on request from the country in need of assistance. The size of the AERR was initially set at 50,000 metric tons and it increased gradually to 87,000 tons by the time the APTERR pilot project started, after the other five current member states had acceded to ASEAN. However, the AERR was never used in an emergency. ASEAN countries in practice preferred to go to international agencies for assistance so as to avoid the embarrassment of admitting to a food emergency to their neighbours, especially as the AERR's rice had to be provided on what amounted to commercial terms.<sup>6</sup>

At a meeting on October 7<sup>th</sup>, 2011 ASEAN ministers agreed to set up APTERR, a new food reserve scheme for use in states of emergency due to disasters. Its members are the ten member states of ASEAN plus China, Japan and South Korea. Between them, the '10 + 3' account for 30 per cent of the world's population or more than twice the population of Africa. It was decided that the total reserve will be 787,000 tons of rice, each country being responsible for providing a certain amount. This is roughly twice the size of the 'modest' physical emergency reserve of 'around 300,000-500,000 metric tons of basic grains' which was proposed by senior Washington officials for the whole world in 2009.<sup>7</sup> China, Japan and South Korea pledged to provide 300,000 tons, 250,000 tons and 150,000 tons respectively, with the remaining 87,000 tons to be provided by the ASEAN countries in amounts varying from 3,000 tons each from Brunei, Laos and Cambodia up to 15,000 tons from Thailand, the largest rice-exporting country in the world.<sup>8</sup> In other words, it is really the AERR plus another 700,000 tons of rice from the three new partners.

APTERR will be run by a regional management team, rather than the bilateral arrangements laid down in 1979. In addition to rice reserves, the meeting in October agreed on contributions to the APTERR Secretariat's operational funds amounting to just over US\$4 million. This will be kept as an endowment, interest on which will finance operations. This relatively small sum means that even the new organisation will be very light at the centre. Of the total promised, China, Japan and South Korea will provide \$1 million each. Seven of the ASEAN members will provide \$107,500 each and Cambodia, Laos and Myanmar \$83,000 each.

APTERR's reserve, called the East Asia Emergency Rice Reserve (EAERR) was little tested in practice during its five-year pilot period, despite the rice supply problems which occurred during that time. However, it was used on at least two occasions. In 2006 the EAERR provided 100 tons of rice to flood victims in Indonesia, partly

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<sup>5</sup> The text is available at <http://cil.nus.edu.sg/rp/pdf/1979%20Agreement%20on%20the%20ASEAN%20Food%20Security%20Reserve-pdf.pdf> (November 2011).

<sup>6</sup> Daño and Peria (2006), pp. 9-10.

<sup>7</sup> Von Braun, Torero and Lin (2009), p. 2. See also p. 10 below.

<sup>8</sup> 'ASEAN +3 sign MoU on agriculture, forestry', *APTERR News*, October 10<sup>th</sup>, 2011, <http://apterr.blogspot.com/2011/10/asean-3-sign-mou-on-agriculture.html> (November 2011).

through a food-for-work programme coordinated by the World Food Programme (WFP).<sup>9</sup> In 2009 APTERR was used to donate 520 tonnes of rice from Thailand to victims of Typhoon Ondoy in the Philippines.<sup>10</sup> However, in the crisis of 2007-08 it could provide no help, since part of the very problem lay in the *disruption* of the region's rice distribution by embargoes from exporting countries.

As constituted at present, APTERR will only contain rice, which is the main staple food of every country in the region. All stocks are to be stored within the region, but they can initially be imported by a member state which provides them.

Like the AFSR before it, APTERR institutionalises the distinction between food-surplus and food-deficit members of ASEAN, which includes both leading rice exporters (Thailand and Vietnam) and countries which depend heavily on imports (Indonesia, Malaysia and the Philippines). The main difference from AFSR, apart from the size of the reserve, is that the EAERR will be owned by APTERR rather than member states in their own right, and APTERR will cover the costs of maintaining it. The rice will be stored in the three donor countries and the rice-importing countries. After the export bans of 2007-08 it was commented that, 'Rice is thinly traded and there would not be confidence that a reserve centrally held by exporters would be available to all in the event of tight supplies.'<sup>11</sup> As under the AFSR, any drawdown of the reserves will follow on a request from a member country and is to be paid for by the recipient country. That country will pay for the transport and operating costs and agree a price for the supply with APTERR, to be paid later.

Even before the new reserve was formally established there were official ambitions to take it further. At the ASEAN Summit in May 2011 the heads of state 'requested relevant Ministers to look at the possibility of incorporating commodities other than rice within the APTERR mechanism' and were 'of the opinion that APTERR should not only be limited to secure stock in case of emergency but also to support countries in vulnerable position as a result of food price volatility and surge in food demand.'<sup>12</sup> APTERR's strategy, as stated on its website, includes the aims 'To smooth-out erratic rice price fluctuation in the region and increase rice trade in ASEAN plus three areas' and 'To improve farmers' income and welfare' but oddly it says nothing about emergencies.<sup>13</sup>

Indonesia in particular has further ambitions for the uses and size of the reserve. 'We hope Asean member countries will agree to increase their food reserves in the region. They can be used to ensure food resilience as well as help stabilize the price,' Indonesian Agriculture Minister Suswono was quoted as saying in May 2011, adding that his government was ready to provide up to 25,000 tons.<sup>14</sup> He later stated 'that the APTERR agreement was also important to ensure that the price stability of supply and production were both maintained.'<sup>15</sup> President Susilo Bambang Yudhoyono has further recommended 'the creation of a food reserve system that can help lift farmers out of poverty.'<sup>16</sup> However, this pressure comes from a rice-importing country, rather than one of the surplus countries whose good will is crucial to the effective operation of APTERR.

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<sup>9</sup> [www.apterr.org/index.php/current-issues/37-year-2006/74-april-2006-flood-victims-in-east-java-received-support-from-eaerr](http://www.apterr.org/index.php/current-issues/37-year-2006/74-april-2006-flood-victims-in-east-java-received-support-from-eaerr) (November 2011).

<sup>10</sup> ActionAid (2011), p. 11.

<sup>11</sup> McCreary (2011), p. 4.

<sup>12</sup> ASEAN (2011), para. 35, p. 7.

<sup>13</sup> [www.apterr.org/index.php/how-apterr-works](http://www.apterr.org/index.php/how-apterr-works) (November 2011).

<sup>14</sup> *Jakarta Globe*, 'ASEAN: Food Security Main Threat Facing ASEAN, SBY Warns', May 10<sup>th</sup>, 2011.

<sup>15</sup> *Jakarta Post*, 'ASEAN +3 sign MoU on agriculture, forestry', October 9<sup>th</sup>, 2011, reprinted at <http://apterr.blogspot.com/> (November 2011).

<sup>16</sup> *Jakarta Globe*, as above.

### 3. Adapting APTERR to regions in Sub-Saharan Africa

APTERR was designed for the circumstances of South-east Asia after three decades of experience with the AFSR. The circumstances are different in other parts of the world, including sub-Saharan Africa, so it should be asked whether this model can be transferred or if other arrangements are required there. When comparing APTERR with the needs of other regions, four questions are considered.

#### 1. The number of foods to be stocked

APTERR, like AFSR before it, will only contain rice, at least for the time being. Rice is the dominant staple food in all ASEAN countries, accounting for up to two-thirds of dietary energy supplies (DES).<sup>17</sup> The 13 APTERR countries include the biggest consumers, importers and exporters of that crop throughout the world.

The situation is considerably more complicated in other food-deficit regions, especially in Africa, where various staple foods can predominate even in different parts of the same country. That applies, for example, within Burundi, Ghana and Uganda. Maize is the most important staple in much of East and Southern Africa, as is rice in much of West Africa, but typically these crops account for only around 30 per cent of DES in each country. Zambia's 51 per cent reliance on maize is exceptional.<sup>18</sup> This reflects the availability of a greater number of staple foods in each country, which should be good for nutrition and therefore deserves to be promoted. Within each region there are exceptions to any general rule: in the ECOWAS region for example, the most important staple in south and central Ghana is reported to be cassava with 21 per cent of DES, while in Niger it is millet, accounting for 39 per cent nationally. This diversity of cropping and eating habits calls for a more complex strategy in food stocks, bearing in mind the requirement under the Right to Food for food to be 'acceptable within a given culture'.<sup>19</sup>

Where public food reserves already exist in sub-Saharan Africa, they therefore frequently stock various crops: for example, maize, wheat, rice, sorghum, millet and pulses in the Southern African Development Community (SADC)'s regional stocks; wheat, maize and sorghum in Ethiopia (although curiously not teff, the main traditional staple in the Ethiopian Highlands); with a similar plurality in the strategic reserves of Kenya and the Sudan. One proposal for ECOWAS recommends holding stocks of millet, sorghum, maize and rice. However, this complicates the tasks of procurement, storage and distribution of food reserves.

#### 2. Reducing external vulnerability

The exact causes of the food price crisis since 2007 are disputed, but it is beyond dispute that the problem arose in the markets of the main globally traded and priced crops, wheat, rice and maize. Indeed, the crisis has been used to illustrate

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<sup>17</sup> Rice is reported to account for the following percentages of DES in the seven ASEAN member states covered by the Food & Agriculture Organisation (FAO)'s GIEWS price data tool: Cambodia 65, Indonesia 50, Laos 64, Myanmar 55, the Philippines 48, Thailand 41 and Vietnam 59. See [www.fao.org/giews/pricetool2/](http://www.fao.org/giews/pricetool2/).

<sup>18</sup> Elsewhere, reported percentages for maize include 35 in Kenya, 30 in South Africa and 26 in Tanzania, and for rice, 30 per cent in Senegal and 37 in Guinea-Conakry. See [www.fao.org/giews/pricetool2/](http://www.fao.org/giews/pricetool2/).

<sup>19</sup> See p. 2 above.

the brutality of competition on world cereal markets, which can affect the smallest, poorest and most vulnerable countries worst of all. For example:

‘[After the 1985 US Farm Bill t]he US was attempting to increase exports by subsidizing production, subsidizing exports, and lowering the price at which historic public stocks were released into the market. Concurrently, the European Commission maintained price support to domestic agriculture and raised exports to sustain their market share. The result was that all of the “adjustment” caused by the brutal trade war [between the U.S. and the European Community] had to be made by other agriculture producers in both importing and exporting nations.’<sup>20</sup>

The same author argues that it was the end of that period of ‘adjustment’ of large overhangs of European and U.S. public cereal stocks which created the price surge and market crisis. He added that:

‘...global markets increase the size of adjustments which must be made, usually by those who can not afford to buy food. As we move toward a world where cereals are consumed by ethanol plants, livestock for relatively wealthy consumers, and for direct consumption by people with a wide range of income levels, the risk is that poor and hungry consumers become even more the ‘adjustment factors’ for a larger pool of consumers than would have been the case historically.’<sup>21</sup>

To take West Africa as an example, the feasibility study for the proposed PREPARE pilot food reserve in the ECOWAS region argued, ‘The majority of grain imports to the ECOWAS region are arranged through a handful of trading firms that are able to charge higher prices because of weak competition, poor transparency and superior market knowledge.’<sup>22</sup>

More broadly, this reflects a problem which has persisted ever since the beginning of the main era of African colonisation in the 19<sup>th</sup> century: the lack of regional and even national market integration throughout most of the continent. This author has argued elsewhere:

‘Africa’s tragedy is that ... during the ... period of European empires, it found itself in the worst of all worlds: territorially fragmented, it was ruled by foreign powers directly to facilitate the extraction of wealth wherever possible; and it did not meanwhile develop the local markets which existed elsewhere. This is what Africa’s new rulers took on with independence between the 1950s and the 1970s.’<sup>23</sup>

After that the problem continued, to be strongly reinforced in the era of structural adjustment at the tail-end of the 20<sup>th</sup> century. Robert Wade’s words are apt here:

‘Today we use the word “integration” to refer exclusively to integration into the world economy, and we assume that more integration is always good for development. One of the strangest silences of development thinking is the silence about internal integration. We should distinguish between “external integration” and “internal integration”... Development strategy has to operate in the zone where the two forms of integration reinforce rather than undermine each other.’<sup>24</sup>

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<sup>20</sup> McCreary (2011), p. 19.

<sup>21</sup> *Ibid.*, p. 29.

<sup>22</sup> PREPARE (2011), p. 7.

<sup>23</sup> Lines (2008), p. 34.

<sup>24</sup> Wade (2005), pp. 94-95.

Close attention to this problem is required in Africa - and nowhere more so than in the area of national and regional food trade. Among other things, this implies a need to reduce dependence on any staple foods which can be affected by such global market shocks and market power. Consistently low world prices combined with sharp reductions in import tariffs for cereals since the mid-1980s had two effects on many poor developing countries: to sharply increase their imports of the main traded cereals, up to levels which were economically unsustainable in many countries of sub-Saharan Africa; but in domestic agriculture to stimulate an *increase* in production of other staple foods such as cassava, sorghum and sweet potatoes, as domestic producers of wheat, rice or maize could not compete with imports.<sup>25</sup>

The choice of crops for storage in food reserves can play a part in achieving such goals. Where possible, emergency reserves should draw on local, national or regional production, and make use of *other* locally important staples rather than wheat, rice and maize. The aim is to reduce vulnerability to shocks transmitted through world cereal markets as well as those arising from climate change and 'natural' emergencies. By analogy with the 'modular' arrangements found in natural ecological systems, it has been argued that 'a diversity of farm types and farming practices can reduce the vulnerability of food production to changes in climate.'<sup>26</sup> A diversity of crop markets should improve *economic* resilience in the same way. From this there follows a preference for local and regional sourcing and as far as possible autonomous national and regional control. These are ambitious goals but they should not be beyond African capabilities. In the 1950s and 1960s India had a reputation for repeated food crises, like parts of Africa in recent times. But the Indian government now runs its own system of food aid, acquiring food for it from domestic sources. It is a powerful precedent to follow.

### 3. Deficit and surplus areas

Where several staple foods are involved, any sharp distinction between the surplus and deficit countries of one crop does not apply. In African regions most countries have overall food *deficits*, while surpluses are neither large nor necessarily permanent. Tanzania and Zambia for example produce surpluses of maize in good years but not always so when their harvests are less. In contrast with South-east Asia, food insecurity and food emergencies in Africa are associated with poor physical communications (exacerbated by the distances required for transport as population densities are generally low) and the unusually small amount of trade *between* African countries. The design of any regional reserves should take these logistical and economic deficiencies into account and can play a part in overcoming them.

In Africa it can therefore be important to build up links between food-surplus and food-deficit areas within the same country or in neighbouring countries, in order to prevent good harvests in surplus areas from being dissipated in wastage and low prices while ensuring that supplies are available even in bad times in deficit areas. As a senior government official in Khartoum argued in 2009, food security cannot be controlled in one state alone: you need to use trade, since the problems faced in neighbouring countries overlap.<sup>27</sup> Such an approach should stimulate supply generally and gradually cut back the continent's food deficit. This requires investments in transport and in other facilities and institutions that are required

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<sup>25</sup> See Lines (2008), Table 7, pp. 121-22.

<sup>26</sup> Silverman (2008).

<sup>27</sup> Lines (2009), p. 19.

for agricultural storage and trade. Food reserves should be designed to assist this process as far as possible; at the local level, some indications on how to do this are given in the next chapter.

#### 4. Financial considerations

Most African countries are poorer than the ten members of ASEAN. Furthermore, three of the world's financially strongest countries are part of the APTERR agreement. They will provide both rice and money. While in the past it might have been possible to expect two or three European countries to play a similar role for African regions to that of China, Japan and South Korea for ASEAN, their financial surpluses are much diminished and cannot be relied on after the financial crisis. Some more reliable sources of funds will have to be found. It would in any case be advisable to draw on domestic and regional finance as much as possible in order to reduce external dependency. However, at current prices the cost of a cereal reserve of the size required for an African region will run into tens of millions of dollars, so external assistance will almost certainly be required.

However, many African countries are used to receiving emergency food supplies free from the WFP and other donors. But APTERR requires a recipient country eventually to pay for emergency rice. It is hard to see how this aspect of APTERR's policy could be fully replicated - particularly in an emergency that actually arises from a sudden increase in the prices of grain, as in 2007-08.

A further requirement is that programmes associated with these various needs should be integrated with each other as far as possible - for example, donor programmes of the WFP, U.S. Aid for International Development and the European Union's Humanitarian Aid department (ECHO) with regional and national initiatives. Free food aid should be integrated in wider social protection programmes while ensuring that both stock replenishment and warehouse operations and management are paid for. The terms for such integration should be negotiated between the region and multilateral or bilateral donors under the aegis of the United Nations. It requires policy and programme links from food storage and reserves to reach out in two directions, towards commercial initiatives such as grain exchanges on one hand, and social protection on the other.

#### 4. The ECOWAS approach

A rather different approach from that of APTERR is being pursued by ECOWAS, which recently held a conference in Dakar, Senegal, in which three alternative approaches to regional food reserves were presented.<sup>28</sup> ECOWAS then gave six months for a pilot project to be designed, possibly involving elements of all three proposals.

In designing a food reserve for any region, the region's own preferences and sensitivities are of the first importance. ECOWAS' aims in creating its reserves follow six principles, which can be summarised as follows:<sup>29</sup>

1. The food stock should be an instrument of regional sovereignty, and aim at both food security and price stabilisation.
2. The food stock will be a fundamental part of the region's crisis response and linked to both local and regional early warning systems.
3. International solidarity is expected to act in support of regional policy, not as a substitute for it.
4. The stock will be financed by national contributions in cash or in kind, as well as regional and international contributions.
5. Management of the stock will be under ECOWAS' control and rely on broad consultations with all interested parties, based on the principles of transparency and accountability.
6. The stock will be integrated with agriculture policy via its methods of supply (including regional preference and direct contracts with producers), the selection of crops, and methods of destocking which avoid market disruption.

Some of these principles are shared with APTERR, but not all. In poorer parts of Africa, including the ECOWAS region, some of them are not easy to achieve, but they reflect valuable developmental goals.

ECOWAS also identified four critical factors in assessing the technical arrangements for food security stocks:

1. Clear Purpose
2. Reliable Food Stock
3. Timely and Transparent Trigger
4. Financially Viable.

The three proposals described at the conference were:

1. A pilot regional reserve called Pre-Positioning for Predictable Access and Resilience (PREPARE). This would be a five-year project in response to the recent request of G20 Agriculture Ministers, and would involve the WFP with other agencies.<sup>30</sup> It would serve 11 of ECOWAS' 15 member countries -

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<sup>28</sup> More information can be found (mostly in French) on the website of the ROPPA regional farmers' federation at [www.roppa.info/spip.php?article175](http://www.roppa.info/spip.php?article175).

<sup>29</sup> Adapted from Silva (2011). The full text in French is reproduced in the Annex to this report.

<sup>30</sup> PREPARE (2011), p. 1.

those which are classified as being both Low-Income Food-Deficit Countries and Least Developed Countries.<sup>31</sup>

2. A scheme based on national food reserves and developed by two agencies of the region, CILSS (the Interstate Committee for Drought Control in the Sahel) and RESOGEST (the Network of Companies, Commissariats and Offices Charged with the Management of Food Security Stocks in the Sahel and West Africa).
3. A system of local 'grain banks', like those that exist in Burkina Faso, Mali and Niger. This uses one of various models of provision and storage aiming to build food security from below.

The three plans will be described in turn.

#### 1. The 'PREPARE' pilot programme - following the IFPRI plan

In 2009 some senior officials from the International Food Policy Research Institute (IFPRI) and the World Bank jointly proposed 'three global collective actions' to address 'extreme price spikes and ... emergency needs for food':

- 'First, a small physical food reserve...
- 'Second, a new international coordinated global food reserve...
- 'Third an innovative virtual reserve ... to help prevent market price spikes and to keep prices closer to levels suggested by long-run market fundamentals.'<sup>32</sup>

The second of these actions was proposed in order 'to minimize the risk of individual countries trying to achieve grain self-sufficiency by rebuilding their own public reserves'.<sup>33</sup> In spite of that warning, PREPARE's feasibility study presented at the Dakar conference imitates the first and the third of them: a regional physical reserve of 67,000 tons of maize, millet, sorghum and rice to cover 30 days of food needs, supplemented by 'a portfolio of virtual procurement tools' for another 60 days.<sup>34</sup> The PREPARE plan was discussed two weeks earlier at a High-Level Stakeholder Workshop hosted by the WFP with officials from West African governments, regional organisations, development banks and others.

Most of the analysis in the PREPARE study refers to shocks caused by volatile prices alone, and the proposed trigger mechanism is based on price volatility on global markets. Unlike APTERR, the release of stocks would not rely on a government request but derive from a local early warning system. Even then, extreme *global* price volatility would have to be signalled first. All of this apparently rules out the use of the reserves for any natural emergencies.<sup>35</sup>

PREPARE would 'prioritise procurement of food on local and regional markets whenever possible and hold stocks at sites ... based on their proximity to major trade routes and considering local food preferences and synergies with existing regional initiatives.' Suppliers in ECOWAS members which are not part of the scheme, such as Ghana and Nigeria, would be able to supply the reserve. Distribution would be achieved through targeted assistance schemes.<sup>36</sup> The

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<sup>31</sup> PREPARE (2011), p. 25. They are Benin, Burkina Faso, the Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Senegal, Sierra Leone and Togo.

<sup>32</sup> Von Braun, Torero and Lin (2009), p. 1. See also Martins-Filho, Torero and Yao (2010).

<sup>33</sup> *Ibid.*

<sup>34</sup> PREPARE (2011), pp. 2 and 27.

<sup>35</sup> *Ibid.*, p. 40.

<sup>36</sup> *Ibid.*, pp. 1-2 and 18.

project's initial costs were estimated at \$44.3 million (including \$33.4 million for physical grain stocks) while its annual recurring costs were estimated at \$16.6 million.<sup>37</sup> The aim would be to operate on a cost-recovery basis. ECOWAS member states could borrow up to a 30-day supply of food, then replenish it in kind at the next harvest, or buy up to their maximum 90-day allotment (or more with the Board's approval) at the market-based cost of replenishment. All loans and sales would require binding financial assurances. However, the country could choose to assign these responsibilities to a U.N. agency, non-governmental organisation or other food-assistance body.<sup>38</sup>

The feasibility study considered that 'procuring physical stocks solely through local sources or solely through international sources would limit the reserve's ability to optimize spot purchasing - buying at the lowest costs possible when market conditions are favourable while not upsetting local market prices'; and it therefore recommended a complex 'portfolio' approach to procurement.<sup>39</sup> However, PREPARE would attempt to avoid damage to local food markets by these means:

- Using early warning systems and regional and global market information systems, and keeping the physical reserve relatively small;
- Monitoring local markets closely for their sensitivity to large purchases and virtual stock contracting; and
- Releasing food through safety nets and other targeted food assistance programmes, and so directing food to beneficiaries who would not be able to purchase on local markets.<sup>40</sup>

The feasibility study noted the need for member countries to play an active role in the reserve's governance and financing. It gave the example of Mali, where the government had participated in financing a national grain reserve since 1999 and assumed 70 per cent of its costs by 2004. However, it also recommended 'multiple avenues of financing so that the system is not dependent upon a single donor or instrument.'<sup>41</sup>

It recommended that the pilot should be a separate legal entity, overseen by an Executive Board to be chaired by the President of the ECOWAS Commission. An independent manager would also be commissioned, to have legal custody of the reserve stocks and authority for operations. It noted that in Mali, 'the national cereal board, the Agricultural Products Office of Mali (OPAM), is responsible for the day-to-day operation of the reserve'. An Advisory Committee would represent civil society, the private sector, development banks, national food reserve managers, and multilateral and bilateral early warning and market information systems. It suggested that the WFP could initially manage and oversee the pilot system.<sup>42</sup>

In one respect the feasibility study departs significantly from the recommendations we made in the previous section - and seems in practice to depart from the principles quoted above. It reports that 'the historical grain consumption patterns for each country ... gave a reserve composition of ~50 percent millet & sorghum, ~30 percent rice, and ~20 percent maize.'<sup>43</sup> But because of certain assumptions about availability in a crisis and acceptability across a broad range of the

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<sup>37</sup> PREPARE (2011), pp. 66-67.

<sup>38</sup> *Ibid.*, pp. 52-53.

<sup>39</sup> *Ibid.*, p. 36.

<sup>40</sup> *Ibid.*, pp. 21 and 36.

<sup>41</sup> *Ibid.*, pp. 16 and 20.

<sup>42</sup> *Ibid.*, pp. 2, 16, 61, 63 and 64.

<sup>43</sup> *Ibid.*, p. 31.

population, it suggests the initial composition of the reserve would actually be in these ranges: maize 20-25 per cent, millet and sorghum 15-50 per cent, rice 30-60 per cent.<sup>44</sup> These assumptions amount to a move in favour of the traded crops and away from the reported existing consumption patterns. Then in the cost simulations as much as 27 per cent is assumed to be maize, 58 per cent rice and only 15 per cent millet and sorghum. In practice, because of the central importance of such simulations in a feasibility study, this is probably the most reliable indicator of what the proportions would actually be in the reserves: more maize, nearly twice as much rice and less than one-third as much millet and sorghum as people eat in the region now.<sup>45</sup> Given the long-term influence on eating habits that emergency supplies can have, such a sharp divergence from current consumption patterns should be resisted for all the reasons already given.

## 2. The CILSS/RESOGEST plan - drawing on national food reserves

This proposal is still going through the stage of a detailed feasibility study, but its outline as described so far bears a closer resemblance to the original AFSR. The aim is to set up in March 2012 a pilot project in the eight countries of the Francophone West African Economic and Monetary Union (UEMOA), all of which are also members of ECOWAS. A Regional Food Security Fund would then be established in collaboration with ECOWAS and UEMOA.<sup>46</sup> The proposal has been described in these terms:

‘Still embryonic, the aim is to establish a co-operative regional framework where members pledge five per cent of their national food reserves into a regional emergency food reserve, ... as well as enhanced information, early warning and surveillance systems. The priority will be holding food produced in West Africa in the reserve.’<sup>47</sup>

The first initiative towards this project was taken in 2007 by CILSS, as a priority measure under both the African Union (AU)’s Lusaka Declaration and ECOWAS’ own Agricultural Policy (ECOWAP). RESOGEST was later formed as a result in February 2010. RESOGEST’s general goals include these:

- to strengthen the capacity of national stock management facilities;
- to make use of regional solidarity in times of crisis to ensure the continuous availability of a stock of food products for urgent interventions at the regional level;
- to facilitate exchanges in the availability of foodstuffs;
- to make available good information on public, private and household stocks and on supply tenders.<sup>48</sup>

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<sup>44</sup> PREPARE (2011), p. 33, Table 3.

<sup>45</sup> *Ibid.*, p. 75.

<sup>46</sup> Coulibaly (2011), slide 11.

<sup>47</sup> ActionAid (2011), pp. 13-14.

<sup>48</sup> Coulibaly (2011), slide 3. In French the full list reads:

1. Assurer une disponibilité constante d’un stock de produits alimentaires pour les interventions d’urgence au niveau régional;
2. Renforcer les capacités des structures nationales de gestion des stocks;
3. Faire jouer la solidarité régionale en cas de crises;
4. Permettre de lever les entraves formelles et informelles et les rétentions de stocks;
5. Faciliter les échanges des disponibilités des vivres;
6. Rendre disponible une information de qualité sur les stocks (publics, privés, paysans) et les appels d’offre.

As with PREPARE, the regional stock would contain millet, sorghum, maize and rice, but only in physical form. The participating countries are estimated to require 1.5 million tons of grains in their national food reserves, so 5 per cent going to the regional reserve would amount to 75,000 tons.<sup>49</sup> This aspect of the proposal is reminiscent of the AFSR's not very successful 'earmarking' of part of the ASEAN countries' national reserves. However, the reliance on early warning and surveillance systems should avoid the unsatisfactory political aspect of AFSR's trigger mechanism.

### 3. The role that local grain banks can play<sup>50</sup>

Grain banks, also known as community granaries, function as either local purchasing cooperatives or warehousing and sale cooperatives, depending on the village and the season. The grain banks in deficit areas provide a market for the cooperatives in surplus areas, facilitating sales and helping their farms to develop. In surplus areas the main benefit is to enable households to keep their harvested crops, rather than selling them for low prices at harvest and having to buy in other foods later in the year when prices are higher. As the feasibility study for PREPARE pointed out, 'The interseasonal variation in cereal prices in Sahelian countries often allows food to be bought [by community granaries] at low prices and sold at higher but below-market prices, with enough profit retained for ongoing operation.' The grain banks provide income from grouped sales to the WFP and they have enabled families to have three meals a day in the hungry season without having to purchase any other cereals. When required, they are in place as village-level emergency food stocks. Their biggest priority in food-deficit areas is to make sure food is available during the hungry season, which can be sold in retail amounts to villagers at prices that are below those of the local trade. They also provide a form of credit-in-kind, giving members access to grain which they 'repay' when their crop comes in. They tend to reduce post-harvest losses as well as improving the quality of the food supplied because of good storage conditions in the barns. At their best, as in a case cited in western Burkina Faso, the grain banks reduce pressure for migration out of the villages. This all supports the goals set out above of linking deficit and surplus areas for the advancement of food security and rural development.

Oxfam reports the potential capacity of existing local grain banks in Burkina Faso, Mali and Niger to be 85,000 tons or more. In Mali there are 752 of them. In addition to the ones already present in those three countries, the PREPARE feasibility study estimates that some 4,968 additional granaries would be required across the region. Community granaries also exist in Cameroon, while within ASEAN a similar system of village grain banks exists in Laos. Under it, 'Families deposit a percentage of rice into the rice bank; the whole community can then draw on the bank if there is a drought or shortage [of] rice, or for use in crops.'<sup>51</sup> They can be integrated into national or supranational systems by providing a ready source of supply, which is regularly turned over. In times of crisis those in deficit areas can assist with distribution because of their local knowledge. However, the PREPARE study pointed to their deficiency 'in the face of a covariate shock, such as high and volatile food prices, which undermines their ability to purchase stocks - often requiring a fresh infusion of stocks.' It rated them as 'high' on speed of

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<sup>49</sup> Silva (2011), slides 7 and 9.

<sup>50</sup> This section draws extensively from information supplied in Oxfam (2011) and in PREPARE (2011), pp. 58 and 84-88.

<sup>51</sup> Quoted from [www.usaid.gov/closeup/rice\\_revolution.cfm](http://www.usaid.gov/closeup/rice_revolution.cfm) and [www.kpl.net/la/english/news/newsrecord/2011/July/21.7.2011/edn6.htm](http://www.kpl.net/la/english/news/newsrecord/2011/July/21.7.2011/edn6.htm).

delivery in an emergency and on sustainability (both as to capacity development and self-reliance). However, they were scored 'low' on the availability of grain and speed of establishment. It is hard to make a granary system reach all vulnerable people in rural areas, and they generally do not reach vulnerable populations in urban areas at all. Success would depend on building up an integrated system in which they would play an important part. One aspect is to require back-up support, probably from government, for management and training requirements and to make up losses either in cash or in kind in the event of adverse price movements.

The PREPARE study saw these further benefits, all of them of great developmental value:

'A granary system does not require a third party estimating demands of vulnerable people. It enables better-informed community members to react to the evolving situation on the ground. Each community has its own storage fully available, conditional on the community granaries being well managed by their committees... They can ... strengthen women's empowerment where women manage stocks.'<sup>52</sup>

#### How does APTERR compare with ECOWAS' six principles and four key factors?

Item by item, here is a brief comparison of the APTERR plan with the six principles laid down for a regional emergency food reserve by ECOWAS at the Dakar meeting:

1. The food stock should be an instrument of regional sovereignty, and aim at both food security and price stabilisation.
  - APTERR formally aims only at food security, not price stability. However, the model could be adapted to do both in any region that so desires. Operating only with ASEAN member states and three neighbours, it can be described as an instrument of regional sovereignty.
2. The food stock will be a fundamental part of the region's crisis response and linked to both local and regional early warning systems.
  - APTERR is fundamental to ASEAN's crisis response but it relies on the assessments of member governments rather than formal early warning systems. However, food security in the ASEAN countries is generally better than in the ECOWAS region, so early warnings are less necessary.
3. International solidarity is expected to act in support of regional policy, not as a substitute for it.
  - The signs suggest that so far, the 'Plus Three' countries have satisfactorily fulfilled this requirement vis-à-vis ASEAN.
4. The stock will be financed by national contributions in cash or in kind, as well as regional and international contributions.
  - APTERR is to be financed mainly by international contributions (from the 'Plus Three' countries), with much smaller contributions from the ASEAN member states. The latter are to be made mainly in kind, but this can include rice purchased on international markets. Contributions to the administrative fund are to be required in cash. Despite the greater prosperity of the ASEAN region, there is actually more emphasis on donors'

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<sup>52</sup> PREPARE (2011), pp. 86-87.

contributions than ECOWAS may desire in its own case - and more so than in the former AFSR system.

5. Management of the stock will be under ECOWAS' control and rely on broad consultations with all interested parties, based on the principles of transparency and accountability.
  - Stock management is fully controlled by the 10 + 3 countries. The degree of transparency and accountability will be discovered once it is in operation. However, one may already contrast the transparency of the Dakar conference with the lack of it surrounding the APTERR agreement, no copy of which could be found on either ASEAN's or APTERR's website one month after the ministerial agreement was signed.
6. The stock will be integrated with agriculture policy via its methods of supply (including regional preference and direct contracts with producers), the selection of crops, and methods of destocking which avoid market disruption.
  - APTERR forms part of the ASEAN Plus Three Comprehensive Strategy on Food Security and Bio-energy Development (APTCS-FSBD), 'the main goal of which is to provide umbrella [sic] for multi-sectoral cooperation among the ASEAN Plus Three Countries in ensuring long-term food security and bio-energy development.'<sup>53</sup> ASEAN 'is also pursuing a US\$150 million ten-year rice action plan in cooperation with the International Rice Research Institute (IRRI), focusing on higher yielding varieties and production technologies.'<sup>54</sup>

With respect to the four key factors listed by ECOWAS, APTERR appears like this:

1. Clear Purpose
  - The purpose of APTERR is quite clear. As we have seen, there are proposals for its further development, which might extend that purpose beyond the present boundaries.
2. Reliable Food Stock
  - Assuming that all of the 10 + 3 meet their requirements to supply rice to the reserve, and that the stock remains adequately turned over once it is in place, it should be satisfactory in this respect. However, as most of it is to be held in the 'Plus Three' donor countries, there may be questions about its accessibility in the event of an emergency. All of this is more easily achieved when the stock consists of only one cereal.
3. Timely and Transparent Trigger
  - This depends on the quality and speed of the response and decision-making of the ASEAN Plus Three governments, since no early warning system and no objective trigger mechanism is included.
4. Financially Viable
  - The presence of the Plus Three countries offers the greatest assurance of that. This aspect could be the biggest obstacle to success in regions which are not in close proximity to such prosperous partners.

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<sup>53</sup> ASEANWEB (2011), 'Joint Press Statement of the Eleventh Meeting of the ASEAN Ministers on Agriculture and Forestry and the Ministers of Agriculture of the People's Republic of China, Japan and the Republic of Korea (11th AMAF Plus Three)', October 7th, [www.asean.org/26673.htm](http://www.asean.org/26673.htm) (November 2011).

<sup>54</sup> Arnst (2009), p. 16.

## 5. Some other considerations for emergency food reserves

The sharp differences that we have found in the South-east Asian and African situations indicate how a regional reserve needs to be designed specifically for the region concerned. One-size-fits-all models will not work. ECOWAS made use of prolonged regional research and consultations for its proposed system rather than having it designed and determined by governments, the ECOWAS Secretariat or international donors alone. This might take longer but if the consultations are properly conducted and respected by all parties, the design is more likely to be successful in the long run. For these reasons, no blueprint for a food reserve is proposed in this paper. However, some further considerations are offered in this section.

### Bottom-up v. top-down

Policy on food reserves can be either ‘bottom-up’ or ‘top-down’. In most cases hitherto, top-down approaches were followed, under the design and control of national governments. However, that is not the only feasible method. Ousseini Salifou, the ECOWAS Commissioner for Agriculture, the Environment and Water Resources, described the interlocking needs of humanitarian relief and capacity-building to prevent emergencies:

‘No regional reserve affordable to our economies could respond on its own to a substantial food crisis, like those provoked by major climatic shocks or big increases in price. The first line of defence lies in nearby stocks for communities to mobilise. The second line of defence is national stocks, which national arrangements can make use of. The third line of defence is the regional reserve and mechanisms of solidarity, as between countries and at the international level. None of these three levels can be neglected if we want to pursue these twin goals: respond effectively to the needs of people affected by hunger, while sustainably strengthening their capacity to withstand such shocks... No country can accept the need to rely permanently on international aid in order to guarantee its citizens’ right to food.’<sup>55</sup>

This indicates a combined approach, using top-down methods as a way of supporting when necessary the fundamental strengthening of food security from below.

The important questions are where stocks are located and at what level they are controlled. The answers to both can be anywhere from the village grain bank to a global virtual reserve (as in the IFPRI proposal); and they can be at several different levels simultaneously. Any decision on this question depends in part on

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<sup>55</sup> Salifou’s speech at the Dakar meeting, pp. 4-5, translated by this author. In French this passage reads: ‘Aucune réserve régionale supportable pour nos économies ne pourrait répondre à elle seule à une crise alimentaire d’envergure, comme celles que provoquent des chocs climatiques majeurs, ou les hausses importantes de prix. La première ligne de défense, ce sont les stocks de proximité que les communautés peuvent mobiliser. La deuxième ligne de défense, ce sont les stocks nationaux, sur lesquels peuvent s’appuyer les dispositifs nationaux. La troisième ligne de défense, c’est la réserve régionale et les mécanismes de solidarité tant entre les pays, qu’à l’échelle internationale. Aucun de ces trois niveaux ne peut être négligé si nous voulons poursuivre un double objectif: répondre réellement aux besoins des populations frappées par la faim, tout en renforçant durablement leurs capacités d’affronter les chocs... Aucun pays ne peut accepter de devoir en permanence compter sur l’aide internationale pour garantir le droit à l’alimentation de ses citoyens.’

one's understanding of the nature of hunger and food shortages. There are two alternative views:

- Hunger can be seen as essentially a **personal, household or local** problem: each hungry person or household faces hunger in their own place and because of their own predicament. Resolving this requires an assurance of local access to food, fulfilling each citizen's right to food. That implies a bottom-up system, based on local and then national provision in the first instance.
- However, a more familiar interpretation internationally is that hunger is caused by the **inadequacy of supplies on organised markets**, and especially *global* markets in food products. This leads to an emphasis on the volumes of global supply and proposals for global or perhaps regional stocks.

Any decision to place food reserves (and food policies generally) at too high a level, and to concentrate on aggregate production and availability only, can lead to neglect of vital questions of domestic food production, access to food and local as post-harvest losses. High-level measures can also take a long time to achieve. In 1975 the U.N. General Assembly formally established a 500,000-ton International Emergency Food Reserve, to be put at the WFP's disposal, but it has never worked as intended. On the other hand, in many places a simple household or village grainstore can be built in a day or two and cost very little. And village or household stores need to be improved or provided in any case. They do not require global decisions but household, local or, at the highest, national ones - which can be much more easily achieved.

#### Rationalisation of African regions

Within Africa, an initial need is to remove the complexities and the overlapping boundaries of the various regional organisations. Thus, in the ECOWAS case it is found that the RESOGEST proposal is put at the level of UEMOA rather than ECOWAS as a whole. There are strong cultural and economic reasons why this preference should be made, but it does confirm the lack of clarity over the roles of various regional organisations below the level of the AU.

Likewise in the Horn of Africa there is uncertainty over the best organisation to undertake this work. There are national food reserves in at least three important countries of the region (Ethiopia, Kenya and the Sudan) and their operations deserve to be strengthened, subject to satisfactory governance arrangements. But at the regional level there is ambiguity here too. The creation in 2010 of an East African Common Market, covering the five countries of the East African Community, provided a compact and cohesive commercial platform for a regional reserve - reflecting some of the advantages available to UEMOA within the ECOWAS region. However, it excludes neighbouring countries with important food security needs such as Ethiopia and Somalia. These are covered by the Intergovernmental Authority on Development (IGAD), which moreover was established in 1986 with a mandate to promote food security across a region that extends from the two Sudans to Kenya, but excluding Tanzania, Rwanda and Burundi. The 2008 IGAD Summit resolved to 'Commence the process of establishing a regional emergency fund/facility in line with the Agreement Establishing IGAD'.<sup>56</sup> As has been proposed elsewhere, 'A regional [IGAD] reserve could eventually be composed of

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<sup>56</sup> [www.igad.org/index.php?option=com\\_content&task=view&id=139&Itemid=92](http://www.igad.org/index.php?option=com_content&task=view&id=139&Itemid=92).

stocks held at critical points around the region and composed of the main staple foods (e.g. sorghum, teff, millet, cassava and maize), roughly in proportion to local consumption.<sup>57</sup> It is worth investigating whether the Ethiopian grain exchange could play a useful role in such a project.

On the other hand, the 19-member Common Market for Eastern and Southern Africa (COMESA), extending from Libya to Zimbabwe, seems too big to be likely to manage this policy the most effectively. The more southerly members of COMESA, including Tanzania and Zimbabwe (but not Rwanda or Burundi), are also members of SADC, which as we have seen has its own food reserve programme. Once the overlapping claims of Africa's regional organisations have been sorted out in the area of food security, a feasibility study and a process of consultation for regional stock arrangements should be carried out in every region.

### The rising cost of inputs

Table 1 indicates how various international commodity prices have moved in relation to the prices of manufactured goods, as well as each other, over the period since the last big commodities boom, which came to an end in 1981.<sup>58</sup> From this table it can be understood that the crisis of recent years was essentially one of *industrialised, high-input* agriculture, not food production in general. The relative price changes show significant real increases in the prices of oil and phosphates (as a representative mineral fertiliser), no change or even a small decline in the global prices of cereals, and much larger real declines in price for major export crops of developing countries. This supports the concept of 'peak oil' and even 'peak fertiliser', but not that of 'peak food' (as it might be called), although this has in effect been widely propagated as the basis of the recent crisis. In order to achieve food security and adequate farm incomes, this calls into question the continued reliance on fossil fuels and mineral fertilisers as well as the import of cereals. This directly connects to the need to make food accessible in 'sustainable' ways under the U.N. Covenant on Economic, Social and Cultural Rights (see the top of p. 2 above).

It can also be seen that many traditional export crop prices (such as in coffee and cotton) have entirely failed to keep up with those of manufactures since the principle of export orientation came to dominate development strategy in the 1980s. Far from closing foreign-exchange gaps as was promised, export orientation has apparently increased them. There is competition between crops in agriculture.

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<sup>57</sup> Lines (2009), p. 30.

<sup>58</sup> Table 1 shows the trends in price of nine representative commodities, using a methodology found in UNCTAD (2003), Table A.2, pp. 457-58. In the first two columns it shows each set of years' average prices in a price index, in other words as percentages of the prices of 2000. As can be seen, some of these prices moved up sharply over those three decades or so while others were more static or even fell. These index numbers illustrate *nominal* prices and take no account of wider inflation. To gauge the price changes' implications for the international trade of commodity-dependent and food-importing countries, in the third column of figures the later period's prices are therefore adjusted (or 'deflated') to the increase in prices of manufactured goods between the two periods. In the fourth and fifth columns we can then see in percentage terms how far each 'real' average price rose or fell over this time.

There has been debate for over half-a-century about the long-term trends in commodity prices and national terms of trade. One lesson is the importance of comparing similar years in different commodity price cycles with each other. This is attempted here by the choice of the last three years of the earlier boom, and three years when the current boom was already well under way. It is impossible to be sure until after the event how long the boom will continue or how high prices will rise by the end, but the long history of commodity price cycles suggests that it will not be indefinite and will be followed by a cyclical downturn - and maybe a large one, if the precedent of the early 1980s is repeated.

Resources of investment, some inputs and land are required, and cannot be used at the same time for an unlimited number of crops. In some cases the competition can be for the same land, as between cotton and cereal crops; in others, less direct, for example between field crops and tree crops like coffee and cocoa. From the economic point of view there seems to have been a clear, if broad, distinction in price performance between cereal crops and the main export crops. This calls into question the broad policy insistence of the last 25 years on export orientation, as well as any trade-based understanding of food security. It bears out the warnings, made by UNCTAD and others from the 1980s on, of a 'fallacy of composition' under export orientation if all countries were to try to gain foreign exchange by expanding their exports at the same time, regardless of the state of the markets.

<b>Table 1. Average world primary commodity price indices over three-year periods, 1979-81 and 2008-10</b>					
<i>Commodity group</i>	<i>Average price index for 1979-81</i>	<i>Average price index for 2008-10</i>			<i>Percentage change in average real price, 1979-81 to 2008-10</i>
		<i>Index of actual prices</i>	<i>Deflated* to 1979-81 values</i>	<i>Deflated price as per cent of 1979-81</i>	
Base year: 2000 = 100					
<b>Globally traded cereals</b>					
Maize	140	216	140	100	0
Wheat	148	226	146	98	- 2
Rice	195	279	180	93	- 7
<b>Agricultural inputs</b>					
Phosphate rock	98	450	291	295	+ 195
Crude oil	122	281	181	149	+ 49
<b>Major export crops</b>					
Coffee - arabica	176	184	119	67	- 33
Coffee - robusta	334	208	134	40	- 60
Cocoa	294	316	204	70	- 30
Cotton	144	134	87	60	- 40
<b>Prices of manufactures</b>	<b>78.7</b>	<b>121.8</b>	--	--	--
<p>* Actual prices deflated by the Unit Value of Manufactured Goods. The prices are deflated between the two three-year periods by a factor of 0.6460574.  Sources: Author's calculations, using data from the World Bank and UNCTAD.</p>					
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## 6. Concluding comments

External agencies wanting to assist regional food reserves need to take a mobilising and developmental approach, not a controlling one. They will have to be well versed in the agricultural and commercial situation of any region or country where they operate. Particular restraint is called for from any agency whose experience lies in bringing food into an emergency zone from outside the region concerned, or in large, all-encompassing programmes which over a long period have underplayed the importance of agriculture and the domestic generation of food security.

As already discussed, it is important to tie in closely with early warning and monitoring systems such as the U.S.-funded Famine Early Warning Systems Network (FEWSNET) and the U.N.'s Food Security and Nutrition Analysis Unit for Somalia. Collaboration is also desirable with agencies like the International Institute for Tropical Agriculture for the development and use of non-traded crops, and the World Agroforestry Centre and others for the development of agroecological methods in response to the increased costs of imported inputs and for the mitigation of climate change.

Any African programme should aim as much as possible to rely for supplies on smallholders' surpluses, for the developmental effect that this would achieve. It should use regional sources, aiming to balance between regional surplus and deficit areas. These should be topped up where necessary from outside, but still in preference from developing countries, if possible in the same continent. The decentralised approach suggested here should help to develop the private agro-food sector in African countries (understood to include smallholder farms and informal food trade), as well as regional trade in agricultural and food products.

The bottom-up approach implies that food stocks and storage are primarily a matter for *national* policy, with regional reserves as a necessary backstop. Policies that successfully complement areas of food surplus with deficit areas should in the long run avoid the need to deploy reserves. The management structure needs to be controlled by the regional authority. At this higher level *more* coordination will be required in African regions than for APTERR because of the greater number of crops involved, the greater complexity of the relationships between surplus and deficit areas, and the use of early warning systems. Therefore its administration is likely to be more expensive than APTERR's. It is also most likely to succeed if it meets the standards of consultation and transparency which were the ambition of ECOWAS' Dakar conference in October 2011.

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## Annex

The full set of ECOWAS' Six Principles reads as follows in French:

1. Le stock régional est un instrument de la politique régionale intégrée de stockage, articulant régulation du marché (pour réduire l'instabilité des prix et ses conséquences pour les ménages) et stockage de sécurité. S'inscrit dans les instruments déployés par l'ECOWAP/PDDAA. Il intègre le «patrimoine» de la région, relève des instances statutaires de la CEDEAO. C'est un outil de souveraineté régionale.
2. La mise en place du stock régional de sécurité s'appuie sur les dispositifs d'information et d'alerte des pays et de la région. Elle s'inscrit dans la politique de prévention et gestion des crises définie par la région et constitue un des éléments fondamentaux de la réponse aux crises. A cette fin, le stock de sécurité régional est intégré dans le plan de contingence régional en cours d'élaboration.
3. La solidarité internationale intervient en appui de la politique régionale et ne s'y substitue pas. Elle doit respecter les principes de la Déclaration de Paris sur l'efficacité de l'aide.
4. Le financement du stock régional de sécurité combine des apports nationaux (en cash ou en nature), des apports régionaux (CEDEAO) et des contributions internationales. Ces ressources doivent être prévisibles et gérées dans la transparence.
5. La gouvernance et la gestion du stock de sécurité régional est placée sous la responsabilité de la CEDEAO. Celle-ci met en place des outils de concertation, coordination et gestion qui assurent la participation équilibrée des différentes parties prenantes: les Etats membres, les partenaires financiers, les organisations du SNU spécialisées, des ONG et de la société civile, des organisations de producteurs. Ces outils sont guidés par les principes de transparence et de reddition.
6. L'intégration dans la politique agricole et alimentaire, dans une perspective de souveraineté régionale. L'intégration dans la politique agricole passe par les modalités d'approvisionnement (préférence régionale, contrat d'approvisionnements avec les producteurs), le choix des produits, les modalités de déstockage pour éviter la déstabilisation des marchés. L'intégration dans la politique alimentaire et la stratégie de PGCA renvoie à la responsabilité première des Etats et de leurs organisations régionale dans le respect du Droit à l'alimentation des populations.'