
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:

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.’ 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.’

However, the terms of reference for this study, as well as the set-up of the APTERR programme itself, point mainly to the fourth item on the list. The underlying aim then is to satisfy 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 implies:

- 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.’

In designing any policy of food reserves, it is important to do so in ways that will facilitate the development of agriculture and agricultural trade, 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 fullest, 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 besides 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 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.

Those events in turn have recently arisen from three underlying 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 calls into question any recommendation to concentrate attention 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 also been associated with climate change, for example in the severe

drought in 2007 in Australia, the impact of which on world wheat exports was a major reason for 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.

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 arise in adapting it to African conditions. This is followed by a description of a regional initiative in the Economic Community of West African States (ECOWAS), including a comparison of the principles for a food reserve laid down by ECOWAS with those underlying APTERR. Further considerations affecting emergency food reserves are then discussed in section 5 and the last section makes some final remarks.

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). There were five ASEAN 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 was provided on what amounted to commercial terms.

At a meeting on October 7th, 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 and 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' proposed by senior Washington officials for the whole world in 2009. 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. 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 project, 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 through a food-for-work programme coordinated by the World Food Programme (WFP). In 2009 APTERR was used to donate 520 tonnes of rice from Thailand to victims of Typhoon Ondoy in the Philippines. 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 the 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 (mainly Indonesia, Malaysia and the Philippines). The main difference from AFSR, apart from the size of the reserve, is that it 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 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.' Use of the reserves is still to be paid for by the recipient country rather than donated. As under the AFSR, their utilisation will follow on a request from a member 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 has been formally established there are 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.' 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' although oddly it says nothing about emergencies.

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. He later stated 'that the APTERR agreement was also important to ensure that the price stability of supply and production were both maintained.' President Susilo Bambang Yudhoyono has recommended 'the creation of a food reserve system that can help lift farmers out of poverty.' However, this pressure comes from a rice-importing country, not one of the surplus countries whose good will is crucial to the effective operation of APTERR.

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. When comparing APTERR with the needs of other regions, four questions will be 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 dominates as the main staple food in all ASEAN countries, accounting for up to two-thirds of dietary energy supplies (DES). The 13 APTERR countries also 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. 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, and wheat, maize and sorghum in Ethiopia (although curiously not teff, the main traditional staple in the Ethiopian Highlands). One proposal for ECOWAS recommends holding stocks of millet, sorghum, maize and rice.

Maize is the main 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. This indicates the availability of a greater number of staple foods in each country, which should be good for nutrition and therefore deserves to be promoted. Moreover, 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 that food should be 'acceptable within a given culture'. That complicates the tasks of procurement, management and distribution of food reserves.

2. Reducing external vulnerability

In the light of the price surges since 2007, it is also sensible to reduce any reliance on the main globally traded and priced crops, which are wheat, rice and maize. The exact causes of the food price crisis are disputed, but it is beyond dispute that the problem arose in the global markets of those three crops. The crisis has been used to illustrate 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 had to be made by other agriculture producers in both importing and exporting nations.’

The author argues that it was the end of that forced period of ‘adjustment’, from large overhangs of cereal stocks in Europe and the U.S. which created the price surge and market crisis. In the words of another analysis, ‘global markets increase the size of adjustments which must be made, usually by those who can not afford to buy food.’

From this we deduce a need to reduce dependence on any staple foods which can be affected by such global market shocks. Wherever possible, emergency reserves should draw on local, national or regional production, and make use of other locally important staples. The aim is to reduce the vulnerability to external shocks, including those that have been transmitted through the world cereal markets since 2007 as well as those arising from climate change and ‘natural’ emergencies. In ecological systems, the risk of shocks is reduced by the existence of ‘modular’ arrangements, in which smaller units are used without strong links between them. Likewise it is reported that ‘a diversity of farm types and farming practices can reduce the vulnerability of food production to changes in climate.’ A diversity of crop markets will 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.

Consistently low world prices for those cereals since the mid-1980s had two effects on poor developing countries: to sharply increase their imports of those crops, 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, in competition with these imports. In current circumstances, higher prices for the global crops should logically provide a further stimulus for the production and consumption of domestic non-traded crops. This would have the advantage of reducing the impact of any future price shocks from the world markets. The choice of crops for storage in food reserves can play a part in achieving these goals.

3. Deficit and surplus areas

Where several staple foods are involved, the APTERR model distinguishing between the surplus and deficit countries of one crop would have to be modified. But in African regions most countries have food deficits, and surpluses are neither large nor necessarily permanent, with Tanzania and Zambia for example producing surpluses of maize in good years but not always so when their harvests are less. Much more often than in South-east Asia, food insecurity and even food emergencies in Africa arise from poor physical communications, exacerbated by the distances required for transport as population densities are generally low, and also from the much smaller extent of trade between African countries. The design of any regional reserve has to take these logistical and economic deficiencies into account, and where possible play a part in overcoming them.

In Africa it is therefore 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. This in turn should stimulate supply generally and gradually cut back the continent's overall food deficit. Food reserves should be designed to assist this process as far as possible.

4. Finance

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 Africa 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 emergency food supplies coming free from the WFP and other donors. But APTERR requires a recipient country eventually to pay for the emergency rice they receive. It is hard to see how this aspect of APTERR could be fully replicated – in particular when an emergency arises from a sudden increase in the prices of grain, as in 2007-08.

4. *The ECOWAS approach*

A rather different approach is being pursued by ECOWAS, which recently held a conference in Dakar, Senegal, in which three alternative plans for regional food reserves were presented. The conference 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 the reserves follow six principles, which can be summarised as follows:

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.

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 schemes described at the conference were:

1. A regional reserve called Pre-Positioning for Predictable Access and Resilience (PREPARE). This would be a five-year pilot project responding to the request of G20 Agriculture Ministers, involving the WFP and other agencies. It would serve 11 of ECOWAS' 15 member countries – those which are classified as both Low-Income Food-Deficit Countries and Least Developed Countries.
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 is one of various forms of provision and storage aiming to build food security from below.

The three plans are as follows.

1. The 'PREPARE' pilot programme – following the IFPRI plan

In 2009 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.'

Although 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', PREPARE's feasibility study presented at the Dakar conference imitates the first and third of them: a 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.

Most of the analysis in the 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. However, this could not be used if extreme global price volatility was not signalled first – apparently ruling out the use of the reserves for any natural emergencies. Any use of these stocks would later have to be replenished by the recipient country at the market price.

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.' Distribution would be achieved through schemes of targeted assistance, such as safety nets. The project's initial costs are estimated at \$44.3 million (including \$33.4 million for physical grain stocks) while its annual recurring costs are estimated at \$16.6 million.

In one respect, the feasibility study departs significantly from the recommendations we made in the previous section. 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.' But because of certain assumptions about availability in a crisis and acceptability across a broad range of the population, it assumes the initial composition would actually be in these ranges: maize 20-25 per cent, millet and sorghum 15-50 per cent, rice 30-60 per cent. This already looks like a bias in favour of traded crops and against the existing consumption patterns in the region. However, 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 the likely proportions in the actual reserves: more maize, nearly twice as much rice and less than one-third as much millet and sorghum as people in the region eat now. Given the long-term effects on eating habits that emergency supplies can have, such a sharp divergence from current consumption patterns should be resisted for all the reasons we have given.

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

This proposal has not reached the stage of a detailed feasibility study, but its outline bears a closer resemblance to the original AFSR. It would set up a pilot project in the eight countries of the Francophone West African Economic and Monetary Union (UEMOA). It 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.’

The first initiative towards this project was taken in 2007 by CILSS. 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.

As with PREPARE, the regional stock would contain millet, sorghum, maize and rice, but in entirely physical form. The participating countries’ national food reserves are estimated to require 1.5 million tons of grains, so 5 per cent going to the regional reserve would amount to 75,000 tons. This system is reminiscent of the AFSR’s ‘earmarking’ of part of the ASEAN countries’ national reserves.

3. The role that local grain banks can play

Oxfam reports the potential capacity of existing local grain banks in Burkina Faso, Mali and Niger to be 85,000 tons or more. At their best, as in a case cited in western Burkina Faso, they reduce pressure for migration out of the villages. They provide income from grouped sales to the WFP and have enabled local families to have three meals a day in the hungry season without having to purchase any other cereals. They function as either purchasing cooperatives or warehousing and sale cooperatives, depending on the village and the season. 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 can also provide a form of credit-in-kind, giving members access to grain which is then returned when their crop comes in. They also improve the quality of the food supplied because of the good storage conditions in the barns. Meanwhile, they provide a market for grain bank cooperatives in surplus areas, facilitating their sales and helping their farms to develop. This all supports the goals set out above of linking deficit and 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. Grain banks 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 also assist with distribution because of their local knowledge. Success will depend on building up an integrated system in this way.

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.'

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

Item by item, here is an assessment 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.

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 required.

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. The emphasis is more on donors' contributions than ECOWAS may desire in its own case.

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 ministerial agreement was reached.

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.' 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.'

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 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.

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 in less close proximity to prosperous financial partners.

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 has to respond to the particular needs of the region concerned. One-size-fits-all models will not work. ECOWAS made use of prolonged regional 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. There can be either a 'bottom-up' or a 'top-down' policy on food reserves. In most cases hitherto, top-down approaches have been 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 must be neglected if we want to pursue these twin goals: respond usefully 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.'

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

The important questions are where stocks are located and at what level they are controlled. This can be anywhere from the village grain bank to a global virtual reserve (as in the IFPRI proposal); or it can be at several different levels simultaneously. Any decision on this question will depend on one's understanding of the nature of hunger and food shortages. There are two broad alternative views:

- Hunger can be seen as an essentially personal, household or local problem: each hungry person faces hunger in their own place and because of their own predicament. Resolving this requires an assurance everywhere 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 common 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.

Deciding on too high a level for food reserves (and food policies generally), and concentrating on aggregate production and availability only, can lead to neglect of the vital question of access to food and other local questions such 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 household or village grainstore can be built in a day and cost very little. And village or household stores need to be improved or provided now, regardless of global decisions.

They do not require global decisions but household, local or, at the highest, national ones – which can be much more easily achieved.

Table 1. Average world primary commodity price indices over three-year periods, 1979-81 and 2008-10

<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					
Globally traded cereals					
Maize	140	216	140	100	0
Wheat	148	226	146	98	- 2
Rice	195	279	180	93	- 7
Agricultural inputs					
Phosphate rock	98	450	291	295	+ 195
Crude oil	122	281	181	149	+ 49
Major export crops					
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
Prices of manufactures	78.7	121.8	--	--	--
<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> <p>© Thomas Lines 2011</p>					

From Table 1, it may be read that the crisis of recent years was mainly one of industrialised, high-input agriculture, not food production in general: the relative price changes reflect 'peak oil' and even 'peak fertiliser', but not 'peak food' as it has been widely represented. In order to achieve food security as well as adequate farmers' incomes, this calls into question the continued reliance on fossil fuels and mineral fertilisers as well as the import of cereals. It can also be seen that, since the principle of export orientation came to dominate development strategy in the 1980s, many traditional export crops (such as coffee and cotton) have failed to keep up with foreign-exchange gaps – and that

principle has failed to meet countries' needs. This further calls into question a trade-based understanding of food security.

6. Final remarks

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 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.

Any African programme should aim as much as possible to rely for supplies on smallholders' surpluses, for the developmental effect. It should use regional supplies, aiming to balance between regional surpluses and deficits. These may 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 greatly help to develop the private agro-food sector in African countries (understood to include smallholder farming and informal food trading), as well as domestic and 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 important as a backstop. Policies that successfully complement areas of food surplus with deficit areas should avoid the need to deploy reserves. The management structure needs to be controlled by the regional authority, but at this level more coordination will be required in African regions than for APTERR because of the greater numbers of crops involved and greater complexity of the relationships between surplus and deficit areas. 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 seem to have been achieved at 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.'