

OPERATIONALIZING THE SAARC FOOD BANK: ISSUES AND SOLUTIONS

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Foreword

The Development Papers series of the United Nations ESCAP South and South-West Asia Office (UNESCAP-SSWA) promotes and disseminates policy-relevant research on the development challenges facing South and South-West Asia. It features policy research conducted at UNESCAP-SSWA as well as by outside experts from within the region and beyond. The objective is to foster an informed debate on development policy challenges facing the subregion and sharing of development experiences and best practices.

This paper by Mustafizur Rahman, Estiaque Bari and Sherajum Monira Farin, prepared for UNESCAP at the request of the SAARC secretariat, examines shortfalls in the policy framework and institutional architecture of the SAARC Food Bank (SFB) and offers solutions to operationalize SFB effectively. The SFB is one of the most potent initiatives adopted by South Asian countries to combat food insecurity through regional cooperation. Its high relevance is underlined by the fact that South Asia remains one of the most food-insecure regions of the world, accounting for close to one-third of the world's food deprived population. The SFB, once implemented, would provide ways to tackle short-term acute food deficiencies experienced in various parts of the subregion. Increasing incidences of extreme climate events, and resultant variability in food production, have amplified food insecurity concerns and the relevance of SFB. However, its operationalization has been mired in a mix of policy and institutional issues.

Though the concept of a SAARC Food Security Reserve (SFSR), predecessor of the SFB, was introduced as early as 1987, subsequent efforts were challenged by structural flaws in organization of reserves, failure of net food-importing countries to contribute to the reserves, insufficient financing provisions and operational guidelines etc. By comparing select international experiences with contingency food reserves and through primary surveys this paper offers a set of policy solutions to overcome these impediments of SFB. Among them are amendments to the SFB Agreement for strengthening institutional capacity, formulation of appropriate pricing and distribution strategies, establishment of a dedicated fund to meet financing requirements, and possible tie-ups with similar regional food reserve systems and international organizations.

The paper underscores the rationale and increasing relevance of regional food reserves as a safeguard mechanism, preventing natural disasters, seasonal discrepancies, market turbulences and other external shocks from aggravating food insecurity in South Asia. We hope that the findings of this paper will inform and aid the process of operationalization of the SFB, and generate strong political support for raising its efficiency and effectiveness.

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Operationalizing the SAARC Food Bank: Issues and Solutions

Mustafizur Rahman, Estiaque Bari and Sherajum Monira Farin¹

Abstract

The SAARC Food Bank (SFB) embodies collective effort of South Asian countries to ensure food security at times when emergencies lead to largescale disruptions in food production, transportation, accessibility and availability. In view of the urgent need for an appropriate institutional architecture to address the ever-rising food security concerns in South Asia, issues of proper operationalization of the SFB have assumed critical importance. This paper enquires into the underlying reasons why this regional arrangement has failed to deliver the expected results and how to raise the efficacy of the SFB in order for it to service its stated mandate of deploying food reserves to affected areas during food emergencies. Based on a comparative study of select international best practices and primary surveys, the paper offers concrete recommendations for determination of thresholds that should define food emergency situations, modalities of distribution of food from the SFB, design of pricing strategies, maintenance of the food stock and ensuring quality of the reserves, derestriction of trade in food grains during emergencies, establishment of a dispute settlement mechanism, and options for institutional tie-ups with similar outfits.

JEL Code(s): Q10, Q13 Q18

Key Words: Food Security, SAARC Food Bank, South Asia, Regional Cooperation

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Operationalizing the SAARC Food Bank: Issues and Solutions

I. Introduction

Whilst food security is one of the most fundamental rights of human beings, many countries are still not in a position to guarantee this right to a large number of their citizens. Evidence suggests that, countries with significant share of population suffering from high degree of malnutrition are severely constrained in their quest for economic development (FAO, IFAD and WFP, 2002). As is known, efforts towards food security at national levels have now been reinforced by global commitments enshrined in the 2030 Agenda for Sustainable Development. Goal 1 of the SDGs (Sustainable Development Goals) sets out the target to eliminate hardcore poverty from the world², while Goal 2 aspires of a world with zero hunger³, by 2030. In this backdrop, it is only to be expected that, addressing food security concerns has come to receive priority attention from policymakers, at national, regional and global levels.

By all accounts, South Asia continues to remain one of the most food-insecure regions of the world (FAO, 2015). In context of the increasing demand arising from a growing population, threats of climate change and changes in production structure, the risk of further accentuation of food insecurity situation has emerged as a real one for South Asia (Ahmed and Suphachalasai, 2014). Sixty percent of the diet in South Asia comes from cereals, roots and tubers (FAOSTAT, 2016). Rice and wheat (referred to as foodgrains in the paper) are the staple food for most people in South Asia. Addressing the rising demand for foodgrains is an ongoing challenge for policymakers in all countries in South Asia. South Asia has achieved commendable success in rising up to the formidable challenge of ensuring food security for its citizens (Rahman, Bari and Farin, 2017). According to head count ratio (at USD 1.90-a-day), poverty in South Asia has declined over the recent past, from 44.6 in 1990 to 15.1 in 2013. This impressive progress is well-reflected in various dimensions of food security (World Bank, 2016). However, in spite of the commendable progress in areas of poverty alleviation and hunger amelioration, according to the authors' estimation by using the World Development Indicator (WDI) data, about 320 million South Asians live on less than USD 1.90-a-day, and an estimated 280 million people remain undernourished. According to the Global Food Security Index (GFSI) data, all countries of the South Asian Association for Regional Cooperation (SAARC) continue to belong to the vulnerable category in terms of food security score⁴. This state of affairs do transmit a clear message as to the urgent need for designing and pursuing forward-looking strategies to address the attendant food insecurity concerns.

This paper seeks to contextualize the current food security scenario in South Asia with a view to operationalize the idea of a collective regional initiative to improve food security situation in South Asia as embedded in the concept of the SAARC Food Bank (SFB). It goes without saying that, the modality of ensuring food security through regional collective action ought to take as its reference point

²Goal 1: End poverty in all its forms everywhere.

³Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

⁴Bangladesh (with score 36.8) belongs to the 'Needs Improvement' category while other countries such as India (with score 49.4), Nepal (42.9), Pakistan (47.8) and Sri Lanka (54.8) are in 'Moderate' category (Annex Table 2).

the dynamics of production, distribution, trade, stock and reserves of rice and wheat. Common topography, ecology and geography, significantly large border areas, shared risks of trans-border environmental damages of high frequency and intensity, and susceptibility to production shortfall – all these factors add to South Asia’s concerns as regards maintaining food security. There is also a spatial dimension to this vulnerability which emanate from similar nature of calamities and adverse environmental impacts in South Asia. This reinforces the need for common region-wide initiatives to tackle the attendant challenges. Since the impacts of disasters and calamities, whether human-made or natural, could transcend national boundaries, and give rise to cross-border problems, there is an added justification to take appropriate collective measures to forestall such possibilities. In view of this, an effective response mechanism to address the challenges ought to be multilateral, relying on regional cooperation among countries that share common geography, history and culture, and whose economies are increasingly interconnected (Ingram, Ericksen and Liverman, 2010). It is pertinent to recall here that, the need for collective endeavors to ensure regional food security, with participation of regional countries, was recognized by the SAARC early on. Indeed, this recognition led to the establishment of the SFB in 2007. The task at hand is to identify appropriate institutional architecture and operational modalities to enable SFB to service its mandate of helping SAARC member countries to address food-emergency situations through efforts based on partnership and sharing.

Methodology

The paper is based on review of relevant secondary evidence, use of quantitative tools, key informant interviews (KIIs), and focus group discussions (FGDs). KIIs and FGDs were participated by representatives of key stakeholder groups. Review of relevant literature was carried out to glean the needed information from secondary sources which included published materials and relevant documents, agreements, regulations and meeting minutes pertaining to the SFB. Review of cross-regional experiences in ensuring collective food security was undertaken with a view to gain learnings; possibility of replicating some of the pertinent measures was examined to draw insights for the SFB. Analytical exercise was conducted by using the most updated secondary data available from the World Development Indicators (WDI), UNCTADstat (statistical database of the United Nations Conference on Trade and Development) and Trade Map. Quantitative assessments (meta-analyses) were based on latest FAO (Food and Agriculture Organization of the United Nations) dataset. Estimates of production shortage at country level were made on the basis of certain assumptions (spelt out in the Annex). Reserve adequacy for the SFB were estimated on the basis of possible production shortages at country level.

This introductory section is followed by three sections. Section 2 provides a brief overview of the state of production, demand and trade in foodgrains, and draws relevant insights from review of literature and cross-regional experiences. Section 3 lays out the background of setting up of the SFB, its structure and challenges of its operationalization. Section 4 comes up with a number of recommendations towards raising operational efficacy of the SFB.

II. Stylized Facts and Review of Literature

Some stylised facts

It is to be kept in mind that South Asia is a major player in global foodgrains production. According to the FAO statistics, in 2014, South Asia alone produced 30.4 percent, 17.9 percent and 3.3 percent of global production of rice, wheat and maize, respectively. India’s share in production of foodgrains is understandably the highest in the region. As per authors’ calculation, South Asia as a region is a net importer of foodgrains, with India and Pakistan being the only two net exporting countries (Annex

Table 1). In terms of adequacy of food at the disposal of citizens, Bangladesh, India and Pakistan are countries with food surplus; Afghanistan, Nepal and Sri Lanka have deficit in foodgrains availability. Bangladesh is a net importer of foodgrains despite having a surplus in terms of rice production.

However, intra-regional trade of the SAARC countries has remained at very low levels, at about 6.2 percent of their global trade (Annex Table 2), in spite of the fact that, South Asian countries have opened up their economies significantly over the past years, as evidenced by the relatively higher degree of openness (Annex Table 3). India and Pakistan are major exporters of foodgrains in the region; while majority of SAARC members have significant trade in foodgrains with India, Afghanistan's trade is mostly with Pakistan (Rahman, Bari and Farin, 2017). Several features of foodgrains production and trade in South Asia are pertinent in the context of the subsequent discussion on SFB in this paper: *first*, status of South Asian countries vary with regard to the correspondence between demand and supply of foodgrains. *Second*, surplus/deficit status tend to change in view of production performance in particular periods. *Third*, bottlenecks in the movement of foodgrains between origin and destination involves significant delays. *Fourth*, both tariff and non-tariff barriers inform the nature of trade in foodgrains. *Fifth*, a price of the foodgrains that tend to evolve through regional trade could serve as a reference point for price fixation in operationalizing the SFB.

All SAARC countries have a number of policies in place to address food and nutrition concerns and reducing market uncertainties.⁵ Common core elements of these policies are: raising agricultural productivity, development of functional market structure, adoption of sustainable technological options, investment in agricultural research, and trade and tariff policies relating to foodgrains and distribution of food among vulnerable groups. Crop insurance policies are in place in some SAARC countries to provide safeguard to foodgrains-producing farmers against possible crop losses; however, concerns remain about the effectiveness of those schemes (Rahman, Bari and Farin, 2017). Agricultural policies pursued by SAARC countries in general aim to create a conducive and stable environment towards production, availability, and accessibility of food. Nutrition security is specifically addressed through various safety net programmes (Rahman, Bari and Farin, 2017). All major crop-producing South Asian countries (India, Pakistan, Bangladesh and Sri Lanka) maintain national buffer stocks through market-based procurement policies. In addition, all SAARC members have functioning public food distribution systems (PFDSs) with built-in networks, storage facilities, and entry and exit mechanisms for foodgrains albeit on limited scale (Rahman, Bari and Farin, 2017).

In spite of the above, as past experiences reveal, there is a need for collective efforts in South Asia to ensure food security at times when emergencies lead to largescale disruption in foodgrains production, transportation, accessibility and availability. Hence the rationale for the SFB and importance of raising its operational efficacy.

⁵ Bangladesh: National Food Policy Plan of Action 2008-2015 (PoA 2008), National Food Policy (2006); Bhutan: Food and Nutrition Security Policy of the Kingdom of Bhutan 2014 (FNSP 2014); India: National Food Security Act 2013 (NFSA 2013); Maldives: Agricultural Development Master Plan 2006-2020 (ADMP 2006); Nepal: Agriculture and Food Security Project's Country Investment Plan (AFSP 2010); Sri Lanka: National Agricultural Policy (NAP-SL) and the National Nutrition Policy 2010 (NNP 2010).

Theoretical framework

In general, three sets of countries are involved in foodgrains trade: (i) countries that almost always export foodgrains – these rarely suffer from lack of food availability and are capable to mitigate temporary supply shock because of production failure, (ii) countries that almost always import foodgrains-variability of foodgrain price in the world market determines the rate of inflation in their domestic market and (iii) countries that are normally self-sufficient in foodgrains production; however, these are in need of import if natural disasters cause significant production shortages. Evidently, second and third set of countries are not adequately capable to mitigate temporary supply shocks (Gilbert, 2011). The argument is that a temporary negative supply shock that causes a fall in supply (in this case e.g. production shortfall of foodgrains due to natural calamity or export restriction) which then results in a rise in commodity prices which in turn has negative implications for access and availability of foodgrains. More precisely, a temporary negative supply shock will shift aggregate supply curve upward and intersect the aggregate demand curve at the new equilibrium E_2 (Figure 1). As a consequence, there will be food price inflation and equilibrium aggregate output of foodgrains will come down. Due to lack of availability of foodgrains marginally non-poor households and households below the poverty line will be afflicted by food insecurity. There is a possibility that even a non-poor, food-secure household could find itself falling into the poverty trap with no, or inadequate, access to food. During emergencies, high import bills for foodgrains create balance of payment pressure in import-dependent countries.

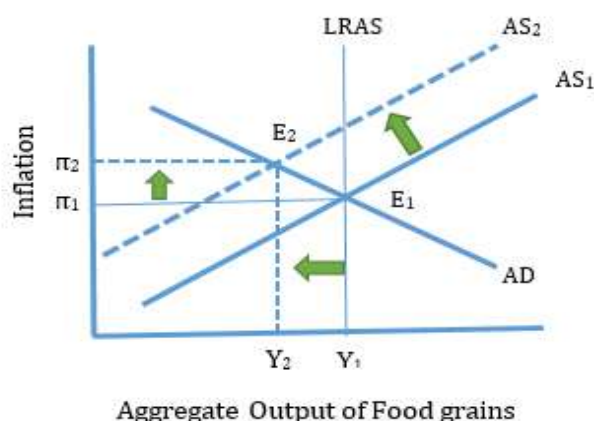


Figure 1. Effect of production failure due to natural disaster: A negative supply shock scenario

Evidence from literature

Food reserves are usually geared to protecting consumers from possible adverse impacts of price volatility (Rojko, 1975; Briones, 2011; Gilbert, 2011). Most common such reserves are: (a) *Food Emergency Reserves* with an objective to guarantee availability, accessibility and utilization of food in situations of natural disasters or external shocks; and (b) *Price Stabilization Reserve* which involves buying foodgrains through future short sales when prices are low, and selling at a reduced rate when prices are high in the commodities market (Briones, 2011). For instance, national food reserves – or buffer stocks – are built up through domestic procurement and imports, and are intended to influence price transmission from international to domestic markets and deal with inter-seasonal price fluctuations.

In times of national food crisis, be it originating from production shortage, or price volatility, movement of foodgrains across borders get disrupted (Joerin and Joerin, 2013). Dependency on global markets for staple foods proves to be largely ineffective in the face of outright export bans, minimum export prices, fiscal-monetary policies to incentivize or disincentivize trade (as may be needed), and other non-tariff barriers (NTBs) that tend to be put into action with a view to ensuring national food security by major net exporting countries (Childs, 2009). Oftentimes, such policies tend to aggravate an already volatile

situation and unsettle global foodgrains market. For instance, in the wake of 2007-08 global food crisis, many foodgrains-exporting countries such as Argentina, China, India, Indonesia, Kazakhstan, Russia, Thailand, Ukraine and Vietnam had taken measures in an attempt to reduce respective risks, assuage apprehension of the populace and ensure stability in the domestic market (Joerin and Joerin, 2013; Childs, 2009). On the other hand, importing countries had to encounter a situation where supply of foodgrains in the world market was severely constrained.⁶ As a consequence, it was the marginalized sections of the society which suffered the most (Dawe, 2010). Experience of the global food crisis of 2007-08 demonstrates that reliance on market mechanisms alone is not adequate to ensure regional food security in times of crisis (Belesky, 2014). In addition, variability in agricultural production originating from climate impact, has added new dimensions to the food insecurity concerns (Ahmed and Suphachalasai, 2014).

In this backdrop, for a production-deficit and importing country, relying solely on trade in foodgrains in times of emergency may not be enough to maintain food security. It is to be noted that even in normal times, trade in foodgrains is adversely impacted because of transport and trade facilitation-related constraints that lead to delays and cost escalation (Annex Table 2). As is known, during periods of food shortages and natural disasters, speed of foodgrains delivery is of paramount importance. Thus, proximity between supply-demand locations assumes high importance. During emergencies, time needed to ensure access to foodgrains could indeed mean the difference between life and death. For example, Bangladesh, one of the net food-importing countries in SAARC, needs two to three months of turnaround time (depending on the distance) to import foodgrains from abroad, mostly from Thailand, Vietnam or Russia through international tender. Importing foodgrains from most competitive source during times of crisis is not a viable option for a country in need of urgent food supply. The main objective of a regional emergency reserve is to improve the timeliness of emergency food aid transfers to meet urgent needs following a disaster.

There is a wide recognition in relevant literature that, regional food reserves could play an important role, in parallel with local (as also international) reserves, in alleviating food insecurity in emergency situations and times of crisis (Toyoda and Suwunnamek, 2011). Historically, stockpiling of agricultural commodities— particularly staple grains – has played an important role as a buffer to address likely adverse impact of natural disasters, calamities, seasonal discrepancies and market turbulences (Murphy, 2009). Such food reserves function as a safeguard mechanism to tackle after-effects of major production failures and global and local price upsurge and trade restrictions, in the backdrop of the inelastic nature of demand for staple foodgrains. The economic rationale of having regional food reserves includes taking advantage of economies of scale and enhanced scope for price stabilization through access to larger reserves, balancing demand-supply mismatches, and wider scope of supply and distribution systems within particular regions. Such reserves are able to function as an emergency food supply which could help to speed up food assistance response and enhance outreach to the needy. Emergency food reserves are aimed at making food available to vulnerable groups in times of crisis; their objective is to function effectively without disrupting regular private market operations. Food stocks, therefore, do appear to be a potentially effective means of protecting poor and vulnerable households from low food availability and high food prices (Gilbert, 2011; Curtis, 2014). Price stabilization and government buffer

⁶One has to keep in mind that the traded amount of foodgrains, particularly of rice, as share of total global production, unlike many other commodities, is rather small (for rice this was about 9 percent in 2015). Consequently, any shortage in the global tradable supply tends to give rise to disproportionate and knee-jerk response on the part of governments in anticipation of any speculative behaviour in the market.

stocks play an important role in food import-dependent countries (von Braun and Torero, 2009; De Castro *et al.*, 2013). Thus, the issue of a collaborative approach to safeguard food security is both relevant and important.

Lessons and learnings from other cross-regional experiences

A number of regional groupings have set institutional arrangements to address food security concerns through cross-country collaborative initiatives. The modalities prevalent in these regional structures and their experiences could provide useful information for the purposes of raising operational efficacy of SFB.

Regional food reserve in ASEAN has been in place since 1979 in the form of ASEAN Food Security Reserve (AFSR) and ASEAN Emergency Rice Reserve (AERR). AFSR's objectives were to address regional food emergencies and offset any urgent food crisis with the earmarked 50 thousand MT of rice reserves (which was raised to 87 thousand MT under the pilot project titled East Asia Emergency Rice Reserve (EAERR)). However, neither AFSR nor AERR/EAERR addressed an emergency situation prior to 2006, when EAERR provided 100 tonnes of rice to flood victims in Indonesia (Briones, 2011). In 2011, EAERR was transformed into the ASEAN Plus Three Emergency Rice Reserve (APTERR) with inclusion of China, Japan and South Korea as part of the agreement, this gave a new lease of life to this regional food security initiative. The three new entrants provided an additional 700 thousand MT of rice. The APTERR was to be governed by a Council, with day-to-day management to be carried out by a Secretariat. The APTERR was formally launched in March 2013. To facilitate the operationalization of the reserve fund, the thirteen members of APTERR have agreed to create a fund worth USD 4 million (with 75 percent contribution from China, Japan and South Korea) (APTEET, 2011).

Salient features of the APTERR are (i) unlike AFSR, reserve is owned by APTERR and funds have been made available for operationalization and maintenance of the reserve; (ii) rice is stored in three donor countries and also in the rice-importing countries of APTERR, to offset the consequences of likely export ban that was experienced by AFSR during the 2007-08 food price crisis; (iii) unlike the AFSR, APTEER is not only an emergency food reserve, but also aims to smoothen price volatility in the market; (iv) there are provisions of dispute settlement in the arrangement; (v) definition of emergency is clearly articulated; (vi) the modality for price trigger is still being discussed and developed, it was decided that the transactions should be based on international market price on a cash basis; (vii) forward contract is valid for three years (Lines, 2011; Briones, 2011; Jongskul, 2012). Operational efficacy of APTERR has increased significantly since 2013 benefitting its member countries.

RESOGEST was set up by Sahel countries of West Africa, along with the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) as a food reserve system to provide guaranteed access to food in the event of scarcity. The primary objective of the RESOGEST is to facilitate cereal trade among and between countries with net surplus and net deficit through triangular operations (purchase/sales/loans), and stimulation of sub-regional trade in agricultural produce and food products (Lines, 2011). Member countries pledge 5 percent of their national food stock to the regional food reserve (RESOGEST, 2012). The RESOGEST network is mandated to establish an extensive information system (Rahman and Khaled, 2012). Initiatives are in place, to improve capacity on technical and financial management and use of all available resources to mobilize food stock during emergencies, taking advantage of each other's information system including existent early warning and

surveillance systems. In cases of emergency, the network is to ease the process of inter-country cereal transfer beyond the regulations of regular trade. This is geared to reducing operational cost.

However, the reserve has never been used by the member countries mainly because of the following constraints: (i) lack of a clear definition of emergency situation; (ii) absence of an well-established reference price and modalities for cereal trading; (iii) diverse nature of staple food in the region which varied across member countries; (iv) absence of quality control mechanisms for cereal trading (in cases of loan and grants); (v) inadequate size of the committed reserve at national level to address regional emergency food crisis; (vi) no early warning system (Lines, 2011; The Rural Hub and ECOWAS, 2012).

The Caribbean Community (CARICOM) was established in 1973 as a framework to promote cooperation among the 11 member states. Unlike APTERR and RESOGEST, the regional initiative of CARICOM is not only limited to ensuring food security, but also covers broader economic issues (Byron, 2014). CARICOM has a unique Regional Food and Nutrition Security Policy (RFNSP). CARICOM countries have low domestic food production capacity and are highly dependent on food import. Countries' vulnerability was particularly exposed during the financial crisis of 2007-08. They are susceptible to food price volatility and climate-induced shocks.⁷ In order to reduce food- and nutrition-related vulnerabilities, the community has developed a 15-year (2012-2026) regional food and nutrition security action plan to help implement the objectives of the RFNSP. Two main objectives of the RFNSP are to: (i) create regional and national 'value chains' by establishing links between small- and medium-sized farmers and food industries in the region and (ii) reduce imports of key commodities from the United States such as feed corn (Wilson, 2016). In this backdrop, the food- and nutrition-related programmes of CARICOM are closely interlinked with greater regional agricultural management initiatives that go beyond the limited focus of addressing and mitigating food security-related efforts. CARICOM experience is relevant for operation of SAARC Agricultural Centre (SAC) which is geared to improving the overall food security situation in South Asia. CARICOM also puts emphasis on developing a strong regional Information System for Food and Nutrition Security (ISFNS), and regional information system on water-sharing in order to improve water resource management for better agricultural production.

The experience of regional food security initiatives mentioned above is pertinent for operationalizing the SFB both in terms of what to do and what not to do. For example, for the SFB to be effective, size of the reserves need to be adequate, exchange of information is critically important in times of emergency. On the other hand, in absence of well-crafted definitions of emergency situation, trigger price, repayment arrangement, and a proper early warning system, it is difficult to operationalize food reserve systems such as the SFB.

⁷The food price volatility arising from the food and financial crises of 2008-09 and 2011-12 has forced the region to confront serious financial, food security and health-related consequences of such high dependence on food imports.

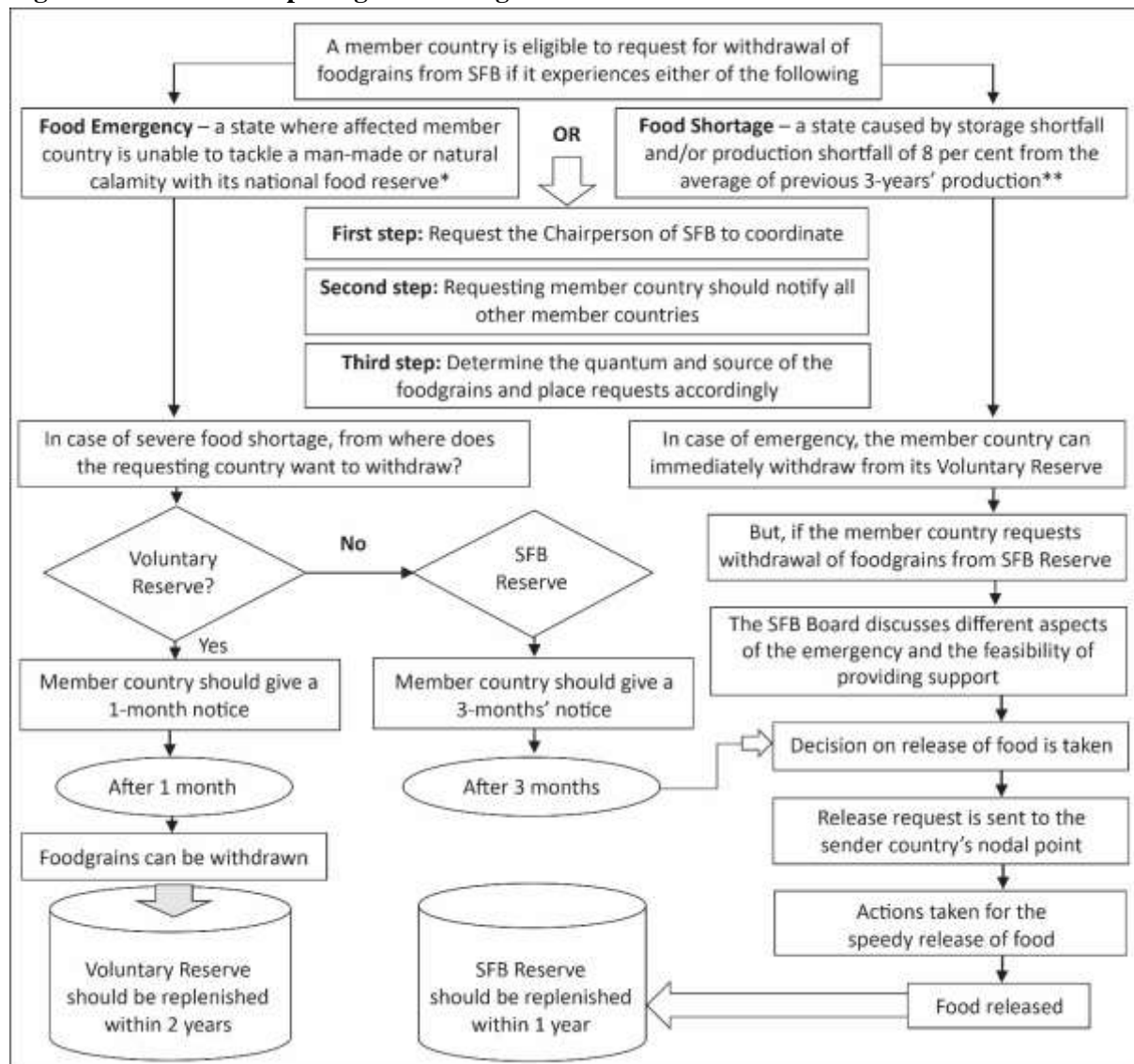
III. Evolution of SFB and Challenges of its Operationalization

Issues of operationalization of the SFB are discussed henceforth by drawing insights from the above discussion and with a forward-looking perspective. This section reviews the background of the SFB initiative, summarizes its evolving mandates and portrays the current structure of the SFB, while highlighting the operational challenges.

Background of the SFB initiative

SAARC Food Security Reserve (SFSR), which predates the SFB, was established in 1987 as a collective endeavor to address the concerns of food insecurity in South Asia. This initiative faced implementation challenges and failed to get off the ground owing to a number of reasons: (i) structural flaws; (ii) lack of specific provisions regarding financing of the costs involved; (iii) absence of guidelines to attain the objectives; (iv) absence of an appropriate monitoring authority to supervise, execute and follow up the agreed activities; and (v) failure of net food-importing countries to contribute to the reserves to the extent needed (Mittal and Sethi, 2009; Rahman and Khaled, 2012; Raihan, 2011; Pant, 2014). In view of this, decision was taken to establish the SFB at the 14th SAARC Summit held in Islamabad in 2007. SFB's evolving mandate at present includes: (i) inclusion of food shortage as an eligibility criterion for withdrawal of foodgrains in addition to emergency; (ii) specification of procedures regarding withdrawal and release of foodgrains; (iii) clear indication of the amount of reserve to be earmarked; (iv) specific requirements in maintaining quality of foodgrains; (v) instructions for proper storage; and (vi) guidelines on price negotiations (Rahman and Khaled, 2012; Pant, 2014). SFB is expected to act as a regional food security reserve for the SAARC member countries during both normal time and at times of food shortages and emergencies, provide regional support to national food security efforts, and foster country partnership and regional integration. A pictorial presentation of the procedural flow of actions as regards eligibility, withdrawal, release and replenishment of foodgrains from the SFB is presented in Figure 2.

Figure 2: Flow chart depicting functioning of the SFB



Source: Prepared by the authors based on information gleaned from the SFB Agreement.

Note: *At the 9th SFB Board Meeting it was agreed that 'food emergency' will be replaced by 'emergency'.

**The provision has been modified with the deletion of the trigger criteria (8 percent production shortfall from the average of previous 3-years' production). However, these amendments are to be approved at the next meeting of the Council of Ministers.

Challenges of operationalizing the SFB

Regrettably, the SFB could not be operationalized despite some of the subsequent amendments to facilitate its operationalization.

Stringent rule for withdrawal of foodgrains from SFB

According to Article V (3) of the SFB Agreement, for a member country to be eligible to seek help from the SFB, production of foodgrains of that country in the concerned year had to be 8 percent lower than the average of the production of the previous three years. This stringent rule for withdrawal of foodgrains from SFB reserves is stated to be a major stumbling block towards effective operationalization of the SFB. Review of the SFB Board meeting minutes suggests that, this issue of

reassessing the minimum threshold criteria has been an agenda for discussion since the 2nd SFB meeting in 2009. At the 18th SAARC Summit, the leaders gave directions to eliminate the threshold criteria. At the most recently held 9th Meeting, the SFB Board has decided to amend Article V (3), with a view to delete the trigger criteria relating to withdrawal of foodgrains from the SFB. However, this amendment is yet to be approved at the meeting of the Council of Ministers. The results presented in Box 1 justifies the decision of the Board to do away with the trigger threshold.

Box 1: Results of Meta-analysis

Results of meta-analysis (Annex Table 5) based on production data for foodgrains at country level (FAOSTAT) suggest that, if production shortfall of foodgrains in 2015 was 8 percent lower than the average of the production of the previous three years (2012, 2013 and 2014), the entire SFB reserve would be adequate to support the needs of Afghanistan, Bhutan and Sri Lanka only. Estimates also indicate that, the SFB has reserve adequacy to support only 2 percent of India's admissible production shortage (of the 8 percent mentioned above), while it is equivalent to only 12 percent and 20 percent of shortfalls in cases of Bangladesh and Pakistan, respectively (Annex Table 5).

Similar exercises have been carried out with varying extent of possible production shortfall (5 percent, 3 percent and 1 percent). Results are presented in Annex Table 5. The results are similar as in the above cases concerning major agricultural countries (India, Pakistan and Bangladesh) of SAARC. At the level of 5 percent admissible production shortfall, the SFB would have reserve adequacy to support only 4 percent of India's production shortage, while it would be equivalent to only 18 percent and 31 percent, respectively, for Bangladesh and Pakistan. Similarly, if the shortfall criteria is set at 3 percent, it is observed that the SFB would have reserve adequacy to support only 6 percent of India's admissible production shortage, while for Bangladesh and Pakistan, these would be 31 percent and 52 percent, respectively. Furthermore, if the shortfall criteria is set at 1 percent, the SFB would have reserve adequacy to support only 19 percent of India's admissible production shortfall, while it will be able to cater for 92 percent of Bangladesh's admissible production shortfall (Annex Table 5). Thus, one finds that the reserve was not adequate enough to address the production shortfall estimated on the basis of 3-years' average production.

Another dimension of the abovementioned conditionality was tested by comparing the production of 2015 with the average of previous three years (2012 to 2014), five years (2010 to 2014) and seven years (2008 to 2014), juxtaposed against the criteria of production shortfall of variable percentages (8 percent, 5 percent, 3 percent and 1 percent). The results are presented in Annex Tables 5, 6 and 7, respectively. Here also, similar patterns of inadequacy of reserve was observed.

Conditionality met, but SFB never made use of

A meta-analysis was undertaken to examine whether the threshold criteria alone was responsible for non-functionality of SFB. The exercise was based on country-level production data retrieved from the FAOSTAT. The analysis reveals that there were four cases where production of foodgrains dropped by 8 percent compared to the average of previous 3-years' production. In 2008 and 2011, Afghanistan experienced 29.1 and 13.9 percent production shortfall in foodgrains, respectively, compared to the average production level for the preceding three years. Similarly, Pakistan experienced 9.6 percent production shortfall due to the prolonged flood experienced in 2012 (Annex Table 7). Most recently, in 2014, Sri Lanka had experienced nearly 18 percent production shortfall due to the drought in most parts of the country before the main harvesting season (Annex Table 7). Thus, the notion that SFB could not

be operationalized because no SAARC member has yet experienced the particular level of emergency food situation that meets the high threshold of eligibility is not fully corroborated by the evidence on the ground.

Inadequate quantum of reserve

Initially, at the time of the first Meeting of the SFB Board in Colombo in 2008, members agreed to have a reserve of 243 thousand metric tonnes (MT) for the SFB⁸. Later, as per endorsement at the 36th Session of the Standing Committee, the quantum of reserves was doubled at the 3rd SFB Board Meeting.⁹ Despite this, analysis in Box 1 shows that, even at 1 percent admissible production shortfall compared to the previous 3-years average, India and Bangladesh cannot be adequately supported even if the entire SFB reserve of 486 thousand MT was put at the disposal of respective countries (Annex Table 5). In view of the above analysis, the SFB reserves will need to be significantly raised for its operational relevance.

Absence of agreed pricing modality

At the 4th Board Meeting of the SFB in Dhaka, modalities of *deferred payment* were discussed highlighting specific equations (Rahman and Khaled 2012; Pant 2014). However, members were not able to reach an agreement about the pricing modalities. The reference export price has not been specified either. If the reference price relative to which the discounted price is set, is itself being high reflecting the forces of supply-demand of the market, then it is difficult to meet the humanitarian objectives. The price to be paid by the receiving (affected) country also includes transportation and administrative costs in addition to costs incurred on account of other logistical supports. Determination of all these costs require access to certain information, and time is rather scarce in times of emergency. Arriving at an acceptable, reasonable, humane and concessional price level continues to remain a significant challenge in determining the price at which food is to be accessed.

Lack of dedicated funds for SFB

No dedicated fund is available for undertaking the operational costs of the SFB. Costs incurred in the operations of the SFB are to be financed by the SAARC Secretariat. The storage systems across countries for rice and wheat are different and involve divergent technical requirements. The system of maintaining the storage of foodgrains and ensuring that required quality standards are maintained,¹⁰ involves significant amount of funds along with administrative- and infrastructure-related resource allocation which further contributes to cost escalation. Budgetary allocations (as a share of respective national budgets) for ensuring food security, as will be understood, vary across South Asia; not all countries are well-endowed to underwrite the expenditures involved. Thus, in the absence of earmarked fund for the SFB, issues concerning its operationalization have remained unaddressed.

⁸ As would be expected, India's contribution was the largest (63 percent), while Maldives and Bhutan contributed the lowest (0.1 percent) (Rahman, Bari and Farin, 2017).

⁹ In the reserve allocation, rice accounts for 60 percent, mostly contributed by India and Bangladesh, while share of wheat was 40 percent. Sri Lanka's reserves include only rice and Afghanistan's reserves include only wheat.

¹⁰ At the 4th SFB Meeting, the Board designated Central Grain Analysis Laboratory (CGAL), New Delhi, India as SAARC Foodgrain Testing Reference Laboratory.

Lack of information sharing

Detailed information as regards the quantum of reserve, godowns/storage facilities and locations was first presented at the 2nd Meeting of the SFB Board. At the 9th Meeting, Bhutan, Maldives and Nepal have shared detailed information on their respective storage methods. Currently, there are 43 earmarked warehouses (Rahman, Bari and Farin, 2017). India, being the largest contributor, has earmarked its reserve in 23 warehouses which are spread across the country (Annex Figure 1). Although members have reported the locations of their respective warehouses designated for SFB reserves, a lack of readiness is observed on the part of member countries to share information as regards quantum of respective reserves of rice and wheat. As both rice and wheat are considered to be politically sensitive items, countries tend to be reluctant to report about actual amounts of national reserve. SAARC Food Bank Information System (SFBIS) has been launched at the 9th SFB Board Meeting to address this particular issue. Hopefully, this laudable step will facilitate inter-governmental sharing of information in this connection. There is no ‘implementation/regulatory plan’ document that would articulate how the SFB is to function. Moreover, formulation and circulation of a set of guidelines on storage methods, practices and quality control measures have remained long overdue.¹¹

IV. Servicing the Mandate: Recommendations for Operationalization of the SFB

Based on the experience of the progress made with respect to the SFB, review of literature, consultations with relevant stakeholders and experts, and review of cross-country best practices a number of recommendations have been proposed in the following section with a view to raising the efficacy of the SFB and towards its effective operationalization.

Policy amendments

- i. The SFB Board has agreed to amend the definition of ‘food emergency’ and ‘food shortage’ (Article V (2)). In addition, if the amendment of Article V (3), as agreed in the 9th SFB Board meeting, is approved by the SAARC General Assembly, then the current threshold criteria of 8 percent admissible production shortfall will no longer be there. These decisions will make it easier for member countries to receive support from the SFB reserve when food crisis or emergency situation originates from price volatility. These decisions will hopefully contribute to making the SFB an effective institution, and help it serve its mandate.
- ii. The provision for dispute settlement should be included in the SFB Agreement with a view to settling possible disputes between two or more SFB members through negotiations or through a set of rules agreed upon by all parties.

Enhancing regional trade

- iii. Although overall intra-regional trade is not significant in the SAARC region, it is observed that the amount of intra-regional trade in foodgrains in the region is not negligible (Rahman, Bari and Farin, 2017). Freer movement of foodgrains and removal of non-tariff bottlenecks will contribute towards better availability of foodgrains across various SAARC countries. This will contribute towards

¹¹As per the 9th SFB Board Meeting Minutes, the necessary information (according to a format circulated in the 6th/7th Meeting) has been submitted only by Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka, whereas Afghanistan and Pakistan committed to provide the information as soon as possible.

mitigating food security concerns, and will thus reduce the need for dealing with food-related emergencies which SFB-type institutions are geared to address in the first place.

- iv. SAARC countries should come to an agreement that trade-related restrictions of the type seen during 2007-08 economic and food crises, in the form of minimum export price or outright ban, will not be enforced in case of intra-regional trade in foodgrains during times of crisis. For a start, such a commitment may be made with respect to export of foodgrains to the four least developed country (LDC) members of the SAARC.

Pricing strategy

- v. Thanks to the regional trade in foodgrains, there does exist a *reference price* for comparison purposes and for determining price of foodgrains. Besides, up-to-date and reliable international market prices of rice and wheat are readily available from various global data sources. During incidents of natural disasters or emergency food crisis, such prices could be taken to serve as the *reference price* for the purposes of the payment of foodgrains received by any country under the SFB mechanism. It is to be noted that ‘deferred payment’ has been proposed as a pricing modality at the 4th SFB Board Meeting.

Need for additional provisions

- vi. Designated testing laboratory for the purpose of SFB is now in place. To eliminate procedural constraint regarding quality standards, SFB Board should develop a system of issuing ‘No Objection Certificate’ in collaboration with the CGAL. This will ensure that the required quality of foodgrains is maintained. These may be included as a provision under Article IV of the SFB Agreement.
- viii. As a forward-looking strategy, SFB could include a provision to keep a certain share of the reserves in the form of bio-fortified rice. This nutritionally rich rice may be targeted to the most vulnerable groups during periods of emergency. In this regard, World Food Programme’s (WFP) existing mechanism of distributing specialized fortified nutritious foods could be taken cognizance of.¹²

New institutional mechanisms

- x. To ensure smooth functioning of the SFB, the option of establishing a dedicated fund for the SFB should be considered with utmost urgency. SFB Board may take inspiration from the practices pursued by the APTERR, which maintains an endowment fund as also an operational fund. Countries such as Maldives, which hardly produces any foodgrains, may be allowed to make their contribution to the SFB in monetary terms. As mentioned in the preceding section, current SFB reserve is not adequate to support food emergencies in countries such as India.¹³ In view of this, an operational fund could be set up to provide the needed support.

¹²WFP already has this mechanism in place for South Asian countries such as Bangladesh, India, Nepal, Sri Lanka, etc.

¹³Indeed, 8 percent production shortfall of foodgrains for India is estimated to be nearly 2.5 times higher than the combined shortfall for all other SAARC members countries. In the global context, India’s 8 percent shortfall in foodgrains production is estimated to be 1.4 percent equivalent of global production of foodgrains.

- xi. In South Asia, the network of weather stations belonging to the meteorological departments of different countries is rather weak. This problem is compounded by lack of high quality weather data for locations smaller than the district level. At present, SAARC Meteorological Research Centre (SMRC), which was previously responsible to project possible shocks and natural calamities and alert the countries under threat via targeted policy briefs, along with three other centres, have been merged into SAARC Environment and Disaster Management Centre (SEDMC). It remains unclear which entity will be responsible to undertake agricultural forecasting. An agricultural forecasting committee should be constituted with the needed capacity to undertake forecasting work (by using latest available technology of satellite images) concerning foodgrains production, and likely food shortages.

Options for institutional tie-up

- xiii. As was noted earlier, ASEAN's capacity as well as flexibility was significantly enhanced with the entry of China, Japan and South Korea in the food reserves system. This indicates that greater access to foodgrains could make operationalization of food security mechanisms such as the SFB more effective. It is conceivable that the SFB, at some point in time in future, could think of coming to an understanding with ASEAN food reserves from which both the food security systems could stand to benefit. In this regard, it is important to highlight that at the 9th SFB Board Meeting members have agreed to add a provision which allows the Board to explore the implementation of regional food security projects in collaboration with international development partner organizations under MoUs with the SAARC Secretariat.
- xiv. SFB may consider collaborating with the WFP. This could benefit the SFB in three major ways: i) SFB may use the Vulnerability Analysis and Mapping (VAM) assessment developed by the WFP as an eligibility criterion for countries to seek help; ii) SFB may make use of the logistics architecture of the WFP to ensure better distribution of foodgrains during times of emergency; iii) SFB may utilize WFP's early warning and early impact analysis mechanisms to forecast weather.

Distribution mechanism

- xv. All SAARC member countries have well-functioning PFDS which are mandated to distribute foodgrains under various social safety net programmes and are also deployed to stabilize markets at times of price volatility (Rahman, Bari and Farin, 2017). The nodal agencies designated with the responsibility to interact with the SFB Board are mainly the national agencies in place which are involved with the task of distribution and maintenance of the foodgrains reserves for the SFB. There is a need for closer interaction between SFB and PFDSs in the architecture of operationalization of the SFB, so that in times of emergency, the foodgrains from the nearest storage facilities can be made available to the national PFDS of (affected) countries for distribution to the needy households and individuals in affected areas.

The need for political commitment

- xvii. There is a need for demonstrated and strong political support towards raising the efficacy of the SFB as an important tool to ensure region-wide food security and to attain the ambitions articulated in Agenda 2030 in the context of South Asia. Political commitment will give clear direction to concerned officials in the member countries to share the needed information, and will encourage the involved parties in member countries to undertake the needed initiatives to make the SFB effective, and to raise its operational efficacy. Adequate resources will need to be deployed to

ensure that an appropriate SFB architecture is in place, the decision-making procedures are transparent, the food reserves, in quantitative and qualitative terms, are in place, and the networks have the capacity to work efficiently during times of emergencies. Only through a strong political commitment can all these be implemented in a time-bound manner.

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Annexes

Annex Table 1: Production Deficit/Surplus of South Asian Countries in 2013

Country	Population (Million)	Domestic Supply ¹ ('000 MT)	Production ('000 MT)	Food Gap ² ('000 MT)	Net Import ('000 MT)
Afghanistan	31	6,453	5,511	-942	1,292
Bangladesh	157	33,929	35,606	1,677	3,128
India	1,252	181,226	199,696	18,470	-18,473
Nepal	28	5,148	4,732	-416	532
Pakistan	182	27,313	28,746	1,433	-4,261
Sri Lanka	21	3,423	3,082	-341	831

Source: Authors' calculation using data from FAOSTAT (2016).

Note: 1. Domestic supply = Foodgrains production + Net import + Change in stock.

2. Food gap = Production – Domestic supply (negative sign demarcates 'Deficit').

Annex Figure 1: Location-wise Designated Warehouses for SFB



Source: Authors' creation using the data in Table 1 from Google Map (16 April 2016).

Annex Table 2: Percentage of Intra-regional Trade to the Region's Global Trade (5-Years Average)

Region	1996-2000	2001-2005	2006-2010	2011-2015
SAARC	4.6	6.1	6.1	6.2
ASEAN	22.9	24	25.0	25.4
ASEAN Plus Three	32.7	34.8	34.6	35.5

Source: Authors' compilation using UNCTADstat (2016).

Annex Table 3: Trade Openness of South Asian Countries

Country	2016			2014	
	Trade Openness	Import (% of GDP)	Export (% of GDP)	Time to Import (Days)	Time to Export (Days)
Afghanistan	55.9	49.0	6.9	91	86
Bangladesh	38.0	21.3	16.6	34	28
Bhutan	81.5	52.1	29.4	37	38
India	39.8	20.6	19.2	21	17
Maldives	182.8	89.0	93.8	22	21
Nepal	50.0	39.4	10.7	39	40
Pakistan	24.5	15.8	8.7	18	21
Sri Lanka	50.5	29.1	21.4	13	16
South Asia	38.9	20.9	18.0	34	33

Source: Authors' compilation from World Bank (2016).

Note: Data was unavailable for latest years for time to import and export.

Annex Table 4: Reserve Adequacy Status of the SFB for Different Levels of Production Shortfall of Foodgrains Compared to Previous 3-Years Average (2012-2014)

Country	Average Production (Last 3 Years)	Production Shortfall				Reserve Amount	Reserve Adequacy (at Different % Shortfalls)			
		8%	5%	3%	1%		8%	5%	3%	1%
		(Metric Tonnes)					Percentage (of 486,000 MT)			
Afghanistan	5,733,333	457,029	286,667	172,000	57,333	2,840	106	170	283	848
Bangladesh	52,666,667	4,207,484	2,633,333	1,580,000	526,667	80,000	12	18	31	92
Bhutan	82,962	6,637	4,148	2,489	830	360	7317	11716	19527	58581
India	250,000,000	20,166,667	12,500,000	7,500,000	2,500,000	306,400	2	4	6	19
Maldives	-	-	-	-	-	400	-	-	-	-
Nepal	6,666,667	535,478	333,333	200,000	66,667	8,000	91	146	243	729
Pakistan	31,000,000	2,480,075	1,550,000	930,000	310,000	80,000	20	31	52	157
Sri Lanka	3,933,333	315,945	196,667	118,000	39,333	8,000	154	247	412	1236

Source: Authors' calculation using data from FAOSTAT (2016).

Annex Table 5: Reserve Adequacy Status of the SFB at Different Levels of Production Shortfall of Foodgrains Compared to Previous 5-Years Average (2010-2014)

Country	Average Production (Last 5 Years)	Production Shortfall				Reserve Amount	Reserve Adequacy (at Different % Shortfalls)			
		8%	5%	3%	1%		8%	5%	3%	1%
		(Metric Tonnes)					Percentage (of 486,000 MT)			
Afghanistan	5,300,000	422,441	265,000	159,000	53,000	2,840	115	183	305	916
Bangladesh	52,200,000	4,165,479	2,610,000	1,566,000	522,000	80,000	12	19	31	93
Bhutan	82,078	6,566	4,104	2,462	821	360	7395	11833	19721	59163
India	242,000,000	19,620,000	12,100,000	7,260,000	2,420,000	306,400	2	4	7	20
Maldives	-	-	-	-	-	400	-	-	-	-
Nepal	6,360,000	509,870	318,000	190,800	63,600	8,000	95	153	255	764

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Pakistan	31,000,000	2,478,768	1,550,000	930,000	310,000	80,000	20	31	52	157
Sri Lanka	4,000,000	320,695	200,000	120,000	40,000	8,000	151	243	405	1214

Source: Authors' calculation using data from FAOSTAT (2016).

Annex Table 6: Reserve Adequacy Status of the SFB at Different Levels of Production Shortfall of Foodgrains Compared to Previous 7-Years Average (2008-2014)

Country	Average Production (Last 7 Years)	Production Shortfall				Reserve Amount	Reserve Adequacy (at Different % Shortfalls)			
		8%	5%	3%	1%		8%	5%	3%	1%
		(Metric Tonnes)					Percentage (of 486,000 MT)			
Afghanistan	5,057,143	403,961	252,857	151,714	50,571	2,840	120	192	320	960
Bangladesh	51,142,857	4,079,103	2,557,143	1,534,286	511,429	80,000	12	19	32	95
Bhutan	80,641	6,451	4,032	2,419	806	360	7527	12044	20073	60218
India	237,142,857	19,071,429	11,857,143	7,114,286	2,371,429	306,400	3	4	7	20
Maldives	-	-	-	-	-	400	-	-	-	-
Nepal	6,228,571	498,352	311,429	186,857	62,286	8,000	97	156	260	780
Pakistan	31,428,571	2,522,025	1,571,429	942,857	314,286	80,000	19	31	52	155
Sri Lanka	3,942,857	315,087	197,143	118,286	39,429	8,000	154	246	411	1232

Source: Authors' calculation using data from FAOSTAT (2016).

Annex Table 7: Change in Paddy and Wheat Production Compared to Previous 3-Years Average*(in Percent)*

Country	2008	2009	2010	2011	2012	2013	2014
	<i>Change in Paddy Production</i>						
Afghanistan	16.4	13.6	11.4	4.5	-24.6	-16.7	-4.3
Bangladesh	13.3	10.5	8.8	4.8	1.8	2.2	2.7
Bhutan	8.0	-11.2	-1.5	9.6	8.0	3.4	-2.4
India	5.4	-5.7	0.8	10.8	8.2	3.9	-0.7
Nepal	5.9	11.3	-3.5	4.2	17.0	-0.3	7.9
Pakistan	26.0	15.1	-25.4	-34.0	-30.0	7.7	13.6
Sri Lanka	19.6	5.9	21.1	-1.2	-2.6	15.1	-18.0
South Asia	7.8	-0.9	2.0	6.6	5.1	3.7	0.5
	<i>Change in Wheat Production</i>						
Afghanistan	-35.0	45.1	11.7	-16.8	16.7	19.6	18.4
Bangladesh	3.4	10.0	11.3	12.4	9.7	31.2	21.2
Bhutan	-40.3	-43.5	-23.8	23.8	-3.2	-1.5	-6.6
India	10.3	8.2	3.1	8.6	14.6	6.9	3.0
Nepal	8.4	-10.0	5.4	17.1	19.2	0.7	6.2
Pakistan	-5.0	10.0	2.4	10.7	-3.0	0.9	6.9
Sri Lanka	-	-	-	-	-	-	-
South Asia	-1.8	9.1	3.9	5.0	7.5	4.9	4.0
	<i>Change in Paddy and Wheat Production</i>						
Afghanistan	-29.1	40.7	11.7	-13.9	11.2	15.1	15.9
Bangladesh	13.1	10.5	8.8	4.9	1.9	2.7	3.1
Bhutan	2.2	-14.3	-3.3	10.6	7.2	3.1	-2.7
India	7.0	-1.0	1.7	10.0	10.5	5.0	0.7
Nepal	6.6	5.6	-1.1	7.5	17.6	-0.1	7.4
Pakistan	3.5	11.5	-5.9	-2.3	-9.6	2.3	8.3
Sri Lanka	19.6	5.9	21.1	-1.2	-2.6	15.1	-18.0
South Asia	4.3	2.7	2.7	6.0	6.0	4.1	1.8

Source: Authors' calculation using data from FAOSTAT (2016).

Note: 1. Production data on wheat was missing for Sri Lanka. 2. Maldives does not produce wheat and rice.