

Regional food security from a human security perspective

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Introduction

Since the end of the Second World War, the world has witnessed unprecedented advancements in various spheres – democracy, economic growth, human development, and technology. But a substantial portion of the humanity still suffers from hunger, malnutrition, disease, poverty, inequality, deprivation, environmental degradation, and conflict. It was because of such mismatch between advancements and sufferings in the world that the concept of human development evolved in the 1990s and gained prominence subsequently. Over time, people-centered development goals have been receiving increasing acceptance over nation-centered ones. If the past and the present are any guide, sole focus on national security might lead to security from external threats, but not from internal ones. Many countries have endured and some continue to endure internal conflicts that have arisen due to the lack of enough focus on the security of individuals, or human security.

Therefore, human security is a relatively new concept, and as will be discussed later, has been defined in a narrow, as well as a broad sense. The broad definition includes a number of factors, food security being one of them, that are essential to ensuring human security. Therefore, taking the broader definition of human security, this paper discusses the various aspects of food security in South Asia and relates it with the seriousness of South Asian governments towards ensuring human security of their people.

Human security

The primary goal of human security is the protection of individuals from all threats. But, because the perception regarding threats to individuals is not universal, human security lacks a universal definition. The narrow definition of human security encompasses only the threats to individuals from violent conflicts. The broad definition, on the other hand, encompasses also threats from hunger, disease, natural disasters, and economic insecurity, and threats to human dignity (UBC, 2005). Proponents of the broader definition of human security significantly outnumber those who perceive human security in narrow sense.

As defined by the Commission on Human Security 2003, "Human security means protecting fundamental freedoms—freedoms that are the essence of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people's strengths and aspirations. It means creating political, social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood and dignity". Such a

broad definition of human security brings together the 'human elements' of security, rights and development (OCHA 2009, 7). It is people-centered, multi-sectoral, comprehensive, context-specific, and prevention-oriented (Box 1).

Box 1: Characteristics of human security

As a people-centered concept, human security places the individual at the 'centre of analysis'. Consequently, it considers a broad range of conditions which threaten survival, livelihood and dignity, and identifies the threshold below which human life is intolerably threatened.

Human security is also based on a multi-sectoral understanding of insecurities. Therefore, human security entails a broadened understanding of threats and includes causes of insecurity relating, for instance, to economic, food, health, environmental, personal, community and political security.

Moreover, human security emphasizes the interconnectedness of both threats and responses when addressing these insecurities. That is, threats to human security are mutually reinforcing and interconnected in two ways. First, they are interlinked in a domino effect in the sense that each threat feeds on the other. For example, violent conflicts can lead to deprivation and poverty which in turn could lead to resource depletion, infectious diseases, education deficits, etc. Second, threats within a given country or area can spread into a wider region and have negative externalities for regional and international security.

This interdependence has important implications for policy-making as it implies that human insecurities cannot be tackled in isolation through fragmented stand-alone responses. Instead, human security involves comprehensive approaches that stress the need for cooperative and multi-sectoral responses that bring together the agendas of those dealing with security, development and human rights.

In addition, as a context-specific concept, human security acknowledges that insecurities vary considerably across different settings and as such advances contextualized solutions that are responsive to the particular situations they seek to address. Finally, in addressing risks and root causes of insecurities, human security is prevention-oriented and introduces a dual focus on protection and empowerment.

Source: OCHA, 2009.

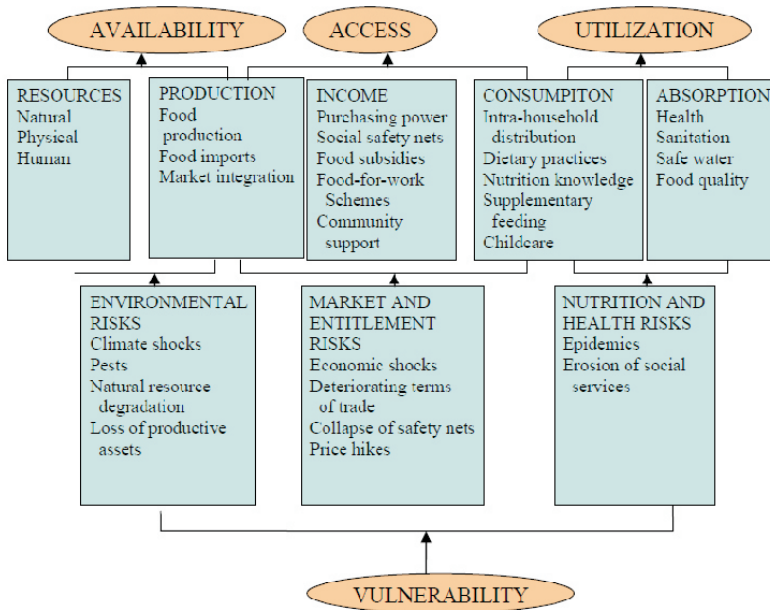
The multi-sectoral understanding of human security encompasses food security as an integral component of human security. Although sole focus on food security is not a sufficient condition to ensure human security, it definitely is a necessary condition.

Food security

Three decades ago, food security was defined in terms of the global volume and stability of food production under the assumption that adequate and stable supply of food globally would ensure food security for all. However, despite the increase in volume and stability in the production of food globally, rise in hunger and malnutrition continued unabated. The vulnerable and the poor people in developing countries were/are the ones to be severely affected by the very limited or no access to food. This compelled a revision of the definition of food security.

The latest definition of food security, as propounded by the Food and Agriculture Organization of the United Nations (FAO), states, "Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern" (FAO, 2003). According to the FAO, the dimensions of food insecurity include availability, access, utilization, and vulnerability (Figure 1).

Figure 1: Dimensions of food insecurity



Source: FAO and SAARC, 2008.

Food availability is the sum of domestic production, imports (both commercial and food aid) and changes in national stock" (FAO and SAARC 2008, 1). Therefore, food availability requires "a combination of three things: production, trade and assistance. Households or countries combine these three elements in different degrees to meet their requirements, depending on their

Food access is "a measure of a household's entitlement to food, which is the amount it can produce, purchase or otherwise receive (e.g. through public food distribution systems). Lack of access to food is primarily a function of poverty, but poverty can affect individuals differently depending on variables such as gender, age, caste and class" (FAO and SAARC 2008, 3).

Similarly, food utilization relates to food handling, and biological absorption in the body (FAO and SAARC 2008, 4; Wickramasinghe 2009, 10). Vulnerability to food insecurity can be either chronic or transient: the former due to physiological, economic, social and political factors, and the latter as a consequence of epidemics, natural catastrophe and man-made disasters (FAO and SAARC 2008, 4).

Food security as human security

From the perspective of human security, ensuring food security means making available at least a minimum level of food for all and eliminating people's fear regarding the certainty of the availability of and access to food at all times. Hence, to consider food security as part of human security, the focus must be the individual. By looking at the food situation only at the aggregate national level, one will overlook specific persons and groups who require assistance to achieve food security.

There are two approaches that are used to analyze the situation of the "most severe cases" of food insecurity. They are: the food availability decline approach (FAD) and the entitlement approach (Box 2). These approaches, however, can be used to analyze other situations of food security as well. Amartya Sen was the first person to analyze the situation of famines using the entitlement approach against the conventional FAD approach because the latter approach is not adequate to conceiving food security as a human security issue whereas the former is (Yoshikawa 2007, 3-5).

Box 2: Food Availability Decline Approach and Entitlement Approach to Food Security

The FAD approach assumes that the cause of the food insecurity, for example, famine, is the reduction in food supply in the affected area or the country. According to this approach, the phenomena that start a famine or account for food insecurity is easily determined. For example, a famine seems likely to occur because the food supply declines in a given area. The FAD approach, however, cannot detect and explain chronic food insecurity. It also cannot identify the root cause of food insecurity. The approach, in general, applies to the region where there is a sudden decline of food supply and tries to find the cause of the decline in the region. As a result, there will be a tendency to overlook the person suffering from chronic food shortages and the specific causes of chronic starvation where there has not been a sudden decline of food supply.

The entitlement approach, on the other hand, assumes that the person who does not possess, or loses, the means to access food will starve. "Entitlements" refer to claim or influential power to access food, and represent claims to food

that are regarded as legitimate. According to Sen, examples of some possible entitlements include exchangeable possessions or products created by the individual's own modes of production, own labor, inheritance, social security, etc., which may also be exchanged for food by the owner. They are not specific things in the world, but are different, depending on the society and the time. Therefore, because it is hard to identify entitlements in any particular case without in-depth research of the society, it is not easy to find the real causes of food insecurity.

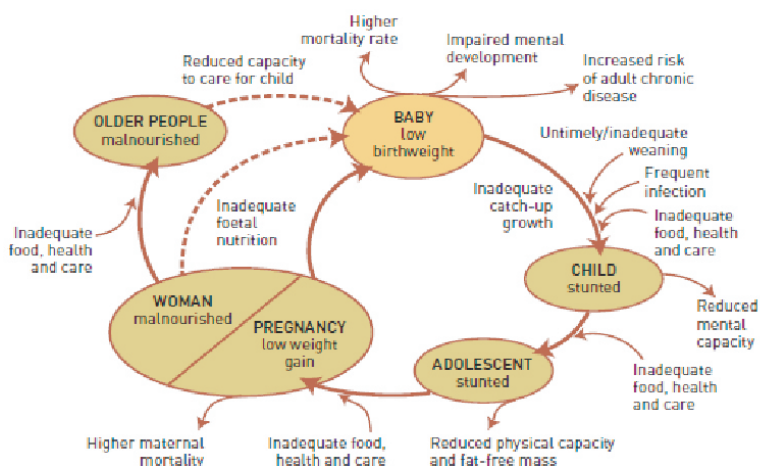
The FAD approach focuses on the external environment in which the needy people live, representing the supply-side analysis. The entitlement approach, on the other hand, focuses on an individual and/or the group who suffers from starvation, representing the demand-side analysis.

Source: Yoshikawa, 2007

The human costs of food insecurity are immense. Every year about 5 million children in the world die due to deficiencies in essential vitamins and minerals, and households in the developing world bear the loss of about 220 million years of productive life from family members whose lives are cut short or impaired by disabilities related to malnutrition (FAO 2004, 8). As figure 2 illustrates, hunger and malnutrition lead to vicious cycle of deprivation affecting the entire life cycle of an individual.

Therefore, the Universal Declaration of Human Rights has recognized the right to food as a fundamental human right.

Figure 2: Impact of hunger and malnutrition throughout the lifecycle



Source: FAO, 2004.

Food security in South Asia

With about 35 percent of the people in Bangladesh, 25 percent in Sri Lanka and 20 percent each in India and Nepal as undernourished, South Asia has the highest

concentration of poverty and hunger in the world. Therefore, it would be appropriate to examine the status of food security in South Asia from the perspective of the four dimensions of food security – food availability, access, utilization, and vulnerability. Due to limitations in data availability, this paper has taken the five largest member states of South Asian Association for Regional Cooperation (SAARC) for the study; the remaining three Member states – Afghanistan, Bhutan and the Maldives - have been taken as per the availability of data and information.

Food availability

The two major sources of food availability in South Asia are domestic production and agricultural trade. South Asian countries also depend on food aid to ensure food availability, especially for rural areas and during emergencies.

Domestic production

Firstly, in terms of domestic food production, in most cases, food production in almost all countries of South Asia has failed to keep pace with population growth (Table 1).

Table 1: Annual growth rates of food production and population in South Asian countries

Country	Annual growth rate of food production, 1995-2005 (%)					Annual population growth rate, 1994-2004 (%)
	Cereals	Pulses	Fruits	Vegetables	Livestock (production index)	
Bangladesh	4.4	-5.4	2	3.6	1.8	1.56
Bhutan	-4.3	NA	-4.9	-10.1	0.1	2.7
India	0.8	-0.5	2.4	4.2	3.2	1.7
Maldives	-10.4	2.6	0.7	2.1	0.0	3.0
Nepal	2.4	3.6	5.2	4.7	2.6	2.3
Pakistan	2.1	-0.2	0.1	1.5	3.1	2.6
Sri Lanka	2.3	-3.9	0	-0.6	0.3	0.9

Source: FAO and SAARC, 2008.

Note: NA = Not available

Cereals (especially rice, wheat and maize) are the major staple food items of all South Asian countries. But as the figures in table 1 demonstrate, except for Bangladesh, Nepal and Sri Lanka, the annual growth rates of cereal production in the remaining countries have been well below the annual population growth rates, implying that domestic food production alone has not been enough to ensure food availability in these countries. Even in the case of Nepal, although the annual growth rate of cereal production is almost at par with the annual population growth rate, estimates by the Marketing Development Directorate show that annual per capita food deficits in the mountains and hills are 37 kg and 23 kg respectively (FAO and SAARC 2008, 13).

The Green Revolution, together with effective water management and agriculture extension services, helped South Asia increase food production tremendously, however, full productivity potential still remains to be utilized, as is evident from the cereal yield gap in the region, for example, a gap of 2,474 ka/ha in 2006 in the case of India (Wickramasinghe 2009, 9).

Agricultural productivity in South Asia fluctuates widely every year due to the South

Asian countries' high dependence on weather. The proneness of almost all countries of the region to natural disasters like earthquakes, landslides, cyclones, floods, and droughts have been notable hindrances for low agricultural production in South Asia. For example, in 2007, a devastating flood and a cyclone named SIDR damaged an estimated 214,000 to 236,000 metric tons of rice in Bangladesh (Raihan et al. 2007, 3). Similarly, in Nepal, prolonged dry spells and floods in 2006 resulted in a decrease of national rice production by 13 percent. Consequently, in 2006/07, increasing cereal deficit caused an estimated 42 out of the total 75 districts in the country to be food deficit (FAO and WFP 2007, 4).

Again, in 2008/09, the winter drought caused a national decrease in wheat and barley production by 14.5 and 17.3 percent respectively compared to that of the previous year. The impact of the drought was that despite a strong summer harvest the same year, yearly crop production for 2008/09 resulted in a negative production balance of 133,000 metric tons of cereal (-2.5%) for all of Nepal (MoAC, WFP and FAO 2009, 7-13). Also in the case of India, for example, the drought of 2009 affected 161 out of the approximately 600 districts of the country. Among the worst affected states by the drought was Bihar, one of the poorest states in the country. The southern states of the country are normally affected by floods that sweep away vast swathes of land and crops every year. The recent heavy floods in southern India have damaged millions of dollars worth of crops, and according to aid agencies, this could lead to severe food shortages.

Domestic food production, therefore, has not been enough to ensure food availability in all countries of South Asia. Therefore, the trade aspect of food availability in South Asia bears importance.

Agricultural trade

Most countries in South Asia rely on food imports to fill the gap between domestic production and consumption. Table 2 summarizes the status of food imports of South Asian countries, which they do between themselves within the region and from outside.

Table 2: Status of food imports of South Asian countries

Country	Status
Bangladesh	Net food importer; imports a wide range of agricultural commodities
Bhutan	Net food importer; imports rice and livestock from India
India	Occasionally imports wheat; regularly imports pulses and edible oil
Maldives	Imports a variety of food items – rice, wheat, flour, fruits, vegetables, etc.
Nepal	Imports food grains, fruits and vegetables
Pakistan	Imports wheat, and fruits and vegetables
Sri Lanka	Food import trend is increasing

Source: FAO and SAARC, 2008.

During the period 1995-2004, with the exception of Pakistan, regional agricultural trade in South Asia increased gradually reaching 22 percent of the total regional trade. However, India alone accounted for about 80 percent of such trade (Wickramasinghe 2009, 9). The reason is that Bangladesh and Sri Lanka are the major markets for India's exports of agricultural products, and Bhutan, the Maldives and Nepal also significantly import agricultural products from India. Hence, the overall increase in agricultural trade in South Asia does not give a true picture of agricultural trade among all the countries in the region. Although agricultural trade provides a huge potential in South

Asia, and that would be a major means to ensure food security in the region, this trade at the regional level has been extremely modest so far. There are some reasons for low levels of agricultural trade in South Asia.

Sensitive lists and tariff barriers

South Asian countries have put in place a regional trade agreement – South Asian Free Trade Area (SAFTA) – that became operational in July 2006. The objective of putting this agreement in place is to gradually liberalize trade in goods within the region. Under the SAFTA's tariff liberalization program (TLP), the non-LDC members, except Sri Lanka, are required to slash tariffs on products not finding place in their sensitive lists to 0-5 percent by 2013; and the LDC members by 2016. Sri Lanka needs to bring down its tariffs to the same level by 2014.

Member states of SAFTA have maintained high tariffs on most of their agricultural products and have included them (cereals, vegetables, fruits, dairy and livestock) in their sensitive lists. Because the TLP does not apply to products in the sensitive lists, high tariffs on such products have hindered regional agricultural trade in South Asia.

However, within the region, many countries have bilateral trade agreements with one another, for example, India-Bhutan, India-Nepal, India-Sri Lanka and Pakistan-Sri Lanka bilateral preferential trade agreements (PTAs). Bangladesh and the Maldives do not have bilateral PTAs with any country in the region. Countries that have entered into bilateral PTAs impose no or low tariffs on the imports of agricultural products from each other, but it is not the same for countries that do not have such PTAs within the region. For example, India levies no tariffs on imports of agricultural goods from Bhutan, Nepal and Sri Lanka, but it levies an average tariff of 34 percent on the 16 cereal products to Bangladesh, the Maldives and Pakistan (Kharel 2009, 23).

Therefore, countries like Bangladesh and the Maldives that have not entered into any bilateral PTAs with any South Asian country continue to face obstacles in agricultural goods trade. Even for countries that have entered into bilateral PTAs, although it would seem that the PTAs tend to offset the higher tariffs on agricultural products levied under SAFTA, there are non-tariff barriers (NTBs) that have held back agricultural trade in the region.

Non-tariff barriers

NTBs exist mainly in the form of quantitative restrictions. India, the largest economy in the region, maintains tariff quotas on a number of items, like some edible oils. It also maintains export quotas on a number of agricultural items, for example, wheat and wheat products, coarse grains, and onions. Similarly, the arbitrary use of standards is another form of NTBs that affect agricultural trade in the region. Nepal's agricultural exports to India have experienced such barriers a number of times in the past. For example, Nepal's food exports are subject to mandatory laboratory tests that have to be conducted only in select places in India, mainly in Kolkata, which is in the eastern part of India. Similarly, India has provided quarantine facilities for Nepali exports also in the eastern part of the country. Therefore, Nepali exports destined for western Indian markets face the problems of being transported to the eastern border for certification,

and again being transported to the western side for exports. Often, even products that are to be exported via the eastern border get delayed for days for getting test certificates. Such NTBs have held back agricultural trade in the region.

Export restraints

When the prices of food commodities started to rise globally in 2008, India imposed export restrictions on some food grains to stabilize prices in its economy. This negatively impacted other South Asian countries that are net importers of food items from India. This highlighted the reality that during crises export constraints lead to low levels of agricultural trade in South Asia which makes the countries mainly dependent on India for their food supply feel vulnerable. In response to the rise in global food prices, Bangladesh, Pakistan and Nepal have also either restricted or banned the exports of food items, even within the region.

Food Aid

Inadequate domestic production of agricultural products and slackness of intra-regional agricultural trade have held back the prospects of ensuring food availability in South Asia. Therefore, the countries in the region are increasingly dependent on food aid, especially for rural areas and during emergencies. The World Food Programme (WFP) works in all the countries of South Asia, except the Maldives, and provides food aid for the targeted group through schemes like food-for-work and mid-day school meals. Food aid has been liberally contributed during emergency situations like floods, earthquakes, landslides and droughts in all the countries of the region. Table 3 helps to understand the role of food aid in South Asia.

Table 3: Food Aid in South Asia

Country	Shipments of cereals as food aid (Metric tons per year)			Share of food aid in total consumption* (percent)		
	1990-92	1995-97	2003-05	1990-92	1995-97	2003-05
Afghanistan	50,462	155,688	159,374	NA	NA	NA
Bangladesh	1,066,757	612,155	303,070	4.4	4.9	1.1
Bhutan	4,361	4,509	3,948	NA	NA	NA
India	270,189	293,099	74,842	0.2	0.3	0.1
Maldives	3,212	4,217	10,631	5.6	46.5	17.1
Nepal	8,535	30,670	40,296	0.4	0.8	0.8
Pakistan	346,349	79,638	25,891	1.8	0.4	0.2
Sri Lanka	300,434	102,242	66,644	10.8	2.9	2.2

Source: <http://www.fao.org/economic/ess/food-security-statistics/en/> (Accessed: October 24, 2009)

Notes: * share in terms of total dietary energy supply; NA = Not available

The problem with food aid, however, is that it does not always reach the targeted population. In 2002, the Indian government had to stop food aid, supplied under the food-for-work scheme, to the state of Andhra Pradesh due to allegations of corruption in the supply of rice intended for poor farmers and agricultural laborers who were the hardest hit by the drought. In the case of Nepal, food aid intended for the most food insecure people of the mid- and far-west regions of the country reaches them very intermittently due to the inability of the National Food Corporation (NFC) to distribute food, although the government subsidized transportation costs for distribution. Therefore, food unavailability is severe for those households that are increasingly dependent on food aid.

Access

Access to food is even more important than the aspect of food availability while assessing food security at the level of households, and further at the level of individuals. As the Entitlement Approach to food security explains, assessment of access to food is also required to understand the relationship between food security and human security.

Food availability at the national level alone does not guarantee food security at the household and individual levels. The case of India is explanatory in this regard. According to the FAO, in terms of food grains per capita food availability, India meets the recommended level of 512 gm/capita/day, but the country still accounts for 39 percent of the world's underweight children. Similarly, in 2005, 16 percent of Indian children suffered from wasting, that is, had low weight for height, and 46 percent were stunted, that is, had low height for age (FAO and SAARC 2008, 18-19). Lack of access to food and essential nutrients are the main reasons for this mismatch between food availability and nourishment. Poverty, inequality, inadequate infrastructure and poor governance have been the major reasons for the lack of access to food in South Asia.

South Asia is home to half the world's poor. About 30 to 40 percent of the population in the region lives below the poverty line. With such wide prevalence of poverty, and inequality in income and means of production like land, the poor do not have adequate access to nutritious food at all times. Also, despite agriculture being the major source of livelihood for a majority of the people in almost all countries of the region, a majority of farmers in these countries are small scale peasants owning less than a hectare of land. Therefore, agricultural production derived from such small land holdings is not enough for subsistence throughout the year. Also, those who manage to have some surplus agricultural production receive very low prices for their produce, but have to pay hefty prices as consumers of other essentials in the market. The dual effect of low income and high commodity prices has limited people's access to safe and nutritious food.

Access to food is severely limited in the case of landless farmers and laborers. These people do not possess the means to produce their own food, nor the income to purchase food from the market. Moreover, as a study from Bangladesh shows, the poor are the ones who get hit the hardest by food price inflation. In 2007, when the average inflation in food prices was 8 percent in Bangladesh, the low income groups in the rural areas suffered about twice that level of food inflation (Table 4).

Table 4: Food inflation rate for the low income groups in rural areas of Bangladesh

Household category	Percent share of food expenditure in total expenditure	Point to point food inflation rate (Nov-07 over Nov-06)
Farmers	81.77	15.36
Rickshaw/Van pullers	84.03	16.11
Day laborers	81.17	17.41
Small traders	80.51	14.48
Average of four groups	81.86	15.84

Source: Raihan et al. 2007.

The problem of access to food is also exacerbated by the remoteness of different regions within the countries of South Asia, and the lack of adequate infrastructure to transport food to these remote areas. Because of the inaccessibility of such places, despite food availability at the aggregate national level, remote areas in the country face chronic food insecurity. For example, from 1999/2000 to 2004/2005, overall food production in Nepal was more than the national requirement, but people in chronically food deficit districts, especially in its mid- and far-western regions, lived at starvation levels. The reason was Nepal's difficult topography and poor connectivity between the food-deficit and food-surplus regions. Issues of bad governance, mainly corruption, have also contributed to the lack of access to food by the targeted population in almost all the South Asian countries.

Utilization

Food utilization depends on a number of factors. In the case of South Asia, two of these important factors include the way food is prepared, and the health conditions of the people. If the essential nutrients are destroyed during the course of food preparation or are not properly absorbed into the body due to poor health conditions, food security will not be achieved, even if there is enough food available and accessible for everyone at all times.

In South Asia, most essential nutrients are lost during food preparation due to the unhealthy ways of cooking by, for example, overcooking. Poor educational attainment and high illiteracy among women resulting in the lack of enough knowledge about nutrition and ways to preserve nutrition in preparing food has been a major factor in improper food utilization. Since women are the ones who take care of the children, lack of knowledge regarding health and nutrition due to high illiteracy has been a major cause of child malnutrition, even among rich families, in South Asia. Malnutrition among children, in turn, has led to poor food utilization.

A recent offshoot of poor food utilization in South Asia is the increasing numbers of HIV/AIDS affected people – currently about 5 to 6 million in the region – due to evidence that even in the early stages of HIV infection, the disease negatively affects the body's nutritional capacity due to its deleterious effects on food intake, digestion and absorption (FAO and SAARC 2008, 20).

Vulnerability

Vulnerability to food insecurity is a cross cutting issue. Both chronic and transient vulnerabilities affect food security through the above mentioned three dimensions of food availability, access and utilization. In South Asia, chronic vulnerability persists mainly due to poverty; economic, social and political inequalities; and the poor health condition of the masses. Transient vulnerability persists, on the other hand, due to natural calamities that occur quite frequently. Of late, natural disasters have more intense in their impact and frequency; hence climate change has evolved to become an important contributing factor to transient vulnerability in South Asia.

Fighting food insecurity in South Asia: Efforts thus far

South Asian governments have taken various steps and measures of varying degrees,

both at the national and regional levels, to fight food insecurity. Even within the nation, safety-net programs and target populations vary from place to place. The sections below discuss some of the efforts made by governments in South Asia to fight food insecurity.

Efforts at the national level

Efforts taken by the South Asian countries at the national level include their overall national strategies as well as strategies at the sub-national levels. Some of the efforts undertaken at the national and sub-national levels include programs to increase agricultural productivity, implement public distribution systems, build buffer stocks, and implement cash transfer programs.

Afghanistan

Afghanistan has been in turmoil for a long time. The country was an exporter of fresh and dry fruits in the past, but the destruction of its orchards due to the continual conflict has made farmers involved in fruit production vulnerable. The country's agriculture has been destroyed and there are no signs of revival in the near-term future. On the access front, there are no employment opportunities that would provide the means to generate income and have access to food. Therefore, the major focus of food security in the country has been its reliance on food aid.

Between January 2006 and December 2009, the World Food Programme has aimed to provide 1,010,000 tons of food aid to 11.2 million Afghans, most of them living in remote, food-insecure rural areas. Afghanistan has also been receiving food aid from other agencies like the European Commission Humanitarian Aid Office, US Department of Agriculture, Mercy Corps, and World Vision (Mittal and Sethi 2009, 9).

Bangladesh

Bangladesh's major policy focus on food security has been on increasing agricultural productivity to ensure food availability through domestic production. The main reason for Bangladesh's strong policy emphasis on domestic food production is its experience of the negative aspects of over-reliance on food aid. Therefore, in the 1970s and 1980s, Bangladesh pursued a policy of agricultural modernization by supplying modern agricultural inputs and technologies (seeds, fertilizer and irrigation), including high yielding varieties. In the 1990s, the government liberalized the seed market, allowed import of improved germplasm for research and development, and developed facilities for producing foundation seeds. Private sector and non-governmental organizations (NGOs) were also encouraged to participate in the seed delivery system. Lately, with the preparation of guidelines and legal frameworks, the Government of Bangladesh has also allowed the use of genetically modified (GM) technology. However, progress in developing hybrids or in bio-technology research in fisheries and animal breeding has been unsatisfactory.

The Poverty Reduction Strategy Paper (PRSP) of Bangladesh, prepared in 2005, has placed strong emphasis on the access, utilization and vulnerability aspects of food security underscoring five strategic goals: (i) creating an enabling environment framework for food security, (ii) assuring low cost food supply to the poor through expansion of food safety net programs, (iii) arresting fluctuations in food grain stocks

and consumption, (iv) increasing the purchasing power and food entitlements of the poor, and (v) ensuring better food utilization and nutritious food for all, especially the poor. Similarly, with the goal of ensuring a dependable sustained food security system for all people in the country at all times, the National Food Policy prepared in 2006 has adopted three objectives: (i) ensuring adequate and stable supply of safe and nutritious food, (ii) enhancing accessibility to food through increasing people's purchasing power, and (iii) ensuring adequate nutrition for all, especially women and children (FAO and SAARC 2008, 28). The strategies devised to achieve these objectives include all four dimensions of food security.

Bhutan

The major focus of the Government of Bhutan to ensure food security has been on increasing food availability, mainly by increasing food production. Of late, the government has also been focusing on other dimensions of food security. For example, although subsidies on agricultural inputs have been scrapped, transport subsidies for the transportation of inputs still continues with the objective of maintaining cost uniformity throughout the country. The government has also been making investments in the construction of rural roads to improve connectivity, which, in turn, would improve accessibility to food for those living in rural areas. The government has also placed food security as a cross-cutting theme in the country's renewable natural resources (RNR) sector, and the relevant documents relating to the country's current Tenth Five-Year Plan have embraced a paradigm shift from household level food security to the nutritional security of the individual within the household. Hence, the current macro policies address the need to enhance food accessibility and promote better nutrition (FAO and SAARC 2008, 28).

Bhutan imports food through the Food Corporation of Bhutan to meet its domestic demand. It has adopted a policy to achieve 70 percent self-sufficiency in food grains and has laid emphasis on developing and promoting high-value, low-volume cash crops; promoting the use and breeding of superior, healthy breeds of highly productive livestock; and placing a higher priority on conservation than on commercial exploitation of forests, among others (Mittal and Sethi 2009, 11-12).

India

In the 1960s, India encouraged the use of high yielding varieties of seeds that led to the 'Green Revolution' increasing overall agricultural production in the country. However, over the years, agricultural production in India has been declining due to a shrinking and degrading natural resource base, low productivity, decrease in public sector investments in agriculture, and inadequate returns to small land holders. Therefore, of the various plans and programs that India has undertaken recently, some of the important ones include plans to increase the growth rate of agricultural production to four percent during 2007-2012, proposals to increase public investments in agriculture, and plans to strengthen agricultural research to take advantage of modern biotechnology. An important initiative for ensuring food availability and food security was the launch of the National Food Security Mission in 2007 to increase the production of rice by 10 million tons, wheat by 8 million tons and pulses by 2 million tons by the end of the country's

Eleventh Plan.

Regarding the other dimensions of food security, India has a public distribution system that was put in place in the 1960s with the object of making basic food grains available to all at affordable prices. The Food Corporation of India, along with overseeing the implementation of the public distribution system, also procures food grains at minimum support prices and regulates the supply by building buffer stocks to ensure price stabilization. However, the public distribution system has not been able to achieve its desired results.

For a long time in the past, the government has launched various programs targeting specific groups. One of such program is the Integrated Child Development Scheme (ICDS) launched in 1975 to provide nutrition and healthcare services to children and pregnant women. In 1995, the mid-day meal program was launched to provide mid-day meals to children attending government schools, aided primary schools and schools run by local bodies. Under this scheme, the government supplies free food grains to schools in quantities determined on the basis of specific nutritional requirements for a specified minimum number of days in a year. Similarly, in 2000 the government launched the Antyodaya Anna Yojana with the objective of providing affordable food to 10 million of the poorest of the poor in the country. A feature of this scheme is the distribution of wheat and rice at subsidized prices of Rs. 2 and Rs. 3 per kg, respectively, for which the State governments are expected to meet the distribution costs of the program (Mittal and Sethi 2009, 13).

With a view to increase the access to food by poor households, the Government of India enacted the National Rural Employment Act in 2005 and the National Rural Employment Scheme in its Eleventh Five Year Plan. The objective of the scheme is to provide employment for at least 100 days to each rural household in 150 of the most backward districts of the country. Another important initiative taken by the government is the proposal to enact the National Food Security Act in 2009 according to which every family below the poverty line would be provided 25 kg of grain per month at a subsidized price of Rs. 3 per kg.

Maldives

One of the most important initiatives taken by the Maldives to achieve food security is the Hydroponics Agriculture Pilot Project taken up by the Ministry of Fisheries, Agriculture and Marine Resources of the Government of Maldives. The aim of the project is to promote hydroponics production- a technique for growing plants without soil, in water containing nutrients – both by households, and on a commercial scale (Mittal and Sethi 2009, 17). Similarly, the major focus of the Agriculture Development Master Plan's (2006-2020) has been on improving productivity in agriculture, by which the government envisages enhanced food security, improved nutritional status of households, and achievement of partial import substitution of agricultural products (FAO and SAARC 2008, 30).

Nepal

Since 1995, agricultural policy in Nepal has been guided by the Agricultural Perspective

Plan (APP) for the period 1995-2010. The APP envisions improved access to food by the poor through increased employment opportunities, production and efficiency leading to lower food prices. However, the APP has never been really implemented and has been overtaken by other policies.

The National Agricultural Policy of 2004 added new food access provisions for vulnerable groups, for example, by providing free inputs, technical support, leased land and irrigation facilities for the landless and farmers with less than half a hectare of land. Similarly, the introduction of low-price shops, food coupons and food credit cards, and more importantly, the provision of guaranteed employment for at least 100 days per family per year in food insecure regions became part of the policy to address food insecurity.

Following the historic political changes in the country, the Interim Constitution of Nepal 2006/07 has recognized food sovereignty as a fundamental human right, following which the Government of Nepal has approved a food security plan as part of its Three Year Interim Plan (2007-2010). The plan has envisioned an increase in overall agricultural production by 4.5 percent per annum by the end of the plan period. Other strategies adopted by the Plan to ensure food security include the production of high value commodities based on comparative and competitive advantage, the provision of additional transport and market infrastructure, early warning and disaster preparedness.

A new Food and Nutrition Security Plan was also issued in 2007 with the objectives of:

- increasing the country's self-reliance for basic foodstuffs,
- improving the overall nutritional situation,
- enhancing standards and safety of foodstuffs available in the markets,
- enhancing capacity for managing food insecurity that arise from emergency conditions, and
- improving food access for people and groups prone to food insecurity.

To ensure food security for some targeted people living in remote areas, especially in the mid- and far-western regions of the country, the government has set up the Nepal Food Corporation and has been providing transport subsidies to distribute food to the deficit hill and mountain areas. However, there are problems in implementation because of which the targeted population has not always benefited from this policy.

Other targeted food assistance programs such as food-for-work, food-for-education, rural community infrastructure program, emergency assistance in natural disasters, etc., are implemented by the government with financial and logistical support from donor agencies, including the WFP.

Pakistan

Pakistan has a National Food Policy whose objectives are: adequate production of food, stability of food prices, and access to food by consumers. The cornerstone of the food security policy has been taken as adequate supply, which means that the food availability dimension has received more importance than the other three dimensions of food for

security in Pakistan. In 1973, the Government of Pakistan established the Pakistan Agricultural Services and Supplies Corporation (PASSCO) as a public limited company, fully owned by the federal government and six public sector banks. PASSCO implements the food security and support price policy by ensuring a support price to growers, stabilizing prices by releasing buffer stocks, setting up agro-industrial base units for processing and preserving food items, and expanding storage capacity. The Government of Pakistan maintains a wheat stock of about one million metric tons to combat natural calamities and to ensure uninterrupted flow into public distribution channels in case of crop failures or fluctuations in food production.

In 2002-03, the Government of Pakistan launched the Food Support Program (FSP) that aimed at improving the living standard of the poor by providing them financial support. It was a cash transfer program under which a subsidy of Rs. 2,000 was given to around 1.25 million poor families in two biannual installments. The rate of subsidy was later increased to Rs. 2,400 in 2003-04 and to Rs. 3,000 in 2005-06. The program continued in 2007-08 by increasing the annual budget to cover a larger number of the country's poor.

Similarly, to address the problems of food insecurity triggered by the 2007/08 food crisis, the Government of Pakistan initiated an additional cash transfer program—the Benazir Income Support Program (BISP) to improve food access to the poor. BISP was initiated with an initial allocation of about US\$ 425 million for the year 2008-09. The objective of the program was to provide a monthly payment of Rs. 1,000 per family that would partially offset the impact of inflation on the purchasing power of the poor. The program covered all four provinces of the country targeting almost 15 percent of the entire population that constituted about 40 percent of the population below the poverty line (Mittal and Sethi 2009, 16). Recently, the government has also initiated some new programs with the help of the WFP to address malnutrition issues.

Sri Lanka

Sri Lanka has a National Policy on Food Security, the objectives of which is to ensure: a sufficient supply of food being made available to the people; access by all individuals to adequate resources to acquire appropriate food for a nutritious diet; a state of nutritional well-being by all individuals, so that all physiological needs are met; and access to adequate food at all times by all individuals.

Of the food-security related programs in Sri Lanka that target special groups and the poor, the three major ones are the Samurdhi Program, Thripasha Program, and the mid-day meal program in schools. The Samurdhi Program is the largest welfare program in the country that was launched in 1995 with the twin objectives of ensuring food security and reducing poverty. The major flaw in the program, however, is that although it was intended to cover a target of 20 percent of the population below the poverty line, the program actually covers half the total number of households in the country.

The Thripasha Program is essentially a program of food supplementation in which cereals, pulses and micro-nutrients are distributed free to mothers with children below the age of one in low income groups. This program has also suffered from the problem of

the subsidy reaching ineligible recipients, and the limited reach and inadequate monitoring of the health of recipients. Similarly, the mid-day meal program covers 500,000 children in 6,440 schools having at least 30 percent malnourished children (Mittal and Sethi 2009, 17). Today, Sri Lanka belongs to the category of "low-level food-insecure country".

Efforts at the regional level

Regional efforts to ensure food security in South Asia were initiated soon after the establishment of the South Asian Association for Regional Cooperation (SAARC). In 1987, the governments of the SAARC member states took a decision to establish a food reserve in the region to meet emergency food needs, after which the reserve was established in 1988. Administered through the SAARC Food Security Reserve Board, this reserve could not address the food security needs of the member states due to complicated processes, harsh conditions and balance of payments crisis in the region.

The importance and need for a regional food security reserve was still felt by all member states. Therefore, in 2008, during the 15th SAARC Summit held in Colombo, the SAARC countries decided to establish and operationalize the SAARC Food Bank. Initially, its aim was to build a reserve of 241,580 metric tons of rice and wheat. The contribution by the member states would be: India – 63.42 percent, Bangladesh and Pakistan – 16.58 percent each, Sri Lanka and Nepal – 1.66 percent each, Maldives – 0.08 percent, Bhutan – 0.07 percent, and Afghanistan to be decided later. There are concerns, however, about the bank's functioning and its role in ensuring regional food security.

In 2005, during the 13th SAARC Summit held in Dhaka, the SAARC countries endorsed the SAARC Development Goals (SDGs) recommended by the Independent South Asian Commission on Poverty Alleviation. The Commission identified food security as one of the priority areas for South Asia, and of the 22 SDGs identified, the following seven relate directly or indirectly to food security:

- Goal 1: Eradication of hunger and poverty
- Goal 2: Halving the proportion of people in poverty by 2012
- Goal 3: Ensuring adequate nutrition and dietary improvement for the poor
- Goal 4: Ensuring a robust pro-poor growth process
- Goal 5: Strengthening connectivity of poorer regions and the poor as social groups
- Goal 20: Conserving biodiversity
- Goal 21: Conserving wetlands

Another important initiative taken at the regional level that relates to food security, although indirectly, is intra-SAARC trade. SAARC countries signed the SAARC Preferential Trading Arrangement (SAPTA) in 1993 that came into force in 1995. Ten years later it was substituted by the Agreement on South Asian Free Trade Area (SAFTA) that covered trade in goods, including agricultural commodities. It was expected that SAFTA would be instrumental in increasing intraregional trade in goods, including agricultural trade, but for reasons already discussed above, agricultural trade has not expanded to the extent possible. Therefore, intraregional agricultural trade in South Asia has only had a modest impact in addressing food availability in the region.

Conclusion

Two basic requirements of human security are freedom from fear and freedom from want. Therefore, from the human security perspective, achieving food security requires the creation of a society in which every individual is free from the fear of whether s/he would have adequate and nutritious food for the next meal. Hence, from the human security perspective, food security is not just about ensuring the availability of food, but more importantly, ensuring access to it.

Until recently, almost all South Asian countries placed strong emphasis on the food availability aspect of food security, more so at the national level. However, they were not successful in ensuring adequate food availability for their people. Moreover, even at times when food was available at the aggregate national level, a large population suffered from hunger, mainly due to inaccessibility to food, and in part, due to improper utilization. Therefore, as the various plans and policy documents illustrate, the governments of these countries have started emphasizing the three other aspects of food security also. But, sadly, the implementation of their plans, policies and programs on the ground has been extremely disappointing due to a number of factors that have been discussed.

In this regard, South Asian governments should strive to ensure food availability by taking measures to increase agricultural production, facilitate agricultural and food trade, increase investments in agricultural research, and so on, but much more emphasis is required to improve the individual's access to food. Therefore, governments should emphasize the Entitlement Approach to food security more than the Food Availability Decline Approach. Some of the measures that South Asian governments should take are as follows:

- In most countries of South Asia, a larger proportion of the farmers are either small-scale farmers owning less than a hectare of land, or landless laborers. Their access to food is barely sufficient to meet their requirements throughout the year. Therefore, governments should improve the asset positions of the rural poor by improving the land ownership position of these farmers. Creating off-farm and seasonal employments will also help improve the asset positions of the rural poor.
- The poor are the ones to be hit hardest by sudden increases in food prices and/or reduction in food supply. Therefore, governments should intervene in the market to stabilize prices and ensure a smooth supply of food items. More importantly, they should ensure that the inflation of food prices and reduced supply of food are not being artificially manipulated.
- The public food distribution system in almost all countries of South Asia has not been effective. Food distributed through the distribution system often reaches untargeted groups, but not the real beneficiaries. Therefore, governments should strengthen the existing distribution systems and control leakages. Controlling corruption is a must. Governments should realize that it is their duty to provide basic public goods to all citizens.
- Governments should also increase investment in the development of rural infrastructure. Lack of adequate infrastructure is the main reason for the

- inaccessibility to food by people living in remote areas, especially in countries with difficult terrains like Nepal and Afghanistan.
- So far, South Asian governments have made little effort to strengthen women's relative position in society because of which they suffer from intra-household food insecurity. Therefore, efforts to increase women's access to economic resources and developing a realization in society that women's status is in no way inferior to that of men is essential to ensure intra-household food security.

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