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RESEARCH PAPER

Prospects of Food Security in South Asia: A Substantial Debate

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ABSTRACT

This paper examines challenges and issues of food security in South Asia. It elaborates the current food security scenario of South Asia in comparison with South East Asia as well. As compared to the other regions mainly South East Asia, food insecurity situation has been intensifying chiefly because of intensive population growth, increased food inflation, rapid urbanization, and reduced agricultural production in South Asia. Besides, secondary sources have been consulted like articles, newspapers, and academic journals to discuss the increasing dilemma of food security in the region with special emphasis on its causes and possible solutions. Although, regional states have been trying their best to reduce the food insecurity and control the situation, but not commendable outcomes have been observed. Furthermore, it unfolds a number of solutions like advancement in research and technology, formulation of food-based social protection and safety net programs, promotion of agricultural yield and promotion of rural development. By focusing on these solutions, the regional food security can be improved.

Introduction

The dilemma of food security is extensively prevalent around the globe with the passage of time. Both the developed as well as developing states are suffering with it, but the developing states are more prone to bear the brunt of the food insecurity. Food security is a multi-dimensional concept, variously interpreted and defined. According to the World Food Summit (WFS) (1996), "Food security is said to be existed, when all the common masses possess economic, physical and social access, at all the times, to, safe, sufficient, and nutritious food, which not only meets food preferences, but also dietary needs for a healthy and active life". Henceforth, from this definition, Food Security's four pillars can be identified, which are food access, food availability, food utilization and food stability (Cochrane, 2011).

South Asia comprises more than 23 percent of the global population, and nearly 44 percent of global poor lives in the region. In a survey (2011), the poverty

head-count proportion (the population percentage below the poverty-line) was as following Sri Lanka (15%), Pakistan (22%), Bhutan (23%), India (27%), Nepal (31%), Afghanistan (36%) and Bangladesh (44%). A sharp contrast exists between South Asia and its share in the international population and its global economic productivity. South Asia produces approximately 2.9 percent of the GNP, which is not more than one-seventh of its global share in the international community. Regional per capita income is low, which is directly associated with the increased ratio of hunger and poverty(WB, 2011). Some key facts about South Asia are stated in the following illustration.

Table 1
South Asia in a Global Setting

Variable	Year	South Asia	World	South Asia's Share
Gross National Product (USD billion)	2009	1,735	59,163	2.93
Population (million)	2009	1,568	6,775	23.14
Land Area (Km^2)	2009	4,771,220	129,710,719	3.68
Arable land (% of land area)	2009	41	11	---
Arable land derived (Km^2)	2009	1,973,940	13,859,525	14.24
Poverty (People living on less than $1.25 a day) (million)	2005	596	1,374	43.38
Prevalence of Undernutrition (%)	2005-2009	22	14	---
Prevalence of Undernutrition derived (million)	2009	345	949	36.37
Total Merchandise Exports ($ millions)	2009	204,760	12,492,190	1.64
Total Merchandise Imports ($ millions)	2009	323,199	12,595,548	2.57

Source: (WB, 2011). data.worldbank.org/data-catalog/world-development-indicators

According to the illustration, more than 36 percent of global undernourished people are inhibited in South Asia. The region represents 2.57% of the international merchandise import and 1.6% of the international merchandise export. Trade ratios of the South Asia shows that its contribution in the transnational exports is lower as compared to its contribution in the transnational imports. All of the regional states, except Delhi are the net food importers because their national food production is not sufficient to fulfill their national dietary needs (WB, 2011).

On the other hand, neighboring region of South Asia, i.e. South East Asia is comparatively more developed and contributes a significant share in the global development and prosperity. The statistics of South East Asia is defined below.

Table 2
Profile of South East Asian States

Country	Land (km^2)	Population	Life Expectancy (year)	Underweight Children under 5 years (%)	Health Expenditure (% of GDP)	GDP per Capita PPP (USD)	GNI per capita (USD)
Brunei Darussalam	5765	430,000	77	--	2.5	73,200	37,320
Cambodia	181,035	15,709,000	64	29	7.5	3,300	1,020
Indonesia	1,904,569	255,994,000	72	20	3.1	10,600	3,630
Lao PDR	236,800	6,912,000	64	27	2	5,000	1,650
Malaysia	329,847	30,514,000	75	13	4	24,700	10,760
Myanmar	676,578	56,320,000	66	23	1.8	4,700	1,270
Philippines	300,000	100,998,000	69	20	4.4	7,000	3,470
Singapore	697	5,674,000	85	--	4.6	82,800	55,150
Thailand	513,120	67,946,000	74	9	4.6	14,400	5,370
Timor Leste	14,874	1,231,000	68	45	1.3	4,900	3,120
Vietnam	331,210	94,349,000	73	12	6	5,600	1,890

Source: (Duangthip, Gao, Lo, & Chu, 2017)

It can be observed that, compared to the South Asian states, net population of South East Asian states is lesser and per capita GDP is higher. Also, average life expectancy is increased in this region, Singapore being the state with the highest life expectancy (85) and Cambodia and Laos with lowest life expectancy age (64). Indonesia possess the largest land and population ratio, whereas Brunei Darussalam owns the smallest land and population ratio in the region. Indonesia has the highest number of underweight children (under5) and Timor-Leste has the least ratio of underweight children. However, Timor-Leste, spends the least proportion of GDP on health expenditure and Cambodia spends the most on health budget in region.

Besides, Food security issue has become the global concern around the globe. And all the international states are trying to combat it in their own respective capacities. Moreover, Food and Agriculture Organization (FAO) has pointed out that the global food insecurity situation has been deteriorating with passing years. FAO reveals that the severe food insecurity situation is worst in Africa, followed by Asia, Latin America and Caribbean, Oceania, Northern America and Europe. In the sub-regions of Asia, South Asia has been facing the increasing severe food insecurity. Similar is the case with prevalence of moderate or severe food insecurity, which is shown in the following table as well.(FAO, 2020).

Table 3
Prevalence of Severe, Moderate Food Insecurity

	Prevalence of Severe Food Insecurity						Prevalence of Moderate or Severe Food Insecurity					
	2014	2015	2016	2017	2018	2019	2014	2015	2016	2017	2018	2019
World	8.3	7.9	8.1	8.6	9.4	9.7	22.4	22.4	23.2	24.8	25.8	25.9
Africa	16.7	16.8	18.2	18.5	18.3	19.0	46.3	46.5	49.4	51.4	50.6	51.6

Asia	8.0	7.5	7.1	7.6	9.1	9.2	19.4	18.9	18.9	20.6	22.6	22.3
Central Asia	1.6	1.4	2.0	2.8	2.2	2.3	8.5	9.1	10.0	13.9	13.6	13.2
Eastern Asia	0.8	0.8	1.5	1.7	1.9	1.3	6.0	5.9	6.3	10.0	9.6	7.4
South-Eastern Asia	4.4	3.8	4.0	5.6	5.4	4.8	16.9	15.3	17.0	19.6	19.6	18.6
Southern Asia	15.9	14.8	13.1	13.3	16.9	17.8	31.6	30.8	30.1	29.4	34.6	36.1
Western Asia	8.3	8.7	8.8	9.8	9.4	9.0	28.0	28.0	26.9	28.9	28.1	28.5
Western Asia and Northern Asia	9.2	8.9	9.6	10.4	9.3	8.8	28.8	27.3	28.4	32.6	29.5	28.5
Latin America and the Caribbean	7.1	6.4	8.1	9.3	9.2	9.6	22.9	25.1	29.4	32.0	31.6	31.7
Oceania	2.5	2.6	3.3	4.1	3.7	4.2	11.1	9.5	11.5	14.2	12.9	13.9
Northern America and Europe	1.4	1.4	1.3	1.2	1.0	1.1	9.4	9.4	8.8	8.5	7.6	7.9

Source:(FAO, 2020) ttp://www.fao.org/3/ca9692en/online/ca9692en.html#chapter-1_1

The most recent report of FAO (2020) has also stated that the number of food insecure people has been increasing continuously despite the global efforts to reduce hunger and malnutrition. It can also be seen that the food security situation in South East Asia is better than South Asia, as severe food insecurity prevalence is nearly 4.8 in South East Asia, compared to South Asia (17.8) in 2019. Similar is the case with severe or moderate food insecurity.

However, unlike the moderate or severe and severe food insecurity, in case of undernourished people, the situation is changed, as instead of African region, the highest ratio of food insecure people is residing in Asian region at present. Asia inhabits the highest ratio of food insecure (severe and severe or moderate) people followed by Africa, Latin America and Caribbean, Northern America and Europe and Oceana, which is demonstrated in the following table.

Table 4
Number of People Experiencing Food Insecurity at Severe Level Only, and Moderate or Severe Level (2014-2019)

	Number of Severely Food Insecure people (millions)						Number of Moderately or Severely Food Insecure people (millions)					
	2014	2015	2016	2017	2018	2019	2014	2015	2016	2017	2018	2019
World	602.0	586.0	605.5	646.4	717.5	746.0	1 633.5	1649.5	1735.2	1874.5	1969.6	2001.1
Africa	192.0	198.7	220.5	230.0	233.1	248.5	534.1	549.5	599.6	640.0	646.2	674.5
Asia	349.8	330.8	318.2	342.2	413.0	421.6	850.9	836.3	848.2	931.5	1030.5	1027.4
Central Asia	1.1	1.0	1.4	2.0	1.6	1.6	5.7	6.3	7.0	9.9	9.8	9.6
Eastern Asia	13.2	12.6	24.6	28.4	31.3	21.7	98.0	97.1	104.1	166.2	159.5	124.5

South Eastern Asia	27.4	24.0	25.8	36.5	35.1	31.8	105.7	97.0	108.8	127.0	128.4	122.8
Southern Asia	287.2	270.7	243.3	249.1	319.5	341.8	570.6	563.8	557.7	551.3	656.5	691.9
Western Asia	21.0	22.5	23.2	26.3	25.5	24.8	70.9	72.2	70.6	77.2	76.2	78.5
Western Asia & Northern Africa	43.5	42.7	46.9	51.9	47.4	45.7	136.0	131.3	139.2	162.7	149.9	147.6
Latin America and the Caribbean	43.8	40.2	51.0	59.0	59.0	62.4	141.5	156.8	185.6	203.3	202.6	205.3
Oceania	1.0	1.0	1.3	1.7	1.6	1.8	4.4	3.8	4.7	5.8	5.4	5.9
Northern America & Europe	15.4	15.2	14.4	13.5	10.8	11.8	102.6	103.1	97.2	93.7	84.9	88.1

Source:(FAO, 2020) http://www.fao.org/3/ca9692en/online/ca9692en.html#chapter-1_1

In Asia region, South Asia alone accommodates 341.8 million (out of 421.6 million) severely food insecure people (2019). Similar is the case with the number of severely or moderately food insecure people, as 691.9 million (out of 1027.4 million) severely or moderately food insecure people are living in South Asia (FAO, 2020). Whereas, South East Asia, inhabits less than half of these statistics, since, it has 31.8million severely food insecure people and 122.8 moderate or severely food insecure people.

The following statistics tend to portray the food security statistics of both regions.The statistics of three regional states is not available. According to the FAO recent statistics, the food security situation is more improved in South East Asia than South Asia. Statistics regarding the three of the food security dimensions as well as their positions in the global ranking are mentioned.

Table 5
Global Food Security Index (2019)

Global Ranking	South Asian States	GFSI Score (Out of 100)	Availability Score (Out of 100)	Affordability Score (Out of 100)	Quality & Safety	Global Ranking	South East Asian States	GFSI Score (Out of 100)	Availability Score (Out of 100)	Affordability Score (Out of 100)	Quality & Safety
NA	Afghanistan	NA	NA	NA	NA		Brunei Darussalam	NA	NA	NA	NA
83rd	Bangladesh	53.2	60.4	54.8	30.6	90th	Cambodia	49.4	56.7	48.1	34.6
	Bhutan					62nd	Indonesia	62.6	70.4	61.3	47.1
72nd	India	58.9	64.2	58.4	47.0	92nd	Lao People's Democratic Public	49.1	55.5	47.6	37.4
NA	Maldives	NA	NA	NA	NA	28th	Malaysia	73.8	81.7	67.7	70.6
79th	Nepal	56.4	58.5	55.4	53.7	77th	Myanmar	57.0	59.1	57.2	51.3
78th	Pakistan	56.8	63.2	55.7	43.6	64th	Philippines	61.0	68.9	57.7	50.3
66th	Sri Lanka	60.8	65.0	60.0	52.4	1st	Singapore	87.4	95.4	83.0	79.4
						52nd	Thailand	65.1	77.1	58.7	52.6
						NA	Timor-Leste	NA	NA	NA	NA
						54th	Viet Nam	64.6	75.1	59.7	51.7

Source: (Economist-Unit, 2019)https://foodsecurityindex.eiu.com/Index

Singapore is the topmost food secure state of the world, which highlights the food security importance for the whole region. Among the 11 South East Asian states, 2 stands in the top 30th and four lies in top 60thinternationally food secure states, while, Cambodia (90), Myanmar (77th) and Laos (92) have lowest food security scores among all. Contrary to that, Sri Lanka has the most improved food security index in South Asia, which globally stands at 66thposition, reflects the regional food security scenario. India, Pakistan, Nepal, and Bangladesh occupies 72, 78, 79, and 83rd position at the global score board. Most of the South East Asian states have more than half of the availability of food (score), opposite to South Asian states, where nearly all of the states hardly have more than 60% scores on the availability of food. Except Cambodia and Laos, all the regional states have been succeeded in providing quality food.

Food insecurity has become the serious issue of South Asia and combating food security dilemma is the chief concern of South Asian governments. Although they are attempting to find out possible solutions, but there is an urgent need of identifying root causes of issue.

Causes of Food Insecurity

Multiple factors are responsible for affecting the food security in South Asia. Few of them are discussed below.

Intensive Population Growth

The South Asian states constitute nearly 22% of the global population, among which only India accounts for 17 percent (1.2 billion population). The share of Bangladesh and Pakistan in global population is about 2.4 and 2.5 percent respectively. Though with passing years, the population growth ratio has decreased but not up to the mark. Sri Lanka has increasingly controlled the population growth as it reached to 1.3 percent, however, Pakistan has highest population growth ratio in South Asian counties. Despite decrease in population growth, and increase in economic progress as well as development in regional food production, only marginal improvements can be observed in the per capita income and food security development (WDI, 2014).

Furthermore, if the population of both regions is compared, then it can be inferred that compared to South East Asia, South Asia shows tremendously increasing trends in population(UN, 2019).Because of this extensive population growth, the regional as well as national food security is being compromised as South Asia is a developing region and doesn't have sufficient resources to accommodate and feed increasing regional population. Consequently, the ratio of under nutrition is prevailing among the regional states. South East Asia, on the other side, has successfully attempted to control its population growth, because of which regional food insecurity has been decreased considerably.

Table 6
Comparison between South Asia and South East Asia

South Asian States	Proportion of undernourished in population (%) (2016-18)	Prevalence of Wasting in Children (under 5 year) (%) (2014-18)	Prevalence of Stunting in Children (under 5 year) (%) (2014-18)	Under 5 year Mortality Ratio (%) 2017	South East Asian States	Proportion of undernourished in population (%) (2016-18)	Prevalence of Wasting in Children (under 5 year) (%) (2016-18)	Prevalence of Stunting in Children (under 5 year) (%) (2016-18)	Under 5 year Mortality Ratio
Afghanistan	29.8	8.1	43.6	6.8	Brunei Darussalam	--	5.1	55.9	6.1
Bangladesh	14.7	14.4	36.2	3.2	Cambodia	16.4	9.8	32.4	2.9
Bhutan	--	2.0	2.3	0.7	Indonesia	8.3	11.7	32.7	2.5
India	14.5	20.8	37.9	3.9	Lao People's Democratic Public	--	--	--	--
Maldives	--	--	--	--	Malaysia	2.5	11.5	20.7	0.8
Nepal	8.7	9.6	36.0	3.4	Myanmar	10.6	6.6	29.4	4.9
Pakistan	20.3	7.1	37.6	7.5	Philippines	13.3	7.1	33.4	2.8
Sri Lanka	9.0	15.1	17.3	0.9	Singapore				
					Thailand	7.8	5.4	10.5	1.0
					Timor-Leste	14.4	14.4	48.6	4.8
					Viet Nam	9.3	6.4	24.6	2.1

Source: (Von Grebmer, et al., 2019)

It can be seen that except Cambodia and Timor-Leste, all the South East Asian states have less than 10 percent undernourished population, as compared to South Asia, where except Nepal and Sri Lanka all states have more than 10 percent of undernourished population. Furthermore, statistics reveal that, India (20.8%), Bangladesh (14.4%) and Sri Lanka (17.3%) has the highest Child Wasting Ratio in South Asia region and Timor-Leste 14.4%), Indonesia (11.7%) and Malaysia (11.5%) has the highest ratio in the region, but far less than South Asian states. Except, the examples of Pakistan (7.5%) and Afghanistan (6.8%), all the South Asian states have low mortality ratio. The basic reason behind this higher proportion is that the regional states of South Asia have been failed to provide a strong and nourishing food security scenario because of the increasing burden of the over-population.

Rapid Urbanization and Food Inflation

In South Asian countries, the trend of massive urban migration is wide-spread. Though, as compared to urban areas, population growth is higher in the rural areas, but intensive migration causes the population reduction on rural land and over-burden the urban areas. Such urban poor, generally, are more exposed to food insecurity instigating from any man-made shock or natural disaster. Till present, Sri Lanka is the only exception. There are several factors which are responsible for the urban migration (Iqbal & Amjad, 2012). On one hand, the rapid expansion of cities intensifies the food buyers, while on the other hand, it diminishes the rural arable land

through the conversion of productive agrarian land and hydro resources into industrial and residential land. Henceforth, this process of unplanned and fast urbanization has become a sever threat to regional food security. Since, majority of the urban and rural households are net food buyers, who are directly hit by the increased prices and inflation. The urban poor are the explicit target of the process(Ahmad, Mustafa, & Iqbal, 2016). However, in the South East Asia the proportion of the rapid urbanization has been increased as well, but they have opted the population control strategies as well as facilitated the rural masses of the region with improved facilities, latest technological innovation, and more incentives for farmers in order to avoid the push and pull factors of rapid urbanization. Over two-third of the South Asian people are still inhabited in rural areas and a great chunk of the rural population is landless and work as a wage worker or tenant farmers in non-agricultural and agricultural sector(Habitat, 2010).

Poverty and Hunger

Poverty and hunger are also one of the key reasons behind the food insecurity in South Asia, as the regional states are not developed and their measures to eradicate poverty are not yielding conducive results. Poverty ratio is higher in South Asia than South East Asian region, which has aggravated the regional food insecurity situation (UNDP, 2019).

According to the United Nations statistics, except Sri Lanka all the regional states have serious hunger situation. Afghanistan scored the highest marks followed by the India, Pakistan, Bangladesh and Nepal. Contrary to that in South East Asia, only four states are facing the severe hunger threat, while other regional states are facing low or moderate hunger crisis, which is displayed in the following illustration as well.

Table 7
Comparison of Hunger between South Asia and South East Asia

South Asian States	GHI Score (2019)	GHI Severity Scale	South East Asian States	GHI score (2019)	GHI Severity Scale
Afghanistan	33.8	Serious	Brunei Darussalam	NA	--
Bangladesh	25.8	Serious	Cambodia	22.8	Serious
Bhutan	NA	--	Indonesia	20.1	Serious
India	30.3	Serious	Lao People's Democratic Public	NA	--
Maldives	NA	--	Malaysia	13.1	Moderate
Nepal	20.8	Serious	Myanmar	19.8	Moderate
Pakistan	28.5	Serious	Philippines	20.1	Serious
Sri Lanka	17.1	Moderate	Singapore	NA	--
			Thailand	9.7	Low
			Timor-Leste	34.5	Serious
			Viet Nam	15.3	Moderate

Source: (Von Grebmer, et al., 2019)

Reduced Agricultural Production

Limited agricultural production (both in livestock and crops sector) is also a key reason behind the regional persistent food insecurity. The rice and wheat yield are lower in the South Asian states as compared to the top global producers (FAO, 2011).

Likewise, if a comparison of the production and yield of the crops among the both regions are made, then it can be concluded that South East Asia has surpassed the South Asia in annual growth of harvested area and crops production. South East Asia has more fertile agricultural land, production and yield of the staple crops, which is shown in the following table.

Table 8
Growth Rates in Area, Production, and Yield of Cereals, by ADB Region, 2000–2015 (%)

Region	Annual Growth Rates			
	Cereals	Rice	Maize	Wheat
Area Harvested				
South Asia	0.02	0.09	2.55	0.70
South East Asia	1.22	1.23	1.25	0.61
Production				
South Asia	2.01	1.95	5.48	1.89
South East Asia	3.20	2.87	5.18	4.94
Yield				
South Asia	2.00	1.86	2.86	1.18
South East Asia	1.95	1.62	3.87	4.30
( ) = negative value				

Source: (ADB&IFPRI, 2019)

The annual growth proportion of the staple food of the South East Asia region is higher than the South Asia except Maize. In harvested area, South Asia significantly lags behind the South East Asia region. Likewise, except Maize, the production growth of Cereal, Rice and Wheat is considerably less than South East Asian states. Similar is the case with the yield of these staple crops and in the crops yield, South East Asia has higher ratio of Maize yield as well.

Recommendations

In order to reduce the regional food insecurity ratio and to strengthen the food security in South Asia the following suggestions can be considered.

Advancement in Research and Technology

Technological backwardness is one of the key reasons of food insecurity in South Asia. While smooth and explicit access to technology and more investment in R&D sector is the most promising reason behind the flourishing food security situation

in South East Asia. That's why the advancement of research and technology in the field of agriculture is the need of the hour to strengthen the regional food security. Also, technological progress in the animal husbandry, crop development and other facets of the agriculture is fundamental in the reduction of the food insecurity. Malnourishment level on the children can also be reduced with the help of technological advancement. In this regard, irrigation facilities are attempted to play an influential role in such transformation. Irrigation facilities, in recent years, have become the vital aspect in the agricultural development hence in the reduction of food insecurity in the long run. Moreover, as far as regional food enterprises and corporations are concerned, most of them don't possess the latest and innovative technological tools. They don't have access to the modern means and procedures of the food processing and storage. Hence, the advancement in the research and technology empowers them to have their own machinery and the mechanism of their own choice. In this regard, the local food industry will not only boom, but the unemployment ratio will reduce as well and farming sector will gain more momentum. By this agricultural and employment sector, as well as food security scenario, will boom (ADB, 2012).

Formulation of Food-based Social Protection and Safety Net Programs

Introduction of the social protection and safety net programs can deliver instant relief to the poor stratum of society in any crisis or disaster. Hence, it is very imperative to incorporate such programs into the national systems as an important part of stabilizers (automatic). In this regard, cash transfer programs should be launched, which should only be targeted to poor people to make it more conducive in curbing food insecurity. Such programs entail greater amount of resources, therefore, they should be well-targeted in order to produce maximum fruitful results. In this way, healthy nutritional practices can be promoted in the region as well. National authorities could also consider the establishment of "hunger alleviation fund", in which they are supposed to set aside an appropriate amount (e.g.1 percent of GDP) as a shield in any situation of food crisis. Such initiatives would provide a safety shield to the poor as well as those who are more vulnerable to starvation, hunger and malnutrition. In addition, safety net programs for farmers (agriculture-specific) can be opted which includes crop insurance (weather-based) and future contracts. For a farmer's estimated plans and income, weather is an integral source of uncertainty, which have direct implications on production and investment decisions. In such scenario, crop insurance (weather-based) could decrease greater proportion of uncertainty by facilitating farmers with a number of opportunities to participate in more conducive and beneficial activities like use of cutting-edge technologies and alternative selection of crops (ADB, 2012).

Promotion of Agricultural Yield

For the assurance of long-term regional and national food security as well as poverty reduction, promotion of agricultural production is essential, on which South East Asia has been working for decades. Boosting farm production by employing increased efficiency and better technology can facilitate the rapid food production.

Transfer of the latest farm technologies to amplify the productivity can quadruple the farm yields. In majority of the cases, the required technologies for the increased efficiency are too costly to access by the poor farmers, or they might not have proper knowledge to use such technologies. In such circumstances, national governments and regional institutions should play an imperative role in education farmers (how to operate new technologies), encouraging farm cooperatives, and offering access to credit (ADB, 2012).

Promotion of Rural Development and Agricultural Research

Promotion of rural development is one of the significant solutions to the over population and rapid urbanization to strengthen food security and poverty reduction. It is also evident from the improved food security situation of South East Asian states. In the contemporary world, agricultural research has become an important part of the agricultural development. For instance, developments in the food technology can considerably bolster the farm production. Biotechnology advancement enables the farmers to produce the crops which aren't only weather and pests resistant, but also embodies greater nutritional content. Deep research and improved technologies are also required in fisheries, livestock production – since the people preferences (dietary) have shifted from grains (cereals) to vegetables and meat. The recent approaches of animal husbandry embody higher quantity of carbon footprint, henceforth, unsustainable environmentally in long term. Better technologies, likewise, for fish farming are required to prevent fish population depletion in seas and increase sustainability. Other agricultural areas needing more research and development include the sustainable and efficient use of dwindling water and land resources. (ADB, 2012).

Analysis

The food security issue has become pronounced throughout the world with the each passing day. Not only developing states, but the developed world as well, has been facing the dilemma of food security. As compared to the developed regions (Europe, East Asia), in developing regions (Africa and Asia) the food insecurity situation is more terrible, as these two regions alone inhabited 800 million undernourished populations. Likewise, compared to the South East Asia, the food security situation is terrible in South Asia. The South Asian region is principally rural and extensively relied on agricultural sector for the livelihood of people. It is the disaster prone region in the globe. Because of the number of reasons, the food security situation in South Asia has worsened. Additionally, the global warming and climate change issue has appeared as the most recent threat to regional food security in South Asia. The intensity and frequency of weather have caused massive displacement of people (in millions), badly affecting their employments, greater food inflation and decreased food production. Therefore, ensuring nutritional and food security to rapidly increasing regional population is one of the regional key challenges in the forthcoming decades. The other major reasons of regional food insecurity include rapid population growth, unplanned and fast urbanization, declining arable land,

reduction in average farm size, and decreased yield due to low Research and Development investments, land degradation. Although, the South East Asia region, more or less have been facing the same challenges, yet, they have successfully cope the food insecurity situation by increasing investment in R&D, and by increasing the production and yield of agriculture and husbandry. Similarly, South Asian states can also overcome these challenges by opting standard measures and operations like advancement in research and technology, formulation of food-based social protection and safety net programs, promotion of agricultural yield and productivity, promotion of rural development and encouragement of agricultural research.

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