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Problems of Food Security and South Asian Countries

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Abstract

Food insecurity can occur because land labour and complementary productive resources at the disposal of a household, region and nation which are not adequate to produce all the food they need. The problem of food security can also be a consequence of technologically challenged farmers, lack of non land inputs, or adverse climate conditions such as droughts, hail storms and floods. Current pattern of food security in Asia must be reviewed in the context of changes in demand for food which in term is predicted on population growth and economic expansion in the continent. In various countries, including but not limited to China, growth in food demand is driven both by demographic expansion and by the diversification and improvement resulting from better standards of living.

The availability of natural resources is critical in determining the extent of current and potential food security. Vast areas of croplands, grasslands, woodlands and forests in Asia and the Pacific have been critically affected by various forms of Land Degradation. The case of degradation of land due to shrimp cultivation is also worth mentioning. Shrimp farming is primarily an export industry carried out in developing countries, including countries in Asia.

Water is a limiting factor for agricultural production in Asia and the Pacific, with drought conditions and lowered water levels depressing agricultural productivity across every sub-region.

Keywords: Food Security, SAC, Water Problem, Conservation.

Introduction

Current problems of food security in Asia must be viewed in the context of changes in demand for food which in turn is predicted on population growth and economic pension in the continent. In 1950, Asia's population was 1.34 billion, equal to 54 % of the Global total. During the next quarter of a century, human numbers in the continent went up by 2.1 % per annum, reaching 2.26 billion in 1975. During the next 25 years, annual growth was slower, averaging 1.7%. But because there was less demographic expansion in Europe, North America and other affluent continents, Asia's share of the Global population was larger at the turn of the 21st century than it had been 50 years earlier: 3.46 billion out of 6.06 billion, or 57% of the world's population live in Asia.

However, in Asia, as in the parts of the world, decrease in population growth has been quiet marked, primarily due to decline in human fertility rates. In China for example, the fertility rate fell from 2.5 births per woman in 1980 to 1.8 births in 2006. If the latter rate, which is lower than the replacement level, sustains for a few more decades, China's population will contract. Comparable declines have occurred throughout Asia, falling to or below the replacement level in nearby every country where per capita income equals or exceeds $3000. Natural increase (the difference between birth and death rates) will continue in Asia for a few more decades, all the Phantom of unbridled growth in human numbers has receded in the world largest and most populous continent. In various countries, including but not limited to China, growth in food demand is now driven both by demographic expansion and by the dietary diversification and improvement resulting from better living standards.

In this connection, it needs to be underscored that the impact of increased earning on food security is not inconsequential in the Asian context. Notwithstanding intra-regional variations in the impact of periodic slowdowns, the general trend in Asia is one of increased household earnings which affect what people eat in multiple ways.

Aim of the Study

To study the causes of food insecurity in South Asian countries based on population, geographic and climatic conditions, and suggest measures to ensure food security.

Agricultural Intensification

In recent decades in Asia, aggregate food security has abated despite increase in human numbers and food consumption. However the increasing food demand and population, which have been outstripped by growth in the food supply, did not lead to the unrestrained expansion of agricultural land. The main reason for this land expansion being the agricultural and the technological developments taking place since the mid of 1960s.

In China, Philippines, Japan, India and other countries of Asia, since agriculture and farming have had a long history, hence population density is high in many parts of the Asian continent. In addition, supply of arable and is severely restricted as the opportunities to increase the livestock and crop production by expanding the area under agriculture are limited. If opportunities for expanding the area under agriculture exist somewhere, agricultural intensification has led to adverse environmental impacts, such as loss in biodiversity that mainly occur when farmers interfere and have a negative impact on Micro-environments, forest and other species rich habitats. Hence major increase in agricultural land use is not anticipated in the Asian region in future, due to the adverse environmental impacts mentioned above and also due to the existence of laws that prohibit incursions into forest and rangelands,

Degradation of Environmental Resources

The availability of natural resources is critical in determining the extent of current and potential food security. Vast areas of Crop plants, grasslands, Woodlands and forests in Asian Pacific have been affected by various forms of Land Degradation. Land Degradation is a complex process which takes different forms and has different levels of intensity, influenced mainly by topography, soil characteristics, climate conditions, vegetative cover and human activities.

The full impact of Land Degradation has been more severe in dry land ecosystems where it has caused desertification. For example, in South and Southeast Asia, around 74% of Agricultural lands were severely affected by wind and water erosion as well as by chemical and physical deterioration. Central Asia is more seriously most affected by desertification and erosion. In Kazakhstan alone, around 66% of the total land area is desertified.

The above impact of this phenomena on the productivity of Agricultural lands has affected the food security of about a billion people in the Asia Pacific region. In China soil erosion is a threat to food supply and increases the risk of floods, according to a report published on 28 November 2008 by the Ministry of Water Resources. China has more than 3.5 million square kilometre of eroded land, out of which 1.6 million square kilometre is due to water and 1.9 million due to wind. During 2000, economic losses of a total of 200 billion Yuan (29 billion dollars), 2.25% of the country's GDP, were attributed to land erosion.

The problem of erosion is worst in the hillside areas. China has about 200,000 square kilometres of hillside land, which is 17.5% of the total arable land area. As a consequence, crop output could fall in Northeastern parts of China by as much as 40% over the next 50 years, if erosion continues as its current rate. In southwest China, if land degradation continues at the same rate, over the next 35 years about 100 million people will be at risk of losing land, and hence vulnerable to food insecurity.

The adverse impact of natural resources degradation on food insecurity, especially in rural areas of Asia, can often be traced to the internal contradiction within a development approach, which promotes the use of productive resources but does not make adequate provision to erase the process of 'loss' through degradation of resources. For example, a report of the ministry of water resources, government of China, states that in 2000, economic losses of a total of 200 billion Yuan ($29 billion), 2.25% of the country's GDP, were attributed to land erosion. In contrast, the level of investment in stopping it is too low, just 1.63 billion Yuan, 0.012 percent of GDP spent in 2004.

Most developing countries in the Asia Pacific region have adopted a strategy of Agricultural intensification with significant negative environmental trade-offs, which affect the integrity of natural ecosystems and their future potential. For example, the original production and the use of mineral fertilizers as a profession of global production is increasing, and is dominated by North East Asia and South Asia. Countries such as India, Myanmar, Sri Lanka, Thailand and Vietnam intensified their use of mineral fertilizers as much 90% over the period of 1992 to 2002 (ESCAP, 2005). Misuse and excessive use of mineral fertilizers responsible for land degradation, soil nutrient imbalances, eutrophication and algal blooms in freshwater systems and coastal waters. The misuse of pesticides and herbicides does not only impact insect diversity and contaminated water supplies but has threatened the help of farmers.

Organochlorines have not only kill the targeted insect pests but also their natural predators, causing harm to food production.

Seasonality

Seasonality is usually an important factor causing food insecurity. It is common knowledge that in large parts of Asia Pacific, farmers are small and marginal farmers, and most of the rural population depends on food only small and marginal farmers. The food produced by small and marginal farmers can support the food needs of the families in rural people for the period ranging from 3 to 9 months, usually after the harvests. Thus people face food insecurity for 3 to 9 months during the year, depending on the place and environment in which they are situated. During these seasons of food and insecurity, people take recourse to various measures.

In village Rakshit Chak (inhabited by families of Lodha tribe), Midnapore district, West Bengal, a participatory study of food insecurity and community coping mechanism was conducted over the years 1993,1995 and 1998. How seriously doesthe seasonality affects their food security due to non availability of food, is demonstrated by this study.This study depicts that the food security situation could have been worse, but the availability of common property resources and right of the poor to access them, gives insurance against lack of food availability in hard times of the year. Study of the food calendar reveals that there are four phases of food insecurity in the village under study. Phase one covers the period from mid-November to mid-February, when people eat the most. Food insecurity sets in during phase two, spread over 2 months from mid-February to mid-April, when people eat less. Mid-April to mid-September marks phase three, when the food consumption is very low. Phase four spreads over the period from mid-September to mid-November, when a typical diet of poor households consist mostly of rice.

It can be seen that there are significant seasonal variations in the availability of foods like rice, potato and pulses, which are from the primary system of food produced using technology in the economic sense. For example, the consumption of rice, the staple food, reaches its peak between mid-January and mid-February, after which declined during mid-March to mid-April, remaining stationary through mad-September to mid-October. The consumption of rice remains low throughout the summer months. Secondary food, which comes primarily from CPRs, provides value addition to the food basket of the poor in the form of fibre and animal protein, adding nutrition to the diet of food insecure villagers. In the lean period, from mid-March to mid-September, when food from the primary system is low, the villagers access CPRs to cope with food shortages. Access to CPRs like water bodies can make a significant difference to the quality and quantity of food available. For example, in the village, a huge tank called Rajbandh was not auctioned in 1998 by the local body due to dispute, which allowed local villagers access to the tank from which they could collect a number of food items. While the auctioning of CPRs like tanks provides resources to local bodies, it also means that insecure households are deprived of food in lean periods.

Conclusion

The article provides insight into the main causes of food insecurity in South Asian countries. Here are some measures which can prevent food insecurity and shortage.

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