

Management of Food Security in Nepal

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Abstract: Food is one of the basic needs of people. However, many people in the world including Nepal have been facing the problem of food insecurity. Food insecurity is a threat to social and political stability. However, the main problem of food security is the inability of people to acquire enough food due to the lack of purchasing power. This article, therefore, examines the nature and causes of food insecurity in Nepal and suggests policy measures to get rid of food insecurity problem, both transitory and chronic.

Food security is now widely defined as “access by all people at all times to enough food for an active and healthy life” (World Bank 1986). The main elements of food security are the availability of food and the ability to get it. Conversely, food insecurity is the lack of access to sufficient food. Food insecurity may be two types – (a) chronic food insecurity which means continuous inadequate food resulting from the lack of resources to produce or get food, and, (b) Transitory food insecurity which means the inability of the people to get food temporarily. This type of insecurity occurs from the instability in food production and price or in family income. The worst form of transitory food insecurity is famine (Reutlinger 1985).

Food, clothe and housing are the basic needs of people. Food has great importance in human life. Inadequate food causes great harm on people and the country. Due to inadequate food people become the victim of diseases. It reduces the energy, initiative and willingness. Inadequate food reduces the productivity of men, which reduces production and income. Inadequate ‘human capital’ makes it difficult to persons and the country to escape from the cycle of poverty. Food security is considered as basic components of human right, which has been endorsed by the Interim Constitution, 2063 of Nepal as well. Hence, enough food should be available to the people in order to increase the rate of economic growth by building human capital.

According to Food and Agriculture Organisation (FAO), in 2007 the number of hungry people in the world was 92 crore and 30 lakh which reached 96 crore and 30 lakh in 2008 (Dhital, 2009a). The number of hungry and undernourished

men in the world increased further due to low production and sky-rocketing price of food grains. The effect of climate change on production, rapid growth of population, change in the food habit of high-income people, production of bio-fuel and worldwide drought are the causes of food crisis. International development organisations have stressed the need to increase investment in production and distribution of food grains. United Nations has warned that the world will have additional food crisis if not taken timely measures. FAO has said that the food production of developing countries will have to double till 2050 and for that needs to invest 30 arab dollars per year. This article examines the extent and nature of food insecurity in Nepal and suggests measures to ensure food security.

I. EXTENT AND NATURE OF FOOD INSECURITY IN NEPAL

The population of Nepal is increasing rapidly at the rate of 2.25 percent per annum. The population of Nepal has reached 2,27,36,934 in 2058 B.S. On the other hand, agriculture production and productivity has remained stagnant or even declined. Due to the increase in population even marginal land and forest-land have been brought into cultivation. However, Nepal has not been able to produce enough food due to the increase in population and the decrease in productivity. Production has not been increased due to the lack of modernisation in agriculture. Rapidly rising prices of foods at present clearly indicates that the supply of food is lower than the demand for food. The food situation of Nepal has been presented in table 1.

Table 1: Food Balance Sheet of Nepal

(Unit: In metric ton)

Fiscal year	Production	Requirement	Balance
2000/01	4513179	4430128	+83051
2001/02	4543049	4463027	+80022
2002/03	4641466	4565820	+75646
2003/04	4835973	4683272	+152701
2004/05	7767490	N.A.	N.A

Source : MOAC, Statistical Information on Nepalese Agriculture, 2001/02, and CBS, Statistical Pocket Book Nepal, 2006.

It is seen in above table that there is no food crisis in the country at present. It is because food production is more than the requirement in each fiscal year. According to the Three-Year Interim Plan (NPC, 2007) the country seems to be self-reliant from the viewpoint of food production. However, there is still food deficit in 55 districts. The food problem is acute in remote hilly areas due to the difficulty of transport and uncompetitive market. At present, food problem in Nepal seems to be regionwise rather than nationalwise, which is clear from table 2.

Table 2 : Regionwise Food Availability and Requirement, 2000/01

Regions	Population	Total production	Total requirement	Balance
<u>Geographical regions:</u>				
(a) Mountain	1715272	247571	327617	-80046
(b) Hill	11335060	1741658	2077346	-335688
(c) Terai	11188763	2523950	2025165	+498785
<u>Development regions:</u>				
(a) Eastern	5452588	1273032	1025009	+248023
(b) Central	7956388	1363821	1515464	-151643
(c) Western	4633376	944625	896128	+48497
(d) Mid-western	3030289	588713	581318	+7395
(e) Far-western	2166456	342988	412209	-69221
Nepal	23239095	4513179	4430128	+83051

Source : MOAC, Statistical Information on Nepalese Agriculture, 2001/02,

As seen in table there was food surplus of 83, 051 metric ton in Nepal in fiscal year 2000/01. On the basis of geographical region, there is food surplus in Terai region and food deficit in mountain and hill regions. On the basis of development region, there is food surplus in eastern, western and mid-western regions and food deficit in central and far-western regions.

The population without ability to consume minimum calorie is 39.9 percent in national level, which is 45.2 percent in mountain region, 41.8 percent in hill region, and 37.4 percent in Terai region. This percentage ranges from 37.2 percent to 39.9 percent in eastern, central and western development regions, and 44.3 percent and 44.9 percent in mid-western and far-western development regions respectively (NPC, 2007). Thus, the situation of nutrition is relatively measurable in mountain and hill regions in terms of geographical regions and in mid-western and far-western regions in terms of development regions. About 35 percent of population is experiencing scarcity of food. According to Ministry of Agriculture and Cooperative except in the hill districts of the eastern development region, more than 50 percent of the population in most hill districts in all development regions will face severe food insecurity the fiscal year 2065/66. This shows the gravity of food problem in Nepal. Although 65 percent of the population is directly involved in agriculture, and this sector contributes 34 percent of the GDP, Nepal is in a very high risk of food insecurity,

About 48.4 percent of the total population of Nepal resides in Terai region and 61.7 percent of the total arable lands of the country lie in this region. Due to the land of Terai region being more fertile and availability of other facilities, production and productivity of this region is higher. On the contrary, about 51.6 percent of the total population of Nepal resides in mountain and hill regions and 38.3 percent of the total arable lands of the country lie in these regions. Besides, the lands of these regions are not fertile and there are many difficulties including irrigation in these regions. Therefore, the food problem is

mild in hill region and severe in mountain region. On the one hand, even the available food is illegally exported to India and on the other, poor people is unable to buy food due to the lack of purchasing power. At present, the country has turned into a food importing country from the food exporting country. In recent years, the export of major cereal crops like, rice, maize and wheat to India is almost nil. On the other hand, in 2000/01, Nepal had imported rice of Rs. 427.1 crore from India. It shows the miserable situation of the agriculture sector. It is because in fiscal year 2023/24 B.S., Nepal's total export consisted 85 percent of agricultural products, and cereal crops like rice, maize and wheat consisted 60 percent of total agricultural products.

Due to chronic and transitory food insecurity Nepal has been receiving food aid from 'work for food' programme of World Food Program (WFP) and the countries like India, China, Saudi Arabia, Switzerland, USA, France and Italy. Nepal has been receiving mainly rice, wheat and maize. Despite the overall food surplus Nepal has been receiving food aid. The main reason for this is the export of the surplus product of Terai legally and illegally to India and not reaching to the hill and mountain regions. Another reason is the inability of the people to purchase even the available food due to the lack of purchasing power.

World Food Program has been making great contribution in removing the food crisis of Nepal. World Food Program has been making available food under 'work for food programme'. Besides, the government of Nepal has been making available subsidised food to the people with low purchasing power through Nepal Food Corporation.

According to international food security index 2008, among 88 countries in the list of famine, Nepal is in 57th position. FAO in one of its report predicted that food insecurity and price will further increase in Nepal in 2009 (Dhital, 2009b). Hence, taking into account the gravity of situation, the government needs to formulate and implement short-term and long term food security policy. Nepal will fall into great food crisis in near future if effective measures are not taken to check high growth rate of population, if proper preservation and utilisation of sources of water is not done, and attention is not given on the development of new variety and technology of agricultural crops (Dhital, 2009a).

II. CAUSES OF FOOD INSECURITY IN NEPAL

Most of the people in Nepal are poor. Per capita income of people is mere \$290. People below poverty line are 31 percent of total population. On the one hand, the country itself is heading toward food crisis. On the other hand, majority of poor people have not been able to consume even available food. Due to the lack of purchasing power people are suffering from the lack of 'food security'. Following are the causes of both transitory and chronic food insecurity in Nepal.

- **Rapid population growth.** Population growth rate of Nepal is 2.25 percent which is high as compared to other developing countries. On the other hand, the growth rate of food products is almost stagnant. Due to the growth of population the per

capita food availability has declined. The country has to shoulder the burden of the people of the countries lie Bhutan, Tibet and India including its own people. On account of this, most of the people have been the victim of malnutrition. This is the common cause of food insecurity.

- **Stagnant agriculture production.** There is more pressure of population on agriculture. Agriculture is still suffering from lack of modernization and dominance of traditional agriculture. Agriculture is still dependent on weather. Due to this agriculture production is more or less stagnant and even decreasing in some years. This has been instrumental in creating food insecurity. Till Seventh Plan agriculture was a high priority sector, but with allocations reduced to as low as to 2.4 percent of the total annual budget, agriculture has become marginalised giving rise to severe threat of food insecurity.
- **Low Income.** Per capita income of people is mere \$290. The economic condition of most of the rural people is miserably low. Due to low purchasing power they can not purchase and consume even the available food. In fact, at present food insecurity in Nepal has occurred due to the inability of people to purchase food rather than from overall food scarcity. Food has been available inadequately due to low income. Thus, lack of access to food is other major aspect of food insecurity apart from low production.
- **Lack of transport facilities :** There is surplus food production in Terai region. On the other hand, there is deficit production in mountain and hill regions. There is no proper development of means of transport in mountain and hill regions. It is, thus, costly and difficult to transport the surplus food products of Terai region to Mountain and hill regions. On the other hand, it is easier to export to India since Indian markets are close to Terai region. The government of Nepal has to make large amount of money as transport subsidy to Nepal Food Corporation in order to make available food to the poor people of hill areas.
- **Uncontrolled trade.** Since Nepal's border with India is open traders export country's food products to India in an uncontrolled manner. Since prices of food products are relatively higher in India traders find it profitable to export to India. It is a paradox that there is food scarcity in Nepal and food products are exported to India in an uncontrolled manner.
- **Lack of godown facilities.** There is lack of godown facility in different districts of the country. Due to this, surplus products could not have been stored and kept in reserve. This has led to the imbalance in the supply of food in different districts. The transitory food insecurity occurring from drought, flood, landslide and excess rainfall has been caused by the lack of reserve. The warehouse of Nepal Food Corporation is of limited capacity. So, at the time of transitory food insecurity prices abruptly go upward and reached beyond the reach of poor people. Due to the lack of scientific storage facility even the available food is damaged by mice, pests and so on. It is estimated that ten percent of food in Nepal is destroyed in this way.

- **Lack of proper control.** There is lack of proper control in the purchase and sale of foods. Likewise, there is absence of proper supervision regarding the quality control of foods. Adulteration in food has surfaced as a serious problem. This has adverse effect on the health of people. Food traders are indulged in hoarding food to show artificial scarcity and selling in black markets. This had made the access of the poor to food still more difficult. Besides, with change in people's lifestyle in urban areas, the demand for meat and dairy products has soared. It is estimated that around 40 percent of edible food is used as livestock feed. This has also given rise to food insecurity.

III. POLICY IMPLICATIONS

As stated earlier, food insecurity may be either transitory or chronic. Chronic insecurity occurs due to low production or low income of people. The central food insecurity problem of Nepal is the inability of people to purchase food rather than overall scarcity of food. Transitory food insecurity occurs due to the factors such as damage of crops due to war, flood, landslide, drought, excess rainfall, hailstone, hurricane, temporary fall in the income of people, excess rise in the price of food products and so on. Famine resulting from these factors has greater effect on small farmers or tenants, landless agricultural workers, rural workers and livestock farmers. According to Sterling Wortman and Ralph W. Cummings Jr (1980), "The immediate problem to be attacked is low agricultural productivity and lack of employment of great masses of rural people. Clearly there are two sides of the food problem: one is to increase production; the second is to create purchasing power among the hungry."

In some of the countries there seems to be no food problem despite low production due to high purchasing power of people. The main determinant of undernutrition is income. Whereas it is difficult to find an example of a country where large numbers of people were lifted out of poverty but are still going hungry because of a lack of locally produced food, there are prominent cases of countries that are food self-sufficient at a national level – even holding large surplus stocks – but where large numbers of poor people continue to go hungry (Nash and Mitchell, 2005).

Solution of transitory or short - run insecurity

If transitory insecurity or shortrun food insecurity is not controlled it might cause danger to political stability. Human energies essential for development will have to be lost. Therefore, the government should remove such risks by adopting the policy of increasing stability in food price and supply. Enough financial resource to purchase food should be made available to the vulnerable in time of need. To deal with short-run food affordability problems, governments generally have available three broad approaches: providing social safety nets, intervening to reduce food prices, and ensuring supply by maintaining stockpiles (Ivanic and Martin, 2008):

Measures to solve transitory insecurity are as follows (Ivanic and Martin, 2008 and Reutinger, 1985):

- Providing social-safety-net, such as provision of emergency food aid or transfers to the poor, can—in principle—be targeted to those most in need. As a result, safety nets have fewer side effects than policies that result in lower prices for all. Even if price is stable, rural landless, small farmers, urban workers might not have purchasing power to buy food. Such groups should be promptly identified and should be given payments in cash or kind. The government may also give them temporary employment. The government of Nepal has been providing food as wages under 'food for work program'.
- Intervening to reduce domestic food prices, such as the imposition of export taxes or reductions in import tariffs—are administratively easy to implement. But these approaches can have unintended consequences. For example, an export restriction that lowers the domestic price of rice also will result in lower production and increased demand at a time of shortage, will hurt poor farmers who sell rice, and will provide benefits to consumers far above the poverty line. Policies that seek to insulate domestic food markets from changes in world market prices also tend to fuel the fire of the price increases they seek to quell.
- Government may also make effort to maintain price stability. International trade is regarded as the best means of bringing price stability. Import or export automatically ends the instability in internal production. Besides, it is better for the government to rely on food aid. The government can stabilize food supply and price also by imposing quantitative restriction on import, export and internal movement of food. However, such intervention by the government may aggravate supply and price instability due to inadequate information, managerial weakness and political pressure.
- Maintaining public stockpiles can be used to solve short-run food-security problem. The government may keep excessive buffer stocks. Nepal Food Corporation has also been adopting such policy. The government may keep excessive buffer stocks. But they are costly and involve difficult management issues. This may impose more cost to the government due to more loss in storage, low capacity utilization of warehouse and high interest on capital tied up in inventories. It is difficult to determine the quantity of stocks required and the amount to release at any stage. 'Most important, food stocks in the granary are not by themselves enough to ensure food security. Whether or not public stocks are used, the key to food security is ensuring that poor people have access to food' (Ivanic and Martin, 2008).
- Since lack of proper control on supply and price of food in the country is one of the major problems that has made it difficult to bring food on poor's table, the government need to make monitoring of food market. To combat food insecurity, there is a need to form a high- level National Food Security Commission with experts with proven track records. In this context it is good news that the government of Nepal (GON) has recently appointed food security commissioners in all 75 districts in order to ensure food security. The commission has responsibility of assessing food production, projecting food demand, monitoring food supply, and setting up

food bank in the district. It will also check unjust price hike and monitoring the quality of food items. Meanwhile, MOAC is opening cooperative shops in all Village Development Committees and municipalities to supply food at reasonable prices.

Solution of chronic or long - run insecurity

The ultimate solution of the chronic or long- run insecurity is to provide opportunity to people to earn enough income, and to assure adequate supply of food either internally or from import. In an agriculture-based country the growth of agriculture should be made rapid. If topmost priority is given to the increase in the income of poor by increasing the overall economic growth, this type of insecurity can be reduced. Following measures can be taken to solve the chronic insecurity (Ivanic and Martin, 2008 and Reutinger, 1985):

- **Income transfer.** Transfer payments in the form of cash or kind should be made to the poor, who are facing food insecurity. This increases poor's real income and may increase their food consumption. The familiar form of income transfer is the food rationing at price lower than market price through 'fair - price shops' to the target group. However, while operating such program care should be taken to prevent leakage in order to prevent likely benefit to unintended persons. The income of the poor can also be increased by 'public employment programs'. Since only poorest people and unemployed get job, these programs are attractive. The problem of food security has been aggravated by the heavily skewed distribution of income. So, without effective efforts to redistribute income, meaningful progress in the eradication of hunger is unlikely (Brown, 1983).
- **Subsidized food prices.** Poor people should be given food at subsidized price. The difference between purchase and sale price should be borne by the government. Even if subsidized food is consumed by both poor and rich, poor benefit more. However, the management of this imposes more cost to the government. Poor may misutilise the subsidised food in making alcohol or feeding cattle. The government of Nepal has been spending large amount of money in providing food subsidy to the poor of food-deficit areas due to which people have stopped cultivation and shifted to other jobs. This has aggravated the problem of food deficit. Hence, in order to make it more effective, the government should adopt the policy of providing subsidy only on inferior grades consumed only by poor.
- **Food supply policies.** The government should adopt appropriate food supply policy. Care should be taken as to whether the policy increases the real income and consumption of malnourished people or not. If poor are mainly the food sellers, increasing food price and substituting import by internal food supply increases the food security. Many countries impose import tariffs on food to encourage and protect higher-cost domestic production. Food protectionism results in higher domestic food prices, which mostly hurt poor consumers as they spend disproportionately on food. Protectionism does not benefit the rural poor equally as it leaves out two large groups: those who do not own farm land, but have to pay higher prices as consumers; and

those who on farm land, but do not produce for commercial purposes. And even commercial farmers, who may see a short-term increase in their income, will not experience long-term benefits such as a significant narrowing of the income gap with non-farmers; this will come only from measures that raise agricultural productivity and facilitate the movement of labour (Nash and Mitchell, 2005)

- **Increase agricultural production.** Increasing agricultural production is the best means of increasing food security in an agricultural country like Nepal. If agriculture is ignored, whole process of economic development and the efforts to provide gainful employment to increasing population and make available adequate food are hampered. Research is the first step to agriculture development. But research programs cannot be carried well with an allocation of just 0.25 percent of the total national budget. As opined by Ayres and McCalla (1996), "Ensuring food for all poses enormous technological, economic, and political challenges. They cannot be met unless both rural well-being in general and a prosperous private agriculture for small and medium-sized holders in particular are nurtured and improved." Following measures may be taken to increase agriculture production:
 - The productive and beneficial technology should be available, and there should be arrangement of training regarding the use of advanced technology.
 - Agricultural inputs like fertiliser, seeds, pesticides, credit should be made available in required quantity and place. Prices of such inputs should be reasonable.
 - There should be arrangement of market for agricultural products.
 - Emphasis should be given on the development of overwhelming majority of small farmers.
 - Integrated development programs should be launched to provide non-agriculture employment.
 - There should be the provision of buffer stock for price stabilization and control.
 - Income of farmers should be increased by changing the unscientific land tenure system.
- **Policies that raise the productivity of poor.** Sustainable improvements in long-run food security depend largely on the ability to bring about sustained increases in the real incomes of the poor. Development policies that raise the productivity of poor people's assets are essential to achieving such sustained income increases. Because chronic food insecurity comes mainly from insufficient purchasing power of the poor, the real question is how the poor can be provided with opportunities to earn sufficient income so they can meet their consumption needs, regardless of whether they do so through food produced at home or abroad. Here, trade liberalisation can have a major impact, as it would open markets for producers in developing countries not only to sell their products at higher prices, but also to buy better production technology, which would in turn help boost their productivity and raise their incomes (Nash and Mitchell, 2005).

Trade liberalization may help in ensuring food security. Broad-based trade liberalization can help raise productivity and income by ensuring that investment goes into the right activities and by promoting technological change. However, "Achieving and maintaining an open trade regime is important, but not sufficient, for achieving food security. In the short term, trade liberalization needs to be accompanied by social safety net programs that protect the poorest from shocks such as those resulting from higher international grain prices. In the longer term, the key lies in improved productivity that raises the incomes of poor families (Ivanic and Martin, 2008)".

Trade liberalization must go hand in hand with development policies that include investments in public goods, such as research and development, public health, infrastructure, education, and basic safety nets to help poor households recover from shocks. Investments in rural research and development appear not only to have particularly high rates of return, but also to have the potential to raise returns to farmers while lowering prices to consumers.

IV. CONCLUSIONS

The possibility of food insecurity is increasing in developing countries including Nepal. If we look at the world food situation Malthus's prediction that population will surpass food production has not been proved true. Rather the world is experiencing the narrow problem of many people not having enough to eat, despite there being enough food for all (Reutinger 1985). However, only food production is not enough. Those who are hungry have no money; world food problem cannot be solved unless their purchasing power is increased by providing food and other needs.

Amarty Sen (1981) opines that food security is not determined by where the food is produced, but by whether individuals have access to it. His study of major 20th century famines found that acute food insecurity can occur even when ample food is available in a country. In order to solve the food problem in a sustained manner economic growth rate will have to be increased. It should be taken into mind that "Long-term food security is a matter of achieving economic growth with equitable distribution of benefits" (Reutinger, 1985). So, the government of Nepal as elsewhere will have to adopt two-pronged strategy to solve the problem of food insecurity in a sustained manner – increasing agricultural production by increasing investment in research and development and by adopting the measures that raise the incomes of the poor.

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