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# Food Security Concept, Condition and Trends in Georgia

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***Abstract***

*The concept of Food security cannot be considered under the context of a single country or even an entire region. This is the global one and requires a global attitude. Many international organizations coordinate and pay attention to the food security issues, especially in the developing countries, where this problem more or less exists.*

*Agriculture represents a significant segment of the economy of Georgia. Development of secure food for domestic consumption or export trade relies on uniform food policies and procedures that are consistently enforced by government agencies.*

*The major objective of this article is to represent the current condition of food security in Georgia, identify main obstacles, show relationship between the economic factors and food production, to assess the future development trends and to show the number and proportion of undernourished persons, improve availability and quality of relevant food security information.*

*This article presents a suite of food security indicators including in the Millennium Development Goal Indicator 5 on the prevalence of undernourishment at the national and sub national levels. The summarized findings cover a wide range of food security statistics which provide the analytical background for identifying and locating the food insecure population. It can be concluded from the findings that Georgia has a moderate level of undernourishment.*

***Keywords:*** *Food Security, Georgia, undernourishment, food deprivation, food consumption, dietary energy consumption*

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## Introduction

The process of globalization develops every country's possibility to participate in the global food production system and to increase its capital investment in the agricultural sector. The raw materials are taken from all over the world, which is similar for finished food products. In developed countries consumers are used to the fact that all kind of food products are available all over the year. Trade barriers are disappearing, reinforcing this type of development. That gives consumers access to both common and exotic foods throughout the year. Food Security represents a major and daily concern in all countries, from the most to the least developed. It has become a truly transnational issue as an important element in the drive of food industries to be internationally competitive. Recent trends in global food production, processing, distribution, and preparation are creating a growing demand by consumers for effective, coordinated, and proactive national food safety systems.

Generally, the concept of food security is used in a broad one. Food security has been defined in many different ways at different times and by different institutions [Maxwell 1990]. The most widely accepted definition of food security at the individual level is that of the World Bank: "Secure access by all people at all times to enough food for a healthy, active life" [IBRD 1986]. This includes the three elements that are widely agreed to be necessary for food security:

- enough food for an active healthy life;

- access to this food;

- the guarantee of having access to it at any given time [Christiansen 1995].

At the national level, the evolving food security debate during the 1970s and 1980s made clear what is obvious at the individual level: national food security does not require individual countries to achieve food production self-sufficiency. Depending on a country's factor endowments, a more lucrative and perhaps even safer option might be to produce and export high-value crops or manufactured goods, and to purchase some proportion of national staple food requirements on world markets. Conversely, countries can be food self-sufficient at the national level but

also contain some food insecure individuals because of unequal distribution of food within the country.

At the multinational level; definition of food security can be identified within the context of the World Trade Organisation (WTO): the term 'food security' is used in a different, narrower sense. It is often taken to relate primarily to the adequate supply of imported food to member states. This reflects concern that the liberalisation of world agricultural trade could lead to a rise in world prices for commercial imports and a reduction in the volume of food aid available.

It goes without saying, that in the process of globalization; food security became the major determinant of the economical security both for the developed and the developing countries. It is obvious; that maximization of the country's food industry's international competitiveness is the subject to achieving its socio-economic objectives and in this way efficiently and effectively assesses; manage and communicate the risk of food security problems.

**Evolution of Concept of Food Security**

In its general form, the concept of food security essentially means the state of affairs where all people at all times have access to safe and nutritious food to maintain a healthy and active life (Food And Agriculture Organization, FAO, 1996).

Nevertheless, it should be kept in mind that this concept of food security evolved over time. There are many competing concepts in terms of the more specific forms of policy and public action, and these have produced many different definitions, reflecting both the shifting focus of concern and changes in emphasis in policies on agriculture, food and nutrition (Maxwell and Frankenberger, 1992). Christiansen and Tollens (1995) elaborated on this observation. During the seventies and the beginning of the eighties inadequate food consumption was essentially blamed on inadequate and later also on an uncertain food supply. Consequently food security was then conceived in terms of a sufficient and ensured supply (availability) of food on a national and international level, whereby the required quantity was calculated on the basis of objectively established physical needs. However, by the mid-1980s, the emphasis has shifted to access to enough food for the family/individual. The work of Sen

(1981), Dreze and Sen (1989) in the mid-eighties citied that not so much as inadequate and uncertain supply of food formed the basis for hunger and malnutrition, but rather a lack of access to that food. By relating food security to entitlements and ownerships, Sen (1989) contend that the consideration of food security must focus upon adequate access demand. It would be thus worthwhile to review these different concepts and dimensions in order to better understand and analyze the problem of food security.

**Dimensions of food security**

Food security has several dimensions by which it can be defined and analyzed. Busch and lacy (1994) define food security as having at least three dimensions: availability, accessibility and adequacy (stability). Elaborating on their comments: (1) Availability requires that there be a stable sustainable system of production and distribution to provide food sufficient to satisfy the needs of all dependent people, and resilient enough to survive the natural and climate human disruptions and disturbances by which crop and livestock production can be adversely affected. (2) Accessibility must not be limited to by what economists describe as effective demand". Populations of all income and social categories, rural and urban, must have access to nutritionally adequate supply of food. In a free and market economy, all must have sufficient disposable income to afford the purchase of sufficient for their needs. (3) Adequacy can be described in general terms as food supply that satisfies different nutritional needs among various conditions of men, women and infants, young and old, rich and poor, which make up national and communal populations.

Subsequent definitions further elaborated on or emphasized three dimensions. According To Hulse (1985), a state of food security is one which the individual or communities under consideration enjoy consistent access to foods that in quantity, quality and composition provide a hygiene and nutritionally adequate diet. In 1986, the World Bank (WB) defined food security as "Access by all people at all times to enough food for an active, healthy life." Rukini and Eicher (1991) comments that the WB definition of food security is not simple but comprehensive, it also reminds one that there are two inter-acting parts of food security: the availability of food (enough food for an active and healthy life) and the ability of people to

acquire food (access by all people). Reutlinger (1987) likewise adopted the WB definition.

Social and moral dimensions on the issue of food security and entailment also exist. Sen (1981,1987) and Dreze and Sen (1989) addressed entitlements as they are accepted in market economies, including voluntary trade, production in terms of entitlement to own what they as individuals or communities have provided with their own resources; entitlement in relation to labor and inheritance. Food security entitlement depends on fair exchange and trade of goods and services among those who are gainfully employed. For the poor and unemployed, food security relies in some degree on social programs and provisions. Food security, poverty, and nutritional status are linked concepts in development (FAO, 1997). Lack of food security more often than not leads to under nutrition- when an individual simply does not get enough food. He or she is short on the calories or protein necessary for normal growth, body maintenance, and the energy necessary for ordinary human activities (Gopalan and Rao, 1979). Under nutrition has been established to be a major factor in holding back national development as it brings about a host of health and social problems that impinge on labor productivity, capacity for learning, and mortality and morbidity (Foster, 1992, Garcia, 1997).

Food security likewise has a temporal dimension. Valdes and Siamwalla (1998), Reutingler (1989), and Bigman (1993) commented that the lack of food availability to poor consumers is a problem that can be analyzed under different time frames. The first type of problem is the chronic lack of food arising out of low productive capacity as a consequence of inadequate resources with which to produce or purchase food. Chronic lack of food is characterized by the large number of effected individuals and households, and that its existence and solution extend over many years. The second type is called the temporary or transitory food insecurity resulting from unstable or disrupted food production or supply that causes a sharp rise in food prices or a drop in household disposable income. This is especially pronounced in areas with strong seasonality in the production (usually due to weather), price, and availability of food, as well as the availability of employment (Chambers, et. al., 1979 and Sahn, 1989). Finally, there is the acute shortage of food that strikes a community, usually concurrent with some form of natural disaster such as earthquakes

or storms which severely damage the normal channels of delivery of food to the area.

**Duration and severity of food insecurity**

The intensity of food insecurity may be measured in terms of levels of food intake. One option is to relate the severity of food insecurity to how consumption falls below a threshold of 2,100 kcal per day:

| Food security status | Indicators |
|---|---|
| Food Secure | Energy intake (measured in kilocalories) |
| Mild food secure | |
| Moderate Food insecurity | |
| Severe food insecurity | |

The measure for hunger compiled by FAO, defined as undernourishment, refers to the proportion of the population whose dietary energy consumption is less than a pre-determined threshold. People suffering from undernourishment are referred to as the undernourished.

Besides being a measure of hunger, the undernourished are also referred to as suffering from food deprivation.

**Overview of Food security in Georgia**

According to the government's Reform and Development Programme for 2004-2009 priority sectors of the country are: economy and energy, transportation and communications, tourism, agriculture, banking and light industry. Despite certain positive developments, Georgia's overall socio-economic situation remains difficult. Rapid and sustainable economic growth and a significant improvement in the population's social situation are still to be achieved. The priority focus should be on extremely impoverished people, as well as other marginalized groups.

In Georgia poverty is estimated based on household consumption expenditure. Two poverty lines are adopted under the Economic

Development and Poverty Reduction Program (EDPRP) elaborated by the government in 2003 with the support of the international community and in close cooperation with the non-governmental sector:

- Poverty line at official subsistence level - monthly GEL124-128 per adult, equivalent to a working-age male;

- Extreme poverty line - monthly GEL58-63 per adult, equivalent to a working-age male.

According to the State Department of Statistics in 2002 the poverty rate estimated at the official subsistence level amounted to 52%. The poverty rate at the extreme poverty line was 15%. In 2003 the proportion of the population below the poverty line increased to 54.5% and the proportion of the population in extreme poverty to 16.6%. Additionally, poverty indicators differ significantly between urban and rural areas. The poorest regions are Adjara, Samtskhe-Javakheti and Shida Kartli. Urban poverty focuses upon Kutaisi, Batumi, Rustavi, Gori, Zugdidi and several districts in Tbilisi. Higher poverty levels in most cases correlate with geographical isolation and the low intensity of arable land use. Seasonal factors have a significant impact on overall poverty indicators.

Populations living below or above the poverty line rely on very different diets. The population below the poverty line relies mostly on nutritionally cheap calories in their diets. There seems to be no distinctively strong correlation between poverty and hunger in Georgia due to reliance on homegrown food to complement diet and informal social protection mechanisms. The first factor is highly effective in addressing extreme poverty or lack of income to satisfy basic food needs. However, in the longer term, this resource cannot generate cash income necessary to satisfy non-food needs such as education, health care, heating, electricity, etc.

Dietary energy consumption differs across regions. The lowest level of dietary energy consumption is traditionally found in Tbilisi. The level of per capita dietary energy consumption is relatively high in Western Georgia, particularly in Samegrelo. However, it would be misleading to conclude that the situation in Samegrelo is better than elsewhere in Georgia, because the proportion of IDPs (Internally Displaced Persons) is particularly high in this region and surveys do not adequately depict the situation of IDPs.

In the Household Food Economy Assessment conducted in January-February 2004 by the World Food Programme (WFP), it was found that food security problems are more likely manifested by qualitative imbalances in diet and inadequate economic access to food by vulnerable groups at the household level rather than real food unavailability at the national level.

According to the WFP the average calorie intake of rural population is still maintained at 2,480 Kcal/person/day which is much higher than FAO recommended energy requirement for an adult of light physical activity of 1,920 Kcal. It is also higher than the Government's proposed requirement of 2,300 Kcal with climate adjustment. Only the destitute households (approximately 5% of total population) consumed lower than this level (1,736 Kcal). This means that, in overall, diets are quantitatively adequate in caloric terms. However, they are qualitatively unbalanced. All groups (destitute, poor, middle) consume a low content of proteins (8% of total calories versus recommended 10- 15%). The destitute and poor households that account for two thirds of total population eat a higher content of carbohydrates (72% versus recommended 55-60%). These two groups are increasing their intake of less nutritious and cheap foods as they can not afford to produce or purchase the more nutritious food such as meat, fish and dairy products. It may indicate a deficit of essential micronutrients (vitamin A, iron and iodine) in the diet which are crucially important for young children, pregnant/nursing women and other vulnerable groups.

In contrast, the diet of the middle group is characterized by a typical dietary pattern of industrialized countries, e.g very high calories (3,355 Kcal), of which 34% are from fat and 57% from carbohydrates. It may warn us about risks of some diseases usually seen in the developed world such as diabetes and cardio-vascular disorders.

Inadequate economic access to food is reflected in a large share of income that households spend on food. In surveyed rural families food accounts for 74% of total annual expenditure. This figure reaches 86% amongst the destitute and 63% in the poor households. The very high food share of income diminishes the household's ability to address other urgent needs such as medical care, heating, transportation, schooling and housing (currently at 7-15% of total expenditure). Additionally, foods expenditures

compete with farm input requirements (currently at 7-11% of total expenditure), preventing households from investing in their land, maintaining low productivity, and contributing to a vicious cycle of poverty. Many farmers can only afford to cultivate part of their land. Elderly people and the handicapped with no support from relatives are particularly food insecure. A significant number of food insecure people have to borrow food and take loans to cope with the food gap.

While energy consumption is the most widely recognized global indicator of hunger, it fails to capture the critical aspect of food insecurity in Georgia. There are three more sensitive indicators, more reflective of poverty and hunger that need to be developed for use in Georgia: energy consumption specifically of the destitute, the proportion of macronutrients consumed against Recommended Daily Allowances (RDA), and household income allocated to food. Progress against any one of these three indicators will reflect critical achievement in the fight against poverty in Georgia.

Unfortunately, administrative data on nutritional status of children has not been gathered regularly in Georgia so far. The only available source is the Multiple Indicator Cluster Survey (MICS) jointly conducted by the State Department of Statistics, the National Centre for Disease Control and UNICEF in 2002. The survey suggests that the proportion of underweight children under five years of age in Georgia is 3.1%. This percentage is not a bad indicator. The 1999 MICS Survey found acute and chronic malnutrition rates to be 2.3% and 11.7%, respectively. The nutritional status among children shows no gender disparity. In 2002 the National Centre for Disease Control and Save the Children's office in Georgia jointly implemented "Survey on Nutritional Status of Children under Five Years of Age in Six Drought Affected Regions". As the survey showed children with moderate and severe signs of acute malnutrition accounted for 0.4% and 1% in 2000 and 2001, respectively. The chronic malnutrition rates were found to be 8.1% to 10.2% for 2000 and 2001, respectively. The results of the survey clearly indicate that even in the drought period, the level of child malnutrition was significantly lower than the levels accepted as the standard threshold by World Health Organization (WHO) criteria for acute (5%) and chronic (20%) malnutrition. This can be explained to a major degree by the food distribution pattern among household members

traditionally giving priority to care and nutrition of children and elderly.

Available data on children's nutrition status is generally encouraging, although one should not overlook the problem of micro-nutrients (iodine, iron) deficiency. Iodine deficiency has historically been a serious problem for Georgia, especially for the population of high-mountainous areas. The study conducted in 1996 with UNICEF support revealed varying degrees of iodine deficiency in 64% of children surveyed.

Georgia's favorable climate and geographic location will facilitate the attainment of the target for improved nutrition. However, specific interventions are required to regain lost markets, improve farming knowledge and skills, and increase access to financial resources, as well as to revise land and agriculture policies. Studies indicate that with dietary energy consumption approaching optimum levels, it will be necessary to address the problem of securing better diets.

## Major food security indicators

Food Deprivation. One of the major indicators of the food security situation in the country is the food deprivation. It refers to the condition of people whose food consumption is continuously below its requirements. FAO's measure of food deprivation refers to the proportion of the population whose dietary energy consumption is below the MDER (Minimum Dietary Energy Requirement).

**Table 1.** Number of undernourished persons in Georgia (Million)

| | 1990-92 | 1995-97 | 2003-2005 |
|---|---|---|---|
| **Georgia** | 2.5 | 1.2 | 0.6 |

**Source:** FAO statistics division, 2008

**Table 2.** Prevalence of undernourishment in total population (%)

| | 1990-92 | 1995-97 | 2003-2005 |
|---|---|---|---|
| **Georgia** | 47 | 24 | 13 |

**Source:** FAO statistics division, 2008

**Table 3.** Food deficit (Depth of hunger) of undernourished population (kcal/person/day)

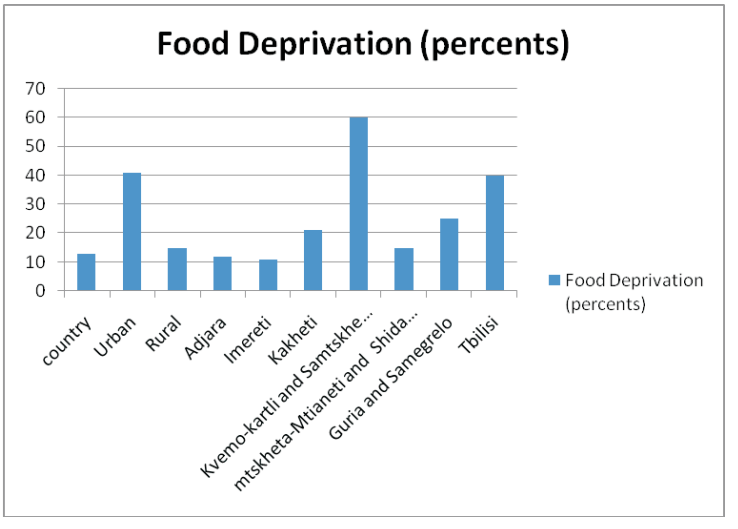
| | 1990-92 | 1995-97 | 2003-2005 |
|---|---|---|---|
| **Georgia** | 230 | 210 | 180 |

**Source:** FAO statistics division, 2008

We can analyze from these statistics that food deprivation at the national level in 2005 was 13%, which means that more than one in seven Georgians suffered from food deprivation in 2005.

Food deprivation is higher in urban than in rural areas. At regional level food deprivation ranged from 13 to 61 percent, in Imereti & Kvemo Kartli & Samtskhe- Javakheti respectively. Although population groups differed in minimum dietary energy requirements, (due to differences in weight for attained heights and sex-age population structures) and in how food is distributed within each population, the main reason for different magnitudes in food deprivation is the amount of consumed food (See figure 1).

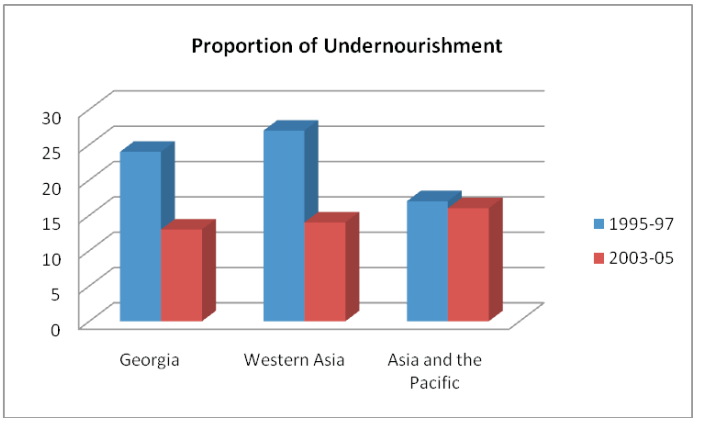
**Figure 1.** Food Deprivation in Georgia (percentage)




**Source:** FAO statistics division, 2008

According to these statistics, Georgia had a moderate level of undernourishment in 2003-05, the latest period available; 13 percent of the total population was undernourished. Both the number and proportion of undernourished decreased over the period. The prevalence of undernourishment in Georgia was lower than in Western Asia and higher than in Asia and the Pacific in 2003-05 years (See Figure 2).

**Figure 2.** Proportion of Undernourishment in 1995-97 and 2003-05 years




**Source:** FAO statistics division, 2008

Food Consumption. Second important indicator of the Food Security is the food consumption. The dietary energy consumption mirrors food deprivation shown previously. Population groups with high food deprivation showed low dietary energy consumption. The dietary energy consumption per person is the amount of food, in kcal per day, for each individual in the total population. Dietary energy requirements differ by gender and age, and for different levels of physical activity. Accordingly, minimum dietary energy requirements, the amount of energy needed for light activity and minimum acceptable weight for attained-height, vary by country, and from year to year depending on the gender and age structure of the population. For an entire population, the minimum energy requirement is the weighted average of the minimum energy requirements of the different gender-age groups in the population. It is expressed as kilocalories (kcal) per person per day. These minimum dietary energy requirements are used exclusively to estimate the prevalence of undernourishment according to the FAO's approach.

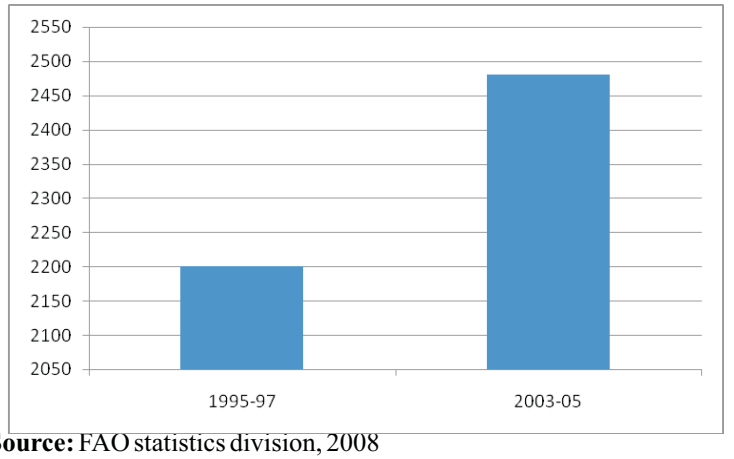
According to the FAO each country has different Minimum Dietary Energy Requirement (kcal/person/day). For Georgia it is 1920 kcal per person in a day (2003-2005 years).

In reality dietary energy consumption (The dietary energy consumption per person is the amount of food, in kcal per day, for each individual in the total population) counted 2480 (kcal/person/day), while

the dietary protein consumption (the dietary protein consumption per person is the amount of protein in food, in grams per day, for each individual in the total population) was 77 (g/person/day) and the dietary fat consumption (the dietary fat consumption per person is the amount of fat in food, in grams per day, for each individual in the total population) was 58 (g/person/day) accordingly.

In general, it must be mentioned that food consumption per person increased in 2003-2005 years,

**Figure 3.** Food Consumption per person (Kcal/Day)




**Source:** FAO statistics division, 2008

**Table 4.** Food Consumption, Quantities (g/person/day) in Georgia

| Food Item | 1990-92 | 195-97 | 2003-05 |
|---|---|---|---|
| Wheat | 412 | 435 | 425 |
| Barley | 10 | 7 | 21 |
| Maize | 57 | 54 | 58 |
| Rye | 0 | 1 | 0 |
| Oats | 0 | 0 | 1 |
| Cereals, Other | 0 | 1 | 2 |
| Potatoes | 137 | 125 | 153 |
| Sugar (Raw Equivalent) | 31 | 39 | 42 |
| Sweeteners, Other | 1 | 1 | 1 |
| Nuts | 11 | 12 | 8 |
| Oilcrops, Other | 0 | 0 | 2 |
| Sunflowerseed Oil | 0 | 3 | 6 |
| Oilcrops Oil, Other | 3 | 1 | 6 |
| Tomatoes | 83 | 117 | 75 |
| Onions | 12 | 23 | 21 |
| Vegetables, Other | 53 | 102 | 140 |

| | | | |
|---|---|---|---|
| Oranges, Mandarines | 35 | 34 | 22 |
| Lemons, Limes | 0 | 0 | 1 |
| Citrus, Other | 0 | 0 | 1 |
| Bananas | 0 | 1 | 4 |
| Apples | 49 | 68 | 35 |
| Grapes | 3 | 17 | 15 |
| Fruits, Other | 62 | 66 | 78 |
| Coffee | 0 | 1 | 3 |
| Cocoa Beans | 0 | 0 | 3 |
| Tea | 26 | 13 | 10 |
| Spices, Other | 0 | 2 | 1 |
| Wine | 91 | 40 | 13 |
| Beer | 2 | 9 | 29 |
| Beverages, Alcoholic | 8 | 3 | 0 |
| Infant Food | 1 | 0 | 0 |
| Bovine Meat | 25 | 33 | 34 |
| Mutton & Goat Meat | 3 | 5 | 6 |
| Pigmeat | 28 | 26 | 25 |
| Poultry Meat | 6 | 13 | 19 |
| Offals, Edible | 4 | 7 | 9 |
| Fats, Animals, Raw | 3 | 2 | 4 |
| Milk, Whole | 184 | 283 | 391 |
| Milk, Skimmed | 2 | 4 | 7 |
| Butter, Ghee | 0 | 1 | 3 |
| Eggs | 8 | 16 | 20 |
| Honey | 0 | 0 | 1 |
| Freshwater Fish | 1 | 0 | 0 |
| Demersal Fish | 0 | 0 | 1 |
| Pelagic Fish | 19 | 2 | 7 |
| Marine Fish, Other | 1 | 1 | 1 |
| Rice (Milled Equivalent) | 1 | 2 | 3 |

**Source:** FAO statistics division, 2008

In terms of quantities in Table 4, food consumption consisted mainly in cereals, namely wheat, potatoes, tomatoes, other vegetables and milk products.

## Inequality in access of food and income

The inequality of income at national level and by residential area, region, household composition, household size and other classification variables is measured using a Gini coefficient. Gini coefficient ranging from 0 (represents perfect equality) to 100 (implies perfect inequality). The Gini coefficient measures the area between the Lorenz curve and a

hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A Lorenz curve plots the cumulative percentages of total income against the cumulative number of individuals or households, starting with the poorest.

The inequality of dietary energy is measured by the coefficient of variation and the Gini coefficient. The dietary energy consumption varies due to socio-economic levels and due to the sex-age composition, body weight and physical activity level, i.e. the factors determining dietary energy requirements. The coefficient of variation of dietary energy consumption, is defined as a composite of the coefficient of variation of dietary energy consumption due to income (CV_I) and the coefficient of variation of energy requirements (CV_R) as follows: CV2 = CV_I2 + CV_R2. The CV_I is estimated using household Survey data. The CV_R is estimated using demographic and anthropometric data and recommendations on dietary energy requirements.

It can be concluded from the Table 5, Gini coefficient in 2005 is higher than in 1990, which indicates that inequity of dietary energy requirement and therefore inequity of income is increased.

**Table 5.** Inequality in access of food and income

| Country name | Income | | Dietary Energy Consumption | | |
|---|---|---|---|---|---|
| | Survey year | Gini coefficient (percent) | Last survey year | Gini coefficient (percent) | Coefficient of Variation (percent) |
| **Georgia** | 2005 | 41 | 1990 | 12 | 21 |

**Source:** FAO statistics division, 2008

## Diet Composition

Diet composition involves dietary diversity of the total population of Georgia. FAO provides key nutrition concepts for developing food-based dietary guidelines, which includes requirements of protein, fats and carbohydrates. Let us consider each of them:

Protein. For high quality proteins, the requirements for most people can be met by providing 8-10% of total energy as protein. For predominantly vegetable-based, mixed diets, which are common in developing country settings, 10-12% is suggested to account for lower

digestibility and increased incidence of diarrhea disease. In the case of the elderly, where energy intake is low, protein should represent 12-14% of total energy.

Fat. In general, adults should obtain at least 15% of their energy intake from dietary fats and oils. Women of childbearing age should obtain at least 20% to better ensure an adequate intake of essential fatty acids, needed for foetal and infant brain development. Active individuals who are not obese may consume up to 35% fat energy, as long as saturated fatty acids do not exceed 10% of energy intake. Sedentary individuals should limit fat to not more than 30% of energy intake Saturated fatty acids should be limited to less than 10% of intake.

Carbohydrate. Carbohydrates are the main source of energy in the diet (55-75%) for most people. Grain products, tubers, roots and some fruits are rich in complex carbohydrates. Generally, they need to be cooked before they are fully digestible. Sugars usually increase the acceptability and energy density of the diet and total sugar intake is often inversely related to total fat intake. Moderate intakes of sugar are compatible with a varied and nutritious diet.

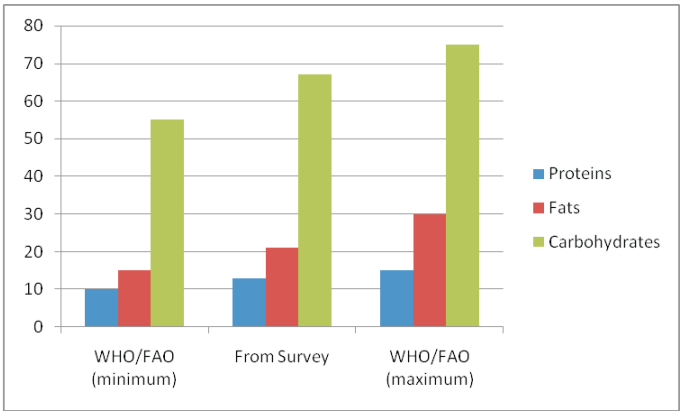
**Table 6.** Share in total Dietary Energy Consumption (percent)

| Country | Macronutrients | 1990-92 | 1995-97 | 2005-07 |
|---|---|---|---|---|
| Georgia | Carbohydrates | 75 | 71 | 67 |
| | Proteins | 12 | 12 | 13 |
| | Fats | 13 | 16 | 21 |

**Source:** FAO statistics division, 2008

According to the Table 6 the highest share of total dietary energy (kcal) was from carbohydrates (67 percent), followed by fats (21 percent) and by proteins (13 percent). If we compare these date with the recommended ranges by FAO and WHO experts, they exceed the minimum standards set by FAO and WHO.

**Figure 4.** Share of proteins, fats and carbohydrates in total energy consumption at national level




**Source:** FAO statistics division, 2008

## Recommendations and Conclusions

To achieve the substantial food security is critically important for the Georgian economy. Various factors shaping food security should be taken into consideration. Some general recommendations are suggested below:

An important contributing factor for the successful attainment of poverty reduction and food security is a well-targeted and well-sequenced implementation of reforms. Hence, improving governance is viewed as a major priority. It is essential to continue with assistance from Georgia's partners and mobilize support to translate the objectives into reality. Regulatory agencies have both enforcement/punitive and education/ supportive roles.

To improve substantial economic and agricultural advances strong and stable relationships with the European Union is suggested in order to continue harmonization of EU laws and regulations. It is recommended to invite international experts, as well as study the experience of new EU accession countries.

Improved diet composition can be achieved by improving the general socio-economic situation, leading to growth in household income and a more diversified pattern of food consumption. One of the most serious interventions is in protecting the consumer market from counterfeit

products. This can only be done through the improvement of the relevant legal framework. Great importance is attached to the protection of the local market from smuggling and dumping.

Further subsidization and substantial insurance for farmers and their products are highly recommended both from government and private sector. Additional finances promote their production and increase their competitiveness.

It is also important to consider the correlation between seed security and food security. To maximize the yield of food/feed production availability and provision of high seed should be taken into considerations;

Internal (social, economic, technological) and external (foreign trade, trade balance, international competition, foreign investments) factors have a huge effect on the food security issues. For the objective assessment of food security all these factors should be studied, analyzed and implemented accordingly.

A system of food security outreach education targeted toward consumers should be established through joint efforts among concerned ministries, universities, and other public sector agencies involved in food security, the private food industry sector, the mass media and other organizations that have an interest in the issue of food security.

All aspects and avenues of information networking should be utilized, including the internet, to establish and foster linkages among educational establishments.

Implementing all these factors greatly contribute to the achievement of the food security, which facilitates country integration into the international market, as well as, it can be seen as major factor of country economical security and development.

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