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## **Food Security: A New Factor in International Relations**

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FROM THE VIEWPOINT of macroeconomic analysis, food production and agriculture are being increasingly pushed to the background because industrialization and urbanization are enhancing the role of industrial production and services in the structure of economy and employment. Economically advanced countries have traveled a long way in this respect. Developing countries and transitional economies follow suit. Even so food remains essential in sustaining human life. When crop failures cause shortages of food they hit hardest developing countries, but also affect developed regions via the world trade channels. What's more, food shortages cause social unrest, which sends streams of refugees from the worst-hit countries.

### **How Many People Go Hungry in Today's World?**

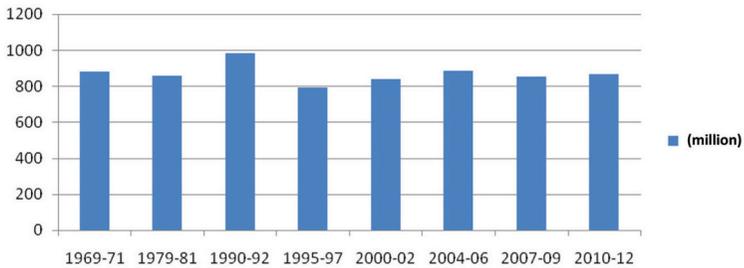
A GREAT NUMBER OF PEOPLE without adequate food, in terms of quality and caloric content, is hard reality in today's globalized, industrial and post-industrial world, in a world of information technologies and the Internet, which is getting increasingly at variance with the objectives of world development. In actual fact, there exists in the world, along with "the gold billion" of people in the industrially developed Western countries, "the hungry billion." They are people who suffer from chronic undernourishment. See Figure 1 (next page).

Figure 1 shows that during more than 40 years, the number of people lacking adequate food has roughly stayed the same. It grows during the years of bad harvest and declines when prices fall. The data in the diagram gathered over several years obscure these fluctuations. For example, the number of undernourished in 2009 shot up to 1,023,000,000 to

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**Figure 1. The number of undernourished people in the world in 1969-1971 and 2010-2012**



Source: *The State of Food Insecurity in the World. FAO, Rome, 2010 and 2012 editions*

drop to 925,000,000 in 2010. At the same time, the share of such individuals among the global population is decreasing owing to growing population and food production in many countries.

The problem of undernourishment mainly affects the developing countries. They account for nearly 98% of the population lacking the adequate amount of food. See Table 1.

**Table 1. The number of undernourished people in the world, by region, in 2010-2012**

<i>Regions of the world</i>	<i>Percentage</i>
South Asia	38
East Asia	21
West Asia and North Africa	3
Caucasus and Central Asia	1
Sub-Saharan Africa	29
Latin America	6
Developed countries	2
Oceania	0

Source: *The State of Food Insecurity in the World. FAO, Rome, 2012*

Plainly, the undernourishment problem is most acute in South Asia (India, Pakistan, Bangladesh, Afghanistan), plus countries in the Sub-Saharan Africa. Whereas the majority of African countries, Bangladesh, Afghanistan, and Pakistan rank among the poor countries, India aspires to world leadership in modern industries and services. None the less, the problems of food procurement are very pressing in that country. Caloric content and quality of food available to rural people stay at the end of the 19th-century level.<sup>1</sup>

It should be noted that the above statistics cover a wide range of problems related to provision of food, from famine to inadequate caloric content and quality of food. The latter, for example, affects 16 million persons in developed countries who are also taken into account in Table 1.

### **Concept of Food Security and Factors that Define It**

IN ORDER TO take into account all aspects of the shortage of foodstuffs, the Food and Agriculture Organization of the United Nations (FAO) introduced a concept of food security. In accordance with this concept, food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary requirements and food preferences for an active and healthy life. This definition also holds true at the household level. Food security is absent when people have no physical, social or economic access to food. Undernourishment comes into effect when the caloric content of the diet drops below the minimum energy requirements.<sup>2</sup> The FAO underscores that this term is more accurate than the more emotive term “hunger.”

The term “food security” first originated in 1974 at the World Food Summit. None the less, as FAO experts observe, there were about 200 definitions in published writings in the 1990s. The above concept of food security spans many real manifestations of food imbalance. Estimates and calculations of food security levels are based on national food balances.

There is a group of countries where food crises are a permanent feature and these countries need special attention of the world community. This group includes about 20 nations. Their development problems caused by adverse natural conditions combine with socioeconomic problems, and they lack the necessary resources to remedy the situation. These countries include Afghanistan, Angola, Burundi, the Central African Republic, Chad, Congo, Côte d’Ivoire, North Korea, the Democratic Republic of the Congo, Eritrea, Ethiopia, Guinea, Haiti, Iraq, Kenya,

Liberia, Sierra Leone, Somalia, Sudan, Tajikistan, Uganda, and Zimbabwe. Typical for many of them are political conflicts which, given their weak governments, frustrates all opportunities to boost productivity of agricultural production. Thus, agricultural production in these countries is made difficult by adverse natural conditions and political instability.

If we look at the problem in terms of the world economy, the main factors influencing food security are population growth, shortage of arable land and fresh water, globalization of food markets, plus economic policy of individual nations and of the world community as a whole. Table 2 offers an idea of the rate of world population growth. It takes no longer than 15 years for the world population to increase by one billion persons in the space of 65 years. Despite the declining rate of growth, the absolute values of increment are still very high. The pressure on global agriculture is growing.

Population growth triggers a constant race for new agricultural techniques to boost production and make up for depleting natural resources. It is impossible to solve the food problem once and for all as long as population is growing. All solutions are bound to be temporary because resources for developing agriculture are limited and the population growth depletes them unless there are improved techniques that boost productivity of the resources.

**Table 2**  
**Periods during which world population increases by one billion**

Billion	Years passed	Years
4	15	1959-1974
5	12	1974-1986
6	13	1986-1999
7	12	1999-2011
8	14*	2011-2025

\*Forecast

*Source:* The UN Department of Economic and Social Affairs Population Division // <http://www.un.org/esa/population/unpop.htm>

There are two types of agriculture in the world: traditional and modern. The former provides fairly good sustenance and employment as it remains semi-natural, whereas the latter is of a commodity-producing nature and feeds mankind. V.G. Rastyannikov and I.V. Deryugina take India's example, where both types of agriculture are widespread and exist side by side, to clearly describe distinctions between them:

“The composition of agents of economic growth is getting increasingly less uniform (it tends to split into many layers). One of its branches mostly clings to the ever more robust medium and prosperous landholdings (called ‘medium farmers’ in India) which are getting increasingly

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fragmented between India's various regions. Belonging to this branch are also considerable masses of smaller (according to India's agriculture standards) commercial agricultural producers.

At the same time, the other branch of the social composition of economic growth agents is maintaining the constantly growing subsistence economy tendencies (lavishly sustained by mechanisms of the still widespread relationships of traditional economy) while there remain vast poverty areas (which, as we already mentioned, contain up to 40 percent of the rural population.”<sup>3</sup> As indicated above, the geographic zones of traditional agriculture and chronic undernourishment coincide.

Modern agriculture is a hi-tech, capital-intensive and knowledge-intensive sector. Its efficiency depends on the transfer of resources from the other economic sectors – that's what they call agribusiness.

Contributing between one and three percent of GDP, agriculture in developed countries is a highly efficient sector whose efficiency grows faster than in the other economic sectors. Agricultural production in the United States increased 180 percent in 1950-2004 whereas the total volume of expenditures increased by two percent. The output, per unit of the total expenditure, went up 184 percent and 286 percent per unit of the labor input. During the same period, the yield of corn, the United States' major crop, increased from 10 centners [here, centner is 100 kg] per

hectare [hectare is 10, 000 square meters] to 40 centners per hectare and milk cow's productivity increased from 2,400 liters to 8,300 liters of milk. Efficiency in U.S. agriculture is growing twice as fast as in its other economic sectors.<sup>4</sup>

Government support for agriculture has long been a reality. In the U.S. it took shape in the 1930s, in the wake of the Great Depression. Today, the U.S. government subsidizes about one half of agricultural productions, the EU subsidizes more than two thirds.<sup>5</sup>

Globalization in resolving the food problem is an instrument that does work and globalization in this respect is obviously useful. Internationalization of the global food setup is seen, for example, in the fact that a ratio of trade in goods (the total sum of export and import) to total GDP produced in agriculture, including fisheries and forestry, is more than 100 percent whereas the total trade in goods and services to total GDP is 50 percent.<sup>6</sup>

To an appreciable extent, this high involvement of agricultural goods in world trade in comparison with other commodities is due to climatic conditions which necessitate imports of products that can be grown solely in certain natural conditions and to basic food crops, one of which is grain. There are, for example, about 150 nations that import grain.

### **International Organizations and Forums Working for Food Security**

THE WORLD COMMUNITY has created institutions to tackle the food problem at the global level. The most important of them is the FAO. This organization is constantly taking steps to improve the food situation in the poorest countries.

The World Food Security Summit held by the FAO in Rome in November 2009 was attended by heads of state and government or their deputies. The summit adopted a declaration on pooling international efforts to end hunger.<sup>7</sup> It stressed that more than one billion people around the world suffer from hunger. It noted that Earth's population will exceed 9 billion by the year 2050 and it is necessary to increase production of food by 70 percent from today's figure to feed the population. The declaration reiterated the need for achieving the earlier objective to half the number of starving and undernourished people in the world by 2015. It underscored the need for international efforts to meet this goal.

The declaration formulates five principles for sustainable global food

security.

Principle 1: Invest in national plans and projects, aimed at channeling resources to well-designed and results-based programs and partnerships. It underscores the importance of precisely national efforts in these areas while recognizing and supporting regional programs in Africa, Latin America, Arab countries, and ASEAN.

Principle 2: Foster strategic coordination at national, regional and global level to improve governance, promote better allocation of resources, avoid duplication of efforts, and identify response-gaps.

Principle 3: Strive for a comprehensive twin-track approach to food security that consists of: direct action to immediately tackle hunger for the most vulnerable and medium- and long-term sustainable agricultural, food security, nutrition and rural development programs to eliminate the root causes of hunger and poverty, including through the progressive realization of the right to adequate food. Item 30 elaborating on this principle calls for in-depth studies to ensure the expediency of production of bio-fuels because it is likely to undermine sustainable production of food.

Principle 4: Ensure a strong role for the multilateral system by sustained improvements in efficiency, responsiveness, coordination, and effectiveness of multilateral institutions. It also stresses the role of the FAO and the need for further upgrading its activities.

Principle 5: Ensure sustained and substantial commitment by all partners to investment in agriculture and food security and nutrition, with provision of necessary resources in a timely and reliable fashion, aimed at multi-year plans and programs. In this connection, the Summit welcomed the commitment made by African leaders to raise the share of agriculture and rural development in their budget expenditures to at least 10 percent. It underlined that the fulfillment of all official development assistance (ODA) by developed countries is crucial to achieve the target 0.7 percent of their GNP by 2015 and 0.5 percent by 2010. It also underscored that the share of ODA devoted to agriculture reached a level of 19 percent in 1980, but fell to 3.8 percent in 2006 and it was necessary to reverse this trend.

In recent years, the food problem has been a subject discussed at top-level meetings in addition to meetings within the UN framework. The heads of G8 states convening in L'Aquila, Italy, in June 2009, passed the Joint Statement on Global Food Security. Its signatories were not only the G8 heads of state and government but also delegates of many international organizations including the FAO, IMF, OECD, World Bank, WTO,

and many others, as well as heads of developed states which are major food exporters and of developing countries including Mexico, China, the Republic of Korea, Nigeria, Turkey among them.

The Statement voices concern about global food security. It calls for joint action to solve the problem of hunger and poverty. It voices determination to act in a coordinated manner to achieve a comprehensive solution to the food security problem. The gathering reiterated its commitment to invest in the development of agriculture and foster cooperation of public-private partnership in the development of infrastructure. The Statement calls on all states to support the poorest and, with this goal in mind, to make available requisite resources and lift the customs and other foreign-trade barriers between countries. It supports UN organizations committed to defeating hunger. The Statement speaks of the decision to create a Global Partnership for Agriculture and Food Security with a mission to enhance coordination of global efforts in this area. The countries represented in L'Aquila decided to mobilize \$20 billion over three years for sustainable agriculture development.<sup>8</sup>

The Global Agriculture and Food Security Program was established early in 2010 with funds provided by many partners. This fund is intended to implement the L'Aquila Food Security Initiative proposed at the G8 Summit by its participants and invited countries in July 2009. The objective of the initiative is to combat hunger on a global scale.

When in 2012 Russia chaired the APEC, food security of its members was seen as the priority. It considered the main elements of APEC's food security to be achieving and maintaining physical and economic access to food products, ensuring international standards of quality and safety, promoting increased food production through the introduction of innovative technologies, and promptly identifying and preventing threats to agriculture, including those related to climate change and emergencies, whether natural or man-made.<sup>9</sup>

There are two more approaches to food security in addition to international efforts to resolve the problem. The first one is reliance on national production and support of local producers. The most striking example of this policy approach is China. The second approach most concisely formulated by U.S. Agriculture Secretary John Block in 1986 is: "The idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on U.S. agricultural products, which are available, in most cases at lower cost."<sup>10</sup> Both self-reliance and dependence on imports have eco-

conomic rationale of their own. International division of labor under globalization allows for both approaches.

### **Brewing International Conflicts over Food Shortage**

THE WORLD EFFORTS for global food security are paralleled by the growing potential of conflict over availability of food. First, it has to do with the struggle for water resources in the river basins (Central Asia, the Middle East) and for owning water resources. Second, countries experiencing shortage of arable land (Republic of Korea, India, China, Saudi Arabia, and United Arab Emirates) have begun purchasing it and taking it on long-term lease. Many deals of this kind take place in developing countries (African countries) which experience shortage of food but enter such deals for financial gains. Third, many major world grain producers, most of which are Western or South American countries, cut back on growing and exporting grain and produce bioethanol and biodiesel instead.

Recent years, way before the world economic crisis, saw the emerging situation where spiraling prices owing to speculative operations and the growing production of biofuels resulted in shortages of food in many developing countries. Political instability in North Africa and the Middle East threatening interruption of regular supplies of oil is likely to encourage the production of liquid biofuels for vehicles in Europe and North America, plus Brazil, to cause a negative impact on the food market.

There is a vast increase in the areas under corn crop for the production of ethanol and the areas under rapeseed crops for the production of diesel fuel. Record oil prices strengthened interest in alternative energy sources and policy measures in the U.S. and the EU encouraged the expansion of biofuel production. As early as in 2007, when the global stocks of food grain were at a record low level, out of the increase of nearly 40 million tons in total world corn consumption in 2007, almost 30 million tons were absorbed by ethanol plants alone.<sup>11</sup> Globally, more than 10 percent of all corn is used in biofuel production with 60 percent being used to feed animals and poultry. In the EU, 60 percent of rapeseed oil was used to produce diesel oil, or roughly 25 percent of the rapeseed produced globally.<sup>12</sup> Thus, the main driver of prices of many cereals and oil-seed crops was the growing production of biofuels. The global crisis caused a decline in consumption and fuel prices while reducing the pressure of the fuel factor on the food market. The other side of this process

was lower prices of fossil oil products which reduced agricultural production costs.

The race between petroleum products and biofuel is likely to significantly affect the food situation. The Energy Policy Act passed in the United States creates conditions for constant pressure upon the food market from the biofuel sector. Since liquid fuel markets are far greater in size than those of food, they can not only absorb the growth in vegetable raw material production but also offer competition to the consumption of food and feed.<sup>13</sup>

Globalization of agricultural production and production of food makes one acutely aware of the limited availability of natural resources of agriculture – arable lands and fresh water. Precisely these two components are essential for the production of food, but far from all nations have an adequate supply of both. The availability of arable land and water for irrigation in the most populous countries of the world – China and India – is rapidly shrinking. In China there is about 0.1 hectares of arable land per person and 15 in India. The availability of fresh water in China is at a “low” level and at a “very low” level in India.<sup>14</sup>

### **Russia and International Food Security**

UNLIKE MANY OTHER COUNTRIES, Russia has natural resources sufficient to support agriculture on a scale to produce enough for domestic consumption and export. This potential is currently far from being fully used. One of the tools to reverse this situation is Russia’s national Food Security Doctrine.<sup>15</sup>

In accordance with Item 2 of the Doctrine, “Food security of the Russian Federation (hereinafter – Food Security) is one of the key areas for ensuring the country’s national security in the medium term, the factor that contributes to maintaining its statehood, sovereignty, the essential component of its demographic policy, the necessary condition for implementing the national priority, i.e. the improvement of the Russian citizens’ life quality through ensuring high sustenance standards.” Item 15 of the Doctrine outlines foreign trade measures. They include measures of customs tariff regulation to achieve a rational export and import ratio of farm and fish products, raw materials and food, active application of protective measures in the event of growing imports of farm and fish products, raw materials and food and in the event of dumping and the use of export subsidies by other countries, effective operation of the system of

sanitary, veterinary and phytosanitary controls in compliance with international rules and standards, phasing out the dependence of Russia's agriculture and fishing industry on imported technologies, machinery, equipment and other resources.

Of importance for Russia is the fact that it has been for a number of years now a major exporter of grain. Thus, it is playing an active part in contributing to international food security.

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#### NOTES

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<sup>2</sup> Trade Reforms and Food Security. FAO, 2003 // <http://www.fao.org/docrep/005/y4671e/y4671e00.htm>

<sup>3</sup> Rastyannikov V.G., Deryugina I.V. *Modeli sel'skokhozyaistvennogo rosta v XX veke. Indiya, Iaponiya, SShA, Rossiya, Uzbekistan, Kazakhstan.* M.: IV RAN, 2004, pp. 87-88.

<sup>4</sup> Andreeva N. A. "Sel'skoye khozyaistvo zapadnykh stran na postindustrial'nom etape razvitiya," *Mirovaya ekonomika i mezhdunarodnye otnosheniya.* 2009, No. 7, p. 91.

<sup>5</sup> *Ibid.*, p. 95.

<sup>6</sup> *The State of Food and Agriculture. Agricultural Trade and Poverty. Can Trade Work for the Poor?* Food and Agriculture Organization of the United Nations. Rome, 2005, p. 12.

<sup>7</sup> World Summit on Food Security. Rome, 2009. 16-18 November; Declaration of the Summit on Food Security // <http://www.fao.org/wsfs/world-summit/en/>

<sup>8</sup> "L'Aquila" Joint Statement on Global Food Security L'Aquila Food Security Initiative // [http://www.g8italia2009.it/static/G8\\_Allegato/LAquila\\_Joint\\_Statement\\_on\\_Global\\_Food\\_Security\[1\],0.pdf](http://www.g8italia2009.it/static/G8_Allegato/LAquila_Joint_Statement_on_Global_Food_Security[1],0.pdf)

<sup>9</sup> See: Prioritety ATEs // <http://rus.apec2012.ru/>

<sup>10</sup> Cited from: Aksenova L.A. "Sel'skoye khozyaistvo i prodovol'stvennaya situatsiya v sovremennom mire," *Geografiya mirovogo razvitiya.* Vypusk 2. M., 2010, p. 291.

<sup>11</sup> The state of agricultural commodity markets. High food process and the food crisis – experiences and lessons learned. FAO, 2009, p. 23.

<sup>12</sup> Там же, pp. 23-24.

<sup>13</sup> For more details on problems involved in biofuel production, see: Akimov A. "Biotoplovo ili uglevodorody..." *Mezhdunarodnaya zhizn'. Special edition "ATES-Rossiya 2012."*

<sup>14</sup> Akimov A.V., Yakovlev A.P., *Tsivilizatsiya v XXI veke: problemy i perspektivy razvitiya.* M., 2012. Razdel 2.7.

<sup>15</sup> The Food Security Doctrine of the Russian Federation [in Russian] // <http://kremlin.ru/acts/6752>

*Key words:* chronic undernourishment, food security, FAO, L'Aquila Food Security Initiative, the Food Security Doctrine of the Russian Federation.