

Global Food Crisis – effects, causes, remedies

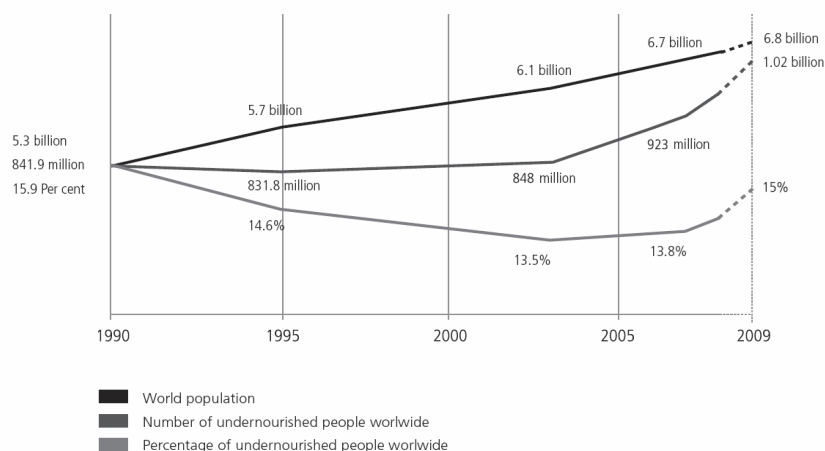
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Abstract: The present paper makes a brief examination of the actual global food crisis which the humanity has to face. The work focuses on the some of the causes as well as factors which lead to the decline in growth of agricultural production with results in the increase of the prices for agricultural and food products. Nevertheless the food crisis is a very complex phenomenon and has its roots some decades ago when people would rather ignore it without thinking to the present serious consequences. Given the present circumstances, it is essential that besides effects to examine the structural causes of the growing food insecurity in order to understand what really lies behind the food price crisis. The paper explores the impact of some factors including the systemic decline in agricultural productivity due to less land improvements, less investment in irrigation systems and in water management, in fertilizers along with states' reduced regulatory role in agricultural policy. In the end the paper presents some measures which can help reduce the adverse effects of the actual food global crisis

1. OVERVIEW ON THE GLOBAL FOOD SECURITY THROUGH THE PERSPECTIVE OF THE FOOD PRICE CRISIS

For the first time in the history of humanity the number of hungry people worldwide has exceeded 1 billion. According to the most recent estimates of the Food and Agriculture Organization (FAO), 1.02 billion people in the world suffer of malnutrition which means that every one of six people is chronically undernourished.

In the last couple of years the number of undernourished has increased dramatically and the world is further than never from fulfilling the 1st Millennium's Development Goal which is to reduce to half the percent of hungry people until 2015. In fact, worldwide is well-known and recognized that the individual right to food and nourishment has been permanently violated



Source: FAO Report /2008-2017

For this reason an immediate intervention of the international community and national governments is required to counter the actual crisis and take long term measures in order to sustainably ensure the food security. This serious problem of the humanity was put high on the public attention in 2008 and since then several international conferences have been held on the way to eradicate the hunger and finding solutions on solving the food crisis.

The United Nations General Secretary, Ban Ki-Moon, set up a High Level Task Force aimed at finding a common strategy to fight the food crisis considering that the number of the undernourished

people is in continuous growing. Within this action the national governments and the intergovernmental organizations took the commitment to ensure the right to food of the 1.02 billion people suffering from hunger. Therefore, a common action is necessary under the direct coordination of United Nations (UN), the only democratic organization under which all the 192 developing and developed states are equally represented and can act commonly and in close cooperation with the Civil Society and NGOs. However, the food crisis in the last three years is only the tip of the iceberg. The alarming increase of the prices has after all awoken the world. Within a few

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months of 2009 the prices for corn, rice and wheat have exploded so that for many people these goods became difficult to purchase or even unaffordable. First who became victims of the price explosion of the food basic products were poor people in the developing countries as they spend a much larger percentage of their income on the staple food. Thus, according to an FAO Report in 2008, whereas average spending on basic food accounts for 10 to 20% of overall income in developed countries, it lies between 60 and 80% in the less developed countries – and much above this level for the poorest states. Therefore they have a very narrow margin of tolerance and no money as a buffer against the rapid price increase. After years of preaching the ever same paean of praise to globalization and liberalization by the International Monetary Fund (IMF), the World Bank (WB) and governments, the developing countries had to learn finally that the export orientation of their agriculture and the consequent dependence on cheap imports may not be the means to achieve the food security after all. The import costs for the net food importing states have quadrupled since 2000, according to a 2008 FAO Report, making impossible for many of these countries to import the most basic staple foods.

The reasons for the price explosion are various but the effects on the poor states in Africa, Asia and Latin America were devastating. The consequences of food price increase were that people could not afford to buy basic food products such as wheat and corn and riots erupted in the streets of Mexico City, Haiti and in other 40 countries in Africa and Asia affected by poverty. The riots resulted in overthrow of some governments and grocery stores plundered. Even though food prices have little declined again on the world market in 2008 the situation is far from being improved. The prices remained not only highly volatile but also high on local markets. The WB Managing Director, Okonjo – Iwela, explained in a WB Report in 2009 that “the decline in global prices has not fully translated into a matching decline in poor countries, especially in Africa where the cost of import for cereals continued to increase in 2008 with 74% slowing down the implementation of the Millennium Development Goal (MDG).

As a result the export-oriented sectors – the largest in many developing countries and often hailed as the universal remedy for economic growth and poverty reduction – were hit hardest and reduced imports by developed countries resulted in large scale job losses with serious social consequences. The latest global trends show food prices finally stabilizing and declining after months of sharp increases. The crisis is, however, far from over. While the prices of major cereals have fallen from their peaks earlier in 2008, they still remain high compared to previous years, making it difficult for many people in developing countries to afford purchasing them. Forecasts of FAO, Organization for Economic Cooperation and Development (OECD) and the United States Department of Agriculture (USDA) project that the recent increases in food prices were not a temporary phenomenon, and suggest that prices for most food crops are likely to remain well above 2004 levels

through 2015 (World Bank, 2008). The FAO Food Price Index was still 28% higher in October 2008 compared to October 2006. Also a FAO Report in 2008 estimated that with prices for seeds and fertilizers (and other inputs) doubling since 2006, poor farmers were not able to increase production. Richer farmers, particularly those in developed countries who could afford these higher input costs, have been able to expand planting. As a result, cereal production in developed countries may have risen by at least 10% in 2008, whereas the increase in developing countries may not even exceed one per cent.

Chart 1 – World food commodity prices, 1971 – 2017
(US dollars per ton)

Source: OCED – FAO Agricultural Outlook 2008 - 2017

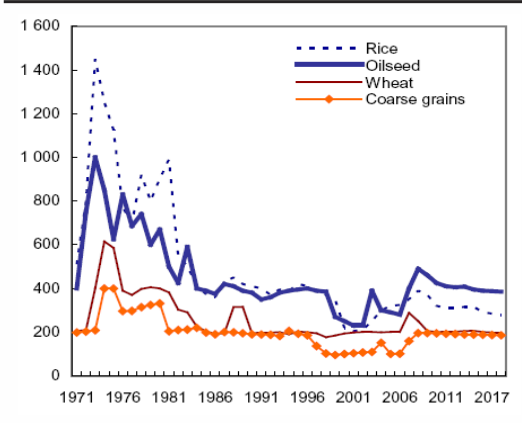


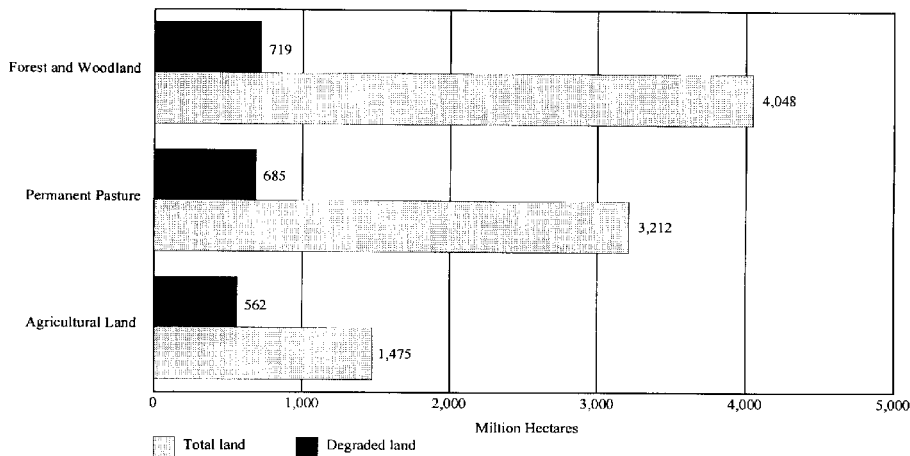
Chart 1 above shows clearly how volatile the food products price was over the last few decades. The diagram shows that in 1980, 1983, 1988 and 1996, prices rose over the previous year, as prices trended slightly downward between 1980 and 2002. Prices began to increase steadily after 2001, and by 2004, reached their mid-80s' level. In early 2006, commodity food prices began to increase rapidly. It is very interesting to see that the actual price increase, which is much more profound and long lasting than the specialists estimated, contrasts noticeably with the 1980s and 1990s when most of the commodity prices were rather on a downward trend. In real terms, however, the prices of many commodities, recorded at the end of 2007, were more decreased than the ones between 1960 -1970. Consequently, the actual food crisis is rather the result, among other reasons, of a rapid price increase over a short period of time. The actual situation emphasizes once more, if necessary, the increased vulnerability of the poor farmers in front of the abrupt changes of the market as the small farmers in the developing countries increasingly rely on the market to sustain and develop their own farms.

Chart 2, below, shows how sharply increased with over 60%, between 2006 and 2008, the basic agricultural products price. This price volatility seriously disturbed the agricultural production as well as the agri-food products market in the poor and developing countries. Under these circumstances the agriculture mostly relied on imports rather than on domestic production.

Table 1

Component	Degradation	Soil improvement methods
Physical land management	Crusting Compaction Sealing Wind erosion Water erosion Deforestation	Soil conservation barriers (live, inert) Re-vegetation of the denuded lands Soil de-compaction Breaking up of rivers' basins Cover-crops Soil deposition Improved furrow methods
Soil water management	Impended drainage Water logging Reduced water holding capacity Reduced infiltration Soil salinization	Irrigation Water harvesting Field drainage Drainage of water logged areas Filter strips
Soil nutrient and organic matter management	Soil alkalization Acidification Nutrient leaching Removal of organic matter Burning of vegetative residues Nutrient depletion	Fertilization Composting Green manuring Animal manuring Drainage of saline alkaline soils Liming of acid soils
Soil biology management	Over application of chemical fertilizers Industrial contamination	Introducing of natural fertilizers Treatment with nitrogen-fixing microorganisms
Vegetation management	Decline of vegetation cover Decline of biodiversity Decline in species composition Decline in availability of valued species	Improve of vegetative cover Increase of species biodiversity Improve of species composition Improve of availability of valued species

Chart 3 – A global perspective of land degradation by type of land use 1990 – 2020.



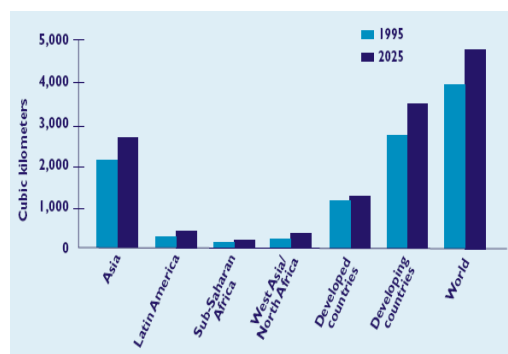
Source: GLASOD land use perspective study over 1990 – 2020

Priority areas in terms of technical research include among other methods soil fertility improvement through the use of technologies such as green manuring; control of soil erosion and biological degradation by land forestation; improved irrigation techniques or rehabilitation of the existing irrigation systems and implementation of improved agro-forestry systems. Promotion of such land improvements, particularly in the “hot spots”, should represent a regional and local development policy priority. Governments, NGOs and farmer associations can promote land investments through several mechanisms. Thus extension policy and farmer organizations can play an important role as well as development of regional specific government/EU supported programs for agriculture and rural development which include land arrangement and soil treatment works.

Besides land improvement issues another main factor limiting the food production is the water.

Will there be enough water to grow food for the almost 8 billion people expected to populate the Earth by 2025, is the question of the specialists? About, 250 million hectares are irrigated worldwide today which is nearly five times more than at the beginning of the 20th century. It's a fact that irrigation has helped boost agricultural production and stabilize the food production and prices. However, growth of population and income will increase the demand for irrigation water in order to meet food production requirements. Water development is a key element for the food security, people's existence, industrial development and environmental sustainability in the entire world. According to an IMPACT-WATER study, drawn up in 2002, in 1995 the world withdrew 3,906 cubic kilometers (km³) of water for these purposes. Also excessive diversion of water flows and overdraft of groundwater have already caused environmental problems in many regions around the world. By 2025 it is estimated that water withdrawal for most uses (domestic, industrial and living) will increase by at least 50%. This will significantly limit the irrigation water resource which will result in food production constraining. Nevertheless, where the benefits worth the costs many governments will construct dams and water reservoirs to sustain the irrigation demands.

Chart 3 – Total water withdrawal by region, 1995 and 2025



Source: International Food Policy Research Institute - Global Water Outlook to 2025

Water scarcity will get much worse in the future if policy and investment commitments from national

governments and international organizations and development banks fail to act. Failure to adopt water saving strategies, improvement technologies and policy reforms could increase the water demand globally faster than estimated. However, some broad strategies were identified which can address to present and future water crisis:

1. Investments in infrastructure to increase the supply water for irrigation, domestic and industrial purposes
2. Conserve water and improve the efficiency of water use in the existing systems through sustainable reforms in water management and policy sectors;
3. Improve crop productivity per unit of water and land through integrated water management and agricultural research and common efforts of the national governments, including crop breeding and water management for rain fed agriculture

Also, large scale improvements in river basins can lead to better management of water sources for domestic, industrial, living and agriculture sectors. River basin efficiency depends on improvements both in water saving technologies and in the international and regional institutions. Industrial water recycling such as recycling of cooling water, can be a major source of water saving in many countries. Also, improvement in the irrigation sector can be made at the technical, managerial and institutional levels. Managerial improvements should include, among others, the adoption of demand-based irrigation systems and improved equipment maintenance. Special care must be taken in designing a water pricing system for agriculture as direct price increase is a pressure factor to the farmers as water plays such an important role in the production costs. However, international community plays an essential role in promoting, planning and supporting research measures aimed to help states which are vulnerable in front of the actual and future food crisis. Moreover public investment, co-financing and training programs along with supportive policy strategies and policy instruments can help agriculture sector to provide enough food in the future necessary to go through this serious impending food crisis

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