

# “Food and ecology crisis as the greatest civilization threats”

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## Food and ecology crisis as the greatest civilization threats

### Abstract

Neoliberal globalization policy brings many negative consequences for the whole of humanity, reflected in increased environmental destruction, increasing levels of poverty, deteriorating working conditions, the implications of different forms of cultural violence, expansion unfounded inequality, deepening democratic deficit, etc. In the last few decades, civilization has not experienced a deepening crisis in the financial, energy and food, than it is now happening.

Financial crises have a permanent effect on potential economic growth, which means that the rate of potential economic growth after the crisis is permanently lower, compared with growth rates before the crisis. In other words, after the crisis is not followed by periods in which high economic growth rates, which compensates for the loss in output during the recession are recorded. The reasons for the change in trend of potential economic growth after the crisis have not been completely clarified. It is possible that the crisis permanently reduced productivity and the rate of savings, which is why the economy loses part of its ability to produce goods and services. Long-term consequences of the global financial crisis are reflected in the reduction of living standards, greater concern for the social security of each individual, the escalation of global poverty, deepening the problem of malnutrition, a flood of dangerous genetically modified products GMO, and environmental pollution. It will be the subject of analysis in the sequel.

In researching these topics it will be necessary to use multiple methods and techniques required by such research. First, it will be necessary to process all available secondary sources of data and information. According to elaborating specific theoretical and methodological problems of the origin of the observed and the application of certain considerations, we will use the methods of analysis and synthesis, induction and deduction, and statistical methods which also have a wide application in international economics.

**Keywords:** global financial crisis, poverty, food-oil crisis, ecology crisis.

**JEL Classification:** G01, F44, F64, I38.

### Introduction

#### Expansion of global poverty and food-oil crisis.

In the latest report of the U.S. non-profit organization Bread for the World in 2010 one states that the global poverty and hunger in recent years has dramatically increased, and that the deepening global financial crisis could only further worsen the situation<sup>1</sup>. According to their research, the number of people worldwide living in poverty has increased by \$ 100 million in less than two years, a number of people who are hungry has increased by more than 75 million<sup>2</sup>. Analysis of the World Bank under the symbolic title "The crisis affects households – sensitivity testing households in Europe and Central Asia, the 2010<sup>3</sup>" showed that the global financial crisis has had a devastating impact on families in Europe and Central Asia, with the risk that the progress achieved over the past decade on poverty reduction, reduced only by one-fifth. According to estimates by the World Bank, to the end of 2012 could be more than 10 million poor people in the region and close to an additional 25 million people who were almost middle class and are now just above the poverty line, with the possibility of losing their homes, jobs and basic services.

Since 2000 onwards, the world is continually faced with record prices of foodstuffs. Such prices, over-speeding increase, the global economy are unstable. With regard to their impact on income distribution and poverty, the last time high food prices create a growing concern, but high oil prices. And economic experts confirmed that the next few months will be difficult to overcome this kind of crisis and avoid its potential consequences. Comparing the earlier increases in food prices between 2005 and 2009, inevitably leads to the conclusion that the increase in price is more susceptible to developing countries. Due to the global trade policy and general trading conditions, from January 2009. The effects of food price increase in more than 15 countries around the world are greater than 10% of GDP and is therefore an area that is designed to strengthen macroeconomic management in developing economies is limited. Consistently high food prices will aggravate inflationary pressure, which will increase the costs of vulnerable groups and further endanger the poor in the world. As the Ministry of Finance of the G-8 stressed, high food prices are a serious problem of economic stability and growth, and as such hamper the progress of many countries in the developing world.

One of the growing problems in the world today is the security of the food supply. According to the research of the Food and Agriculture Organization<sup>4</sup>

<sup>1</sup> See Jicking M. (2008). *Containing the financial crisis*, p. 5.

<sup>2</sup> See IMF (2009). *The Implications of the Global Financial Crisis for Low-Income Countries*, p. 68.

<sup>3</sup> See [http://worldbank.org/world\\_report](http://worldbank.org/world_report), July 2012.

<sup>4</sup> Tucker P. (2009). *Reparing the world's financial system*, p. 14.

food security of supply is ensured if all the people in a given moment have tangible possibility and physical access to sufficient amounts of safe and wholesome food. Speaking of safety without financial food, like energy and oil, it must be noted that this is not just about uninterrupted supply of physical, but also a price that would allow unhindered economic activity. With that in mind, global food reserves are 2009 were at a lower level, i.e. at the lowest level. On the other hand, prices of major food items have risen a record, with the only corn end of 2009 reached 50% higher price than those recorded 12 months earlier. The growth of food prices has occurred in countries that are predominantly rely on their production. According to UN estimates, the world population will reach 9 billion by the year 2050, which will increase demand over the impact on the further growth of food prices. Today, one billion people living on a daily income of \$1, which is all the more prominent characteristics of poverty. However, the population is only 50 cents per day are faced with a disaster, and for the middle class in poor countries, world food – oil crisis means giving up health care and withdrawal of children from school. Representatives of the World Bank cautioned that governments, the global economic crisis could push another 100 million people below the deepening poverty and thus undo all that has been done in recent decades, especially in improving the standards of the world's poor. In this context, today the World Summit proposed various programs of assistance for Global Food Policy that includes, among other things, an increase in aid to Africa, but also requires the formation of the largest producers of grain due to cancellation of a ban on exports. In addition, the offer and suggestions for dealing with eating in school, conditional on the transfer of money, increase agricultural production, better understanding of the impact of the price of biofuels, reduced support and trade barriers that hinder competitiveness for decades in world agricultural markets, etc.

Rising prices of food in the world is becoming an increasing problem. Rise in food prices in many parts of the world is particularly felt during the 2010 and 2011. If in the coming weeks do not take some measures, the situation could worsen in general. This is supported by the fact that in more than 90 countries around the world threaten protests against food prices. The rise in prices in the past year has been one of the harshest in the history, and as a result, most countries (Bangladesh, Malawi, Ivory Coast, Ethiopia, Pakistan, Egypt, Haiti, the Philippines, El Salvador, Afghanistan, Senegal, etc.) have introduced control price limit exports, lower tariffs and subsidies for consumers. Most economists see the causes of this situation on the food market due to

volatility in oil prices, increased demand (China and India), increased subsidies and implementation of protectionism. Despite record production of food in the world in the first decade of the XXI century, the prices will remain high until 2015. The poorest countries will be the most affected countries that rely on food imports. According to a World Bank report in 2010 in the last three years wheat prices have globally risen to 181%, and food prices to 83%. The prices of rice, maize, edible oil, milk and other foods increased. In just a few weeks, the price of rice has reached a historical record with a 75% growth on a global level, and the price of bread in most poor countries has more than doubled<sup>1</sup>. The example is presented in Table 1.

Table 1. Index projections of food and grain prices, 2004 = 100

Real prices	2007	2008	2009	2010	2015
Corn	139	175	165	155	140
Wheat	154	215	191	166	148
Rice	130	243	208	183	160
Soy	119	156	147	139	115
Soybean oil	136	187	173	160	110
Sugar	133	157	167	176	182

Source: World Bank (2010). *World Development Indicators*, p. 35.

Many experts estimate that the price of grain to the 2015 will be high and only after this period the stabilization of the situation on the market of basic agricultural products can be expected. In addition, they state that one of the most important reasons of the sharp rise in prices of agricultural products is more and more widespread use of corn and other raw materials in the production of biofuels. Therefore, the search of the countries that are the most important producers of agricultural raw materials, to change its agricultural policy and much more accounts lead a normal supply of household foodstuffs. Cellulose should be the basic raw material for biofuels, rather than corn and other vital crops. Today, the United States spent more than a quarter of the total production of corn to produce biofuels, and this is the main reason for the drastic jump in grain prices during the past 12 months. However, apart from these economic consequences of this food-oil crisis, are increase and political instability. Thus, in 2009 the spiraling food prices caused internal unrest in a number of countries (Mexico, Bengal in India). Government in Russia, Egypt and China have intervened in the market of food, just to keep prices at a level accessible to the population. Nothing less is neither an issue about genetically modified foods, and the debate on this subject that last several dec-

<sup>1</sup> World Bank (2010). *World Development Indicators*, p. 35.

ades, the 2011 was brought to a boiling point. Genetically modified organisms (hereinafter GMOs)<sup>1</sup> for the first time appearing on the market in the late eighties. The first genetically modified farming was the tomato, which due to non acceptance by the market, after a short time was withdrawn from use. Soy is currently one of the world's most genetically modified crops. Of the total world soybean production, even 77% is genetically modified soybeans, which in translation means "improved". Her improvement refers to resistance to herbicides and drought.

Thus, China has approved the production of genetically modified rice for household consumption. The move could change the balance of power in the global food trade, and encourage other countries and manufacturers to use the controversial technology. China has decided to move up due to lack of land and water for agriculture. Otherwise, this is a Chinese procedure called dangerous genetic experiment<sup>2</sup> because the previously recorded cases of illegal production of genetically modified rice in the country. According to the data of the Food and Agriculture Organization in the period 1997-2009 the area planted with GMO has increased for 80 times. North America leads to the production of such products, although in previous years registered its strong growth in developing countries, particularly in India and Brazil. The four most common genetically modified crops are: soybean, rapeseed, cotton and corn. In many EU countries, in the last decade, there was a trend of spreading the so-called "GMO free regions" declaration, meaning ban on the production of genetically modified organisms. Size of the region free from GMOs is increasing from year to year. Delegates from GMO free region is constantly making calls to many European institutions to protect their crops from the use of GMOs, to become a member of GMO free regions and thus resist the production without adequate precautions.

World Economic Forum held in Davos in mid 2011<sup>3</sup>, presented a very interesting report titled "Global Risks" in the context of high food prices on the food market. Specifically, the report states that in 2011 the prices for most of the food reached record levels. Price of corn on the end of 2011 was 50% higher than 12 months earlier, and the price of wheat had doubled. Global food reserves are the lowest for the past 25 years, making it the world's food supply vulnerable to a financial crisis or natu-

ral disaster. The report predicted the growth of food prices in the UK in the 2012 to 4.7% for the period of one year<sup>4</sup>, and in the U.S. by 4.4%, mainly due to the increased use of corn for ethanol production. In China, the rise in food prices for the year was 17.6%, although the income earning population remained almost unchanged.<sup>5</sup> Combined with a sharp rise in oil prices, high food prices in China could have significant influence on global inflation. World leaders, who took part in the summit in Davos, particularly emphasized the fact that in many developing countries, poor people spend about 75% of their income on food. They are the hardest hit by the increase in the prices of basic foods. Because of this situation, the population in developing countries threatens to increase malnutrition and hunger, and the reversal of the progress made in poverty reduction and reducing the debt burden of the poorest countries. Also, according to the forecast economic analysts IMF expensive food in the world will be harder to hit Central and Eastern Europe, as it will generate more inflation than in Western Europe. The share price of food in the consumption basket in the Central European and Eastern European countries in 2011 amounted to 22%-40% and in the western countries 14%. In their opinion, the factors that affect global food insecurity (such as population growth, changes in lifestyle, the use of crops to make biofuels, and climate change, etc.) will certainly affect the long-term shift in the global food market and open global issues equality.

It is an indisputable fact that the food-oil crisis in the background expansion of the global financial crisis causes, slowing in economic growth, the U.S. economy entering a recession, the imbalances in the currency markets and rising of inflation. Its further escalation threatens to cause new social disorder, which means that if action is not taken quickly to create a global consensus on the price spiral, social unrest, boost food prices in many countries, will be merged into a global contagion, leaving no country untouched. In order to stop the rise in prices of food and other raw materials, which threatens to spread unrest and hunger among the population of the poorest countries, international representatives of the World Bank and the IMF are urgently called for coordinated action by industrialized countries and developing countries to restore the unconscionable increase in food and energy prices. In this regard, the World Bank is already working on the conclusion of an agreement with UN agencies through the

<sup>1</sup> Shortly after its release, the use of genetically modified soy allergies has increased significantly in the UK, 50%.

<sup>2</sup> See in: Nocoll A. (2009). *The importance of the financial crisis*, p. 6.

<sup>3</sup> World Bank (2009). *Global Development Finance – Charting a Global Recovery*, p. 117.

<sup>4</sup> Ibid.

<sup>5</sup> World Economic Outlook (2009). *Global Economic Slump Challenges Politics*, p. 112.

Secretary General's High-Level Task Force<sup>1</sup>, which deals with the issues of the global crisis of food supplies in order to implement a joint response to the current crisis.

Common strategies to combat food-oil crisis consists of four basic guidelines. The first guidelines for the activities of the World Bank, negotiating with over 40 countries to help find different types of responses to the current crisis, in order to then conducted adequate programs of financial assistance. In this context, it launched Global Food Crisis Response Program as well as other guidelines, which attempted to accelerate the creation of foundations IDA and IBRD directed towards the affected countries (which also represents the third guideline). Finally, the fourth guideline refers to the creation of a new fund called the Multi Donor Trust Fund through which the Bank offers innovative ways to ensure financial market products, such as insurance against the weather, in order to help countries to control the risks taken by (drought or other natural disasters). To fill the gap, the Bank is continuing its cooperation with other international research organizations, trying to take advantage of existing empirical knowledge of experts to create the appropriate policies that will help resolve the crisis and global instability in the near future.

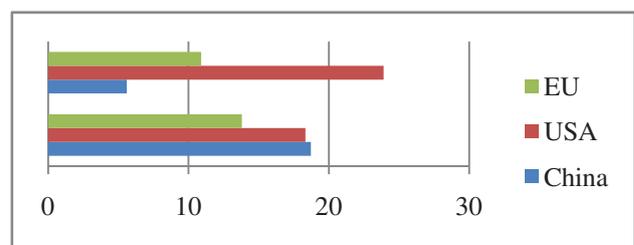
### 1. Ecological crisis as the greatest market failure

Global warming and climate change caused by human activities, with a strong and accelerated destruction of biodiversity are included among the most prominent forms of environmental crisis. He is currently part of a steady increase in the use of fossil fuels, the increase of anthropogenic emissions of greenhouse gases into the atmosphere, the increase in global average temperature, etc. Therefore, it is in most cases the global environmental crisis, with a total impact, established international institutions, held a world conference, even achieved and agreements on the protection of the environment. However, all this was not enough, because developed countries do not allow to make a radical and complete measures to prevent contamination. Even those adopted measures not implemented or partially implemented with great delay<sup>2</sup>.

World climate scientists in recent years indicate that the accumulation of gases (such as CO<sub>2</sub>), mainly caused by burning fossil fuels, will lead to global warming and other important climate change. Based on the established methods of climate, many scientists believe that, if current trends continue global

environmental pollution, the Earth's crust heated from 5°C to 10°C Fahrenheit<sup>3</sup>. That would be the Earth's climate has led above the level that felt human civilization throughout its entire history. In doing so, countries had to accept more expensive energy, lower standard of living and lower levels of consumption<sup>4</sup>.

In this connection, most economists today examines the economic impacts of climate change, in order to know how the state can take a sensible strategy. In their opinion, in the course of a long progression of economic development, the technology is increasingly separated the people and economic activity of the climate system and climate change. Today, thanks to modern technology, people live and thrive in virtually every climate on earth. For much of the economic activity, the different variables such as wages, sindikaliziranja VET workforce or political factors awash climatic considerations. Generally, those sectors of the economy that is very much dependent on the ecosystem and the natural phenomenon will be most vulnerable to climate change. Previous studies have shown that the ecological crisis is not in the least random, but that is immanent essential features of civilization. It is primarily a system of values of modern civilization. In this context, the foreground is imposed profiteering oriented ethic of individualism, which has significantly reduced the field of moral subjects and completely ignored possible moral objects. Most economists are convinced that the ultimate cause of the contemporary ecological crisis in the sphere of the spirit and culture.



Source: <http://www.manager.ba/clanak/?i=2010>, January 2013.

Fig. 1. The largest issuers of greenhouse gases

Unfortunately, until today, no agreement was reached in Copenhagen in relation to climate change, which in the future will certainly have strong consequences that will, among other things, reflected in the decrease in productivity of the agricultural sector from subsistence farming (decrease by 50% over the next 20 or 30 years), diseases, floods, drought, lack of water, and starvation, chronic malnutrition, the variability of weather con-

<sup>3</sup> Ibid.

<sup>4</sup> Countries like Japan and the U.S. are quite isolated from climate change, while developing countries such as India and Brazil are more vulnerable.

<sup>1</sup> World Bank (2009). op. cit., p. 119.

<sup>2</sup> Hatibović Dž. (March, 2013). *O globalizaciji još jednom*.

ditions, appears depletion, acid rain, the greenhouse effect, which produces high temperature, etc. Since it is the globally widespread problem, environmental protection was the main item on the agenda at the World Economic forum in Davos in April 2010. To remind, at the Copenhagen summit three objectives were set, namely<sup>1</sup>:

- ◆ the reduction of greenhouse gas emissions, particularly in developed countries;
- ◆ the prediction of the World Meteorological Organization suggests that there is a need to regulate CO<sub>2</sub> as a dangerous polluters financial support for poor countries and developing countries;
- ◆ the exchange of funds scheme, in order to reach the 2030 ended destroying the world's forests.

Therefore, the main options for emission reductions are the following<sup>2</sup>:

- ◆ improve energy efficiency, for example in transportation, buildings, appliances, lighting;
- ◆ clean renewable energy such as wind, water, solar, biomass, geothermal energy from waves;
- ◆ biofuels, such as corn, sugar cane, palm oil;
- ◆ taxes and restrictions on emissions of harmful gases – taxes on fossil fuels, emission limits;
- ◆ carbon sequestration – taking CO<sub>2</sub> at source and storage underground; and
- ◆ nuclear energy – the extension of present industry.

The European Commission is the middle of 2010 made a review of global costs in the fight against climate change and the proposal was the basis for negotiating the 27 member states of the EU's common position on international climate conference in Copenhagen, held in December 2010<sup>3</sup>. At that conference a new global climate agreement to replace the Kyoto Protocol was signed (which says 2012). The Commission has estimated that the developing countries should combat climate change by 2020. The need is around 66-80 billion per year. Of this amount, adjustment costs would amount to 10-24 billion Euros, and mitigation of climate change around 56 billion Euros. Also, the Commission estimated that the industry and power plants should provide 33 billion Euros, 5 billion agriculture, a slow destruction of tropical forests 18 billion Euros. In addition to these public funds, international carbon market will provide by 2020 the 38 billion Euros per year. Share of individual member states is the most contentious issue, because the EU should

provide 287.8 billion Euros for each billion agreed at the global level. The biggest burden would, in fact, hit the largest Western States, Germany (57.96 million), Great Britain (46.60 million) and France (43.52 million Euros)<sup>4</sup>. Due to the current situation on the world stage, in the EU countries (particularly France), the beginning of 2011 was introduced so. carbon tax on the consumption of gas, oil and coal.<sup>5</sup>

Awareness about global warming at the international level there is (the Kyoto Protocol). However, the big problem is the United States which entail a number of problems and disagreements, not respecting the above protocol. In this connection, the global financial system to allocate three appeals to world leaders: the first is for developing countries that global warming will cause the most damage, the other was sent to the U.S., since it is assumed that there is a moral imperative to join the rest of the world addressing global warming and the third appeal referred to Europe, in the sense that Europe must be ready to use the great power of economic globalization, and to catch up with the world's most important environmental issues. Taking this into account, today it is proposed trade sanctions through the World Trade Organization which can be used to enforce better behavior towards the environment.

## Conclusion

One of the biggest drawbacks of the market economic system is what produces pollution of the environment. Economic systems of countries have failed to seize this market failure. When the crisis on the basis of this large market failure manifest incomparably stronger and more catastrophic than it is this now, the world will face the apocalyptic consequences of the fateful character of human civilization and for all living creatures on earth. Then the lack of savings, liquidity, unrealistic presentation of results of companies, bankruptcy (and other defects markets) and financial crisis, which is still present and you are trying to solve, compared to the global environmental crisis look marginally!

Solving pressing problems include all the major participants in the global economic flows. Basically everyone agrees that in addition to finding a solution out of the crisis, it is necessary to ensure that such a solution is in order to achieve a stable sustainable growth model.

Based on the so far above, to conclude that many of the financial crisis, which took place during the twentieth and beginning of the XXI century, point to an important fact, which is that the national financial system could be "the Achilles heel" of macroeco-

<sup>1</sup> [http://www.carbonpro.org/docs/public/Kyoto\\_protocol/MZOPUGoKyotu.pdf](http://www.carbonpro.org/docs/public/Kyoto_protocol/MZOPUGoKyotu.pdf), January 2013.

<sup>2</sup> <http://www.nezavisne.com/komentari/kolumne/Bitka-za-smanjenje-emisije-stetnih-gasova-u-atmosferu-50681.html>, January 2013.

<sup>3</sup> Ibid.

<sup>4</sup> <http://europeancommission.org/countryreport>, July 2012.

<sup>5</sup> Ibid.

conomic management of the economy of a country. In fact, financial crises are inevitable and since the advent of the modern market system of production. The development of the financial sector (e.g. stock exchange and banking operations) can have positive effects on economic growth and development. However, the stock exchange meltdowns and financial crisis shows that the upward trend in the price of any financial instrument in the financial market are often too long (i.e., form a financial bubble or bubble) and that it is necessary to come to a more or less intense calming prices at a lower level (the so called bursting bubble). At the same time, there is a disruption in the real sector of the economy not only affected country, but also the surrounding neighboring countries, including most of the world's developed countries.

Generally, the cause of a large number of increased financial crises in the last two decades, has certainly increased globalization and the mobility of capital in the global financial market, the liberalization of current and capital account, inconsistent with the liberalization and reform of other sectors of the economy, the implementation of unsustainable macroeconomic policy and the emergence of many new markets and countries in transition to a market economy, with grosso modo weakening the world financial system. With regard to the proper definition of the causes of the financial crisis is of great importance for its resolution. Practice shows that the financial crisis phenomenon that occurs in all economic systems, and that at the end of their resolution, however, require the intervention of the state.

## References

1. Hatibović Dž. (2013). *O globalizaciji još jednom*. MP 1-2, 2002, Globalizacija, tržište, Evropska zajednica, Vol. LIV, br. 1-2. Available. at <http://www.doiserbia.nb.rs/img/doi/0025-8555/2002/0025-85550201002H.pdf>.
2. Jicking M. (2008). *Contiaing the financial crisis*, CRS Report Congress.
3. IMF (2009). *The Implications of the Global Financial Crisis for Low-Income Countries*, IMF, Washington D.C.
4. Nocoll A. (2009). *The importance of the financial crisis*, Survival: Global Politics and Strategy December 2008, January 2009.
5. Tucker P. (2009). *Reparing the world's financial system*, BIS. Available at: <http://www.bis.org>.
6. World Bank (2010). *World Development Indicators*, WB, Washington D.C.
7. World Economic Outlook (2009). *Global Economic Slump Challenges Politics*, WEO, IMF, Washington D.C.
8. World Bank (2009). *Global Development Finance – Charting a global recovery*, WB, Washington D.C.
9. <http://www.manager.ba/clanak/?i=2010>, January 2013.
10. [http://www.carbonpro.org/docs/public/Kyoto\\_protocol/MZOPUGoKyotu.pdf](http://www.carbonpro.org/docs/public/Kyoto_protocol/MZOPUGoKyotu.pdf), January 2013.
11. <http://www.nezavisne.com/komentari/kolumne/Bitka-za-smanjenje-emisije-stetnih-gasova-u-atmosferu-50681.html>, January 2013.
12. [http://worldbank.org/world\\_report](http://worldbank.org/world_report), July 2012.
13. <http://europeancommission.org/countryreport>, July 2012.