



**The meatification of diets and global food security**

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**3 December 2009  
European Parliament**



I am very grateful to this invitation to contribute to this hearing within the European Parliament about the impact of our consumption choices on global food security and on the right to food.

This discussion arrives at the best time possible, for two reasons. First, as a result of the global food price crisis of 2007-2008, there is a renewed and unprecedented interest in rethinking our agricultural systems. Massive changes therefore lie ahead. Foreign direct investment flows in agriculture jumped to 3 billion USD annually in the 2005-2007 period, up from 600 million USD during the 1990s. This is a welcome development. Investments in agriculture can have a powerful impact in the reduction of poverty. And one of the reasons why the food system is going through such a crisis today is because, since the 1980s, investments in agriculture have been sorely insufficient. But we must ask not only how much money will go into agriculture, but also in support of which types of production, with which impact on revenues, and with which environmental consequences.

Second, governments are increasingly aware of the relationship between climate change and food security. As we have seen recently in East Africa, in India, or in the Central American regions affected by the El Niño phenomenon, climate change is already threatening the ability of entire regions to maintain actual levels of agricultural production. In Sub-Saharan Africa, as well as in parts of Asia, climate change will affect rains. It will increase the frequency of droughts and average temperature. Less fresh water will be available for agricultural production. The Intergovernmental Panel on Climate Change has estimated that in Southern Africa yields from rainfed agriculture could be reduced by up to 50 percent between 2000 and 2020. Overall, our productive capacity worldwide will decrease at least 3 percent by the 2080s in comparison to levels of 2000, and up to 16 percent if the anticipated carbon fertilization effects fail to materialize. The losses will be particularly important in Africa and Latin America.

While these findings may sound bleak, they still err in the direction of optimism. They do not include the impact of more frequent extreme weather events, such as floods and droughts, which are the most immediate manifestation of changing weather patterns. Nor do they take into account the fact that rising sea levels may contaminate coastal freshwater aquifers with salt water. They do not consider, finally, the risks of diminished agricultural production due to scarcity of water for irrigation. But the melting of the great glaciers of the Himalayas, for instance, could increase flooding from river overflows, while at the same time affecting the water resources of a large number of people in Central and South Asia: more than one billion people could be affected by the 2050s, and as a result, crop yields could decrease by up to 30 percent in Central and South Asia by 2050. Finally, soil degradation is progressing at a frightening speed.

While agriculture is a victim of climate change, it is also an obvious culprit – and therefore, in direction investment in agriculture, taking the environmental dimension into account is crucial. Unsustainable forms of agriculture and unsustainable patterns of consumption are accelerating the trend towards global warming. Modern agriculture accounts for 14% of the total annual GHG emissions. Land-use change, including forest deforestation to develop agricultural land, contributes another 19%. While forests play an essential role in capturing CO<sub>2</sub> – they store 45% of terrestrial carbon –, they are currently being destroyed on a large scale.

One question, however, is almost systematically avoided in international discussions about global food security : it is that of the impact of the modes of consumption in the rich countries. Yet, these modes of consumption are, in part, responsible for the situation we are now facing. The food we eat determines how we produce food. The increase in livestock production, in response to our demand for meat, results in huge negative externalities that are not accounted for. Out of the 14 % greenhouse gas emissions coming from agriculture, fertilizers represent 38%, and livestock counts for another 31%. as In the 2006 study called *Livestock's Long Shadow - Environmental Issues and Options*, the FAO noted that, in total – taking into account also deforestation to create pastures – livestock are responsible for 18 percent of greenhouse gas emissions, about double the share of transport. Together, grazing land and cropland dedicated to the production of feed-crops and fodder account for 70 percent of all agricultural land, or about 30 percent of the land surface of the planet. Livestock grazing alone is

equivalent to 26 percent of the ice-free terrestrial surface of the planet, and the rapid expansion of pastures is one of the major reasons for deforestation, particularly in the Amazon region. The total area dedicated to feedcrop production, particularly maize and soybean, amounts to 33 percent of the total arable land, and this surface is rapidly increasing.

This is not the best use of our scarce natural resources. Earlier this year, the UNEP published a report on 'The Environment's Role in Averting Future Food Crises'. It noted that by reducing meat consumption in the industrialized world and restraining it worldwide in 2050 at 37,4 kg/capita – the level in 2000, we would free an estimated 400 million tons of cereals per year for human consumption. This is enough to cover the annual calorie need for 1.2 billion people. Under a business-as-usual scenario, by 2050, 1,573 million tonnes of cereals will be used annually for non-food, of which at least 1.45 million tonnes will be used as animal feed – enough to cover the calorie need for about 4.35 billion people.

Nor are these the only negative environmental impacts of livestock expansion. Overgrazing in the presence of too many livestock, such as goats or cows, strip the soil of its vegetation and expose it to erosion by wind and water. The world's population of cattle has increased from 720 million in 1950 to about 1.5 billion in 2001, according to statistics compiled by FAO. The number of sheep and goats expanded from 1.04 billion to 1.75 billion during the same time period. This increase in livestock production since 1950 has led to severe overgrazing worldwide. Since mid-century, 20 percent - some 680 million hectares - of global rangeland has been degraded by overgrazing.

Of course, the picture is a complex one, and other factors should be taken into consideration. Farm animals raised in industrialized countries consume more than 5 calories in feedstock for each calorie of meat or dairy food produced. In India the rate is a less than 1.5 calories. In Kenya, where animals are not fed grain but live off grass or agricultural by-products which humans cannot eat, livestock actually yield more calories than they consume. And it is equally important to acknowledge that livestock rearing represents a source of income for perhaps up to one billion people, representing one third of the poor in the rural areas.

We may therefore have to distinguish between different ways of producing meat, and between different ways through which meat production and consumption affect global food security – by the emission of greenhouse gases, by overgrazing and the degradation of soils, and finally, by the inefficiency caused by the production of crops for feed instead of for human consumption. These impacts are at different levels and are caused by different types of meat production. The questions raised are different, and so are the populations concerned, both at the production and at the consumption ends.

What is clear to me however, is that we cannot define quantitative objectives in the production of food – such as the need to increase meat output by more than 200 million tonnes to reach 470 million tonnes in 2050, one objective identified in advance of the FAO High-level experts forum on how to feed the world by 2050 – without questioning trends on the demand side of the equation, particularly when epidemiologists constantly warn us of public health problems resulting from the meatification of diets.

I warmly welcome the discussion which is being launched today. Human rights can only make progress when taboos are broken – when individuals, among the boldest or among the most enlightened, dare to ask questions that most people would prefer not to have raised. I would therefore like to thank EP President Jerzy Buzek and Vice-President Edward McMillan-Scott to convene this hearing, and I look forward to working together with the European Parliament on this subject in the future.

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*Olivier De Schutter* was appointed the UN Special Rapporteur on the right to food in March 2008 by the United Nations Human Rights Council. He is independent from any government or organization, and he reports to the Human Rights Council and to the UN General Assembly. For more on the work

of the Special Rapporteur on the right to food, visit [www.srfood.org](http://www.srfood.org) or [www2.ohchr.org/english/issues/food/index.htm](http://www2.ohchr.org/english/issues/food/index.htm).