The climate problem is a food problem

1 AUG 2009

Food production leads to climate change
The production of meat and dairy worldwide is responsible for about 18% of the greenhouse gases caused by humans. 1 That is more than the percentage of gases caused by traffic and transport combined. In Europe (EU-27), we are talking about huge amounts of animals: 153 million pigs, 123 million cows, 99 million sheep and more than 500 million battery hens and almost 11 million tons of chicken meat. 2 (The fact that these statistics are expressed solely in terms of weight says enough about how the life of a chicken is valued.)

Next to the emission of the infamous carbon dioxide (CO_2), the relevant gases when it comes to keeping livestock are primarily methane (CH_4) and nitrous oxide (also known as laughing gas, N_2O). In order to still be able to compare products, everything is translated into CO_2-equivalents. The results show enormous differences between butter and beef on the negative side of the scale, and vegetables, grains and legumes as sustainable alternatives.

CO_2-emissions in grams per kilogram food	
product	gr co2/kg
beef	13,300
chicken and other poultry	3,500
pork	3,250
eggs	1,950
milk	950
butter	23,800
hard cheese	8,500
yoghurt and soft cheese	1,950
apples	550
vegetables (on average)	153
beans	144
brown bread	750
(source: GEMIS-database 3)	

Meat and dairy score worse than vegetarian food; the animal as an intermediate step renders the process far less efficient. Beef scores extra badly because of the huge amounts of methane that develops in the process of chewing the cud. Sadly for fans of biological meat and dairy, the more an animal is able to move, the less efficient the production of food becomes. On the other hand, a more natural diet means lower emissions of CO_2. A rule of thumb as regards dairy is the fattier the dairy product, the worse it is for the environment. As a result, butter scores particularly badly per kilogram. The development of new fields for keeping livestock and producing food for cattle has also been taken into the equation. Burning down forests and savannas causes large-scale CO_2 emissions, and the drying of swamps means that a lot of methane is released.
Next to the climate, there are other problems. In 2008, the Institute for Prospective Technological Studies published a report commissioned by the European Commission, which concluded that meat and dairy are responsible on average for 24% of the damage to the environment in all 27 EU countries.4

Worldwide, meat can still be seen as a luxury product. The rich consume the most meat and dairy and hence contribute a disproportionate amount to climate change. Anyone with a social conscience could hence simply eat less or no meat and dairy.

Irresponsible agriculture can also have a negative impact on the climate on a local scale. An example is the south of Brazil. Soy for cattle-fodder is now grown on a very large scale in areas that used to be covered in rainforest. This means that less water evaporates there, leading to less rainfall elsewhere. The result is poorer harvests, which force soy and cattle-farmers to use the remaining rainforest even more quickly.

Climate-change has a negative impact on food production
Next to over-fishing, erosion and soil exhaustion caused by non-sustainable agriculture and the pollution of water and soil through industry and the use of pesticides, climate change also endangers food production. The argument that some people proffer, namely that the yields increase due to the higher concentration of CO_2 in the air, is invalid. After all, the warmer weather is simultaneously leading to an increase of ozone on the earth's surface, which decreases agricultural yields.5 Research by the UN predicts "that the ever more prevalent failed harvests due to extreme weather such as droughts or heavy rains will have more effect than the average rise in temperature. (…) Due to climate change, the amount of people who suffer from famines will increase."6 The same study shows that the temperate zones can hope for increased the yields for a short time, while the countries around the equator will suffer most from these developments. It is no coincidence that these are also the poorest countries with the most vulnerable agricultural systems.

For the long-term, the Centre for Global Development comes up with even more pessimistic figures: "Worldwide, potential agricultural production may decrease by 5-20% due to climate change, if nothing is done until 2080. (…) However, these statistics mask an even greater decrease in India (-30%-40%) and Africa and Latin America (both – 20%)."7 It must be mentioned that the influence of the coming lack of fossil fuels (for machines and as an important ingredient of artificial manure and pesticides) has not been discounted in these figures.

Next to climate change, there are other indirect factors that constitute a danger for food production. The coming lack of fossil fuels has ensured a growing production of bio-fuels, or agro-fuels if we refuse to adopt this misleading word. A substantial part of the rapeseed, grain and corn crops already goes towards this fuel and, if we do not halt this development, this will take up an even greater part of the land for agriculture. In addition,

English

Events

DeKweeper Community Garden – Solidarity Gardening Session
June 10 @ 11:00 am - 1:00 pm

DeKweeper Community Garden – Workshop #4 – Seedling Care & Summer Sowing
June 26 @ 11:00 am - 1:00 pm

DeKweepeer Community Garden – Solidarity Gardening Session
July 8 @ 11:00 am - 1:00 pm

DeKweepeer Community Garden – Workshop #5 – Eco-Fertilizers & Chop n' Drop
July 31 @ 11:00 am - 1:00 pm

DeKweepeer Community Garden – Solidarity Gardening Session
August 12 @ 11:00 am - 1:00 pm

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increased prosperity in parts of the world is leading to the adoption of the Western pattern of consumption (i.e. the consumption of excessive amounts of meat). This adds to the pressure on the land to produce all that extra food for cattle, all of which leads back to the first half of this article. All in all, ever less land is available for actual food production.

Guess who are the first to suffer the ill effects…
With climate change, the poorest and most vulnerable are, as ever, the first to suffer the ill effects: scarcity leads to higher food prices. Thanks to speculation, failed crops and the growing demand for the production of bio-diesel, we were able to see this with our own eyes in 2008. People with a low income, little in reserve and no access to their own land are directly affected adversely by these developments. Already, they are spending a large amount of their income on food and cannot save on anything else.

And what are governments and companies doing to solve this problem?
Nothing! The problems are not disputed, and in general policy documents it is generally noted that excessive consumption of meat leads to problems. With that out of the way, the politicians turn to the really challenging issues: the stimulation of companies and export, and smoothing the way for an even more large-scale cattle industry. Companies still need to optimize their profits in this capitalist system in order to survive. You can't expect the companies involved to voluntarily reduce the production of cattle-fodder, meat and dairy and to promote sustainable vegetarian alternatives. We will have to give the animal industry a hand with ending their murderous activities towards animals and the climate.

Small-scale farming leads to a cooling-down
It doesn't have to be this way. The international network for farmers' organizations, Via Campesina, emphasizes in her statement8 for the coming climate conference in Copenhagen that small-scale agriculture actually reduces climate change. In contrast to 'normal' agriculture, organic agriculture leads to deposits of CO2 in the soil. Also, 'normal' agriculture uses artificial manure to bind nitrogen in the soil. A lot of natural gas is necessary to produce this.
It has been calculated that a medium-sized organic company binds as much carbon dioxide as 100 cars emit.9 Small-scale farming also makes it easier to produce for local consumers.
In addition, small-scale farming leads to employment and the means to sustain oneself for a large part of the world's population. It is also less vulnerable to the coming deficit of (fossil) fuels.

For food production that takes mankind, animals, the environment and the climate into account, and abandons multinationals and owners of large properties!

notes:
1) Livestock's Long Shadow, FAO 2006, website: http://www.fao.org/docrep/010/a0701e/a0701e00.HTM
2) Figures from Eurostat, ec.europa.eu/eurostat . Usually from 2008, but figures from some countries are older.
3) Global Emission Model for Integrated Systems, Öko institute, http://www.oeko.de/service/gemis
4) Environmental Improvement Potentials of Meat and Dairy Products from IPTS, ftp://ftp.jrc.es/pub/EURdoc/JRC46650.pdf
5) UN IPCC Fourth Assessment Report (AR4): Climate Change 2007: Impacts, Adaptation and Vulnerability, Chapter 5, http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg2_report_impacts _adaptation_and_vulnerability.htm
6) See footnote 1.
7) See the report 'Global Warming and Agriculture' http://www.cgdev.org/content/publications/detail/14090 or http://www.voanews.com/english/archive/2007-09/2007-09-13-voa16.cfm?CFID=251796887&CFTOKEN=87411355&jsessionid=8430e2c460b388a5a54cac4e4547031e7b20
8) http://www.viacampesina.org/main_en/index.php?option=com_content&task=view&id=745&Itemid=37
9)Rodale Institute, http://www.rodaleinstitute.org/ob_31 en http://www.sustainabletable.org/issues/climatechange

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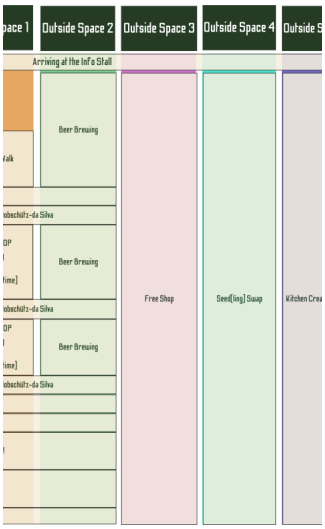
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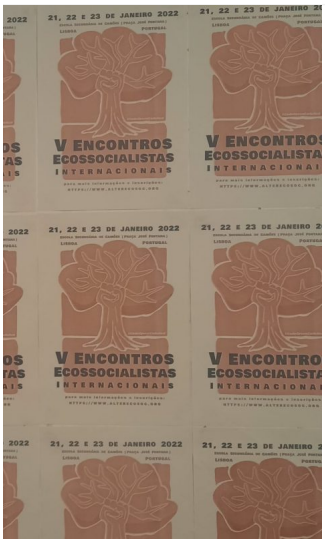
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