

16 October 2018

What future for our food? Three scenarios picture quite different futures

As we are celebrating the 38th World Food Day with, this year, the theme “Our Actions are our Future” and the statement that says that “A #ZeroHunger world by 2030 is possible”, FAO recently released a report entitled “The future of food and agriculture - Alternative pathways to 2050” that, as its title says, explores the future of our food and agriculture according to three very different scenarios.



This work is a follow-up to a report published in 2017 that was focusing on “The future of food and agriculture - Trends and challenges” that we have already commented, wishing that it should be complemented by a second volume that would put forward specific solutions for implementation [[read](#)]. This has now been done, to a large extent.

The report candidly acknowledges, to start with, that “*despite great progress towards increasing income and wealth globally, billions of people still face pervasive poverty, hunger and malnutrition...*”. It also envisages the possibility that the absolute number of undernourished people could increase in the future.

It also admits that “*much of humanity’s progress has come at considerable cost to the environment. To produce more food and other non-food agricultural goods, a combination of intensified agricultural production processes and the clearing of forests has led to the degradation of natural resources and is contributing to climate change.*” Authors continue and write that “*should we continue to address these challenges with a “business as usual”*”

approach, the future will not look promising”, while adding that “options to face these challenges exist.”

The text offers a rather new perspective from the UN, by coming explicitly to a break with the idea that “developing countries” should follow the example of “developed countries” and stating clearly that all countries will need to make “*fundamental changes in the way societies consume and produce ... for achieving global sustainable development*”. There are therefore no more, on the one hand, good performers, and on the other hand laggards, but rather a group of misled countries that need to change their practices and invent new ones to hope to cope with their food and agricultural issues.

To come to this conclusion, the teams of FAO experts envisaged three very distinct scenarios constructed on the basis of the diagnosis made in 2017, in order to analyse possible futures:

- First scenario : this is the “business as usual scenario”, with no particular change, just projecting past trends.
- Second scenario : this is the scenario of hope. It is characterised by a moderate global economic growth, reduced inequalities, improved governance, stronger institutions, a more balanced and healthy diet, reduced wastage and “*an increased efficiency in the use of natural resources and reductions in post-harvest losses*” which will have a positive impact on climate change.
- Third scenario : this is the disaster scenario. More economic growth, even more inequalities, a rapid increase of consumption of animal products, more wastage and more GHG, particularly those emitted by agriculture.

The analysis of results obtained gives the basis for FAO to state that the solution to the food issue is in (i) sensitising consumers and convincing them to change their behaviour (for a more healthy and sustainable diet, and less wastage), (ii) higher food prices that better reflect costs by internalising costs related to negative externalities generated by production (e.g. degradation of natural resources, emission of GHG) and (iii) the limitation of the use of cereals as raw material for producing agrofuels. Aware of the fact that higher food prices would have a negative impact on food security, *ceteris paribus*, the report advocates for a more equitable distribution of incomes, a better access by family farms to sustainable technologies, stronger institutions to ensure competitive, transparent and fair markets, effective social protection schemes and equitable fiscal systems as well as for reduced illicit financial flows.

These are all recommendations that hungerexplained.org can only support. Of course, some will criticise FAO for having somewhat gone beyond its narrow food and agriculture mandate. But they are wrong because it is illusory to believe that the food issue can be resolved without acting on the world economy as a whole. Unfortunately, the list of conditions required for the food system to become more sustainable shows how difficult it will be to meet this challenge. This will somewhat temper optimism regarding the chances for the scenario of hope to actually take place.

Indeed, markets have never been so much dominated by a few large operators grouped in oligopoles upstream of agriculture - supply of fertiliser, pesticides and seeds is concentrated in the hands of a few huge multinationals that are currently restructuring [read [here](#) and [here](#)] - as well as downstream where a limited number of large agroindustrial and retail companies dominate the market [illustration with the [Greenpeace diagram](#)]. Never ever have agricultural and food commodity markets been so opaque,

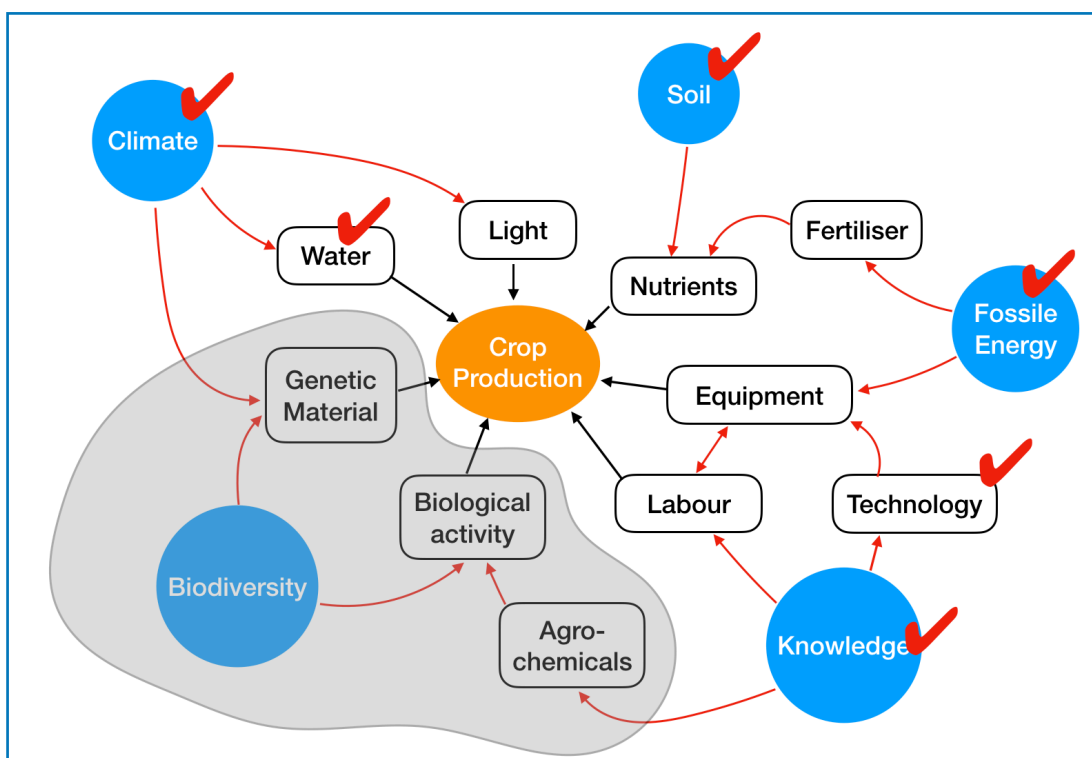
despite new information technologies, and never ever have they been shaken by decisions taken according to a logic entirely foreign to food value chains (investments made by financial funds and speculation on commodity prices, in particular).

Simultaneously - but not independently, of course - inequalities have been growing worldwide [read], social programmes are being threatened in many countries and numerous are tax havens whose existence is neglected or, worse, negated, and that are present right in the heart of Europe (e.g. Luxembourg, the Channel Islands, and may be tomorrow the whole of the post-Brexit United Kingdom) or of the US (Delaware, Nevada and many others).

It is by enumerating all these facts that one starts being fully aware of how difficult the challenge will be and that one understands that the objective of making our food system sustainable can only be achieved if the logic and mode of operation of the world economy is fundamentally changed. This is quite a programme! And it has rather low chances of succeeding; that too tempers our (relative) optimism regarding the odds that the scenario of hope may occur and the objective of this year's World Food Day may ever be achieved,

This notwithstanding, the FAO report has the merit of raising these critical points and, as write the authors: *"for the first time, a report provides a globally consistent foresight exercise based on scenarios designed specifically to investigate challenges for food security and nutrition, while taking into account the future economy-wide context and possible climate change pathways."* And they can only be congratulated for their work!

This being said, this report calls for a word of caution if not of criticism. If we refer to the analytical framework used in our recent article "The global food crunch: myth or reality?" the FAO report covers most of its dimensions - marked with a ✓ on the diagramme below - but one, with which it does not really deal: the biological dimension of our food and agricultural system (see diagramme below where this neglected dimension is figured under a slightly grey area).



This gap suggest a view of agricultural production that one could qualify as being rather mechanical, where it is seen as a process that would combine means of production (land, energy in various forms and technology) in an environment reduced to the climate. This way of looking at agriculture forgets that agricultural production is first and foremost a biological process that humans manage, try to control, but do not master in its details. And these details are the biological activities of plants that express in this way their genetic potential as well as that of the immediate environment around them (organisms and micro-organisms present in the soil, pollinators, disease vectors and other organisms whether harmful or not that live nearby the plant) [[read](#)]. This biological world is as yet relatively unknown and it harbours processes that may be more chaotic and be part of more dramatic episodes than most of the factors that are taken into account in FAO's scenarios. This is why they also raise the issue of risks of a brutal exit from the smooth projections found in the study, a brutal exit that we define as a food crunch.

Not taking into account this biological dimension has another consequence - in addition to the risks just mentioned -, it is the near to total oversight by the FAO study of the relations existing between the specific content of agricultural technologies and biological activity (e.g. pesticides, fertilisers, but also tilling modalities) and their critical analysis. This is probably also the reason why the description of technologies in scenario 2 - the scenario of hope - remains rather vague and is more of a black box supposed to help to achieve "*an increased efficiency in the use of natural resources and reductions in post-harvest losses*". This could possibly also be explained by a "political" requirement to preserve the sensitivity of the multinationals dominating the upstream of agricultural production.

In any case, the report represents a major step in the way the future of our food and agriculture is being considered. This work can yet be improved and our hope, at hungerexplained.org, is that it will be further complemented for the benefit of the sustainability of our food system.

To know more :

- Bellù, L.G., *et al.*, The future of food and agriculture - Alternative pathways to 2050, FAO 2018.
- Bellù, L.G., *et al.*, The future of food and agriculture - Alternative pathways to 2050 - Summary, Summary, FAO 2018.
- FAO, The future of food and agriculture Trends and challenges, FAO 2017.

Earlier articles on hungerexplained.org related to the topic:

- The global food crunch: myth or reality? 2018
- Policies for a transition towards more sustainable and climate friendly food systems, 2018.
- What are the challenges to be met in order to secure a sustainable future for our food system?, 2017.
- Growing inequalities are a threat to world social and political stability, 2017
- Large manoeuvres in the global food system: concentration and financialisation consolidate its industrial nature, 2017

- Climate is changing - Food and Agriculture must too - Towards a “new food and agricultural revolution”, 2016.
- To produce more: build an alliance with nature rather than combat it, 2016.
- The large multinational corporations in charge of our agri-food system...: upstream corporations, 2014.