

## Reflections on food, power, poverty and resilience in the face of global catastrophic risks<sup>1</sup>

by Geoff Tansey<sup>2</sup>

We know the world faces a number of catastrophic risks for humanity. Since [my contribution](#) to the last TARGET Congress, I've been working with a couple of people connected with the Centre for the Study of Existential Risk ([CESR](#)) at the University of Cambridge. The risks this centre focuses on include the biological, such as pandemics or risks arising from the use of biotechnology leading to accidental release or intentional misuse of harmful organisms. The extreme risks arising from human activity potentially pushing us past tipping points that might lead to sudden catastrophic ecosystem collapse or runaway climate change. Others include potential risks from the development of artificial intelligence and failures in global justice resulting in inequality, corruption, and structural discrimination.

What these risks have in common is that they're linked to what we humans think about how the world works, the stories we accept as shaping our lives, the paradigms that underline the current structures – economic, social, and political – that have led to these risks arising. The small group I've been connected with, are working on a project called "[People and Patterns](#)". The focus is on the dominant narratives in current systems such as energy, food, defence, and technologies, the underlying paradigms, how they reinforce each other and are exacerbating global catastrophic risks.

Ensuring resilience in our food systems is part of a wider challenge because avoiding these risks becoming catastrophic requires a radical rethinking and practice in how humans run this planet. Putting ethical concerns that respect well-being, autonomy and justice as fairness for people and all life on this planet must be central to a new paradigm – narratives and stories.

### Food system challenges

Today there are widespread calls for food system transformation because there are many ways in which today's food systems fail to ensure everyone is well nourished in ways that enhance sustainability. As FAO's [State of Food and Agriculture 2023](#) (SOFA 2023) report notes, there are huge costs of at least 10 trillion PPP (purchasing power parity) dollars not accounted for by the way current economics works. The bulk of these hidden costs relate to "dietary patterns which lead to disease and lower labour productivity". Over 20% are the environmental hidden costs. The report calls for the adoption of true cost accounting.

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Global hunger is still far above pre-COVID-19 pandemic levels and way-off track to achieve sustainable development goal of zero hunger by 2030 as the FAO's State of Food Security and Nutrition the World 2023, the [SOFI](#) report, pointed out. It estimated that between 691 million and 783 million people in the world were undernourished in 2022. A further 2.4 billion people were moderately or severely food insecure and no progress was made in reducing food insecurity at the global level in 2022. Even in the USA, as the USDA Economic Research Service [reported](#), some 12.8 per cent (17 million) of households were food insecure at least sometime during 2022. As was said in SOFA 2023, "the intensification of the major drivers of food insecurity and malnutrition – conflict, climate extremes, economic slowdowns and downturns, and growing inequality – often occurring in combination, is challenging our efforts to achieve the SDGs."

But even the food secure are not eating healthy diets with almost 3.2 billion people worldwide unable to afford a healthy diet in 2020 (SOFI 2023). Poor diets are linked to growing levels of overweight and obesity, and chronic non-communicable disease like diabetes and coronary heart disease.

Food Systems are not simply about farming and farming is not simply or even mainly about growing food. People make a living from the land or sea. What makes sense for them in doing so is not feeding people but the economics and incentives that shape what makes sense for them to do in order to make a living. It's these that need to change if people and corporate actors are going to change. As Prof Marion Nestle pointed out in a recent blog [post](#), quoting a Farm Action [report](#), most American farmland acreage is dedicated to animal feed and fuel production. Moreover the acreage of many key food crops in the US including potatoes, sweet potatoes, sweet corn, tomatoes, apples, and oranges has fallen precipitously by 20-90% from peaks in the 20th century.

And choosing what to eat, if we have choices, is not simply an individual uninfluenced decision but linked to family, beliefs, peer pressures and hugely by the marketing and advertising activities of the food and retail industries, as the UK's Food Foundation's report [Force Fed](#) illustrated.

Food system transformation has become a new mantra that is being talked about by all kinds of players and actors in the food system today. But there are clearly very different visions of what that means and how to achieve it. The question is which one will deliver resilient, sustainable food systems that enable everyone to be nourished well while respecting all life on this planet and different cultural approaches.

## **Poverty**

Many of the problems people have in our food systems are not to do food but poverty and how poverty affects people's relationship with food, as we found in the [Fabian Commission on Food and Poverty](#) in the UK, which I chaired. Poverty underlies food insecurity, reduces peoples' freedom of action – choice, autonomy or agency – and constrains their options. Empowering poorer people, communities and nations is an essential element in increasing resilience. But it won't happen on current trends. Inequality is increasing with an increasing amount of wealth in fewer and fewer individual and corporate hands. These hands are increasingly shaping the direction of change and shaping the dominant narrative on how to tackle the challenges.

This narrative is based on using science and technology to increase control and power over food and the environment. It builds on an old-fashioned, 19th century, positivist, anthropocentric view of dominance and control over nature. As our understanding of science and our ability to manipulate the natural world and all living organisms has grown so too has the power of those who want to benefit from this for private gain rather than public good. A more modern approach to this growing understanding of our biosphere and ecology would not aim to bulldoze through problems by redesigning living organisms, and using blunt instruments like pesticides, fertilizers and mining the soil, but rather work with biological and ecological systems in ways that enhance their viability and resilience, maintain biodiversity, diverse communities and focus on healthy nutrition outcomes for people and environment.

This approach to science and technology is linked to an economic system addicted to growth based on the flawed measure of Gross Domestic Product. It is the need to get away from this approach that Olivier de Schutter, former UN Rapporteur on the Right to Food and now UN Rapporteur on Extreme Poverty and Human Rights is exploring in [“Well-Being without Growth? A New Approach to Combating Global Poverty”](#).

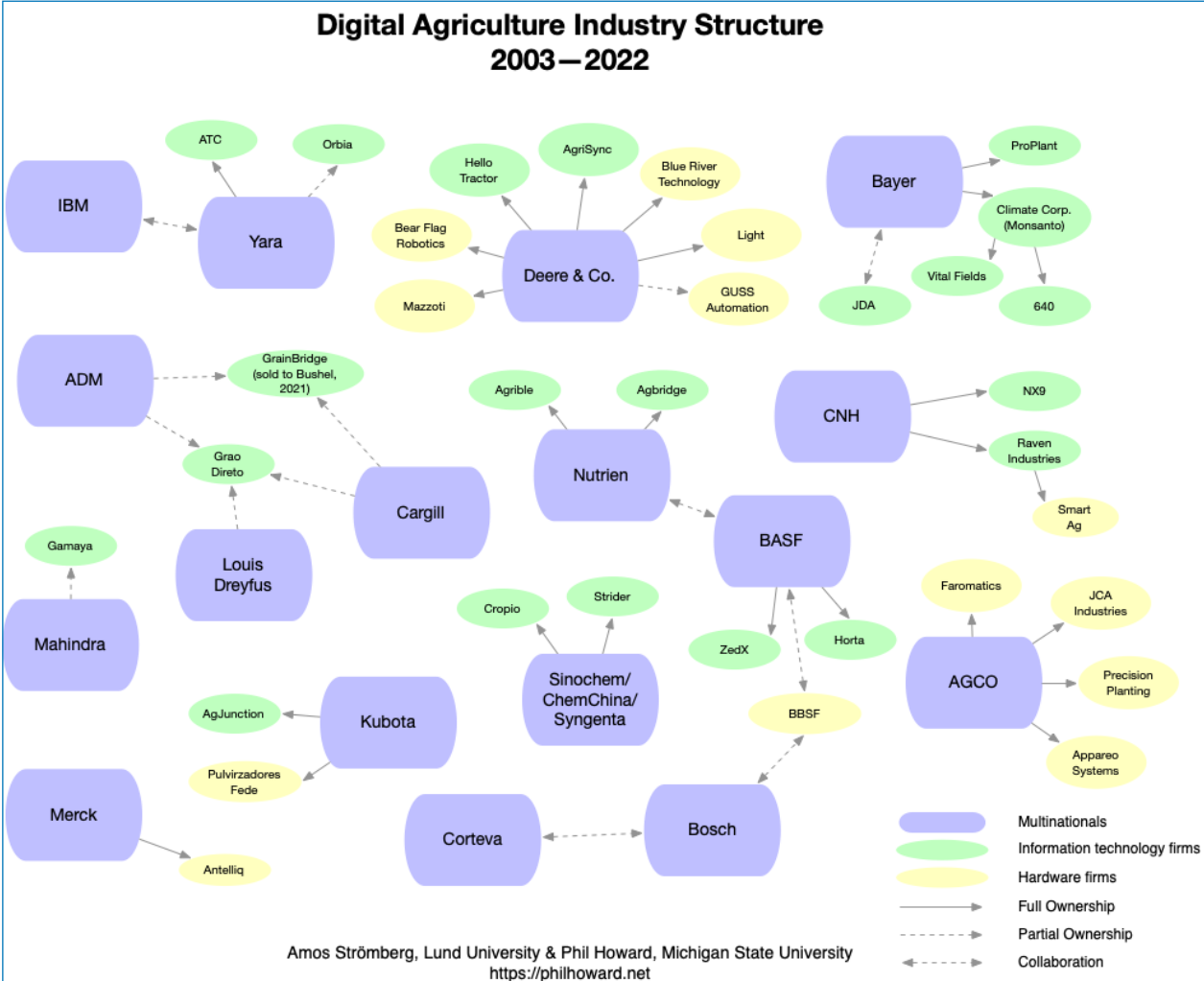
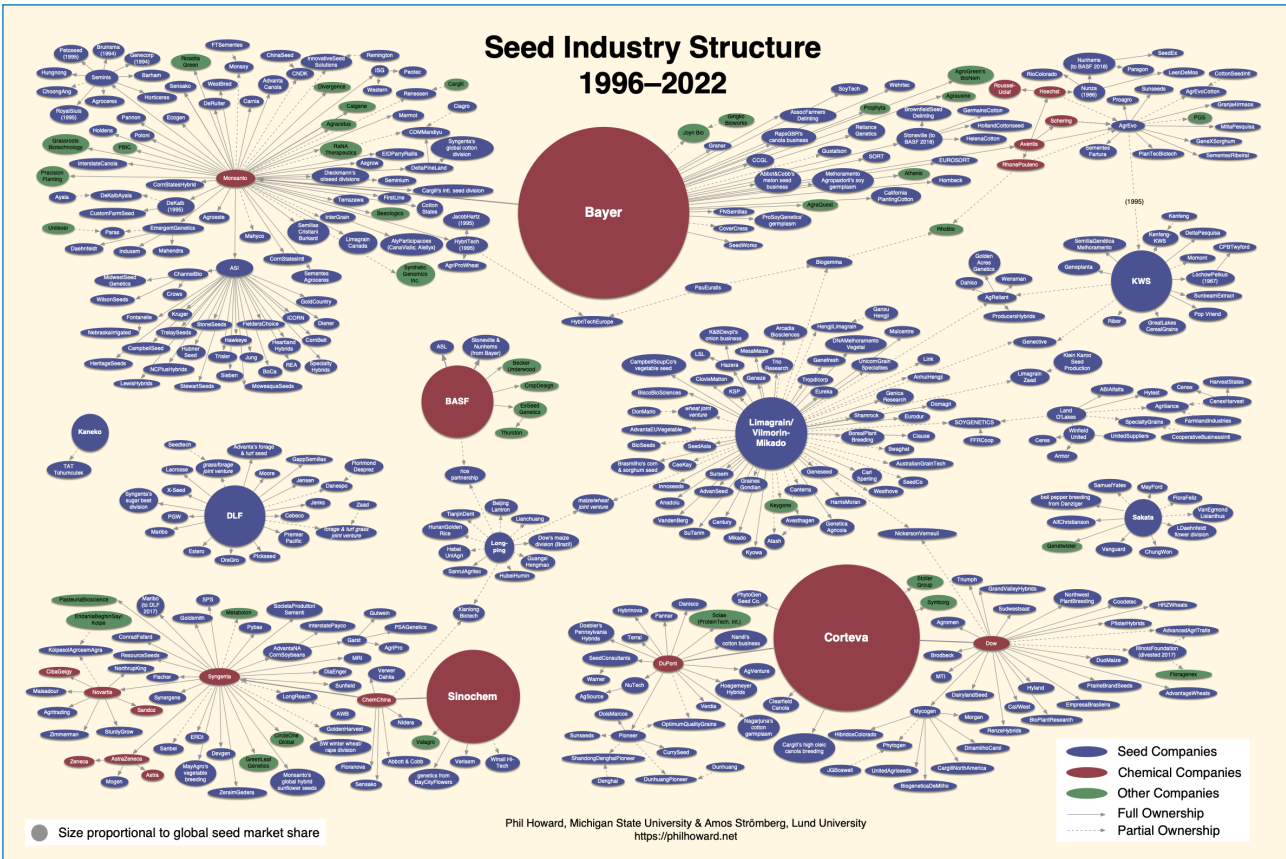
## **Power**

As I said at the 2021 Congress, reflecting on [comments](#) from an earlier talk by Prof de Schutter, “If you want to discuss ethics, you must discuss power.” We must look at who has what power to shape the narrative and structure the systems in which we live if we want to change those to be more resilient for the potential shocks facing humanity.

One of the major developments over the past 50 years has been the increasing economic concentration of power across all sectors of the economy into fewer and fewer corporate and individual hands. This is a natural development for the way our current economic system works, in particular with the growing financialisation of the economy. These increasingly powerful private actors influence government policies and international organisations to enact rules and laws that maintain and enhance that power.

One of the most important but relatively neglected areas that is enhancing those actors power, and which limits options for transformative change, was the introduction of more or less global rules on intellectual property. This came about through inclusion of the Trade-Related Aspects of Intellectual Property Rights ([TRIPS](#)) Agreement into the World Trade Organisation in 1995. In the 2000s I worked with negotiators at the WTO and elsewhere on these complex legal fictions, which affect huge areas of life from food, access to medicines and knowledge. These rules on IPRs and continued pressures to extend those misnamed rights further in bilateral trade agreements underpin the growing power and control of large corporate actors who increasingly dominate our food systems – from plant to mouth.

The impact of TRIPS, which allowed the patenting of plants and animals and required some form of plant variety protection in all WTO members, on the increasing consolidation of the structure of the seed systems has been well illustrated by [Phil Howard](#) of Michigan State University. His excellent graphics show how after TRIPS the initial larger players, in particular former chemical companies, moved progressively into acquiring more and more seed businesses and then began merging, so now three big players dominate. The trend developing in the mid 2020s is of growing connections between seeds, inputs and data businesses, which some industry executives say aims to create a world of fully autonomous farming.



Source: [P. Howard, 2022.](#)

This leads Amos Stomberg and Phil Howard to [say](#):

“As a result, many giant companies that previously have not been involved in food production, such as Google, Microsoft, Amazon and Bosch, now penetrate the agricultural sector, offering farmers a variety of technological tools such as automatic tractors, satellites, Internet of Things (IOTs), and a myriad of apps and software (Birner 2021). Consequently, companies hope to make use of “big data, artificial intelligence, and automation along the entire commodity chain, from input production and harvesting, packaging, transportation and consumption” (Hackforth 2021:1). Moreover, the harnessed agricultural data will allow for higher levels of surveillance and enable agribusiness to tailor advertisement packages to farmers (Bronson 2022). This has led to concerns that digital agriculture will only exacerbate existing inequalities, including between core – and peripheral nations, urban and rural areas, ethnic majorities and minorities, and men and women (Birner 2021). In addition, these trends are contributing to lock-ins, or a tendency to make industrial farming systems even more resistant to change – such as by increasing the cost of switching to other data platforms, steering users towards more expensive inputs and larger-scale operations, or steering users away from crops other than commodity corn and soybeans (Bronson 2019; Carolan 2020; Ryan 2020).”

As they also point out this approach is based on a false narrative

“While the dominant agribusiness firms and proponents of digital agriculture assert that smart farming and industry consolidation will be needed to increase the amount of food needed to feed a growing world population, this is a smokescreen. Glenn Davis Stone, in [‘The Agricultural Dilemma. How Not to Feed the World’](#) (2022), details how Malthusians have it exactly backwards – the real problem is overproduction due to massive government subsidies (particularly agricultural input industries), which leads to a “runaway train” of industrial agriculture, not population growth”.

IPRs also include copyright and trademarks, which underpin brand power, as well as patents. What they do is allow the holder to exclude others from using, for example, the patented seed, copyrighted material or trademark. The story told is that they are there to foster and reward innovation and creativity but the reality is, as Peter Drahos [explains](#) through much of his work, they are really monopoly privileges, granted by society for social good, which today allow a form of private taxation. They allow the owners of patented seeds or medicines, for example, to charge what they want for them and prevent others from entering the market.

Indeed, the model for the future of research and development emerging in the food system is where publicly financed research can only be taken up and developed by private companies which use intellectual property to then get all the benefits from them. This also skews the direction of R&D into those areas that can be privatised rather than innovations that can be easily shared, as for example was the aim in much agricultural research and extension aimed at benefitting resource poor farmers.

This approach is most developed in the pharmaceutical sector with terrible consequences, as Nick Dearden, among others, illustrates in his recent book [‘Pharmanomics – How Big Pharm Destroys Global Health’](#). Despite the amazing triumph of developing vaccines against COVID-19 in record time, largely underpinned by publicly financed research, big Pharma companies were allowed to hold the patents to them. Dearden argues they used this power to set whatever price they could get away with and ration who got how many doses of the vaccines, and at the same time made massive profits for both the companies and executives. These latter are incentivised by reward systems that put share prices

above maximising health outcomes. They also mitigate against working on less profitable areas, such as development of antibiotics and diseases of the poor.

A similar tale applies in food, perhaps not yet as extreme. When I interviewed the late [M. S. Swaminathan](#) in 2009, father of the Green Revolution in India, who lamented that it has become a greed revolution and monocultural. He also said how in his day there were no patents and research was done for the common good. He also discussed how patents and the expansion of intellectual property rules inhibited the sharing of knowledge and led to an emphasis on one type of technology. While he did not see problems with the use of biotechnology in medicine, it was much more controversial in food. Key questions concern its impact and who will control it. The green revolution, he noted, was a public good enterprise but the gene revolution is a private sector enterprise and the issues we face are not just scientific but social and ethical. And as Antonio Guterres, UN Secretary General said about the failure to spread vaccines equitably around the world in 2021 “This is a moral indictment of the state of our world. It is an obscenity. We passed the science test. But we are getting an F in ethics.”

In the use of food as a weapon, in the continuing and growing inequality around food insecurity, in the failure to ensure healthy diets and biodiverse sustainable production systems we are also getting an F in the food system. It need not be like this. Enabling our food systems to be resilient in the face of global catastrophic risks require reforming the economic system in which it is embedded, challenging the power relations shaping the direction of change, and creation of a form of global governance based on the common good. Clearly a challenging and long-term project but urgent.

## Wealth

What are the constraints on wealth? Not many. Yet as the 18th-century Quaker John Woolman [said](#), “Wealth is attended with power, by which bargains and proceedings, contrary to universal righteousness, are supported; and hence oppression, carried on with worldly policy and order, clothes itself with the name of justice and becomes like a seed of discord in the soul.” It may be old-fashioned language but the sentiment is valid. The concentration of wealth in ever fewer hands, while the logical outcome of our economic system, is the antithesis of what is needed for resilience for human societies in the future. There is a need for another UN Rapporteur on Extreme Wealth perhaps, and ways to ensure that wealth is used for the common good.

Towards the end of my contribution to the 2021 Congress, I said, “We can never solve problems of hunger and malnutrition, sustainability or poverty by just producing more food, nor only by the use of science and technology. The central challenges to life on earth concern how we organise our societies, the nature of our economics and if we can learn to cooperate over how to use the world’s resources.” This requires a global transformation away from the competitive, nationalistic approaches of today to cooperative, knowledge sharing approaches for tomorrow to increase the chance of being resilient in the face of the global catastrophic risks we face.

That transformation does not look likely to come from the top down. Rather a whole host of bottom-up actions are beginning which may help it come about. Neither in the pharmaceutical sector nor food sector is the domination of the big corporations and powers going unopposed. Alternative approaches are being tried to avoid dependence and create greater autonomy and spread the results of research more fairly. Just as the problems arising from the monopolist control of medicines by Big Pharma is leading many

countries in the South to create their own industries and vaccine production capacities, so too is the current dominance of Big Food interests leading to push back in the Global South, particularly from farmer and peasant organisations. Dozens of peasants and indigenous organisations have come together in a [Global People's Caravan](#) for Food, Land, and Climate Justice (GPC) to challenge what they see as how the UN Food Systems-COP28 agenda is being dominated by “big transnational corporations that cover every step of the agriculture supply chain, from production to consumption and finance”. Others are pioneering open source and participatory plant breeding and developing new ways of doing business These are just a few of those working on more decentralised, locally led activities to enable more just and effective change.

As the product of an education system in an almost post imperial, colonial country when I was at school, but in which that old mentality is still embedded in so many ways by too many in our country, it is hard to see the world as others see it. Especially those who experienced the exercise of power over them and who feel the effects of the dominant power today.

### Resilience

So what does resilience mean? Resilience for whom and for what? We need to unpack thinking about resilience into what it means for individuals, families, communities, countries, globally. The capacity to survive and bounce back from shocks. Poverty, at whatever level, undermines resilience. But if we are thinking more broadly about the biosphere and the period during which human civilisation has developed resilience means of avoiding tipping points that would dramatically transform the ecosystems of today.

The questions I'm left with include which paradigm, narratives, stories will provide more resilience in the face of these global catastrophic risks and may help prevent and mitigate them. Which is the more ethical approach taking into account the need to balance well-being, autonomy and justice as fairness, attention to which may help prevent the dangers of catastrophic risk from the growing levels of inequality. Is allowing monopolistic and oligopolistic large conglomerations and individuals operating in their private interests globally and helping to shape the rules that suit them globally be the better approach? Or is it rather than one that sees the spreading of power, the sharing of knowledge easily and urgently, and the building and sustaining of co-operative mechanisms to work together in the face of these challenges much better than continuing nationalistic and economic competition focused on short-term gains and old ideologies and ways of thinking.

For my own part I think it's the latter. I have what you might call the dung heap view of power. In a huge great pile gathered together dung stinks. When it's spread out it can fertilise. Even better if it's not gathered together in the first place but diverse communities and approaches allowed to blossom and knowledge, which is not diminished in the sharing of it, be distributed widely is better. If the need in the face of rapid climate change is to share knowledge and best practice to enable adaptation to take place, and mitigation occur, then the rules on monopoly privileges need changing as one element in enabling knowledge sharing and resilience.

What's the new story I hope today's babies will be able to tell their grandchildren in 70 years time. It's how in the face of global catastrophic risks, seeing the dangers of continuing to run the world in the way we humans have to date, people from all countries began to change to see themselves as part of a common humanity, with more in common than what had historically been told divided them – religion, culture, nationality – and began to transcend the traps of history. There was so much to celebrate. The ways different peoples had found to manage their environments over millennia, to create many and varied cuisines based on what they could produce there, and now were sharing them around the world. That the fantastic possibilities for creating a better world for all using our great scientific understanding, technological capacities and accumulated traditional and indigenous knowledge were used for sharing, not hoarding behind legal fictions, in order to enable humanity to adapt to the changes human activities to date were causing. That we rose to this, the biggest challenge we humans ever faced, to let go of the things that divide us and share out the wealth of the planet that all might live well and sustainably.

Utopian? Impossible? But necessary and ethical!

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Further readings:

- Ingram P. and S. Woods, [People & Patterns: Transforming the ways we think and connect when everything is at risk](#), Centre for the Study of Existential Risk, University of Cambridge, 2023.
- FAO, [The State of Food and Agriculture 2023](#), 2023.
- FAO, IFAD, UNICEF, WFP and WHO, [The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum](#), Rome, FAO, 2023.
- Strömberg, A. and P, Howard, [Recent Changes in the Global Seed Industry and Digital Agriculture Industries](#), 2023.
- Tansey, G., [From India's green to greed to evergreen revolution – M S Swaminathan discusses a lifetime's work](#), (2016).

Websites:

- Drahos. P., [Understanding intellectual property](#) (online, undated).
- [The Global People's Caravan](#) (online),

Selection of articles on [hungerexplained.org](https://hungerexplained.org) related to this topic:

- [Energy and food](#), 2023.
- [Inequality in food systems - Is it realistic to believe that food systems could become more equal in an unequal society?](#) 2023.
- [Facts and figures on world food insecurity and malnutrition Food insecurity stable globally, but still on the rise in Africa SDGs out of reach](#), 2023.
- [The “food and agricultural transition” is ongoing - Nine changes tell us to what kind of world it is leading us](#), 2023.
- [Science, what science ? A problem or part of the solution? When the industry doctors science for profit](#), 2023.
- [When dealing with complex and intertwined crises, mainstream economic solutions prove ineffective and generate more inequalities - The case of the climate crisis](#), 2022.
- [Private economic power in food systems and its new forms](#), 2022.
- [Governance: united to decide or divided to be ruled?](#) 2022.