European Commission

Food futures

Sustainable food systems

Sonja Stummerer

Martin Hablesreiter

Joint Research Centre

Contact information

European Commission, Joint Research Centre (JRC), Chemical Safety and Alternative Methods Unit (F3)

Via E. Fermi 2749, I-21027 Ispra (VA), Italy

Email: JRC-F3-ENQUIRIES@ec.europa.eu

EU Science Hub

https://joint-research-centre.ec.europa.eu

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honey & bunny

https://joint-research-centre.ec.europa.eu
https://www.honeyandbunny.com

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The Viennese Eat Art Duo Sonja Stummerer and Martin Hablesreiter (honey & bunny) collaborate since 15 years with the photographers Ulrike Koeb from Vienna and Daisuke Akita from Tokyo.

Almost all photos in this report were created together. All concepts are developed by honey & bunny. Ulrike Koeb and Daisuke Akita did the photography.

www.koeb.at

www.daisukeakita.com


Cornflakes

Content

foreword

The Farm to Fork strategy is a cornerstone of the European Green Deal. It strives for a fair, healthy and environmentally friendly food system fulfilling the UN Sustainable Development Goals. The strategy presents the policy perspective: the case for action; the need to build a new food chain; the imperative for a just and fair transition benefitting all actors within the EU and beyond. Essentially, it puts forward the grand plan for sustainable food systems.

But what about the people perspective? How do our values, our culture and our individual views of the world influence how far policy can drive change in the way we think about food, and how willing we are to really embrace sustainable food systems? Such pivotal questions are not only scientific in nature, so we looked to the JRC's Art & Science programme and our artists in residence, Sonja Stummerer and Martin Hablesreiter (honey & bunny) to help us explore what goes into the making of a sustainable sandwich, and how will it taste?!

Although this beautifully illustrated book is the unique creation of Sonja and Martin, their research was enriched through lively engagement with scientists from across the JRC who work in numerous fields linked to the complex world of sustainable food systems. Our hope is that the book serves to create healthy conversation and debate, to make the implicit explicit, and to explore collectively the emotional challenges that lie on the horizon.

When we embarked on this collaboration, the aim was expressed eloquently in the artists' own words - "We need to create new narratives and aesthetics to change the European way of thinking, to change the European way of life. Without a bigger positive picture, without a bridge to the unthinkable, without creativity, we will not manage a sustainable food future. Please help us to create the necessary!"

Buon appetito!

Elisabet Berggren and Maurice Whelan, JRC.

sustainable

Why?

- Food systems are too complex for people to understand and judge.
- To implement the Farm to Fork strategy the support from a majority of citizens is necessary.
- The sustainable turn and the Green Deal will very much depend on cultural solutions.

What?

- This book aims to explain the functioning of food systems and the link between food, environment and justice (fairness, equality).

How?

- We introduce culture as a main game changer, transport hard facts with wit and humour.

FOOD systems

food and society

food problems

The production, processing, trading and consumption of food create all kinds of problems. Air, water and soil are contaminated with substances that can be harmful or even fatal to humans, animals and plants. The loss of vital soil and water resources through pollution, acidification, sealing and erosion is alarming. The way people deal with food has a direct impact on the biosphere. Food production requires too much (fossil) energy and therefore ensures, among other things, the rapid progression of climate change. Conventional agriculture, monocultures and the conversion of previously unused forests into farmland lead to the drastic extinction of species, i.e. the loss of biodiversity. A part of agricultural production is increasingly relocated to places where ownership, minimum wages, labour rights and environmental standards are either hardly taken seriously or not legally secured. Land grabbing, exploitation right up to child labour and slavery, violence, habitat destruction, flight and migration are part of


TAGESTELLER
Auer

the global food market. The food production system also causes economic and social problems within the European Union. Exploitative structures / labour conditions exist in both agricultural and processing establishments, such as on vegetable plantations or in slaughterhouses. Farmers who work legally earn significantly less than employees in almost all other occupational groups. Without funding, they could not survive economically. These problems are known and published. They are described in the "farm to fork strategy".

The issue is, however, that these problems are not sufficiently explained. Far too often, responsible citizens are unaware of the connections between food systems and sustainability, as well as externalities. For example, the scope of the extinction of species is unclear. Why should a species not be allowed to become extinct? Loss of biodiversity hardly affects a middle-class life, does it not? What is so bad about the average temperature rising by two degrees? The Austrian winter is too cold anyway. Why is the reduction of pesticides necessary when regulatory safety limits (for consumers) already exist? This booklet attempts to explain the problems mentioned above, in addition to their present and future consequences, in an understandable manner.

The loss of biodiversity, for example, within food production creates a very fragile system and thus represents an enormous risk. Monocultures are at risk through pest infestation. A lack of biodiversity ultimately means that massive crop losses are possible and difficult to countervail for longer periods of time. Additionally, the fact that climate change will result in the loss of fertile farmland and thus lead to the reduction of agricultural production is elaborated on. A further example is the effect of conventionally produced, processed and very cheap (mal) nourishment on people's health and well-being. Producing, processing and consuming food affect individuals (and their health, freedom and dignity) and society (concerning economic and cultural opportunities, peace and equality). This applies not only to a seemingly abstract future, but also to the present – socially as well as ecologically.


Kelly
POP CORN
Heidi

food systems

"Our world" – the industrialized consumer society – is no longer a "farm to fork" society. Subsidiary economics are extremely rare in Europe, Japan and the United States. A complex system of production, trade, consumption and waste lies between farm and fork. Food is also a network that connects science, innovation, work, business and culture. Today, natural scientists invent and produce pesticides, genetically improved seeds or nano-coatings for ham. Technicians create and build satellite-controlled tractors and "controlled atmosphere" packaging. Traders and computers define new world market prices for wheat, meat and biofuel every minute. Politicians specify the amount of agricultural and economic subsidies, they set import and export quotas or free trade, and they define which foods are permitted for consumption and which are not. Officials decide whether a food is safe for people while defining regulatory limits for toxins that may be used in fields or in manufacturing plants. Thousands of farmers, harvest workers, employees in slaughterhouses, industrial workers, salespeople in supermarkets work (often underpaid) to provide cheap calories. The list goes on! Food is more than a simple agricultural product that idyllic mountain farmers deliver to cooking housewives.

Food is the most important economic good worldwide. Food makes the difference between life and death. Fertile land and clean water are essential resources and still cause bloodshed. The production of food is partly responsible for climate change, the extinction of species, the pollution and destruction of living space, as well as the neglect of human and labour rights. This means that countless scientific disciplines are involved in the challenge of developing and implementing sustainable food systems. This includes social sciences, economics and various humanities, as well as medicine.

Food is a political issue. Through political elections, citizens indirectly decide on the boundary between permissible and impermissible interventions in nature through food production, such as on pesticides' regulatory limits. Due to a lack of transparency, a lack of public discourse, marketing and false reports, this decision cannot be considered a real democratic one made by responsible and informed citizens. In addition to the lack of transparency, another problem is that many people primarily perceive themselves more as consumers than as citizens. This attitude is a consequence of the cultural character of the consumer society, in which the credo "I consume, therefore I am" prevails. Consumption is


Teigprodukte
Tiefg

perceived as an integral part of one's own person, individuality, identity and even one's freedom. We have to realize that, in relation to the state, we are citizens first and foremost and not consumers. For the switch to sustainable food systems cannot be achieved by "correct" consumption alone. "Correct" consumption should be seen more as a model and a way to build political pressure for action. Real change can only be made politically. The idea of achieving sustainability through the "voluntary" consumption of sustainable products (e.g. through seals of approval) and through the market's self-regulation should also be viewed critically because it shifts the responsibility for the sustainable production of our food primarily to the consumers, and thereby reduces the pressure on manufacturers, trade and politicians. This can even be counterproductive in terms of rapid and widespread sustainable change. Everyone involved in a food system is responsible for the sustainable production of food.

If people are granted the right to dignity, freedom and a happy and healthy life, this calls for a constant negotiation of political and cultural boundaries that strongly correlate with food systems. In this respect, food should not be understood solely as an economic good, but rather it must be positioned as a political issue that includes all people involved in the food system.


FRISCHE ZUM MITNEHMEN
BILLA

food culture

Every society defines itself with the help of the selection, preparation and consumption of food. Food is always designed and eaten according to cultural rules. Food reveals cultural standards, social, economic and geographical origin, gender, state of health, age, etc. Only famine presents an exception. Food is an expression of both individuality and membership in a group. Food can be provocative or challenging, it can be misused for racist purposes or it can contain family memories. Food shapes communities and excludes people. Food is a political statement. Food shows whether people are provocative or mannerly, traditional or progressive, open-minded or misanthropic, believers in innovation or simply believers, willing to take risks, fearful, lavish, stingy, hedonistic or ascetic. Food is always a cultural good. Eating is always a cultural act.

Culture is an essential link in every human society. Culture creates narratives that people live by. A common ideology defines a group or culture's value structure and sets the goals. Narratives are the stories/tales in which these goals are embedded, e.g. the narrative of progress and prosperity. Culture is renegotiated on a daily basis by what is good or bad, true or false, desirable or to be rejected, beautiful or ugly, progressive or adapted, important or unimportant, etc. In this respect, culture is also power. Culture is debate and decision and it relies on its respective story. What is exclusively factual can only function as a guide for a society in exceptional situations (such as a pandemic). Culture must be understood as an essential part of the sustainability debate. Only a collaboration between science and culture can redirect the powerful narratives of a society based on consumption and industry in a sustainable direction. Sustainability, in the sense of enabling the Earth to continue supporting life, the capacity for the biosphere and human civilization to co-exist, is suitable both as a social goal and as a narrative, because it is about the positive relationship between the human race and nature.

Culture formulates everyday instructions and values. In the case of food, for example, culture defines the representative and political value of individual ingredients and preparation methods. Among other things, it determines how we deal with meat or vegan eating habits. Which cuts of meat are "prime cuts" when, for whom and why, and why is it that vegetables are only eaten in vegetarian households on holidays? Culture defines taboos and hospitality. Culture designates the supermarket or the restaurant as an aesthetic space full of desires. Society and communities differ from one another through and because of their eating cultures.

Provocation is used thereby specifically to present political messages. In Europe, being a vegetarian is also a political statement, for example. These cultural values and instructions relate to ideas of hygiene and health, attitudes towards freedom and equality, to role models and to sustainability. A change in the aesthetic narrative can result in changes in eating behaviour. One example of this is the Nordic cuisine, which was influenced by the “Noma” restaurant in Copenhagen. It stands for sustainable, regional and seasonal vegetable cuisine at Michelin-star level, whereby some of the produce is grown in-house, as well as for the revival of old techniques such as fermentation and a new, simple and natural way of presenting these dishes.

Food affects you directly. Food triggers reactions. Food radically evokes emotions. Food can provoke much faster and more intensely than any other medium.

food futures

No area of life can be changed as quickly and flexibly as the diet. Citizens can switch to vegetarian, seasonal, regional or pesticide-free food every day and at every meal. For example, eating vegetarian food three out of seven days a week is conceivable without having to refer to the ethics of renunciation. Preparing a certain number of meals yourself using sustainable ingredients is also conceivable and can be viewed as a societal ideal. Eating sustainably is gradually feasible and in some respects faster and cheaper to implement than climate-neutral mobility or refurbishing housing to meet new sustainability standards. Many companies that process or produce food, especially in regions where the agricultural sector is still operating in small entities[1], can change production methods relatively easily and thereby accept sustainable standards. In contrast to plastic or cars, food is a sustainable product in itself, meaning that it does not have to be replaced but only its production methods have to be adopted to a sustainable standard.

At present, mass consumption and consumer representation are the cultural ideals of Western capitalist societies. To possess as many new, expensive items as possible conveys status and prestige. This also applies to the food. Radically active consumption is a sign of progress and civilization. Any reduction in consumption or criticism of this behaviour is dubbed renunciation. Renunciation cannot be a social narrative. By definition, renunciation is contrary to well-being. Renunciation cannot be accepted. What could a positive vision for the future but also for the present resemble?

Currently, the health, well-being, common good and intellectual and technical achievements of societies are undervalued. Less value is attached to the production of goods, services, scientific or artistic experiments than to consumption. The latter is rated higher socially and culturally than working or "being active". It is questionable whether the prevailing philosophy of placing consumption above productivity is even human. In any way, however, it radically devalues work and thus most people too. Cheap labor radically devalues both its producers (farmers, workers, cooks, salespeople) and the consumers of cheap, conventional, industrial food. Food is also a form of degradation. Establishing sustainable food is in every respect a question of human existence in itself. Both the biosphere, i.e. Earth as a habitat, and the culture of coexistence are in question.

[1] According to the IAASTD report the average farm size in Europe is still relatively small in comparison to South, Central and North America, being 14,7 hectares in Europe, compared to186 hectares in North America (source IFAD 2010, cited in "Agriculture at a Crossroads, IAASTD findings and recommendations for future farming", 2016, p.22; *www.globalagriculture.org*)

Like apocalyptic horsemen, the depictions of climate change and Co. threaten us with the imminent end of the world. Tomorrow's apocalypse is part of falling asleep. It is no surprise that this is no longer taken seriously. The permanent demand for radical change and even more radical restraint of each and every individual is equally abstract and incomprehensible. Projecting climate change into the future is frivolous. Climate change is in the present. The effects of climate change are comprehensible. The consequences of conventional agriculture and nutrition on health, well-being and equality are also legible. Dealing with sustainable food provokes positive change for the people of today.

People want to be active per se. People are creative per se. When people create of their own free will it fills them with comfort. In most cases, creativity follows goals that are formulated by societies. At best, this is a democratic process. Politics, culture, science and the media are tasked with working on the discursive development of sustainable goals.

food narrative

“Conquer the earth!” This sentence from the Bible shapes Western societies to this day. Humans try to rule nature. Humans settle in inhospitable places and make hardly fertile land arable. Humans developed technologies to artificially irrigate soil, to improve the fertility of the earth, to preserve and transport food and to make it easier to digest and more palatable. Humans control the biosphere to protect themselves from the climate, wild animals or disease. Humans want to master nature in order to have (more than) enough food available at all times.

Today, technology and science in the form of heavy, fossil-fuelled machines, computers, satellites, chemicals or genetic manipulation are used to perfect the mastery of nature in food production. Unpleasant opponents such as insects, bacteria or fungi are destroyed. Natural processes like rotting are artificially removed. Landscape – soil and water – is transformed into easily cultivated arable land on a large scale. Animals or plants that want to continue to “nibble” on this land in order to survive are driven away or killed.

The mastery of nature is culturally accepted. It is a cultural ideal. This is evident not least in the term cultural landscape. In Europe, at least, every square centimetre of soil is subject to human control. Soil serves economic or cultural purposes. Nature has to deliver. It must provide us with resources, arable land or serve human leisure. Nature has to be productive or beautiful. Nature is only allowed to prosper in places that are explicitly made available to it by humans. Controlling nature and overcoming or exhausting of the laws of nature are viewed as innovations by Western cultures. Artificial fertilizers and combine harvesters are seen as positive achievements for civilization, as are supermarkets and frozen pizzas. Massive tractors, industrial plants operating in shifts or bursting supermarket shelves are considered beautiful. The mastery of nature is also an aesthetic ideal. (Supposed) superiority and control are beautiful. The West prides itself on its power over the biosphere.

Covid-19, climate change and an increasingly inhospitable biosphere show that humans are unable to exercise power over nature. Human beings cannot subjugate the Earth. It is neither possible nor effective. Humans are a cooperative species. People want to get along well with others. This also includes plants and animals. Power and control are cultural narratives Contempt and exploitation are cultural narratives. Western societies are in need of a new enlightenment that expressly rejects the idea of wanting

to exercise power over nature. People and societies must see themselves as a coexisting part of the biosphere. This idea can only be accepted if the cultural narratives of Western societies are reformulated.

food demands

A cultural requirement for the social self-concept: Society must decide where, under which conditions and how much food is produced with which quality. Citizens must be able to decide whether and, if so, how many harmful substances can be used by agricultural businesses, the food industry or gastronomy establishments. Democratic legitimacy is needed in the dealing with soil, water, air, health and well-being. Like production companies, citizens must also be given the opportunity to request, accompany and control changes to regulations, for example on regulatory limits, the approval or prohibition of recipes or additives, labour rights and conditions or public tenders. Citizens must be granted the right to full transparency. Citizens must be understood as such and not as consumers.


POP
CORN

food and sustain

ability

How are food systems and sustainability connected?

Neither the sustainable turn nor the green deal can happen without adapting food production, eating habits and food culture. The question of daily nutrition is not only related to diets, recipes or gourmet criticism, but also to effects on the ecosystem, as well as to social and economic processes. What and how we eat is directly linked to CO_2 emissions, water and land use, energy and transport systems. Agriculture as THE production site of our food causes around 30% of global CO_2 emissions and uses about 70% of the total fresh water supply. Against these figures, it becomes clear why food waste is not only a moral but also a very concrete, ecological problem. In most parts of Europe food is a consumer good that is available in abundance and is also treated as such. Up to 40% of food in Europe is thrown away somewhere between production and consumption.

loss of biodiversity | Biodiversity is the basic operating mode of nature. Biodiversity is a precondition for humans to feed themselves and thus to survive. 70% of projected losses in terrestrial biodiversity are attributed to agriculture through widespread land conversion (habitat destruction and forest fragmentation), introduction of exotic species, pollution and soil degradation (IISD 2016). According to a FAO estimate, over 70% of the world's fish species are either fully exploited or depleted due to over-fishing (Viteri, 2017, p. 8). Biodiversity also refers to resilience: The more diverse a system is, the higher its resilience. Over the past 100 years, the diversity of cultivated plant species has decreased by 75% (FAO).

climate change | Food causes CO2 emissions in the course of its production (machines, heating of glass houses, etc.), distribution, consumption and disposal. On the other hand, the harvest/output of food production will decrease by up to 50% depending on the region, according to the FAO and the World Bank (FAO and WFP, 2020).

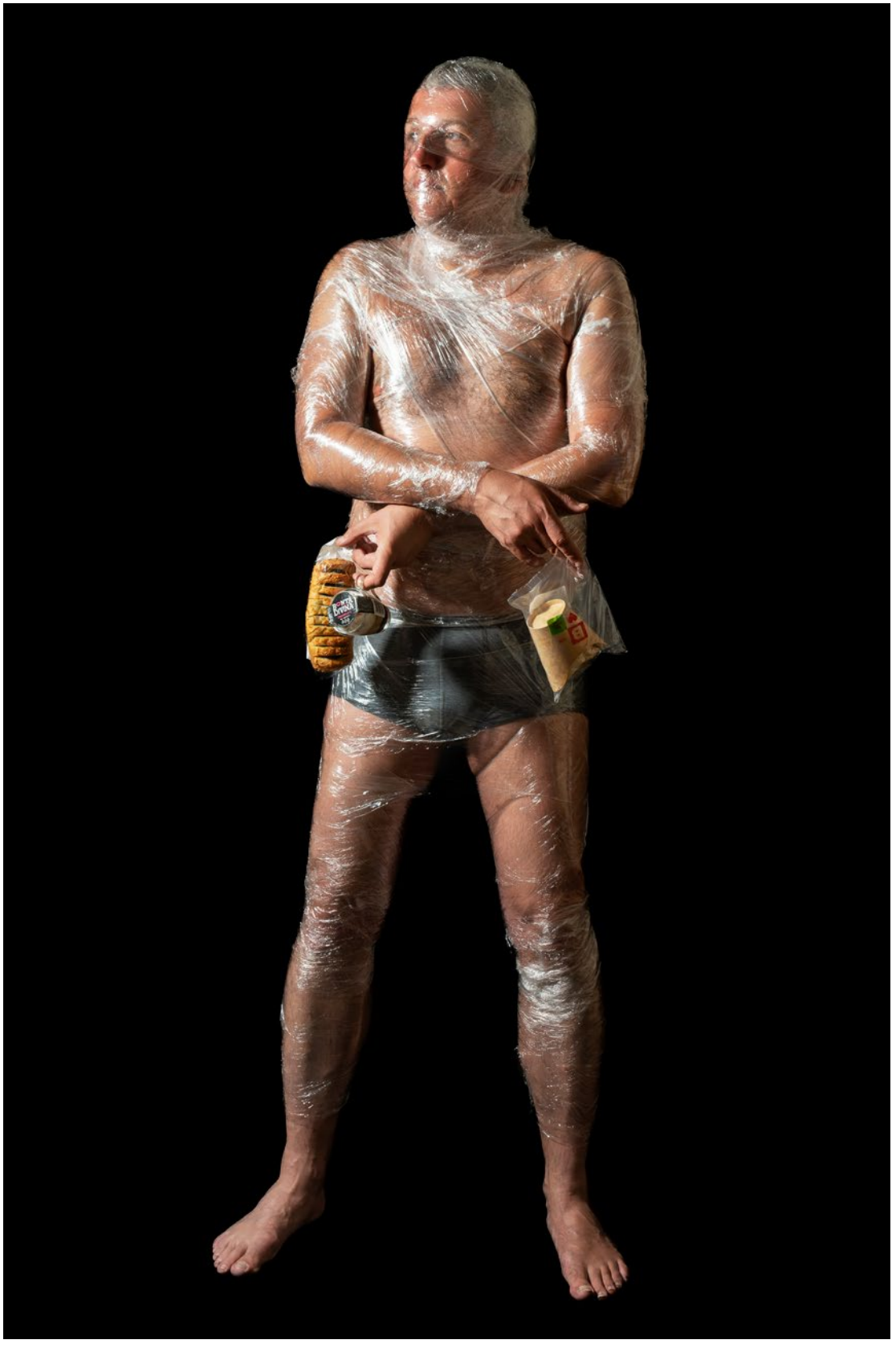
consumption of resources / ecological foot print | The production of food uses the lion's share of the earth's natural resources, with agriculture responsible for 70% of the world's fresh water consumption and around 53% of the earth's land surface is used for agricultural purposes (FAO, 2019), thus creating mankind's 'agricultural footprint' on the earth.

globalization | Today food is a global market. The food consumed in the EU is increasingly produced outside the EU, meaning that the EU footprint of the food happens worldwide. It may affect water supply in dry regions, biodiversity losses, devastated soil, exploitation of natural resources and workers or child labour anywhere on the globe.

pesticides | The use of pesticides threatens biodiversity, the quality of fresh water and fertile soil and the health of workers and consumers.

over-fertilization | The use of fertilizers threatens the quality of fresh water, the long-term fertility of soil, ecosystems, biodiversity, and the health of workers and consumers.

food waste | The global food loss is estimated to approx. 30% of food production (FAO, 2011). In the EU the amount of non-eaten food is about 170 kg per capita and year (Stenmarck et al, 2016). Food waste is not only an ethical question but means a waste of money, water, energy, land, human labour and the futile use of pesticides and fertilisers. The majority of food waste happens in private households (42%; Monier et al, 2010). The share of food waste seems to depend on the percentage of household income spent for food (the lower the more food waste) and on the level of industrialisation of the food sector (the higher the more food waste).



violation of human dignity, health and well-being | In no other sector than in agriculture more humans are working involuntarily, illegally or under inadequate conditions (Ermann et al, 2017). Agricultural workers are underpaid, exploited, expelled or their livelihood is stolen from them. On the consumer side, lower income people depend on cheap and bad food, thus facing health problems, obesity, non-communicable diseases and a shorter life span.

economy | Most of the production of food commodities is economically not viable and needs to be subsidised by the public. Agriculture is the sector with the biggest budget in the EU. If the external costs are added to the actual production costs, many food products are produced at a loss / in deficit, e.g. beef or wheat (Weizsäcker and Wijkman, 2018, p. 80). Sustainability is also a question of how economic viability is defined: in the sense of political economy or in the sense of business management. How much would food cost if its production would be calculated with true and consequential costs? Social equality and the problem of overproduction and hyper-consumption cannot be disconnected from a discourse on sustainability.


Spätzle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food systems

and culture

Food systems mould culture (and thus values and knowledge) and vice versa.

local conditions and traditions | By nature, climate, soil conditions and the availability of water in the area surrounding a settlement determine what is eaten. Hence, traditions have developed with regard to the selection and preparation of food.

religious regulations and prohibitions | Most religions have principles determining nutrition. These clarify what fits into the religious community's regulations and what does not, i.e. what may and may not be eaten and when.

legal regulations and prohibitions | Many societies have official institutions that define what may and may not be eaten. The rules that are created there respectively correspond to the knowledge and cultural customs with regard to health. Economic interests are not excluded. Culturally related bans are pronounced under the guise of health protection, such as that against camel meat in Europe.

economic framework | Western cultures feed themselves largely on food that is industrially produced and sold according to centralized principles. Industry and trade create the market themselves by way of marketing and lobbying. They define the supply of food and fabricate the idea that the market corresponds to cultural customs, the well-being of the communities and is an aesthetic ideal.

eating as a provocation or as a statement | Rejecting certain ingredients such as meat or dairy products is a political statement. It publicly expresses that animal welfare is important to an individual. This can also be understood as a provocation against dominant, carnivorous groups. People who use food as a political statement are part of communities themselves.

consumption as culture | We currently live in a consumer society. Consumption is not just a way of providing ourselves with everyday necessities, it has become part of our culture. This means that consumption is not only closely linked to our sustenance, but also to our way of life, our values, our expectations, our conception of purpose, our knowledge (and non-knowledge), in short our intellectual and mental world. People today spend more time comparing prices and making purchase decisions than they spend with the purchased product afterwards (Welzer, 2019, p. 264). Consumer culture creates values that are also applied to food: In Western industrialised countries, the product "food" should be, among other things, economically efficient to manufacture, cheap, long-lasting, hygienic, always available in the same quality, etc., i.e. meet the requirements of modern industrial society. Belief in progress and technology are regarded positively without a shadow of a doubt. Citizens are increasingly degraded to consumers by "consumption" as a cultural act that is (at least seemingly) meaningful and is also subject to intense social pressure (since those who refuse to consume exclude themselves from the group).

supermarket | One consequence of the industrial mass production of food is the supermarket system. Supermarkets are exemplary of how consumption as a social principle shapes culture. Between industrialisation, mass production and mass consumption, supermarkets today shape our expectations of food both in terms of price, as well as range and availability. With masses of (almost) identical goods, they also create an aesthetic principle that is based on bulk, repetition, sterility, pre-packaging and hygiene that differs from the aesthetics of a conventional market. Tiling, lighting and acoustics are reminiscent of a hospital and atmospherically distance themselves from food production (earth, nature, plants, farms, etc.) and the producers (farmers, industrial workers). It seems like everything is available in supermarkets. Yet in truth, many things are not: unpackaged goods, certain pieces of meat and offal, small quantities, seasonal and regional produce such as ripe cherries, etc. Basically, supermarkets sell few fresh goods, a lot of pre-packaged goods and goods that are as non-perishable as possible. They are nicely

decorated warehouses. The supermarket is thus a typical, very powerful and seemingly indispensable player in the linear economy in contrast to the rural circular economy. The assortment supermarket is based on the idea of a fixed range of goods that remains as constant as possible throughout the year and is always available at the same price and quality. This system stands in fundamental contradiction to the rural circular economy.

eating as a cultural act | Not only food, but also eating symbolises who you are and which groups and interests you feel you belong to. The choices of location, tools and clothes for eating reveal culture. Eating must also be made more sustainable. This includes the household, communal catering and all kinds of restaurants, dishes, portion sizes, menus, presentation, ingredients and recipe management.

Culture is relative, it is man-made, and it is changeable. Culture can be changed, food systems can be changed. Food systems reflect the values of a group or society. In order to change food systems it is necessary to change the cultural values.

The cultural aspect of sustainability is crucial, especially in respect to eating. Since we generally do not act rationally concerning food (for example, we eat much that we know is unhealthy or fattening) and follow other principles (such as feelings, habits, culture, traditions, values, etc.), sustainability in dealing with food must be culturally embedded in order to function as such. Why do our culture's values lead us to divide fruits into ugly and beautiful, prefer meat to vegetables, eat strawberries in winter, and not have leftovers to take home from work in food service industry? Did you know, for example, that at the time of the Sun King Luis XIV pure pork fat was considered the most luxurious of all ingredients?

So it is not just about making our food sustainable, but also our food-culture. And this is where our creative design expertise comes into play. For the rules and rituals around our food are only scarcely predetermined by nature or the economy, but instead can be shaped. Do you throw away fat strips or streaked meat? Would you ask a stranger at an inn to let you have the leftovers from his clearly over-sized meal to reduce food waste? It's so damn embarrassing to be so incredibly exhaustingly sustainable! In all its facets, food offers us endless possibilities for action. The only question is which topics within this spectrum we want to deal with in the future.

food futures and

sustainable values

What do we gain through sustainability and sustainable food?

nature | Nature makes sense and is meaningful: a positive relationship to an intact ecology is profoundly satisfying and is fulfilling and supports emotional, mental and psychological health. It raises the feeling of happiness.

health | Social and ecological sustainability guarantee a healthier, happier and longer life. Pollution of land, water and air, exploitation of ecology and humans, harmful substances used as additives in food and ambience, food of inferior quality, etc. threaten the physical and mental health of humans.

quality of living and well-being | Co-existence with an intact nature creates good health. Humans experience plants, animals and landscapes as beautiful and relaxing.

dignity | Sustainable food aims for dignified working conditions in food production and distribution as well as dignity for consumers in terms of sufficient, affordable, healthy and diverse food of high quality including freedom of choice and transparency (knowledge about food).

liberty | Food systems relate to liberty in different ways, among them the freedom of choice for workers (workers' rights, unions) and consumers (how to feed oneself); the freedom to decide why and how societies intervene/interfere in/with nature; the freedom to benefit from and to enjoy an intact ecology; the freedom to decide what type of food system(s) someone wants to live in; the freedom to participate in the design of food systems.

equality | Sustainability is not only a question of protecting the ecology and stabilising the climate, but primarily a question of equality and fairness. When we – especially in the rich countries – eat then we consume natural resources in different parts of the world. The global agricultural land divided by the world population means a piece of 45 per 45 meter per person. People in Europe consume approximately one third more than this adequate share of land, meaning that we "import" agricultural land from other parts of the world even though Europe is one of the most fertile regions on the planet.[2]

transparency and knowledge | Transparency with regard to production, processing, distribution, trade and disposal of food is a precondition for citizens' freedom of choice and self-determination and enables them to act politically and to intervene in these processes. Transparency is a precondition in order to democratise food systems.

diversity (in ecological, economic and cultural terms) | Sustainability creates and requires diversity. Diversity supports food security, freedom of choice and equality. It reduces dependences and thus promotes liberty and the possibilities to choose how and under what circumstances someone wants to live his or her life.

democracy and citizen engagement | Nearly half of the EU's budget is dedicated to agriculture, meaning that food is co-financed by the public. Agricultural commodities are thus in a way part of the social services similar to hospitals or schools. The way they are supported by the state should to a larger extent be part of a public discourse and the political agenda just like pensions are.

Is sustainability a human right? Eating is a profoundly political act. With every bite we change the world, environmentally, economically and socially.

[2] Quelle: Benedikt Haerlin, Foundation on Future Farming, Berlin, *www.2000m2.eu*; The Foundation on Future Farming is a foundation associated with the GLS Gemeinschaftsbank, which belongs to the Federation of German Volks Banks and Raiffeisen Banks.


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conflict lines and

food must be cheap | It is said that sustainable food is not affordable by people with lower incomes. Does Europe need conventionally produced, cheap food to feed those who earn the least? How will sustainable changes affect the price of food? Will the reduction of food waste result in lower prices? Can follow up costs for public health, environment, waste, etc. caused by conventional agriculture be redirected to finance sustainable ways of production?

sustainability is an anti-business way of thinking | How much do conventional food businesses depend on public subsidies? Is the food market a free market at all? How could a sustainable market work? What could a massive reduction of food waste mean economically?

organic farming cannot not feed all | According to Amartya Sen, democratic societies would not suffer hunger – even without having industrialised agriculture. He gives the example of the situation in India, where the agaric system works very differently. Very small farmers provide food for a huge nation (Sen, 1999, p.196). Do we need industrialised, centralised, conventional food production to feed ourselves and what could a sustainable agriculture contribute to environmental conditions (clean water and air, healthy soil) and eco system services and how could that output be integrated in the economic situation of farms?

can we save the world by consuming the "right" way? | What is the role of the consumer: responsible person, problem solver, game changer? Consuming sustainably is good for raising awareness and putting pressure on policy and producers. But sustainability is a systemic problem and needs a systemic solution that can only be implemented politically. First and foremost Europeans are citizens and are not to be reduced to consumers.

cultural legends


Crunchips
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TORTILLA CHIPS
Kelly's

technology will save us | Will technology solve the current problems of pollution, climate change, loss of biodiversity and inequality? Jeremy Rifkin talks about the "internet of things" (Rifkins, 2019, p.33f). He thinks that big data and technology will create an efficient and therefore sustainable economic system. Scientists propose that precision agriculture based on using big data, new breeding techniques or smart farming could decrease emissions massively and create a sustainable future. A hamburger made of artificial meat was presented in the Netherlands a couple of years ago. Artificial meat is meant to replace real flesh, end animal suffering emissions from cattle of climate gases. Other scientists are sceptical. They talk about monopolies and dependences. They fear a loss of democracy, rising influence of tech companies and even talk about techno fascism. They promote diversity instead of centralised technologies and suggest alternative ideas like the donut economy, de-growth and low-tech solutions. Is the belief in technical solutions solving climate change also an excuse so we do not have to change our resource intense lifestyle and unsustainable habits?

can industrial products be sustainable at all? | Do industrialisation and sustainability exclude each other? Industrialisation as such is based on the concept of mass production and depends on mass consumption. Does such a thing like a sustainable industry exist at all? Could we establish a different economic system for food production, based on small and medium-sized businesses? What are advantages of a diverse economy (for economy, health and democracy)? Could diverse food economy offer food security and food safety?

does sustainability mean the end of trade and a free market? | Could sustainability become a barrier for trade between EU and the world? Does Europe need to produce so much food? Why does the EU produce food for export and import food products on the other side? Do we need to exclude food from the global market?

How can we measure sustainability?

Is it necessary to measure sustainability? Can sustainability be measured at all?

Let's grow the economy first and clean up later.

Can we instrumentalise supermarkets as educational institutions on sustainable food?

the

sustainable turn

The farm to fork strategy aims for sustainable food systems that will ensure, by 2030, healthy and affordable diets from a healthy planet and enhanced livelihoods for all.

- long-term availability of resources
- symbioses/balance of human and nature: humans to survive (+ make their living) and nature to be sustained
- strengthen self-empowerment, subsidiarity, freedom, self-determination, independence, democracy, human rights
- tools of change: money, laws, culture
- black hole: secondary production and supermarkets
- who will pay for the changes claimed in the Farm to Fork Strategy and for the sustainable turn?
- divide natural resources and eco system services democratically

The food market is shaped by cultural images. On the one hand, rural tradition in the midst of untouched nature is romanticised, on the other hand, a near-to fetish around agricultural technology is created. As is well known, both aspects have little in common with reality. Aesthetic perception behaves similarly concerning the preparation of food: the loving, cooking grandma/mom faces the land of milk and honey, the supermarket. The latter example represents Europe's aesthetic ideal of perfectly functioning, super-clean industrialisation. These analyses can be applied all the way up to the ritual of eating food, where vegan frozen pizzas refer to cultural connotations just as the (supposed) ideal of the family table does.

The most challenging task is the development of a new and revolutionary aesthetic of sustainability. This is imperative in order to be able to establish a Europe-wide, sustainable narrative. One opportunity is to analyse every step involved in the production and consumption of food, as well as the prevailing aesthetics and culture, breaking them down into their components. After that, gradually use sustainable ideas as a substitute for wasteful or destructive practices and examine lifestyle, tradition and luxury. The aim is to generate a sustainable lifestyle and thus create a revolutionary tradition.

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sonja and martin

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