



Farm- Food- Climate Actionplan

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CURRENT SITUATION AND RELEVANCE

The COVID 19 pandemic has highlighted the importance of a resilient food system. It has made us very aware of the interactions between our health, ecosystems, supply chains, consumption patterns and the limits of our planet.

The world's population is growing and climate change is having a negative impact on the ability of agriculture to continue feeding it in the future. At the same time, the food system is responsible for a significant proportion of greenhouse gas emissions. In addition, nutritional problems such as obesity and malnutrition persist and a third of the food produced globally is still lost or wasted. Even though awareness of sustainable and healthy nutrition is growing in Germany, this is rarely reflected in customers' willingness to pay.

Nevertheless, farmers are expected to not only grow food at low cost, but also to protect the climate and foster biodiversity. This has created deep rifts, between farmers and citizens and between conventional, organic and alternative production methods. It is time to rethink and transform the food system together - into a resilient system that produces healthy food within planetary boundaries through regenerative agriculture and the careful use of resources. Scientific research has shown that a healthy diet is possible within the limits of our planet. Now it is up to us to put this vision into action, and in this way contribute to several sustainable development goals at once.

In line with the recommendations of the EAT-Lancet Commission and its report „Food in the Anthropocene - the EAT-Lancet Commission on Healthy Food through Sustainable Food Systems“, the UN 2021 Food System Summit advocates a global transformation of food systems. However, a transformation of the food systems can only take place if eating habits are changed, food production is regenerative and food waste is reduced.

On our continent, the European Green Deal was adopted to make Europe the first climate neutral continent. The way to achieve this is through a new, sustainable and inclusive growth strategy that stimulates the economy, improves people's health and quality of life and protects nature.

The “Farm-2-Fork” Strategy, published on 17 February 2020, is a core of the European Green Deal. It sets out a comprehensive roadmap for tackling the challenges of sustainable food systems and recognises that healthy people, healthy societies and a healthy planet are inextricably linked. The strategy is a key component in achieving the United Nations' Sustainable Development Goals (SDG). All citizens and stakeholders in the EU and beyond should be enabled to make a fair transition.

“

Switching to a sustainable food system can bring ecological, health and social benefits, create economic opportunities and ensure that the path out of the crisis leads us towards sustainability (...).”

Excerpt from the “Farm-2-Fork” Strategy of the European Commission





Farm Food Climate Challenge

The transformation of our food system is a complex task and requires adaptations in all areas. Solutions to the challenges must be produced and implemented by society itself, to which different policy instruments must also contribute. The Farm-Food-Climate Challenge aims to become a pioneering example of how the necessary transformation of food systems can be approached from within society and achieved step-by-step - within Germany, the EU, or even on a global level in the context of the UN 2021 Food System Summit.

The Farm-Food-Climate Challenge pursues the goal of bringing the Farm-2-Fork strategy to life through concrete implementation measures that are designed together with citizens. With a new participation process, a platform is being created to jointly exploit opportunities and potential in society as a whole and in cooperation - to make the agricultural and food sector of tomorrow sustainable. With this Open Social Innovation approach, the Farm-Food-Climate Challenge aims to actively involve a high diversity of actors along the food value chain.

PROCESS AND IMPACT LOGIC

The basic assumption of the Farm-Food-Climate Challenge is that social challenges can only be solved if all relevant actors work together. This is why the organizers of the Challenge pursue a multi-stakeholder approach: In August 2020, more than 100 courageous and ambitious initiators, who develop innovative solutions for a sustainable agricultural and food sector along the entire value chain, joined the program of the Farm-Food-Climate Challenge. From humus building and new organic fertilizers to Big Data and Smart Farming, new acceptance of insects, avoidance of food waste and direct marketing - the approaches are multifaceted.

Through a strong alliance of partners, initiators are supported in the development, validation and implementation of their solutions. This approach allows the wealth of ideas from civil society to be combined with the implementation power of existing institutions.

The framework for this innovative problem-solving process is provided by the nine-month Farm-Food-Climate Program (with access to the digital platform of ProjectTogether, mentoring and coaching offers, peer learning formats, contact and networking opportunities, access to a pool of experts, networking events with partners for piloting, etc.), which promotes joint and pragmatic learning in the community. Through this program, ProjectTogether and the Elobau Foundation as organizers of the Challenge create a digital test room that enables the quick and low-risk testing and validation of solutions (= reality checks).

The initiators are testing on a broad scale. The solutions that prove themselves are established. Doing instead of just talking - the Farm-Food-Climate initiators learn by doing and continuously adapt their solutions to real needs. The vision of real impact is our top priority.

Validated solutions are implemented on a broad scale. „Bottom-up“ is combined with „top-down“: For rapid piloting and implementation of successful approaches, these are brought together with public and private institutions. There should be no limits to the possibilities for participation in the projects of the Farm-Food-Climate Challenge. Individuals as well as entire organizations, foundations and companies support the initiatives with resources, expertise and/or access - from pro-bono services and collaboration, to technical infrastructure and pilot projects.

Through this process, a community of engaged citizens is built - the relationship between state and citizens is redefined through active participation and the distance is reduced. Scientific support enables the generation of systemic knowledge.



SYNERGIES OF OBJECTIVES AND INITIATIVES

The transition to a sustainable and healthy food system cannot be achieved by a technological breakthrough, a single actor or a multitude of independently acting lone fighters. A common strategy with carefully coordinated actions, mutual willingness to help each other and a great deal of understanding is necessary. Science and practical implementation experience as well as targeted political support are essential for change.

The following exemplary considerations may underline that this is the case: Without a strong, consistent cohesion between regenerative agriculture and well-informed, affluent consumers, there will be neither sales markets nor willingness to pay, acceptance or public support for sustainable products and their ecosystem services, even if these can be measured. A possible large-scale „coal entry“ in agriculture and forestry with biochar can only be assessed in the overall context of defining and measuring ecosystem services. Data on the ecological handprint at the consumer level must be based on a comprehensible measurement of ecosystem effects in the primary sector. Furthermore, it will only be possible to inject funds for sustainable agriculture services into public and private budgets if ecosystems of sustainable agriculture are clearly defined, measurable and assessable, and if there are enough sustainable agriculture ambassadors who can convince and involve farmers on the ground.

This summary lists only some synergies. When reading the Farm-Food-Climate objectives (p. 10 – 22) it becomes clear that all objectives interact directly or indirectly with each other. For example, awareness of one's own ecological handprint (a holistic approach that makes the ecological, economic and social sustainability impacts of products assessable, measurable and communicable) can only be increased if transparency is created in value chains and ecosystem services are measurable.

That is why the Farm-Food-Climate Challenge has decided to organize its individual activities in light of the maximum possible synergies. The basic idea is that a sustainable food supply, including biodiverse agriculture, would enable higher ecosystem value and a better climate balance. Starting from a healthy and sustainable diet, the necessary transitions to sustainable production can be created. Only a strengthened awareness of sustainability and the prices required for this, will enable regenerative agriculture that promotes biodiversity, builds up humus and protects the soil. This requires transparency and information in purchasing, as well as educational programs and sustainable catering in educational institutions. Only if there is demand, willingness to pay and political support, farmers can be supported in alternative cultivation methods and rewarded for their (measurable) social and ecological value added.

Wholesale and retail play an important mediating role between production and consumption and thus has the task of strengthening the connection between consumers and farmers through transparency and the correct placement of regional and sustainable products. New cycles between different actors in the value chain, which are based on genuine appreciation for each other, have the potential to change the food system sustainably. Joint design of supply chains, but also cities as new places of food production, can bring agriculture and consumption closer together again and thus increase the appreciation of food. Food waste can also be avoided in the long term if appreciation and quality, rather than convenience and low prices, determine our food system in the future.

The following objectives demonstrate how the Farm Food Climate Challenge aims to implement these synergies. The strategic approach described above, based on an increasing demand for sustainably produced food and a diverse diet, would put all Farm Food Climate Challenge initiatives into a meaningful relationship with each other and encourage them to a joint implementation in practical constellations and pilot regions.

THE OBJECTIVES

A holistic approach - from production and consumption to the frameworks of the agrifood sector

A climate-positive food sector is only possible if we influence key levers simultaneously. The generation and production of food, consumer behavior or general conditions cannot be considered in silos. Therefore, we strive for holistic thinking, cooperation and approaches to solutions that aim to change the production, consumption and framework conditions of the food system.





Goal 1: Making ecosystem services measurable

Measurable ecosystem services provide the basis for a market for social and ecological services from agriculture. Examples of environmental ecosystem services are the provision of a carbon sink and the promotion of biodiversity, or the role of agriculture for drinking water quality. Social ecosystem services include the recreational and leisure value of cultural landscapes, their aesthetics and the cultural identities rooted in them. In this way, farmers can be rewarded for sustainable economic activity by companies and consumers. The commitment of society as a whole that agriculture does not only mean food production, but also preserves the cultural landscape and can contribute to climate protection is strengthened.



Goal 2: Enabling private financing of ecosystem services

Farmers are financially compensated for their sustainable management. In this way the contribution of agriculture to climate protection is rewarded in society. A portfolio of various proven financing mechanisms is the basis for future political decisions. This creates an incentive system that promotes not only food production but also the ecological added value created by agriculture, e.g. through carbon sequestration or greater biodiversity.



Goal 3: Establishing agroforestry through legal security, subsidies and agricultural research budgets

Legal certainty for agroforestry is created and reward systems the generation of ecosystem services are in place. Hence, farmers in Germany can implement agroforestry on a large scale.



Goal 4: Creating public awareness of the climate impact of biochar

„Carbon Valleys“, centers and networks of pioneer farmers, illustrate tangible practical examples of the carbon sink performance soil improving capacities of biochar. Farmers, foresters, municipalities, politicians and investors are convinced of the advantages of biochar. Biochar is a common term in the media and public awareness.



Goal 5: Advancing EU agricultural policy and promoting sustainable agricultural and research practices

Redistribution of EU agricultural subsidies can be achieved, based on the measurability of ecosystem services. Area subsidies are redistributed to promote ecosystem services. In order to systematically record and evaluate the achievement of ecosystem services, part of the subsidies are used for accompanying research projects.



Goal 6: Enabling agricultural associations, cooperatives and advisory rings to become ambassadors for sustainable farming practices

Building on research and a number of pilot projects, agricultural associations, cooperatives and advisory rings have included alternative farming methods (e.g. regenerative agriculture, hybrid agriculture, humus building) in their portfolio. Based on this, they inform, advise and support farmers according to their needs. Clear commitments, strategies, convincing examples and reliable support help to overcome barriers to implementation.



Goal 7: Ensuring true prices for sustainable, healthy and fairly produced food

By reflecting social and environmental costs in the price of food, purchasing decisions can be made that also take social and ecological values into account. The basis is created through measurability (see objective 1) and transparency in the value chain, through which determining and comparing true costs is made possible. ►►



As a result production processes that take s into account social and environmental values become competitive. Through true cost accounting, a sustainable supply of healthy and fairly produced food is established and farmers are given appreciation, security and fair prices for all the services they provide.



Goal 8: Promoting urban food production and integrating it into urban planning

Food is also produced locally in the cities. This creates jobs and reduces the distance „from farm to fork“ (so-called foodmiles). A separate certification for urban farming has been established. In a society that increasingly lives in cities, production in close proximity to consumption strengthens the awareness of food production. Urban Farming is politically promoted and is an essential part of construction planning. Areas for urban food production are integrated into urban planning.



Goal 9: Establishing the ecological handprint as universal and widespread concept for sustainable consumption in the population

Consumers know the ecological footprint of the products they buy. They are aware of the influence of their purchasing decisions on economic incentives for more sustainable practices. With the ecological handprint, a new, generally valid and widespread concept of sustainable consumption is created among the population.



Goal 10: Promoting sustainable catering as a nationwide standard in educational institutions

Healthy, sustainable and climate-friendly catering in schools, daycare centers, kindergartens and other educational institutions is ensured throughout the country. A basis of evidence is created to convince decision makers of the importance of sustainable (and democratically selected) school catering. Decision-makers are teachers and facility managers, as well as municipal actors and politicians at state and federal level.



Goal 11: Avoiding resource loss and food waste through circular value chains

The awareness of society and economy for responsible/sparing use of resources and food is increasing. Through new cycles the waste of resources and food is constantly decreasing. The number of 12 million tons of food waste per year in Germany is demonstrably reduced (and eliminated by 2030). At the production level, the use of residual materials as alternative raw materials is becoming a standard.



Goal 12: Strengthening cohesion between farmers and consumers through new connections and regional supply chains

A steady, participatory dialogue between consumers and farmers is demonstrably increasing, and the appreciation of the other group of actors is growing through building trust and understanding. At a growing number of locations, solidarity-based and cooperative models have established themselves as an exemplary approach for strengthening regional cohesion between agriculture and society. The profitability for producers and trade is proven. It has been possible to guarantee planning security for the trade that is equal to that of conventional models. In addition, the new models are accepted and evaluated by consumers as climate-friendly, easily accessible alternatives to buying healthy and affordable food. Fair prices remain a balancing act: Producers must live from production, (also low-income) consumers must be able to afford regular purchases of fair food and business models must operate profitably.und Händler:innen wurde bewiesen und Planungssicherheit ist gewährleistet, durch professionalisierte Datenerhebungs-und Logistiksysteme. Preise bleiben ein Balance-Akt: faire Preise für Erzeuger:innen, Zugang auch für geringverdienende Konsument:innen zu nachhaltigen Lebensmitteln und rentable Geschäftsmodelle.

MAKING ECOSYSTEM SERVICES MEASURABLE

Session Hosts

Ivo Degn (Climate Farmers),
Jasper Holler (BioBoden, Mentor)

Participants

Felix Grünziger (DOINGGOODS), Jenny Gronostay (Climate Farmers), Dianne Hondeborg (sus.lab, ETH Zurich, Scientific Partner), Felix Harrer (Sustainable Food Systems, Ganzheitliche Nachhaltigkeitsbewertung mit SMART), Peter Aulmann (elobau Stiftung, Organisier), Simon Wind (open state)

Measurable ecosystem services provide the basis for a market for social and ecological services from agriculture. Examples of environmental ecosystem services are the provision of a carbon sink and the promotion of biodiversity, or the role of agriculture for drinking water quality. Social ecosystem services include the recreational and leisure value of cultural landscapes, their aesthetics and the cultural identities rooted in them.

In this way, farmers can be rewarded for sustainable economic activity by companies and consumers. The commitment of society as a whole that agriculture does not only mean food production, but also preserves the cultural landscape and can contribute to climate protection is strengthened.

Problem

Observing the ecosystem added value of agricultural practices is currently a time-consuming task in daily practice. Without reliable, cost-efficient and transparent measurability of ecosystem services, it is hardly possible to provide farmers with feedback and incentives for the conversion to climate-positive agricultural methods.

Potential

Societies follow what is measurable. Currently, yield is one of the most important goals of agriculture. If we can measure contributions to ecosystem services transparently and continuously, we create the opportunity to optimize agricultural practices in this respect. Direct feedback to farmers would enable them to make faster adjustments and make meaningful decisions. Measurability is a prerequisite for effective incentive systems based on real results rather than practices.

Lever

The development of new technologies based on satellites & machine learning will make it possible to evaluate the climate and ecosystem impact of farms in real time.

There is demand at political, economic and social levels:

The EU Commission wants to integrate agriculture into cap-and-trade and therefore needs CO2 certification.

The economy is interested in climate neutrality through agriculture. Food producers are interested in climate neutrality, but have not yet invested in soil carbon because the process of measuring it is too costly.

The interest of consumers in sustainably produced food is growing. Transparent measurability not only of CO2, but of ecosystem added value in general enables conscious consumer decisions.

Farmers can be offered incentives through higher product prices or through subsidies.

Impact

Initiatives within the Farm-Food-Climate Challenge are developing easy-to-use technology to demonstrate ecosystem services for renewable farmers. One initiative already has a system to approximate ecosystem services that can be scaled up. Another creates communication between consumers and farmers.





ENABLING PRIVATE FINANCING OF ECOSYSTEM SERVICES

Session Host

Henning Dicks ([agriportance](#)), Andreas Schnall ([ForestFinest-Consulting, Patin](#)), Johannes Parzonka ([Uniper, Pate](#))

Participants

Fabio Volkmann ([Climate Farmers](#)), Ana Rosa ([Meli Bees Network](#))

Farmers are financially compensated for their sustainable management. In this way the contribution of agriculture to climate protection is rewarded in society. A portfolio of various proven financing mechanisms is the basis for future political decisions. This creates an incentive system that promotes not only food production but also the ecological added value created by agriculture, e.g. through carbon sequestration or greater biodiversity.

Problem

Farmers are not supported enough in their contribution to healthy ecosystems. The focus of agricultural profitability is primarily on yield and cultivated area. At the same time, agricultural practice is increasingly regulated. In order to offer farmers the opportunity for sustainable and regenerative practices, regulation must be accompanied by financial incentives. There is no broad-based and scalable instrument available to generate additional income by contributing to ecosystem services.

Potential

Farmers are protectors and caretakers of our cultural landscape and ecosystems. Through adequate social compensation, farmers can contribute to ecosystem health, climate protection and resilience to climate change. Public incentive schemes in agriculture can easily lead to unwanted side effects. Testing incentives through private funding as 'policy prototyping' can make an essential contribution to sustainable development in agriculture.

Lever

Through the Farm-Food-Climate Challenge connectable concepts (for rules and measures) can be developed, which do not have a double promotion problem and enable the agricultural enterprise to generate further added value. The approaches and concepts can be evaluated together with representatives of national and European politics.

Impact

By creating an instrument that is recognized in society, the public interest in sustainable and regenerative agriculture is demonstrated. The mechanisms developed can provide the basis for future policy decisions.



3 ESTABLISHING AGROFORESTRY THROUGH LEGAL SECURITY, SUBSIDIES AND AGRICULTURAL RESEARCH BUDGETS

Session Host

Christoph Meixner ([Triebwerk](#)), Tobias Peschel ([Lignovis GmbH](#), Pate)

Participants

Daniel Kruse ([Weleda](#)), Nicolas Schmelling ([Krauts n' Sprouts](#)), Jacob Fels ([Tiny Farms](#)), Alexandra Werdes ([Heckenretter](#))

Legal certainty for agroforestry is created and reward systems the generation of ecosystem services are in place. Hence, farmers in Germany can implement agroforestry on a large scale.

Problem

Farmers who want to establish agroforestry systems are currently facing enormous hurdles. Registration in the agricultural application or support instruments of the 2nd pillar is not intended for modern agroforestry systems in Germany. The manifold services for society, environment and climate are thus not rewarded and significantly disadvantage agroforestry systems compared to other common agricultural uses. In addition to the economic and legal uncertainty, farmers also have to bear comparatively high initial investment costs, which only flow back over a longer period of use in the form of revenues.

Other permanent crops and sustainable forms of cultivation, such as organic farming, are therefore remunerated with a higher premium. The support of important research and demonstration projects with public funds has also been largely discontinued. Important flagship projects and pilot plants to generate and disseminate practical knowledge for an agriculture adapted to climate change are lacking. In terms of the framework conditions, Germany is far behind other countries in international, and above all European, comparison.

Potential

Agroforestry as a form of land use fulfills numerous objectives of the funding priorities classified as priorities in Regulation (EU) No. 1305/2013. For example, woody plants bind carbon, effectively protect the soil through permanent vegetation, reduce nutrient discharges into ground and surface waters and increase biodiversity through structural richness and the creation of living and retreat areas. In addition, agroforestry systems contribute significantly to improving the climate resilience of agricultural land by creating a positive microclimate and reducing evaporation and erosion. The same environmental effects lead to an increase in productivity per unit area. In contrast to environmental and nature conservation measures, agroforestry thus offers the opportunity to diversify the farm orientation with a correspondingly large income contribution. Since agroforestry systems can also be integrated into conventional agriculture, they have great potential for land use and scaling.





Lever

The federal government must include agroforestry as a funding criterion in the GAK framework plan. This will create the necessary incentives for the states to provide support through the 2nd pillar, e.g. as an agri-environmental and climate measure (AUKM). It is necessary to define agroforestry systems for the German agricultural subsidy law (allocation of a usage code for the agricultural application) in order to guarantee legal and investment security for the farmers as well as the ability of the authorities to control the system.

Impact

The Farm-Food-Climate Challenge aims to pave the way for a socially supported establishment of agroforestry systems in order to use their potential in meeting and adapting to climate change and the sustainable production of food. To this end, the previous obstacles will be removed and replaced by a nationwide promotion

of agroforestry. Through the remuneration of ecosystem services, diverse, multifunctional agroforestry systems will become an economically interesting alternative to common forms of use. On this basis, a broad alliance of stakeholders will inform farmers about the advantages for their farms and provide them with professional support in their efforts to establish agroforestry systems. In addition, further private sector incentives, such as compensation measures, are also used to increase the attractiveness of agroforestry.

4 CREATING PUBLIC AWARENESS OF THE CLIMATE IMPACT OF BIOCHAR

Session Host

Michael Sernatinger ([Carbonauten](#)), Harald Bier ([European Biochar Industry Consortium](#), Pate)

Participants

Carolin Güthenke, Venna von Lepel ([CarbonSinkCycle](#) ([NovoCarbo](#)))

In „Carbon Valleys“, centers and networks of pioneer farmers, tangible practical examples of the carbon sink performance of biochar while improving soil quality are illustrated. Farmers, foresters, municipalities, politicians and investors are convinced of the advantages of biochar. The „(plant) coal entry“ is a common term in the media and public awareness.

Problem

Although the contribution of biochar to climate neutrality has been proven, the humus build-up with biochar is currently only financially interesting if the entire system is cascaded. Up to now, there is hardly any transparent presentation of how biochar works in the overall system in a scalable way. Furthermore, concrete implementation examples and the recognition of a binding standard are needed to measure and validate the sequestration performance over time.



Potential

When plant material is carbonized via the process of pyrolysis, a large part of the carbon contained in it remains bound in the form of biochar. The agricultural sector can therefore contribute to climate protection by creating CO₂ sinks using biochar from biomass residues. Furthermore, it is possible with biochar to increase yields, promote humus formation, increase the water storage capacity of soils and thus their resilience and reduce emissions of climate-active gases such as methane and nitrous oxide, as well as nitrate leaching. The use of biochar is economically viable through cascade use.





Lever

Concrete proposals for political measures would be the inclusion of biochar in emissions trading, the mandatory inclusion of carbon sinks in the climate targets, a targeted subsidy towards farmers for biochar, and linking up with the EU's Circular Economy Action Plan. To demonstrate the potential of biochar as a carbon sink and emission reduction, we need concrete projects that can demonstrate this. A so-called „carbon valley“ is a spatial unit that can be used to implement various projects and bring together relevant stakeholders from science, agriculture and forestry, politics, society and industry. In order to support interested parties in the implementation process, the Carbon Valley not only offers guided tours, but also training for various groups of stakeholders.

Impact

Within the framework of the Farm- Food- Climate Challenge, the initiatives and mentors want to identify regions and cities who want to become climate neutral and convince them of the importance of biochar for achieving climate targets. Initiatives want to develop a rough concept for a Carbon Valley and discuss it with potential supporters and politicians.

ADVANCING EU AGRICULTURAL POLICY AND PROMOTING SUSTAINABLE AGRICULTURAL AND RESEARCH PRACTICES

Session Host

Christian Kemnade ([Bunte Biomasse](#)),
Sinjo Neitsch ([embauerment](#))

Based on the measurability of ecosystem services, a redistribution of EU agricultural subsidies can be achieved. Area subsidies are redistributed to promote ecosystem services. In order to systematically record and evaluate the achievement of ecosystem services, part of the subsidies are used for accompanying research projects.

Problem

The majority of EU agricultural subsidies are distributed among a few large farms. At the same time, an increased diminishing of farms can be observed. The tendency towards larger farms reinforces monocultures in open land and reduces species richness. The courage to change in the new CAP is limited. Consumers are becoming more restless with growing awareness of these issues among the population.



Potential

The Common Agricultural Policy (CAP) of the EU has a massive influence on agriculture in Europe, as well as the use of a large part of the land area within the EU. As a rule, the support guidelines of the CAP are adopted every seven years. For the period from 2021 to 2027, around 365 billion euros are planned. This means that CAP decisions are crucial for the orientation of the development of many agricultural enterprises in the EU.





Lever

The implementation of the „Farm-2-Fork“ strategy must be consistently promoted in terms of policy so that food systems can be made more resource-efficient, healthier, more inclusive and at the same time more economical. The strategy aims to accelerate our transition to a sustainable food system and sets out both regulatory and non-regulatory initiatives. The Common Agricultural Policy is a key instrument to support a fair transition.

Impact

Initiatives and mentors of the Farm-Food-Climate Challenge want to join forces to exert more influence on political decisions in order to strengthen the necessary support for sustainable farming practices. The working groups want to raise public awareness of the issues, adopt petitions and launch crowdfunding campaigns.

6 ENABLING AGRICULTURAL ASSOCIATIONS, COOPERATIVES AND ADVISORY RINGS TO BECOME AMBASSADORS FOR SUSTAINABLE FARMING PRACTICES

Session Host

Francisco Telles Varela ([ORGO](#)); Prof. Marie von Meyer ([University Göttingen](#), Patin), Christine Bajohr ([KUHproKLIMA](#))

Participants

Marija Spokaite ([sus.lab ETH Zürich](#)), Michele Bandecchi ([SmartCloudFarming](#))

Building on research and a number of pilot projects, agricultural associations, cooperatives and advisory rings have included alternative farming methods (e.g. regenerative agriculture, hybrid agriculture, humus building) in their portfolio. Based on this, they inform, advise and support farmers according to their needs. Clear commitments, strategies, convincing examples and reliable support help to overcome barriers to implementation.

Problem

It is often difficult to convince farmers of new production methods, especially when it comes to fundamental changes to current practices. According to scientific research and practical experience, the main barriers can be traced back to lack of awareness of viable alternatives; lack of information and support for implementation; fear of failure and financial and bureaucratic burdens; and lack of entrepreneurship to open up alternatives and develop new markets. In addition, farmers are often emotionally and closely connected to their work, the farm and the social network that surrounds it. It is therefore often difficult for them to admit to themselves that their way of production may not be sustainable.

Agricultural associations could act as mediators and catalysts, but they do not always do so. One reason for this is that many of them are farmers themselves, or are closely linked to production, so the above-mentioned barriers also apply to them. Furthermore, there is often a lack of capacity (money, personnel, time) to commit to alternatives.



Potential

Agricultural associations, cooperatives and advisory rings are in close contact with a large network of farmers. Convincing them of more sustainable production alternatives could therefore help many farmers to overcome the above-mentioned barriers through financial capacities, advice and communication. The

associations play an important role in inspiring and empowering farmers for alternative practices. ►►



Lever

Now that science has researched many of the fundamentals of sustainable production, it is time to work on implementation processes and optimize them in practice. In doing so, conflicts of objectives will arise that can only be resolved through transdisciplinarity and co-creative work with representatives: along the entire value chain. Various scientific disciplines can provide valuable support. Associations and the business community can contribute to the success of the transformation through capacities such as money, personnel and communication. In addition, the EU can create a central information and support office that provides credible, trustworthy and impartial support for the will to change through networking, financing and knowledge transfer.

Impact

The Farm-Food-Climate Community can be seen as a convincing example of the courageous transition to alternative ways of thinking and working. Together with the partners and initiative, concrete examples of successful alternatives can be shown and the pathway can be documented. In the further course of the Farm-Food-Climate Challenge, interested participants can network further and work together to implement the idea of overcoming the barriers for farmers to convert to more sustainable farming methods.

ENSURING TRUE PRICES FOR SUSTAINABLE, HEALTHY AND FAIRLY PRODUCED FOOD

Session Host

Anna Mehrländer ([Fermentiersalon](#)), Stefan Gothe ([Regionalwert Impuls GmbH](#), Pate); Armin Meitzler ([Biobetrieb Meitzler](#), Pate)

Participants

Jonas Wendt ([OURZ](#)), Leonard Witte ([DOINGGOODS](#)), Alexander Appel ([R50](#))

By reflecting social and environmental costs in the price of food, purchasing decisions can be made that also take social and ecological values into account. The basis is created through measurability (see objective 1) and transparency in the value chain, which makes it possible to determine and compare true costs. Thus, production processes that take these values into account become competitive. Through true cost accounting, a sustainable supply of healthy and fairly produced food is established and farmers are given appreciation, security and fair prices for all the services they provide.

Problem

The environmental impact of food production and consumption is currently not economically measurable and is therefore not reflected in prices. Due to a lack of transparency in most global and also many regional supply chains, a comparable and comprehensible internalization of environmental impact into sales prices is not possible at present. This pricing system promotes environmentally harmful production methods and a throwaway culture driven by convenience.



Nevertheless, we pay for the costs in a hidden way, e.g. through environmental remediation costs, or by passing externalized costs on to other countries or future generations. The non-social treatment of seasonal workers or the poor working conditions in processing plants also contribute to this.





Potenzial

Reflecting external costs in the price of food can create greater awareness of the personal ecological footprint and actively encourage sustainable consumption patterns. Increasing demand enables the competitiveness of environmentally friendly production processes.

Lever

Subsidies must be linked to sustainable (ecological, social and regional economic) services and not to land. Transparent global and regional value and supply chains allow transparent purchasing decisions and strengthen consumer confidence. Regional direct marketing, as a possible instrument, creates transparency and trust and is therefore a promising approach for pricing external costs.

Impact

Through model projects within the framework of the Farm-2-Fork Strategy or the European Green Deal as well as the Regional Value Creation of the Federation program, comparable standards for true costs and performance can be developed. These costs and services can then be compensated for by funds. The initiatives want to jointly develop a standard with social, ecological and regional economic criteria for rewarding the sustainable performance of the agricultural and food industry, as well as true pricing. This should be based on transparent value chains. Regional value creation areas are to be created in order to achieve food sovereignty in regions. To this end, various initiatives from production (e.g. solidarity agriculture, urban gardening, food councils) and marketing (farm stores, etc.) want to work together on one platform. Together, initiatives can coordinate their activities, share software and refine ideas.

8 PROMOTING URBAN FOOD PRODUCTION AND INTEGRATING IT INTO URBAN PLANNING

Session Host

Andreas Rawein ([fivefarms](#)), Gwen Schröter ([Golzern Holding, Patin](#))

Participants

Susanne ([Stadtfarm für alle](#)), Svenja ([Urban Green](#)), Elias ([Climate Farmers](#)), Dennis Gref & Justin ([Aquaponik Aromat](#))

Food is also produced locally in the cities. This creates jobs and reduces the distance „from the field to the plate“ (so-called food miles). A separate certification for urban farming has been established. In a society that increasingly lives in cities, production in close proximity to consumption strengthens the awareness of food production. Urban Farming is politically promoted and is an essential part of construction planning. Areas for urban food production are integrated into land use plans.

Problem

Although a large part of the population lives within cities and urban areas, there are currently no food production or nature and recreation areas for the people living there. Conversely, this means that food is produced outside the cities and transported to urban areas, while city dwellers can usually only find nature and recreation areas outside the cities. This results in high CO2 emissions, most of which could be avoided. The isolated location of cities with regard to food production results in a progressive alienation of citizens from the origin of the food they consume. These are perceived only as readily available consumer goods, without seeing and understanding the actual value and cost of production.

Potential

Especially in times of Corona, the awareness for robust agricultural value chains is increasing. Sustainability has a higher priority among the population and influences purchasing decisions. Urban agriculture enables local food production and at the same time offers solutions for a better microclimate in cities. Integrated into the planning of cities, it can simultaneously serve as a food producer and as a natural and recreational space for the population. Educational opportunities and community gardens can help to bring people closer to the production and origin of our food.





Lever

In order to make locally produced food more attractive for consumers, appropriate incentive systems must be created. This can be achieved by targeted promotion and appropriate labeling of locally produced foods. Retail can also help by creating space for local products and highlighting them with a seal. In order to make locally produced food available to consumers, appropriate „urban farming“ projects should be promoted. Existing projects should be actively involved in the planning of our cities and contribute their share to a city worth living in.



Impact

Farm-Food-Climate initiatives aim to raise public awareness of urban farming and create a greater understanding of the potential in communities and cities. Local communication solutions can help create a *raison d'être* for urban farming. Together, initiatives want to develop Urban Farming modules that they want to offer to cities and municipalities in the form of a complete Urban Farming Package. In addition, a common seal (with mileage/ district) will be created to make the services of Urban Farming visible. In order to support Urban Farming on a large scale, the initiatives aim to implement and evaluate pilot projects.

9

ESTABLISHING THE ECOLOGICAL HANDPRINT AS UNIVERSAL AND WIDESPREAD CONCEPT FOR SUSTAINABLE CONSUMPTION IN THE POPULATION

Session Host

Anna Pflug ([Futuring](#)), Nick de la Forge ([Planet A Ventures](#), Pate)

Participants

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Consumers know the ecological footprint of the products they consume. They are aware of the influence of their purchasing decisions on economic incentives for more sustainable practices. With the ecological handprint, a new, generally valid and widespread concept of sustainable consumption is created among the population.

Problem

Consumers do not have a clear picture of the ecological footprint of the products they consume - only in rare cases is there convenient transparency. Political subsidies are currently used in such a way that sustainable consumption is still a luxury. Politics and companies play a significant role in influencing the consumption of climate-friendly products, but current politics promotes non-sustainable products. Besides, many doctors and nutritionists make dietary recommendations that are unsustainable and not climate-friendly. On the consumer side, the trend towards sustainable behavior has not yet left the niche of sustainable circles to become the norm.



Potential

While the ecological footprint captures the negative effects of products, the ecological handprint is about positive sustainability effects that take social and economic dimensions into account. Thus, the ecological handprint can measure one's own positive contribution to sustainability, which can have an encouraging effect on consumers. An ecological handprint as a positively associated counterpart to the ecological footprint can provide a measure of the contribution to sustainability. Passive influence on the immediate environment (e.g. through changed consumer behavior) can also be included in the measurement of the ecological handprint.





We assume that the concept of the Footprint has not become accepted due to the negativity associated with it. The initiators see the creation of positive associations as a valuable test that has great potential.

Lever

The leverage of the ecological handprint is unlimited, as there are no upper boundaries to doing good. Thus, the handprint can open up the possibility of creating broad awareness of one's own relevance.

Impact

The ecological handprint should become a generally valid and widespread concept in the population. Together with the actors involved in the Farm-Food-Climate Challenge, a variety of approaches will be worked on to put this handprint into practice and to have a sustainable

influence on consumer behavior. Initiatives are building apps that support citizens to reduce their footprint and increase their handprint, promoting behavior change through playful challenges and cooperative approaches. Initiatives also focus on educating citizens about physical and mental health being closely related to ecological sustainability. Conscious consumption of food for the body and planet is to be promoted through relevant consumer products. Furthermore, the Competence Center for Education for Sustainable Development and cooperation between companies and local authorities are to be promoted, for example by tracking citizens who switch to sustainable alternatives. Systemic change should also be achieved through early-stage capital. This requires an economy that moves within planetary boundaries. Therefore, relevant investors focus on Life Cycle Assessments (LCA) for their investment targets.

PROMOTING SUSTAINABLE CATERING AS A NATION-WIDE STANDARD IN EDUCATIONAL INSTITUTIONS

Session Host

Karla Reese, Christina Schulze ([foodture](#)), Silke Ramelow ([BildungsCent](#), Patin)

Participants

Jaclyn Schnau ([Pumpkin Organics](#), Patin)

Healthy, sustainable and climate-friendly catering in schools, daycare centers, kindergartens and other educational institutions is ensured throughout the country. A basis of evidence is created to convince decision-makers of the importance of sustainable (and democratically selected) school catering. Decision-makers are teachers and facility managers, as well as municipal actors and politicians at state and federal level.

Problem

Schools, daycare centers, kindergartens and educational institutions (collectively referred to below as „schools“) are crucial institutions when it comes to sustainable development. However, the provision of school meals in German schools is hardly sustainable. There is also very little awareness and willingness to ensure healthy and sustainable/ climate-friendly catering for children and young people. Only a very small number of schools have specified a proportion of regional or organic food in their school catering contracts and follow recommendations for healthy eating.



Potential

Increasing awareness of decision-makers towards the topic is considered to have the greatest potential. A carefully researched and visualized collection of data on what is currently being offered to children and young people as school meals could help these decision-makers to choose more sustainable meals for their educational institutions.



Lever

Using and structuring already existing data points and feeding them into a broad database, whilst comparing them with a nutritional-physiological target state, should provide a basis of evidence for the urgent need for action. Existing data on school catering will be collected and evaluated. In order to raise broad awareness of the topic, this data will then be visualized and made accessible. In order to answer the question: „What is possible“, best-practice examples from Germany and abroad will be collected, explained by independent experts in an understandable way and also made accessible in order to create a hopeful, positive and feasible picture. In addition, the short and long-term effects of the various aspects should also be explained in order to have a clear cost-benefit comparison. These include lack of concentration and performance in the case of malnutrition, learning the wrong eating habits and the resulting costs for the education and health system (extra effort).

Impact

As a basis for action in the area of sustainable school catering, the initiators want to structure existing data, create a broad database and develop a framework for it. In this way, decision-makers can be convinced of the importance of sustainable (and democratically selected) school catering. The first step is to identify decision-makers. In the second step, they are made to rethink their approach by means of data on school catering. For this purpose, cooperation with experts from the fields of data visualization and communication, such as the makers of the magazine „Katapult“, will be explored. What has prevented other actors from working on this topic to achieve their mission? The continuous evaluation of these findings is also part of the strategy.



AVOIDING RESOURCE LOSS AND FOOD WASTE THROUGH CIRCULAR VALUE CHAINS

Session Host

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Participants

Micha Gattinger ([Secondfood](#)), Karoline ([Fermentiersalon](#)), Nicolas Wenz ([Invisible Foods](#))

The awareness of society and economy for responsible/sparing use of resources and food is increasing. Through new cycles the waste of resources and food is constantly decreasing. The number of 12 million tons of food waste per year in Germany is demonstrably reduced (and eliminated by 2030). At the production level, the use of residual materials as alternative raw materials is becoming a standard.

Problem

Conventional production processes are often associated with high energy and resource consumption. Economically active players are reluctant to talk openly about misproduction and overproduction for various reasons. A lack of incentive systems - for example, the donation of still edible food is currently more expensive than its disposal (see, among other things, German tax law) - as well as inefficient data storage and lack of networking and communication within the industry make it difficult for potential social and commercial buyers and users to pass on and use the data. Consumers often lack awareness of the consequences of their own consumption. At the same time, there is a major global disposal problem.

Potential

In the context of the so-called food use hierarchy, there is still great potential to avoid food waste as far as possible through improved cooperation, technical solutions and improved framework conditions between food suppliers and customers. If this is not possible, it should be aimed to give priority to the supply of food for human consumption (and not, for example, to feed it into energy production as biogas recyclable material). Broad awareness of the issue can stimulate interest in alternative resources for new product opportunities with a lower environmental footprint.





Lever

In order to strengthen social responsibility for the waste of resources and food, the origin of products must be presented transparently and recycling possibilities must be communicated effectively to the public. In addition, close networking of different branches of industry is required for the optimal use of by-products. The initiatives are therefore striving for transparency in the value chain in order to further improve the flow of information on food supply and demand. This involves communication between (primary) production and trade, as well as between trade and social and commercial buyers of surpluses. Digital networking solutions to support both established and missing processes and the development of innovative products play a major role here. Financial support for the recycling of residual materials is also needed to create incentives for their use as alternative raw materials.

Impact

Initiatives are working together on various technological solutions (apps, dashboards, marketplaces) that help actors in the value chain to avoid food waste through data, transparency and networking. In addition, the possible development of a label/ certificate for products or

services that demonstrably - and in consideration of the Food Use Hierarchy - reduce food waste, e.g. by returning them to the supply cycle or recycling them. Community and network effects are evaluated as the key to achieving these objectives. With political support, test regions should have a radiance to other regions in order to accelerate imitation effects. Synergies are also seen in the joint design and corresponding follow-up of a „food waste shelf“ in retail.

Producers, traders and suppliers of food are involved in the validation of the approaches. The motto: Share data and knowledge, strengthen trust, reduce competitive pressure. On the level of legislation, corresponding changes in tax law are being advocated to make it easier to donate food to social institutions.

On the production side, possibilities of using plant residues, e.g. from pineapple cultivation for pulp production, are being tested. Through new pulp properties and the resulting product possibilities, an incentive is created for the use of e.g. pineapple pulp. The scope for educating the public about waste materials and their responsible use aims to show that innovation can be created with sustainable solutions.

STRENGTHENING COHESION BETWEEN FARMERS AND CONSUMERS THROUGH NEW CONNECTIONS AND REGIONAL SUPPLY CHAINS

Session Host

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Participants

Christian Klotz ([Roots](#)), Dmitry Yaskov ([Bauer Nebenan](#)), Maren Kammler ([MeatMe](#)), Merit Ulmer ([eco:fibr](#)), Nicolas Barthelmé ([Du bist hier der Chef!](#)), Renaldo Scola ([noma](#)), Robert Schultz ([obergudt](#)), Yannik Gassmann ([ErnteErfolg](#))

A steady, participatory dialogue between consumers and farmers is demonstrably increasing, and the appreciation of the other group of actors is growing through the building of trust and understanding. At a growing number of locations, solidarity-based and cooperative models have established themselves as an exemplary approach for strengthening regional cohesion between agriculture and society. The profitability for producers and trade is proven. It has been possible to guarantee planning security for the trade that is equal to that of conventional models. In addition, the new models are accepted and evaluated by consumers as climate-friendly, easily accessible alternatives to buying healthy and affordable food. The cohesion between actors in the value chain is strengthened by a new balance between ecological sustainability, social justice and economic profitability. This means fair prices for producers and access to sustainable food for everyone.





Problem

Long and non-transparent supply chains create a gap between consumers and farmers. Most purchases are made in supermarkets and the price is the decisive criterion for almost half of the consumers. The retail sector is part of the value chain between farmers and consumers, but it currently does not sufficiently fulfill its responsibility as a mediator. Indirect communication currently takes place mainly one-sided (via price): producers should produce products of high quality and good ecological standards as cheaply as possible in order to meet the expectations of consumers. The realities of the farmer are not sufficiently taken into account. Moreover, retail often prefers to buy and sell products with long supply chains. The reason is the lower planning reliability for regionally produced food, since farms rarely have professionalized data and logistics systems. Farmers face a challenge that has been difficult to overcome until now: Getting fair prices for their products, working with reliable bulk buyers, and/or direct marketing themselves while minimizing the logistical and bureaucratic workload.

Potential

Retail must also become part of the solution: If retail is oriented towards the needs of producers, processors and consumers and enables consumers to participate in the processes, the appreciation of sustainable food supply would increase. The potential of regional marketing lies in the geographical proximity of the actors, who must tackle the challenge together to make their region stronger and more resilient. Reliable, regional supply chains, the willingness of consumers to pay for innovative formats of agriculture based on solidarity and the growing demand for regional and sustainably produced products speak for this.

Lever

Dialogue between producers and consumers about mutual material and social needs creates transparency, trust and appreciation. This also has positive effects on the willingness of consumers to pay. Local cooperation between producers, processors and logistics companies is seen as the key to this. Diversification of income streams is an incentive for farmers to adopt new business models. The marketing of products that have emerged from a dialogue can also offer opportunities for retailers, because it can improve the customer's buying experience. The authenticity created in human dialogue can only make a big difference if retailers present products in a credible and transparent way.



Impact

The Farm Food Climate Challenge initiatives are committed to building a communicative bridge between farmers and the public through the diversity of solutions. Transparency and opportunities for co-determination in a spirit of solidarity should make regional agriculture accessible and tangible for citizens. In order to

train the understanding of the challenges of the respective other perspective, different exchange formats and models will be simultaneously tested and promoted in the media - from farm festivals, to educational events and dialogue formats, to „Experiences“ as events on farms. In marketing, there are various options: direct dialog formats, in which producers offer their products in the showrooms of the initiatives, or the inclusion of the products resulting from the dialog between the two groups in retail.



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