Food Systems in European Cities

Deliverable 6.1 Factsheets with overview on EU and national regulatory framework conditions and policies and the related constraints and challenges

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12	LAN	GEMEENTE LANSINGERLAND	NL
14	WR	STICHTING WAGENINGEN RESEARCH	NL
16	POL	POLAR PERMACULTURE SOLUTIONS AS	NO
17	TAS	TASEN MICROGREENS AS	NO
18	MBI	ASOCIATIA MAI BINE	RO
19	ARC	ARCTUR RACUNALNISKI INZENIRING DOO	SI
20	BEE	DRUSTVO URBANI CEBELAR	SI
21	SBD	AJUNTAMENT DE SABADELL	ES
22	ISL	ORGANIZACION DE PRODUCTORES DE TUNIDOS Y PESCA FRESCA DE LA ISTA DE TENERIFE	ES
23	ULL	UNIVERSIDAD DE LA LAGUNA	ES
24	UAB	UNIVERSITAT AUTONOMA DE BARCELONA	ES
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Executive Summary

The project “FoodE - Food Systems in European Cities” aims to make local food production and consumption more sustainable. In doing so, it aims to accelerate the growth of sustainable and resilient urban food systems by bringing together citizen-led local food initiatives across Europe. So-called City-Region Food Systems (CRFS) include all the actors, processes and relationships involved in the food chain (from production over processing to the distribution and consumption of food) in a given geographic region and are therefore important sites for facilitating interactions between rural, peri-urban and urban areas. A CRFS might encompass the territory of a city, a metropolitan area or a region. Task 6.1 deals with the EU and national regulatory framework conditions and policies and the related constraints and challenges regarding CRFS in the partner countries. Various policies with positive and negative impacts as well as current policy gaps were compiled from both a theoretical and a practical perspective. The data collection was conducted by means of desktop research, stakeholder interviews and workshops and evaluated after the data collection. The analysis revealed seven policy fields, which were identified as most relevant: (1) Planning, (2) Agriculture, (3) Education, (4) Circularity, (5) Food Safety, (6) Policy silos and (7) Fisheries. The compiled data was used to create the seven factsheets, structured around the seven major topics, which present current constraints and challenges of CRFS in the respective policy field as well as examples, possible solutions and recommendations.

1. Introduction

By drawing increasingly on products from sustainable urban and regional agriculture, the consumption of food in populated and dense areas should be made more sustainable. The production and consumption patterns applied in CRFS initiatives have the potential to bring many positive effects. For example, they can contribute to an improvement of the climatic conditions on the local level in the cities (Artmann & Sartison 2018; Gasperi 2017) as well as to the reduction of greenhouse gas emissions in contrast to industrial agriculture (Sanyé-Mengual, Gasperi et al. 2018; Sanjuan-Delmás et al. 2018; Sanyé-Mengual, Specht et al. 2018). It also implies a greater awareness of sustainable and local food production among the population (Ilieva et al.2022; Zoll et al. 2017; Opitz et al. 2017). However, urban agriculture often competes with other urban uses, such as development for residential purposes, renewable energy production or even with other green and open spaces for the population's recreation, which can eventually lead to inhibiting the expansion of such food production models (Specht et al. 2014; Specht et al. 2020; Russo et al. 2017).

To counteract these conflicting uses and promote CRFS, various policies have been established at both the European and subordinate planning levels to reduce or eliminate the barriers for and problems of CRFS. According to Mickwitz (2003), policies are basically "the set of techniques by which governmental authorities wield their power in attempting to affect society - in terms of values and

beliefs, action and organization - in such a way as either to improve, or to prevent the deterioration of the quality of the natural environment". The policies discussed in this Deliverable address all three policy types as introduced by Mickwitz (2003), and therefore include (a) regulations, (b) incentives and (c) awareness-raising measures.

One example of a policy that can both promote and inhibit CRFS is the Common Agricultural Policy (CAP). Through the provisions of the CAP, the EU aims to promote sustainable agricultural production and food systems taking into account the economic, environmental and social dimensions of agricultural production and consumption throughout all EU member states (EU 2013a; EU 2013b). While the CAP is supportive in many areas, its track record in the areas of sustainable food production and marketing and when it comes to supporting small-scale producers is at best, uneven (EC 2018; EC 2019; EC 2020a; EC 2020b; EC 2021; Pe'er et al. 2017; Piorr et al. 2018). It is often criticized that the CAP promotes mainly large and industrial farming operations, while it partly ignores the smaller and individual farms, which play a major role especially in the context of sustainable CRFS. The CAP has historically encouraged large-scale food production by linking direct payments and financing to farm sizes (Recanti et al. 2019; Curry et al. 2014) and is reflected in national policy schemes EU-wide. Finalisation of the new CAP provisions and the National Strategic Plans implementing them in the member states coincided with the work on T6.1 so the analysis of challenges arising from the CAP refers to its previous versions up to and including 2022.

Partly in response to the CAP as a mainstream EU policy, especially at the local level, "bottom up" strategies and concrete programs are being developed to influence a sustainable transition of the food system. Food policy councils (FPC) - local multi-stakeholder collaborations for food system transformation - have been initiated in cities and municipalities throughout the EU and are still increasingly spreading as institutionalized platforms for local food policy-making. The FPC model was already well-established in Brazil, the USA and Canada by the late 1990s, with the Toronto FPC founded in 1990 (MacRae, 1994; Stahlbrand and Roberts, 2022). It was taken up in Europe from the early 2000s - first in Great Britain, beginning with the Brighton & Hove Food Partnership founded in 2003 (Brighton & Hove Food Partnership, 2022), and more recently in Belgium (Bonomelli and Eggen, 2017), Italy (Rete Italiana Politiche Locali del Cibo, 2020) and the German-speaking countries (Netzwerk der Ernährungsräte, 2022). By signing the Milan Urban Food Policy Pact (MUFPP) initiated in 2015, more than 200 mayors worldwide have now committed to working for sustainable urban food systems (MUFPP 2015; http://www.milanurbanfoodpolicypact.org/). These developments have contributed to the increasing recognition of urban food planning as an important component of planning aimed at sustainable development. The MUFPP is the first international guide on urban food policies (Carey & Cook 2021).

While ensuring food security and quantity of the basic food supply has always been understood as a public task, current problems in the food system are primarily attributed to individual consumers. Thus, individual consumption behaviour is often held responsible for problems such as malnutrition and obesity or environmental damage (Stierand 2012). One counter-response to the globalization of food policy on the one hand and to the individualization of problems on the other is to formulate new demands for a sustainable food system at the local level (Doernberg et al. 2019). It is becoming increasingly recognised by policy makers and planners throughout the EU, that the urban food system has strong interrelationships with a variety of other sectors, such as public health, social justice, energy, water, land use, transportation, and economic development (von der Leyen 2019; Caputo et al. 2021). Following this increasingly holistic understanding, "food policy programs" are consequently established in many European municipalities.

In addition to the already existing policies, which can be both promoting or hindering CRFS, there are also policy gaps and challenges to further advance CRFS. These challenges are observed by researchers and stakeholders in various areas. For example, stakeholders still see a need for action and thus the need to adapt existing policies to decrease bureaucratic hurdles that CRFS initiatives often struggle with. Especially for small and regional companies, which often do not have additional staff for organizational and administrative tasks, bureaucracy guides could help to reduce bureaucratic hurdles, facilitate the start-up and also obtain financial support. With regard to specific sectors, such as fisheries, scholars and stakeholders still see a need for additional supporting policies. For small and local fisheries, such policies should help to ensure a steady income and also facilitate and promote market access for customers for local fish (Pascual-Fernández et al. 2019).

In the already existing literature, some studies deal with the influence of policies on urban agriculture in general, but there is a research gap in the analysis of existing positive as well as negative policies and policy gaps over different European countries related to the different policy fields. Several papers address the different barriers and opportunities presented by certain policies, while focusing only on a specific city or on a specific form of urban agriculture, such as the implementation and impact on rooftop agriculture (Zambrano Prado et al. 2021; Marchetti et al. 2015; Orsini et al. 2014). By analysing existing (or missing) policies, our research aimed to fill this gap and to present (1) in which areas the existing policies can have a particularly inhibiting effect, (2) in which areas there is still a need for action (policy adjustment or policy gap) for the successful advancement of CRFS in the partner countries and (3) which barriers and challenges influence the development.

The compiled data has been used as a basis to create the factsheets, structured along the seven major topics, which were identified as most relevant: (1) Planning, (2) Agriculture, (3) Education, (4) Circularity, (5) Food Safety, (6) Policy silos and (7) Fisheries. They present current challenges of CRFS in the respective policy field as well as examples, possible solutions and recommendations. The data

will be further processed and transferred into stakeholder- oriented as well as scientific publications in the course of work in WP6.

1.1 WP6 Upscaling

Within the FoodE project, WP6, which targets at upscaling, deals fundamentally with the enablers and especially with the barriers that can have various impacts on the planning, implementation and management of CRFS. Those barriers can occur at different levels and stages of the food chain. They can exist directly on the project level and influence the implementation, but they can also have an impact at the national and European level. This work package highlights the differences and commonalities among the different levels in terms of inhibiting and facilitating policies and, in addition, the different regulatory frameworks among different European cities and regions. Currently, the barriers to urban food production in various European cities are not sufficiently known and investigated so this work package aims to 1) analyse these barriers to CRFS and, 2) make recommendations regarding the successful promotion and implementation of CRFS, based on best practice examples and the analysis of these different policies. The overall aim is to foster the sustainability of the food systems towards approaches that are beneficial for operators as well as for consumers and the society as a whole. This first Deliverable 6.1 provides an initial contribution to the fulfilment of the overall goals of this work package through the analysis of EU and national framework conditions and policies and how these affect the establishment of sustainable CRFS.

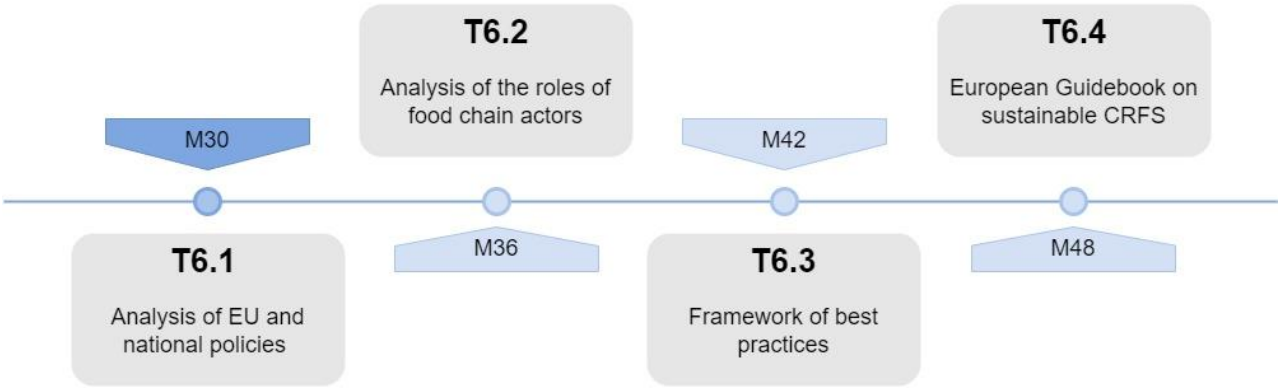


Figure 1: *Structured and chronological overview of WP6. This report covers the first phase of WP6 (task and Deliverable 6.1) due in month 30 of the FoodE project (figure: ILS/FoodE)*

2. Methodology

As explained in the introduction, the objective of task 6.1 was to provide an overview on EU and national regulatory framework conditions and policies. The geographical focus of this analysis was on the six FoodE project`s research partner countries France, Germany, Italy, the Netherlands, Norway and Spain as well as on the policies on supranational and EU level. In order to obtain a comprehensive policy collection of these different geographic areas, three methodological approaches were applied:

(1) desktop research of existing frameworks and policies, (2) stakeholder interviews and (3) workshops and online feedback rounds.

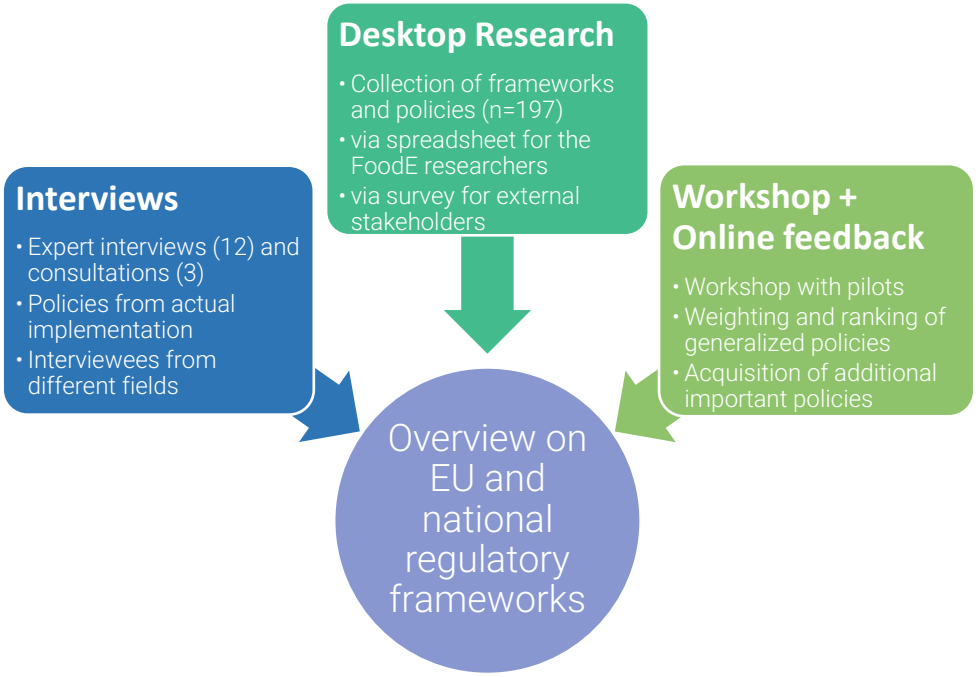


Figure 2: *Overview on the methodological steps of the first phase of WP6 (task and Deliverable 6.1) (figure: ILS/FoodE)*

2.1 Desktop Research

The first methodological step was a desktop research, which aimed at the identification of frameworks and policies in the FoodE partner countries. The data was collected through two different formats, while the content was identical. On the one hand, a spreadsheet was set up for the project's internal researchers to collect policies for the six countries and the EU. In this document, the project members were asked to enter policies for their country that they were familiar with on the basis of their research and work background. On the other hand, an online survey was created to elicit the same content as the spreadsheet, to be used by the consortium members via the "1KA-One click survey" platform (https://www.1ka.si/d/en) that could be sent out by the researchers to experts from their countries and could then be completed online by additional selected stakeholders. This online tool was also intended to reach stakeholders not belonging to the project consortium, having knowledge and experience in frameworks and policies related to CRFS. This included for example representatives of municipalities, CRFS initiatives or NGOs. The survey thus complemented the data collection of the FoodE internal researchers with information and policies from different perspectives and positions.

Spreadsheet and survey were structured in such a way that the first step was intended to obtain general data on the individual who collected the data (researcher or stakeholder), such as name, affiliation and position. This enabled to assign the policies to certain individuals in case of incomplete

information or in case of later queries and to be able to contact the persons on more detailed information if necessary. Subsequently, the policies to be entered were subdivided into the following categories: positive policies, negative policies, and policy gaps. The structure of the three categories was almost identical, except for the policy gaps differing in the column/item related to the sources (URL or link to the policy or a policy document), origin and year of enactment, since this information certainly does not exist for non-existent policies. Regarding the existing policies, in the first step, the spreadsheet and survey asked for general information about a) the respective country and city of origin, b) in which year and in which decade the policy was enacted, c) in which year it was renewed, and d) if it was terminated in a certain year or will be terminated in the future (if applicable). The source for the registered (negative or positive) policy was also queried in order to be able to do more detailed research if necessary (see Figure 3).

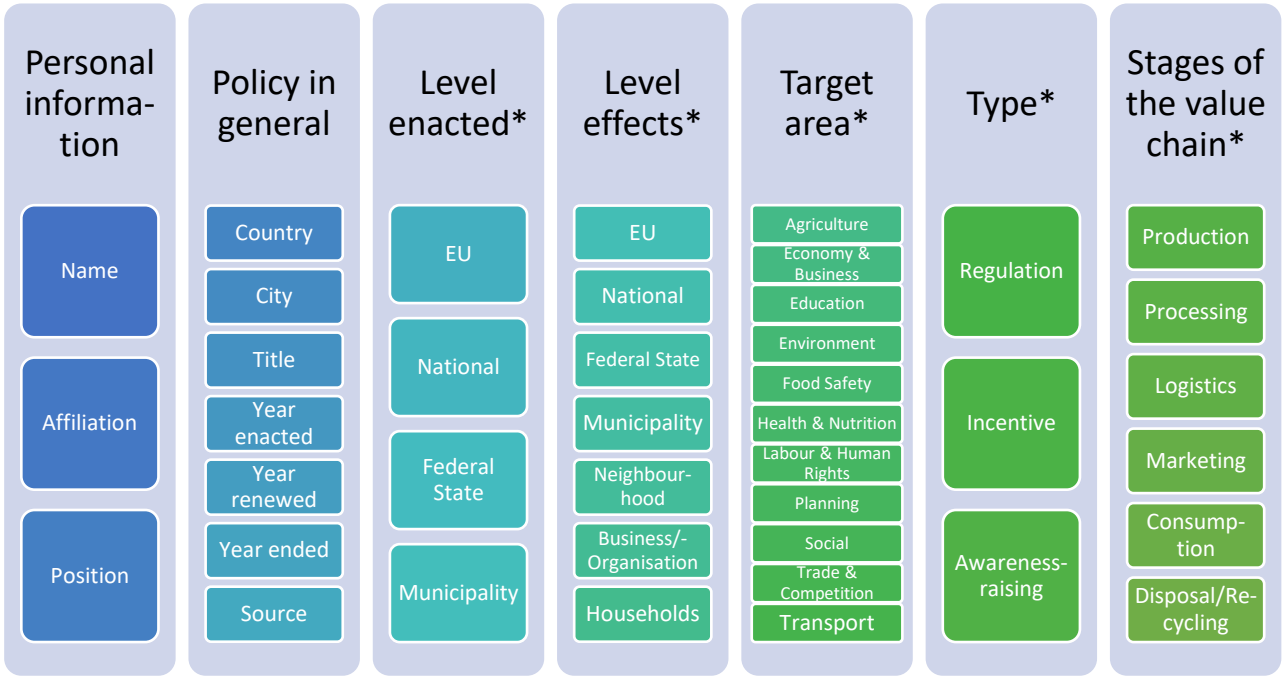


Figure 3: *Overview of the contents of the spreadsheet and the survey (figure: ILS/FoodE); * = An additional category "Other" was included in the original spreadsheet/survey (figure: ILS/FoodE)*

Following the information on the basic policy data, the next step was to provide more detailed information related to the specific policy and its relation to the topic of the CRFS. For this purpose, the researchers and stakeholders could select from various options for the respective questions using a drop-down menu and, if necessary, add supplementary information in a subsequent comment field. One set of questions was about the level on which the respective policy was enacted (municipality to EU) and on which level it shows its effects (household to EU level). The following question referred to the subject addressed in the respective policy (e.g., whether the policy targets agricultural production, education, food safety or other possible subjects). Furthermore, it was documented which type the policy belongs to - regulations, incentives or awareness-raising measures (based on the policy

classification of Mickwitz (2003)). The last set of questions dealt with the stages of the food chain to which the policy refers or for which it has an impact (from production to waste disposal). Finally, a free-text comment field was used to ask specifically about the consequences or effects of the respective policy. After the separate collection of the policies in the survey and the spreadsheet, the two data tables were merged and analysed using a nominal scale classification (0=applies or 1=does not apply) so that all results could be recorded in one table.

2.2 Interviews with policy stakeholders and decision makers

The aim of the additional interviews was to complement the policy collection from a policy and decision maker`s point of view and to gain more detailed qualitative background information on the challenges and barriers from a stakeholder perspective. Therefore, in addition to the desktop research, a total of twelve guided interviews and three consultations (herein not a full interview was conducted, but only selected aspects were addressed) took place with various policy experts between mid-February and end of March 2022. The interviewees were based on an interview guideline (following the standards from Kuckartz 2019) and covered a broad range of backgrounds with insights into urban food policies (such as from an environmental agency, food departments at municipalities or from the food policy council network). The interviews were conducted with stakeholders and practitioners from either countries or policy fields that were not sufficiently explored in the data collection by the desktop research. They further served as a supplement for Romania, Slovenia, the Netherlands and Germany. The interviews were conducted via online conference tools, recorded and afterwards transcribed for analysis purposes. A deeper analysis of the interviews will be performed in the second half of 2022 in order to feed into the tasks and Deliverables 6.3 and 6.4.

2.3 Workshop with practitioners (FoodE pilots)

As a third and final methodological step, a workshop was conducted on 18.05.2022 to include the perspective of the pilots participating in the FoodE project on the relevance of certain policies for the practical implementation of CRFS. In cooperation with the leaders of WP4, the workshop was conducted to (1) provide the pilots' practitioners with knowledge regarding the policy framework in their own region or country or even from other countries, (2) to filter out additional negative and positive policies or gaps (3) to weight and rank the collected policies from a practitioner's point of view and (4) to enable an exchange of the different views and ideas of the pilots and other FoodE partners from municipalities and research. Altogether, 19 participants joined the workshop: 3 representatives from municipalities, 10 pilot projects´ representatives and 10 researchers (4 persons were both – researchers who run pilot projects).

In preparation of the workshop, the specific policies collected in the first step were aggregated into more generic categories. For example, the several different planning regulations and laws from different countries, that limit the production possibilities in cities (e.g. the height limit for new buildings

precluding development of rooftop agriculture and the stifling effect of zoning regulations on emerging forms of urban agriculture such as vertical farming and aquaponics) were summarized as: "Planning laws that limit production possibilities in cities". The full list of generalized policies is displayed in table 1.

Generalised negative policies	Generalised policy gaps	Generalised positive policies
Planning laws that limit production possibilities in cities	Public awareness campaigns to promote regional / sustainable food	Land access (for example through leasing from a land trust)
Restrictions on food grown in public spaces	Accessible training and education	Municipal strategies for regional food
Laws restricting direct sales to consumers	Regulations requiring regional food in public procurement	Municipal subsidies for regional food / sustainable farming
Hygiene regulations that are difficult for small-scale production	Urban planning regulations to include areas for food production	Extension services (public service advisors for agriculture producers)
Compost production and use regulations	Regulations on land prices in urban areas	Regulations for preferring regional food in public purchasing
Subsidy schemes that ignore urban production	Awareness around sustainable food in educational system for children	A public food / agency coordinator
Innovation incentives that do not include 'low-tech' options	Joint planning between cities and rural areas (both structures and funding)	EU strategies (Farm to Fork, Food 2030, etc)
Water regulations that restrict re-use of water for agriculture	Incentives and policies for young / new farmers	Business Innovation development schemes
Education & training preparing new farmers only for large-scale/industrial farming	Tax cuts for locally produced and traded products	
	Local policies to access land	

Table 1: *Overview of the generalised policies of the workshop (figure: ILS/FoodE)*

The interactive collaboration was carried out using a Miro Board, an online collaborative platform that enables to work together on a joint whiteboard, where sticky notes and dots can be placed by all participants in parallel (see Figure 4). It ensures real-time collaboration regardless of location. Using Miro Board, the participating pilots were first given an explanation of the research framework, so that

they knew what the research group understood by policies in principle and in what forms they could occur. The interactive exchange then began. The first step involved weighting the policies, which were previously selected and described in more generic terms by the research group.

For the purpose of ranking, the participants were asked to assign points to the policies they consider most important by means of their previously assigned weighting cards (1x1, 1x2, 1x3 points).

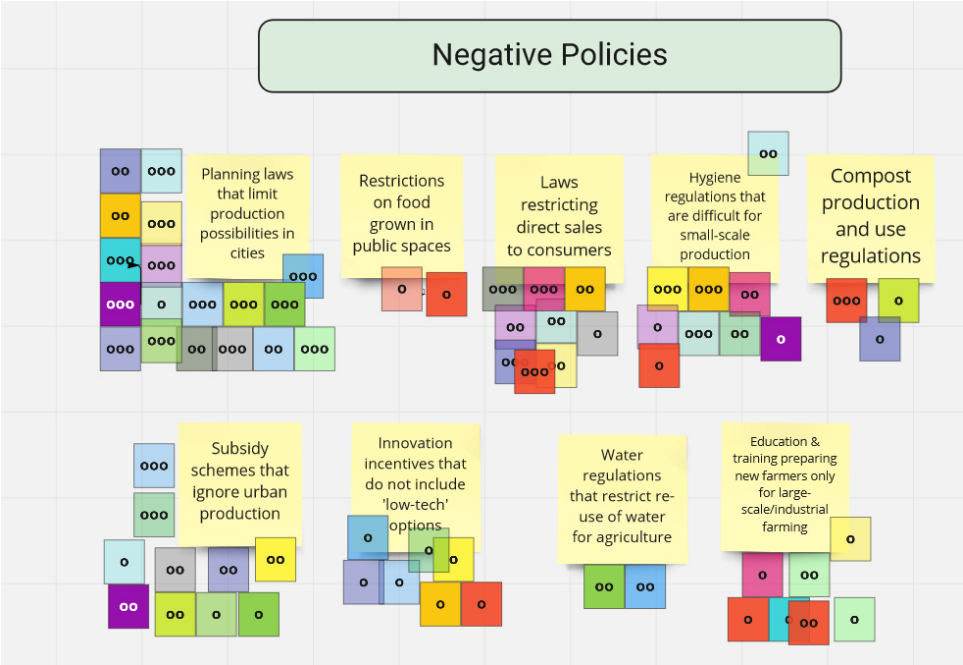


Figure 4: *Excerpt from the Miro board used in the workshop. This cut-out shows the valuation of negative policies from the workshop participant´s perspective (figure: ILS/FoodE)*

At the end of this weighting process, the policies ranked in the top three were discussed. In a second step, the participants were asked to add policies that they felt were also relevant and that had not yet been listed. These steps were applied to the three categories of negative policies, positive policies and policy gaps. The workshop was wrapped-up with a closing discussion.

2.4 Creation of the factsheets

For the creation of the factsheets, an online portal was chosen, in which the workshop participants were provided online with the first created factsheets versions on the different topics (see chapter 4). In this precinct process, they were able to actively contribute their further ideas and suggestions and thus comment on, supplement and finalize the versions and contents. This process enabled further feedback and inclusion of practical perspectives. The major findings from the first three methodological steps served as the basis for the selection of the factsheet's topics and their content.

3. Overview on EU and national regulatory framework conditions and policies

In the following chapter, initial evaluations of the data collected from the three methods used (desktop research, stakeholder interviews and workshop) are presented, which already allow interpretations regarding the current state of regulatory framework conditions and policies.

3.1 Results of the Desktop Research and Interviews

Preliminary findings can already be derived from the data collected in the first step via the desktop research, interviews and consultations. A total of 197 entries from six EU countries were recorded. Basically, the countries Netherlands (35), Italy (34), Spain (31) and France (31) recorded a quite similar amount of entry values, while the entries for Germany (50) and Norway (5) differed significantly. Entries were also recorded at the European level (9) and the supranational level (valid across countries, but not for the entire EU) (2) (see Figure 5). Obviously, most of the identified policies can be traced back to the national level.

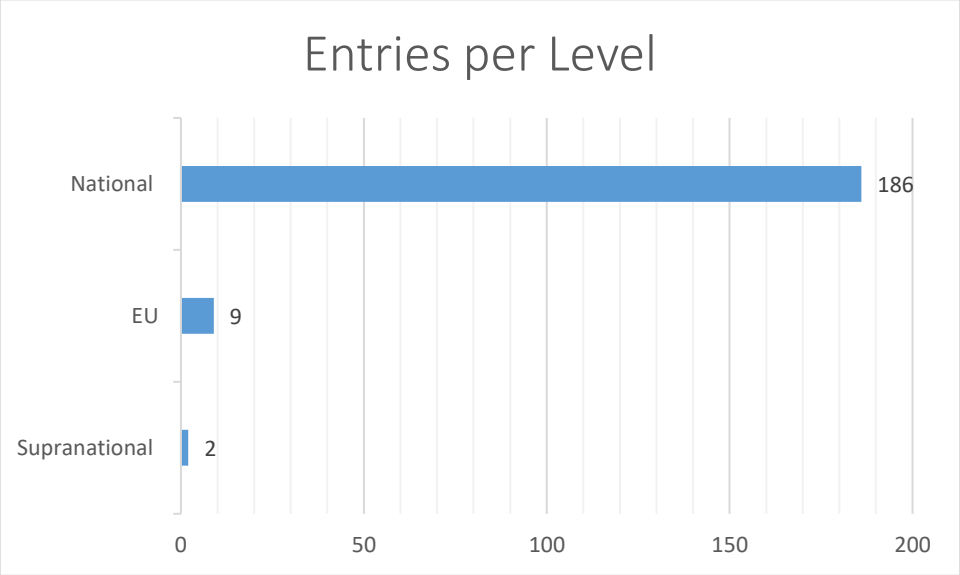


***Figure 5**: Policy collection listed by entries per country; n=197 (figure: ILS/FoodE)*

In addition, a concentration or dominance of positive policies has also emerged from the data collected (132). The policy gaps follow with a number of 46, while the negative policies have the lowest number of entries with 19 (see Figure 6).

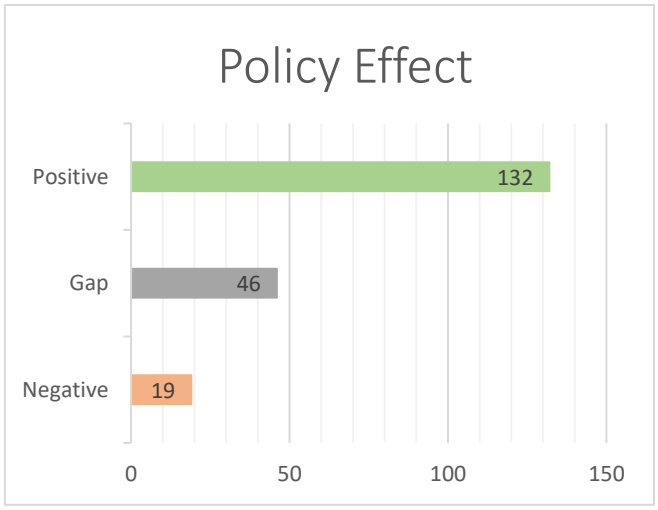


Figure 6: *Policy collection listed according to the three policy categories (positive, negative, gaps); n=197 (figure: ILS/FoodE)*

With regard to the policy type, in contrast to the policy effects, no strong deviations between the three categories could be identified. Policies could be assigned for more than one type if applicable. Most of the policies are incentives (83), followed by regulations (76). These are followed by awareness-raising measures (70), which can relate to educational and leisure activities, for example. In addition to these three specific policy types, there was also the option of specifying other types (27) (see Figure 7).

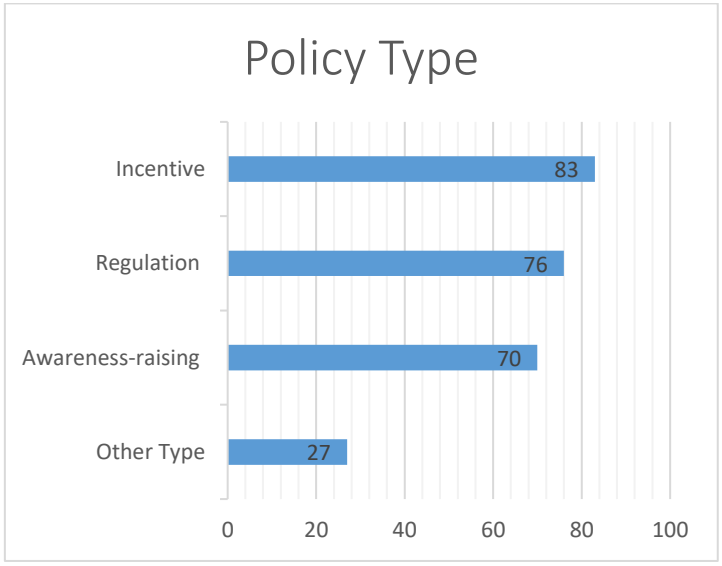


Figure 7: *Policy collection displayed by policy type; n=265 (figure: ILS/FoodE)*

The analysis of the "Stages of the value chain" can be highlighted as another interesting result from the data collection. In this section, too, multiple entries were possible, resulting in a total of 511 entries. A clear dominance of policies can be seen, that focus on and influence the area of Food production (154). After a large gap, the stages Consumption (84), Marketing (77) and Processing (79) follow, which are all in the same midfield. After that, the two stages of the value chain Logistics (50) and Disposal/Recycling (48) are the stages with the lowest number of entries. Only the category "Other

stages" which again allows an open and extended classification, falls at the end of the list with 19 mentions (see Figure 8).

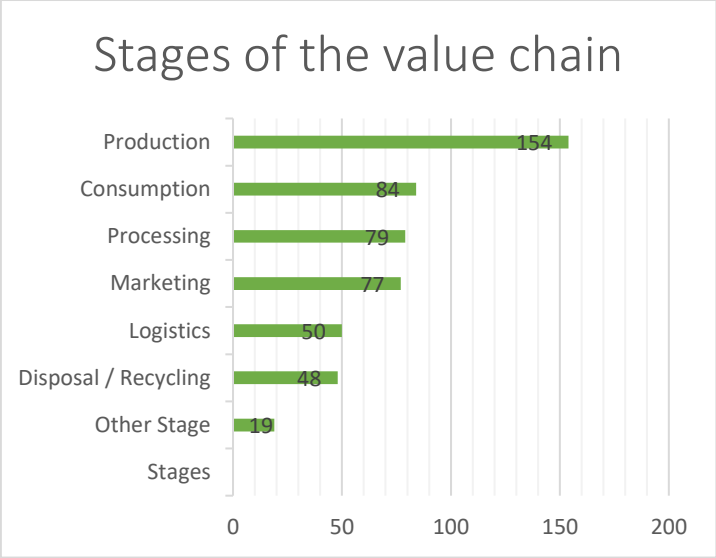
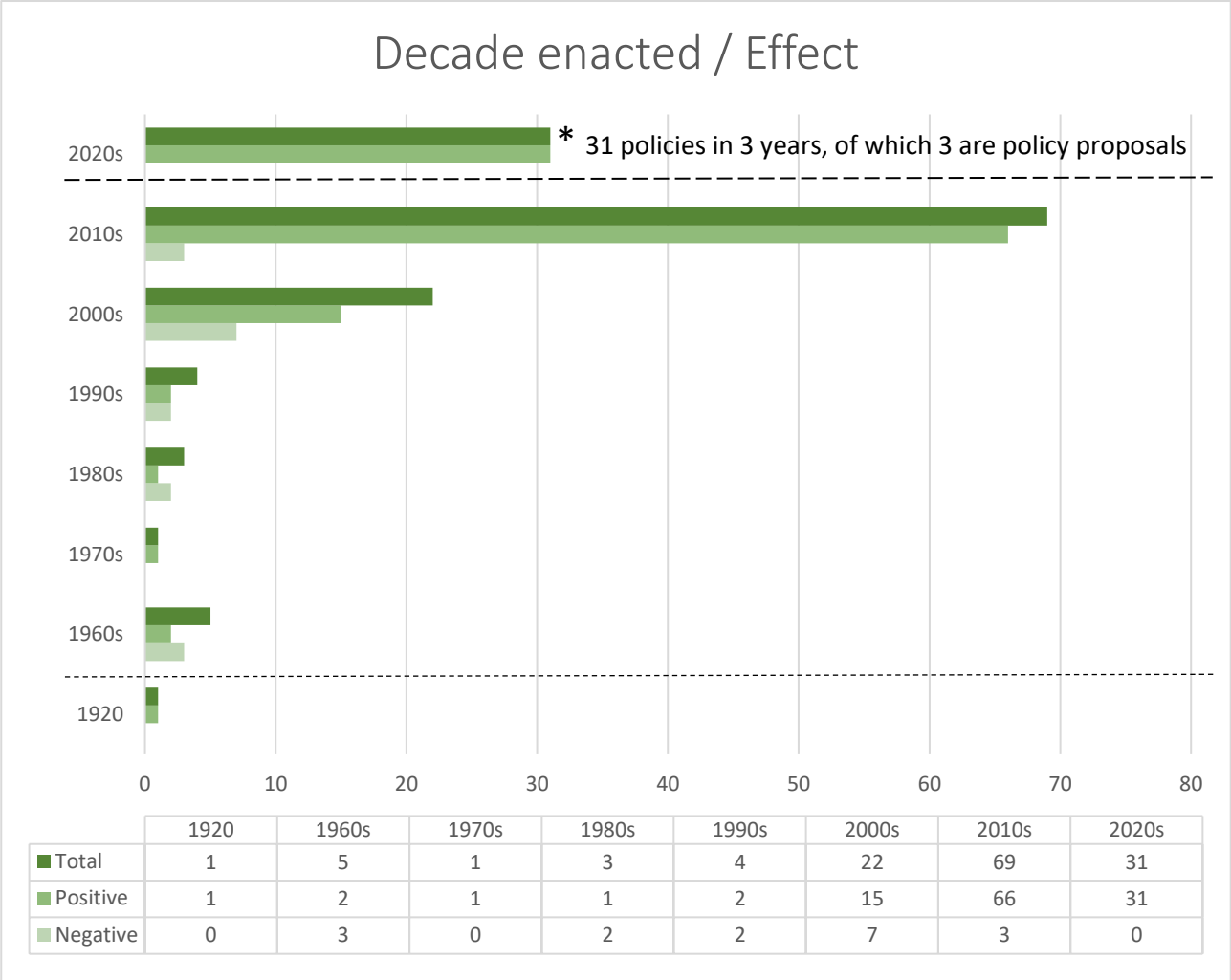


Figure 8: *Policy collection listed according to the stages of value chain; n=511, multiple entries possible (figure: ILS/FoodE)*

Another interesting characteristic of the collected policies involves the decade in which the positive or negative policies were enacted and how many in total emerged from this decade. A total of eight decades divisions were distinguished, in the period from the 1920s and the 2020s. A striking feature of this analysis is the sharp increase in the number of policies, both positive and negative, since the 2000s (22) (see Figure 9). In the following decade, there is even a threefold increase in the number of policies compared to the previous one (69). Another aspect that becomes apparent is that, with the exception of the 1960s and 1980s, the positive policies always predominate. This development or trend is therefore also reflected in the evaluation of policy effects already explained above (see Figure 6). From this graphic representation it is clear that the topic of CRFS has been ascribed an increasing importance, especially since the 2000s.



	1920	1960s	1970s	1980s	1990s	2000s	2010s	2020s
Total	1	5	1	3	4	22	69	31
Positive	1	2	1	1	2	15	66	31
Negative	0	3	0	2	2	7	3	0

Figure 9: *Policy collection listed by decade enacted/effect (figure: ILS/FoodE)*

Figure 10 contains the combination of the results of the policy effects, i.e., how many positive and negative policies and gaps resulted from the analysis, and the parameter of the level on which it has been enacted. A distinction is made between the EU, national, federal state, municipal and other levels. Here again the statement is supported that the positive policies predominate on all mentioned concrete planning levels. Especially on the municipal level the most positive policies were issued, while this level is also the level with the least number of negative policies. The level at which policies are enacted certainly also depends on the country's governance. Furthermore, according to this evaluation, the number of negative policies increases with increasing supra-locality, while the number of positive policies decreases (see Figure 10).

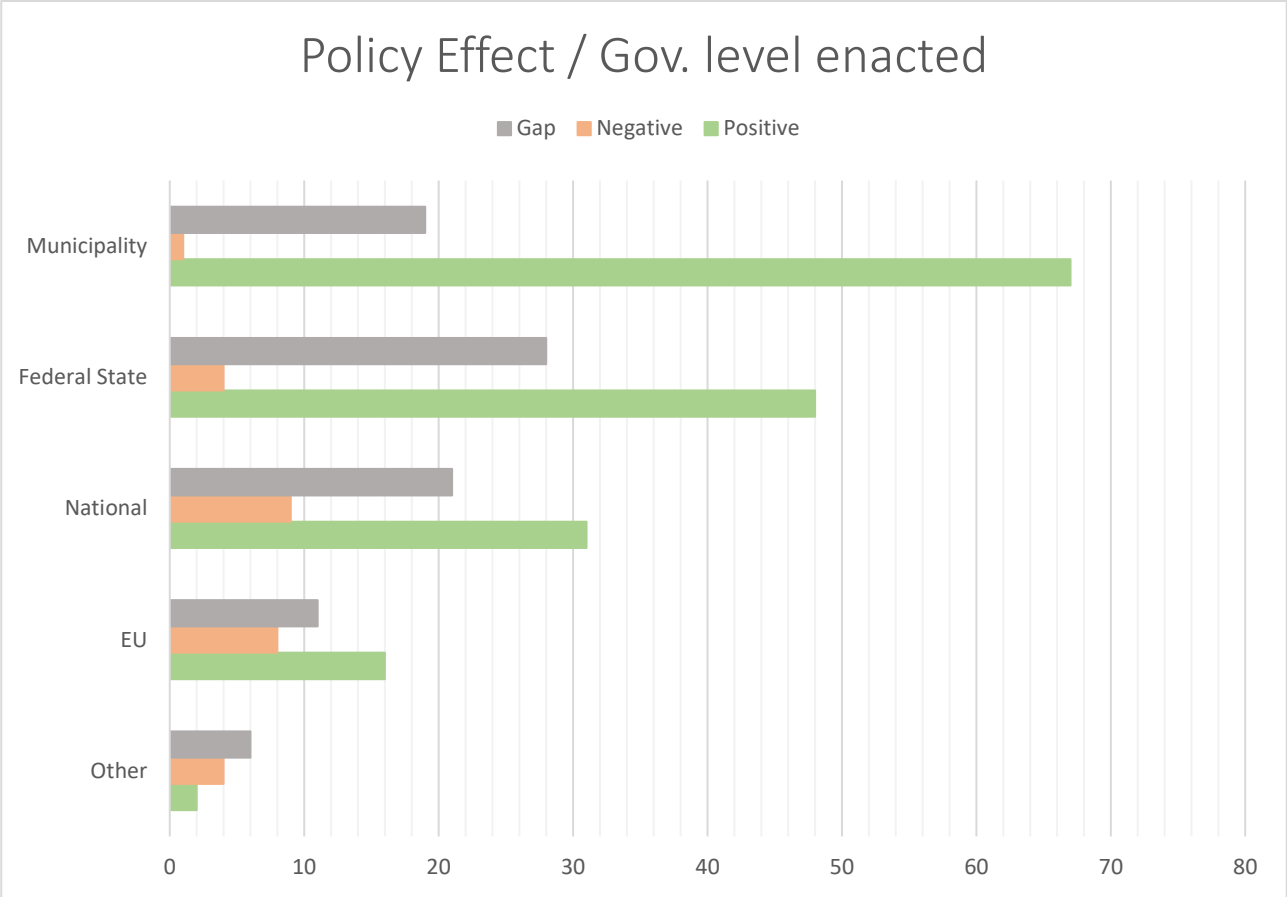


Figure 10: *Policy collection listed by policy category related to the government level enacted; n=275 (figure: ILS/FoodE)*

Figure 11 shows the policy entries according to the subject areas. In this category, too, multiple entries for one single policy were possible. This results in a total number of 623 entries. Most of the entries can be assigned to the subject area "Agriculture". With a value of 114, this option is far ahead of the two subject areas "Economy & Business" (81) and "Environment" (80). However, the "Health & Nutrition" option (69) is also frequently mentioned in connection with CRFS policies. These four subject areas already account for more than half of the entries. Also, two options that are mentioned comparatively often are the areas "Education" (58) and "Social" (57). The remaining categories such as "Planning" (42), "Food Safety" (39), "Trade & Competition" (35), "Other Subject" (19) and "Labour/Human Rights" (18) are in the lower field. The area with the lowest number of occurrences is "Transportation" (11) (see Figure 11).

Figure 11: *Policy collection listed according to the target areas; n=623 (figure: ILS/FoodE)*

In a further evaluation step, the previously mentioned subject areas (Figure 11) were linked to the countries for which the entries were made. This results in an overview of the distribution and the respective dominance of individual target areas in the different countries (see Figure 12). With regard to the agricultural policy, Germany (27), Spain (25), the Netherlands (23) and Italy (16) account for the largest share overall. For France, on the other hand, it is primarily the areas of "Economy & Business" (15) and "Environment" that were mentioned most frequently. For the EU, too, it is environmental policies (9) that appears most frequently. Different distributions and characteristics can also be seen in the less pronounced subject areas. With regard to "Food Safety", for example, it stands out that this aspect appears in the comparison above all in connection with the Italian policies (10). In the other countries, it was mentioned less frequently. In contrast, the situation is exactly the opposite for the "Trade & Competition" option. This area is for example not as pronounced for Italian policies (5) but it is more frequently associated with policies in countries such as the Netherlands (11) and Germany (11). For the interpretation of these numbers, it must be considered that the numbers of entries per country varied (see section 3.1) On the one hand, this evaluation can give some direction on the focus of some European countries and the EU and their policies regarding CRFS.

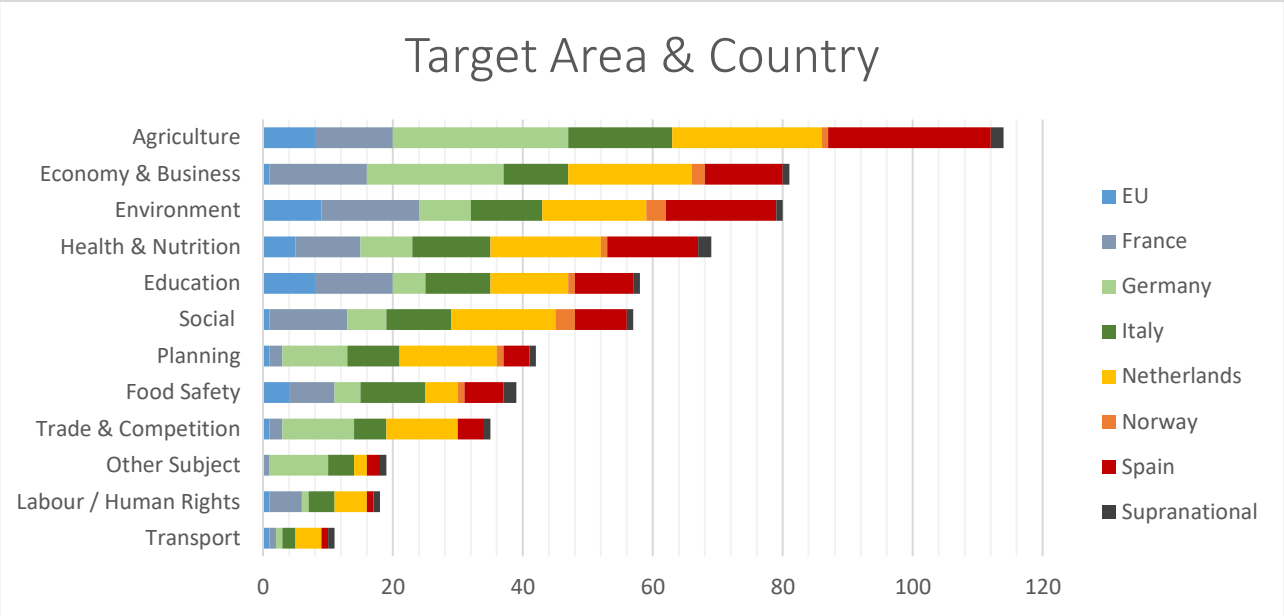


Figure 12: *Policies by subject areas in connection with the project countries (figure: ILS/FoodE)*

3.2 Results of the practitioner's workshop

In the pilot workshop, both the representatives from pilots and municipalities as well as from the WP6.1 task group evaluated the set of generalized policies (see table 1, section 2.3) given in each of the three categories (see method section 2.3). For the evaluation of this weighting, the points assigned to the respective policy were added up and then a ranking was created. For each category, positions 1-3 were evaluated (see table 2).

Policy type / Placement	Negative policies	Policy gaps	Positive policies
Number one	Planning laws that limit production possibilities in cities **(48 votes)**	Awareness around sustainable food in educational system for children **(20 votes)**	Municipal strategies for regional food **(35 votes)**
Number two	Hygiene regulations that are difficult for small-scale production **(21 votes)**	Accessible training and education **(18 votes)**	Regulations for preferring regional food in public purchasing **(17 votes)**
Number three	Laws restricting direct sales to consumers **(21 votes)**	Public awareness campaigns to promote regional/sustainable food **(15 votes)**	EU strategies (Farm to Fork, Food 2030, etc.) **(17 votes)**

Table 2: *Evaluation of the pilot weighting of the given policies (figure: ILS/FoodE)*

Even within the most highly ranked policies per category, there were slight differences in weighting between the different participants (Pilots=P, Researchers=R, Municipal=M) of the workshop. The most chosen negative policy "Planning laws that limit production possibilities in cities" was weighted strongly by all three groups, but especially the pilots (28) had a strong focus on this topic. The

researchers also saw this policy as significant (9), but they felt that another policy, which was not chosen among the first three policies, was even more significant for the CRFS: "Subsidy schemes that ignore urban production" (11). While this has a very low relevance for the other two groups.

Such a reweighting between the three groups of actors can also be observed for the category of gaps. In this case, the researchers selected the third-ranked policy "Public awareness campaigns to promote regional / sustainable food" (14), while this was weighted as rather less important for both the pilots (4) and the municipalities (0) compared to the other policies mentioned. For the practitioners and municipalities, the votes were more likely to be cast for the policies "Awareness around sustainable food in educational system for children", which also received the most votes, and the "Local policies to access land" policy.

In the case of the positive policies, an agreement among the three groups can be observed according to the initial ranking, since all three had assigned the most votes to the policy "Municipal strategies for regional food". Only the pilots gave one more vote to the third-placed policy "EU strategies (Farm to Fork, Food 2030, etc.)" than to the previously mentioned one. However, these were considered less relevant by the other two groups of actors (research and municipalities). Even though the results entail some bias due to the uneven distribution of the three groups, it can still be concluded that policies are perceived as relevant in different ways depending on the perspective and consideration and are weighted differently by different stakeholder groups.

4. Development of the Factsheets

As a final step following these findings, as already mentioned in the previous chapters, the factsheets were developed. The factsheets are 2-page documents that summarize and present the relevant information on one of the identified key policy fields textually and illustrated with pictures, including references and links to policy examples and real-case challenges for CRFS. In total, there are seven factsheets, which resulted from the previous policy data collection (see section 2). The interviews and practitioner workshop also served to confirm and verify the selected policy fields. The policy fields are based on the category of target areas (see Figure 11) and were further specified by the previous analysis. The collected policies and gaps were assigned to the respective topics and evaluated to create these documents. The process resulted in the following seven factsheet topics:

Factsheet 1: Planning policy and the development of sustainable CRFS

> *Major constraints/challenges:* Urban zoning regulations don't allow food production for the market while rural zoning precludes the erection of buildings, making it virtually impossible to set up certain innovative forms of food production, e.g., aquaponics, on a commercial scale.

Factsheet 2: Agricultural policy and the development of sustainable CRFS

Major constraints/challenges: The CAP and other agricultural subsidies favour large producers over small, and often exclude urban food producers altogether. Also, the majority of funding has no environmental criteria attached and so supports production of any kind, rather than sustainable production.

Factsheet 3: Education policy and the development of sustainable CRFS

Major constraints/challenges: Professional training and academic curricula for farming and food trades are geared towards producing and marketing at scale, rather than small scale, artisanal production and short-chain marketing, which call for very different skills and knowledge.

Factsheet 4: Circularity and the development of sustainable CRFS

Major constraints/challenges: Regulations such as the ban on using grey water for irrigation or catering waste for insect fodder make it difficult to realize the full potential of urban agriculture in closing water and nutrient loops.

Factsheet 5: Food Safety policy and the development of sustainable CRFS

Major constraints/challenges: Food safety and hygiene regulations in many areas are so burdensome to smaller producers - both farmers but also artisanal food producers and crucial local food infrastructure like abattoirs and dairies – that many have closed down over the past decades, and it is a major barrier to new, small food businesses starting up.

Factsheet 6: Policy silos and the development of sustainable CRFS

Major constraints/challenges: Policy silos make it very difficult to create the joined-up policies needed to drive a system transformation such as the one from a globalized, extractive, large-scale food system to a more regionally-focused one based on sustainable production and consumption principles. Cities and regions have started creating comprehensive food policies, this also needs to happen at national and EU level.

Factsheet 7: Fisheries policy and the development of sustainable CRFS

Major constraints/challenges: This factsheet is a case study of the situation in the Canary Islands: due to the way the regional government has implemented EU and national regulations, and partially omitted to do so, the sustainable, artisanal fishery that has a long tradition on the islands is heavily disadvantaged in comparison to large industrial fishing fleets using unsustainable fishing methods.

Each factsheet includes a general introduction, a description of the challenges in the respective policy field related to CRFS, real-case examples of challenges as well as emerging innovations and some recommendations.

The factsheets produced in this Task 6.1 aim primarily at supporting stakeholders concerned with the legal situation and the planning and implementation of CRFS. This includes, for example, representatives of municipalities, administrations, planning departments, as well as stakeholders who are responsible for the future creation of policies in this area. In addition to these decision- and policy-relevant stakeholders, the factsheets can in principle also serve for scientific purposes and also for the practical use of the pilots in dealing with their CRFS. The factsheets are online accessible via the FoodE website https://foode.eu/for-citizens/ since 27th of July. They will be further distributed and advertised through institutional channels, social media channels and the FoodE stakeholder boards and panels. Basically, the goal of these seven factsheets is to highlight the needs for policy change and improvement in individual areas for CRFS, and especially for the smaller initiatives and actors in this industry, to advance implementation and spread successfully.

5. References

Artmann, M., Sartison, K. (2018): The Role of Urban Agriculture as a Nature-Based Solution: A Review for Developing a Systemic Assessment Framework. Sustainability 2018, 10, 1937.

Bonomelli, V., Eggen, M. (2017): Les conseils de politique alimentaire. FIAN Belgique, Brussels.

Brighton and Hove Food Partnership (2022): Online source. Accessible via https://bhfood.org.uk

Caputo, S., Schoen, V., Specht, K., Grard, B., Blythe, C., Cohen, N., Fox-Kämper, R., Hawes, J., Newell, J., Poniży, L. (2021): Applying the food-energy-water nexus approach to urban agriculture: from FEW to FEWP (Food-Energy-Water-People). Urban For. Urban Green. 58, 12693.

Carey, J., Cook, B. (2021): The Milan Urban Food Policy Pact monitoring framework: A practical handbook for implementation. FAO. Rome.

Curry, N. R., Reed, M., Keech, D., Maye, D., Kirwan, J. (2014): Urban agriculture and the policies of the European Union: the need for renewal. Spanish Journal of Rural Development, V (1), 91-106.

Doernberg, A., Horn, P., Zasada, I., Piorr, A., (2019): Urban food policies in German city regions: an overview of key players and policy instruments. Food Policy 89, 101782.

European Commission (EC) (2018): Evaluation study of the impact of the CAP on climate change and greenhouse gas emissions: final report. Publications Office of the European Union, LU.

European Commission (EC) (2019): Analysis of administrative burden arising from the CAP: final report. Publications Office of the European Union, LU.

European Commission (EC) (2020a): Evaluation of the impact of the CAP on water: final report. Publications Office of the European Union, LU.

European Commission (EC) (2020b): Evaluation of the impact of the CAP on habitats, landscapes, biodiversity: final report. Publications Office of the European Union, LU.

European Commission (EC) (2021): Evaluation: impact of the CAP on biodiversity, soil and water (natural resources). Publications Office of the European Union, LU.

European Union (EU) (2013a): Regulation (EU) No 1307/2013 of the European Parliament and of the Council of 17 December 2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and repealing Council Regulation (EC) No 637/2008 and Council Regulation (EC) No 73/2009, 2013. OJ L.

European Union (EU) (2013b): Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005, 2013. OJ L.

Gasperi, D. (2017): Urban Horticulture: Reducing Food Miles to Improve Cities Microclimate and Environmental Sustainability. Ph.D. Thesis, Alma Mater Studiorum-University of Bologna, Bologna, Italy.

Ilieva, Rositsa T., Cohen, N., Israel, M., Specht, K., Fox-Kämper, R., Fargue-Lelièvre, A., Poniży, L., Schoen, V., Caputo, S., Kirby, C. K., Goldstein, B., Newell, J. P. and Blythe, C., (2022): The Socio-Cultural Benefits of Urban Agriculture: A Review of the Literature, Land, 11, issue 5, p. 1-21.

Kuckartz, U. (2019): Qualitative Text Analysis: A Systematic Approach. In: Kaiser, G., Presmeg, N. (eds) Compendium for Early Career Researchers in Mathematics Education. ICME-13 Monographs. Springer, Cham.

MacRae, R. (1994): So Why Is the City of Toronto Concerned About Food and Agriculture Policy? A Short History of the Toronto Food Policy Council. Culture & Agriculture, 15, p. 15-8.

Marchetti, L., Piovene, C., Cesarali, A., Bertocchi, I., Orsini, F., Gianquinto, G. (2015): "Greenhousing": Integrating low-input simplified hydroponics for roof gardening in bologna's public housing. Acta Hortic. 2015, 1093, 99–106.

Mickwitz, P. (2003): A Framework for Evaluating Environmental Policy Instruments. Context and Key Concepts. Evaluation, 9(4). 415-436.

Netzwerk der Ernährungsräte im deutschsprachigen Raum (2022): Online source. Accessible via https://ernaehrungsraete.org/

Opitz, I., Specht, K., Piorr, A., Siebert, R., Zasada, I. (2017): Effects of consumer-producer interactions in alternative food networks on consumers' learning about food and agriculture. Moravian Geographical Reports, vol.25, no.3, 2017, pp.181-191.

Orsini, F., Gasperi, D., Marchetti, L., Piovene, C., Draghetti, S., Ramazzotti, S., Bazzocchi, G., Gianquinto, G. (2014): Exploring the production capacity of rooftop gardens (RTGs) in urban agriculture: The potential impact on food and nutrition security, biodiversity and other ecosystem services in the city of Bologna. Food Secur. 2014, 6, 781–792.

Pascual-Fernández, J., Pita, C., Josupeit, H., Said, A., Rodrigues J. (2019): Markets, Distribution and Value Chains in Small-Scale Fisheries: A Special Focus on Europe. In: Chuenpagdee, R., Jentoft, S. (Hrsg.): Transdisciplinarity for Small-Scale Fisheries Governance. Analysis and Practice. Vol. 21. Springer, Cham. 141-162.

Pe'er, G., Zinngrebe, Y., Hauck, J., Schindler, S., Dittrich, A., Zingg, S., Tscharntke, T., Oppermann, R., Sutcliffe, L.M.E., Sirami, C., Schmidt, J., Hoyer, C., Schleyer, C., Lakner, S. (2017): Adding Some Green to the Greening: Improving the EU's Ecological Focus Areas for Biodiversity and Farmers. Cons Lett. 2017, 10, 517–530.

Piorr, A., Zasada, I., Doernberg, A., Zoll, F., Ramme, W. (2018): Research for AGRI Committee – Urban and peri-urban agriculture in the EU. European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

Recanti, F., Maughan, C., Pedrotti, M., Dembska, K., Antonelli, M. (2019): Assessing the role of CAP for more sustainable and healthier food systems in Europe: A literature review. Science of the Total Environment, Vol. 653. 908-919.

Rete Italiana Politiche Locali del Cibo (2022). Online source. Accessible via https://www.politichelocalicibo.it

Russo, A., Escobedo, F.J., Cirella, G.T., Zerbe, S. (2017): Edible green infrastructure: An approach and review of provisioning ecosystem services and disservices in urban environments. Agric. Ecosyst. Environ. 2017, 242, 53–66.

Sanjuan-Delmás, D., Llorach-Massana, P., Nadal, A., Ercilla-Montserrat, M., Muñoz, P., Montero, J.I., Josa, A., Gabarrell, X., Rieradevall, J. (2018): Environmental assessment of an integrated rooftop greenhouse for food production in cities. J. Clean. Prod. 2018, 177, 326–337.

Sanyé-Mengual, E., Gasperi, D., Michelon, N., Orsini, F., Ponchia, G., Gianquinto, G. (2018): Eco-Efficiency Assessment and Food Security Potential of Home Gardening: A Case Study in Padua, Italy. Sustainability 2018, 10, 2124.

Sanyé-Mengual, E., Specht, K., Krikser, T., Vanni, C., Pennisi, G., Orsini, F., Gianquinto, G.P. (2018): Social acceptance and perceived ecosystem services of urban agriculture in Southern Europe: The case of Bologna, Italy. PLoS ONE 2018, 13, e0200993.

Specht, K., Schimichowski, J., Fox-Kämper, R. (2021): Multifunctional Urban Landscapes: The Potential Role of Urban Agriculture as an Element of Sustainable Land Management. In: Weith, T., Barkmann, T., Gaasch, N., Rogga, S., Strauß, C., Zscheischler, J. (eds) Sustainable Land Management in a European Context. Human-Environment Interactions, vol 8. Springer, Cham.

Specht, K., Siebert, R., Hartmann, I., Freisinger, U. B., Sawicka, M., Werner, A., ... & Dierich, A. (2014): Urban agriculture of the future: an overview of sustainability aspects of food production in and on buildings. Agriculture and human values, 31(1), 33-51.

Stahlbrand, L., Roberts, W. (2022): Food policy councils and the food-city nexus: The History of the Toronto Food Policy Council. Canadian Food Studies / La Revue canadienne des études sur l'alimentation, issue 9.

Stierand, P. (2012): Stadtentwicklung mit dem Gartenspaten. Umrisse einer Stadternährungsplanung. 1. Auflage. Dortmund: Speiseräume.de.

Von der Leyen, U. (2019): A Union that Strives for More: My Agenda for Europe, Political Guidelines for the Next European Commission 2019–2024; Publications Office of the EU: Luxembourg.

Zambrano Prado, P., Pons-Gumí, D., Toboso-Chavero, S., Parada, F., Josa Garcia-Tornel, A., Gabarrell Durany, X., Rieradevall, J. (2021): Perceptions on barriers and opportunities for integrating urban agri-green roofs: a European Mediterranean compact city case. Cities, Vol. 114. Article 103196.

Zoll, F., Specht, K., Opitz, I., Siebert, R., Piorr, A., Zasada, I. (2017): Individual choice or collective action? Exploring consumer motives for participating in alternative food networks. Int. J. Consum. Stud. 2017, 42, 101–110.

Annex

01
THE POLICY ENVIRONMENT FOR SUSTAINABLE CRFS
PUBLISHED ONLINE: JULY 2022

PLANNING POLICY AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

Rooftop garden on the roof of AgroParisTech in Paris, France. Photo: Runrid Fox-Kämper

INTRODUCTION

Over the past two decades, interest in urban food production has grown worldwide and research on the potential of both classical peri-urban agriculture and innovations such as rooftop gardening and vertical farming to "feed the city" has shown potential for a much higher degree of self-sufficiency in vegetables, fruit and herbs than is currently realised – with multiple additional benefits on climate in urban areas and physical and mental health for urban dwellers. One of the obstacles that stand in the way of realising this potential in many European countries are spatial planning laws: they define quite narrowly what kind of activities are allowed on each piece of land and often restrict urban food production or urban agriculture activities within the city. E.g., the German Federal Land Utilisation Ordinance (Baunutzungsverordnung), originally enacted in 1962 and last revised in 1990, is based on the distinction between rural and urban areas, and defines which types of uses (residential, industrial, agricultural and leisure) are allowed in which area. The purpose of such ordinances is to arrange urban functions so that they do not interfere with or impede each other's function. Besides allotment garden areas, the land use plans regularly do not include a category for urban agriculture or urban food production. Another aspect of urban planning law legislated by land use plans is the maximum number of floors allowed for new buildings.

CHALLENGES FOR SUSTAINABLE CRFS

In [most] European planning laws, "urban farming" is a contradiction in terms: commercial food production, whether soil-based or hydroponic, in the open air or in greenhouses or vertical farms, is defined as a rural activity, while urban areas are meant for housing, industrial uses and leisure. Urban residents are allowed to grow food for private or communal consumption in private and community-run gardens, allotments or in some places even on public land, but they are not allowed to market it. Under these conditions, urban farming remains a small-scale leisure pursuit with no potential for professionalisation or upscaling.

While green roofs have many advantages in terms of passive climate control, aesthetics and possibly social functions, it is not as profitable to construct a rooftop farm or garden instead of adding another floor of residential or office space - but this is often the choice developers are forced to make, as for example a greenhouse on the roof counts as a full storey according to the planning law. As long as developers have to "sacrifice" a significant part of their expected income from a new building in order to fit a garden, they are unlikely to do so.

The peri-urban horticultural areas that have played an important role in feeding cities throughout their history and that are vital to the development of sustainable CRFS are under pressure from urbanisation. Housing development and the expansion of business and industry, including relatively new phenomena such as very large data and logistics centres, and the new roads and other infrastructure they require, all jostle for space in and around cities. In many cases, even though brownfield sites would be available for redevelopment, it is much cheaper to start afresh on a greenfield site – which in most cases, mean s agricultural land.

Detail of Zoning Plan, Cologne, Germany. Image: Stadt Köln

EXAMPLE OF CHALLENGE

The German Federal Land Utilisation Ordinance (Baunutzungsverordnung) limits the opportunities for horticultural business and livestock production that are only allowed in villages, small settlements and mixed areas while it is in general not allowed in inner-city areas, industrial or residential zones. Businesses that process food are considered as "Trade" (Gewerbe), not as "Agriculture", and are only allowed in business parks ("Gewerbegebiet"). This leads to a situation where small food growers who want to engage in value-adding activities literally have no place to set up their operation.

EMERGING INNOVATION

1. Enabling rooftop farming

Cities can become active promoters to enable rooftop farming. Looking towards Paris and Bologna, both cities require green roofs on new public and private buildings. While Bologna's "Piano Urbanistico Generale" (General Urban Plan) from 2021 does not extend to legislating for urban agriculture, the Parisculteurs programme, started in 2016, has the objective to install 100 hectares of green roofs and walls, one-third of it for urban agriculture. Also since 2016, any building in Paris undergoing renovations or new construction over 100m² is required to have a green roof or rooftop farm. Any building over 5,000 m² must use the roof for urban farming specifically. The municipality of Paris further provides practical advice through their Urban Gardening Resource Centre (Maison du Jardinage) and has also produced detailed information material on rooftop gardens and farms – both on their website and in a separate guidebook.

2. Encoding food production in urban planning

Cities can encode and thereby enable food production. In Bologna's General Urban Plan from 2020 the city makes provision for the promotion of both existing and newly founded agricultural enterprises with a wide range of activities within the city boundaries: "environmental, recreational and leisure services, social agriculture, catering and hospitality, land maintenance, educational farms, direct sale of fresh and processed agricultural products". This includes allowing new construction of building "necessary for the management of agricultural land and for the exercise of agricultural and related activities".

3. Safeguarding peri-urban food production

Where cities have jurisdiction over their horticulture belt, they can take direct steps to protect it from development. In many cases, these areas are spread out under several municipalities, making coordination and collaboration among the relevant cities and district imperative. An example of this is the plan of the Bordeaux Métropole authority, with nine neighbouring municipalities, safeguarding the area known as the Parc des Jalles.

RECOMMENDATIONS

1. Create a land use category for "urban food production" that closes the gap in planning provisions to enable urban farming.

2. Enable and promote rooftop farming. Municipal governments are looking for ways to adapt their city to climate change and the heat and water stress it brings, and green roofs are one powerful part of the solution. Many cities have programmes providing planning advice and financial support for green roofs. Include a stipulation for food production, not just extensive greening, in projects above a certain size.

3. Change the definition of what constitutes an additional floor of a building to make it easier to realise the potential of built-up areas for adding rooftop greenhouses for food production.

4. Establish a central contact point for food production projects at the municipal level, in order to be able to implement and coordinate activities more efficiently, both on the part of the municipality and for private actors and small businesses. This central contact point can centrally record, process and implement all concerns and utilisation requirements.

5. Link the planning of green and open spaces to urban food production. Urban gardens and small food production enterprises can be integrated into existing or planned green and open spaces in order to provide CRFS initiatives with space, to provide visibility and educational opportunities, and to avoid conflicts of use.

02
THE POLICY ENVIRONMENT FOR SUSTAINABLE CRFS
PUBLISHED ONLINE: JULY 2022

AGRICULTURAL POLICY AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

Fermes de Gally, Saint Denis, France. Photo: Véronique Saint-Ges

INTRODUCTION

The policy environment for agriculture in Europe has been shaped to a very large extent at the EU level since the first enactment of the Common Agricultural Policy (CAP) in 1967, with national and regional governments' role largely confined to making decisions on its local implementation. The CAP, last reformed in 2021, continues to be the most impactful agricultural policy in Europe, with deep repercussions around the world. It is the single largest item in the EU budget, accounting for 33% of total spending (€ 55.71 billion) in 2021. In 2019, more than 80% of this (most of what is known as "the 1st pillar") was spent in direct payments to farmers, which are predominantly based on the size of their landholding or animal herd. This results in a heavily skewed distribution of the funds: the great majority (75%) of farms received €5,000 or less in direct payment in 2019, while the largest 1,93% of farms received more than € 50,000 each. Rural farmers with very small holdings, below the so-called "minimum requirement" (0.3 to 5 ha, depending on the country) and farms in urban areas are not eligible for any direct payments at all. Furthermore, the so-called 2nd pillar, containing €95.5 billion or 24,7 % of CAP funds in 2019, is meant to support "a thriving rural economy" and a variety of measures to make agriculture more sustainable. However, numerous evaluations of successive versions of the CAP – most recently the European Court of Auditors in May 2022 - have found that for all the rhetoric and dedicated funds, the desired effects on climate change mitigation, biodiversity, soil and water protection have not materialised, while both the overall number of farms and people making their living in agriculture has been falling for decades.

CHALLENGES

Current agricultural policy and support strictly separate rural areas (production) and urban areas (consumption)

The distribution mechanism for direct payments thus favours large, commodity-focused land holdings and factory farms whose production is oriented towards the global market and the food industry. On the other hand, the types of farms that benefit least are the smaller, more diversified operations that are actually the underpinning of a sustainable city-region food system: they are more likely to produce food for the local market, as regional marketing is more profitable for relatively small quantities of food meant for direct consumption than for large, specialised farms with high production volumes. Primary food producers in the urban centres are excluded from support altogether, both for their location and for their lack in size.

Current agricultural policy and support exacerbate disadvantages for small producers

Small farmers are doubly disadvantaged by the CAP and the market situation it has created – not only do they receive only minimal support, if any, but they also suffer from the market distortion that results from massive financial support exacerbating the existing economies of scale: in comparison to their product, industrial food becomes even cheaper and more difficult to compete with.

EXAMPLE OF CHALLENGE

The experience of the "Jardins Inspirés", located in the "horticultural valley" ("La vallée maraichère") near Bordeaux, France is illustrative of many of the challenges small European peri-urban farmers face, and also of some of the emerging solutions through new forms of organisation, partnership and support. It is a very small operation (just 0,5 ha) but at the same time highly diverse in its products and services: they include biodynamic vegetable production for the market, but also educational activities for both adults and schools, and agro-biodiversity conservation through in-situ conservation and a seed bank of heirloom ("peasant") varieties of tomato and other vegetables. While all their products and services are appreciated and in demand the owner has had difficulty in maintaining the farm due to insecure land tenure, which has led to several short-term moves. She has also had difficulty in finding a suitable organisational form to accomodate these very different types of economic and social activities. Ultimately, two kinds of legal entity were created – a "for-profit" farming operation for all commercial activities and a non-profit association for the educational services.

In order to ensure the long-term existence of the farm, three surrounding municipalities, Bordeaux, Eysines and Blanquefort are providing various kinds of support – funding the education programme, giving advice and administrative support for participating in public tenders, and setting up the infrastructure for the seed bank.

EMERGING INNOVATION

1. Shifts in public purchasing

Many cities are boosting demand for regional, sustainable food by focusing their public food purchasing accordingly – see e.g. the members of the German Organic City Network or of ICLEI's Buy Better Food Campaign.

2. Land access and subsidies at city level

Cities can become strong partners in providing land access and subsidies for small-scale farming. For example, cities that own agricultural land increasingly decide to make it available specifically for small, agroecological producers (e.g. Sabadell, Madrid, Bordeaux Métropole). The municipality of Ljubljana pays a direct subsidy to small farmers in and around the city.

3. Municipalities as networking facilitators

Municipalities become facilitators by encouraging their citizens to take an interest in food production through networking and awareness-raising activities. This happens for example in Eysines, France, on the outskirts of Bordeaux, with the annual "Raid of the Vegetable Farmers" ("Raid des Maraîchers"), a programme of hikes, bike rides and organised visits to the farms. In Lansingerland, Netherlands, commercial greenhouse agriculture plays a strong role in the local economy and the municipality helps to set up partnerships between local farmers and schools for educational activities.

4. Urban agriculture departments at city level

The municipalities of Ljubljana and Bordeaux-Métropole have a dedicated department for agriculture, while the city of Hanover in Germany formulated an "agriculture programme" for the first time in 1994. While this remains the exception, many cities have formulated food strategies with a vision, goals and concrete measures for strengthening their local sustainable CRFS. Market places have existed in cities for centuries but recently, there has been renewed focus on providing spaces specifically to local producers (e.g. in Bologna).

5. Edible cities

The idea of the "edible city" has caught on in many places, and citizens are getting access to space for growing their own food all over cities, on the rooftops of public or private buildings, former car parks and wasteland or even in public parks (e.g. in Paris through the Parisculteurs programme, in Cologne's "Garden Laboratories" or in the "edible city" of Andernach, Germany).

RECOMMENDATIONS

1. Facilitate access to funding and other support by reducing the bureaucratic hurdles and opening up programmes for very small, as well as urban-based operators.

2. Provide public support to small and highly diversified farms in dealing with bureaucratic hurdles related to taxes, access to funding and other issues.

3. Integrate the goals of transition towards more regional production and to sustainable production systems into policy-making on all levels. Strong regulations and standards are needed in combination with education, technical advice and financial support that enable producers to make the investments needed and convert to sustainable practices.

4. Focus agricultural subsidies on producers who are creating public goods in terms of environmental and social sustainability, rewarding e.g. ecological farming practices, fair employment and contributions to education rather than sheer size.

5. Ensure fair market conditions for European producers who conform to high environmental, social and animal welfare standards through supply chain legislation.

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EDUCATION POLICY AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

Photo: Chiara Cirillo.

INTRODUCTION

At a time when more farmers and small food producers in Europe are retiring every year – "in 2016, for every farm manager under 40 in the EU there were three farm managers over 65" – academic and vocational education systems are struggling to provide prospective entrants with the knowledge and skills they need to succeed in the demanding environment in which they will operate. The education they receive is still focused on growth and intensification, in a situation where this production model is already reaching its limits. In a traditional agricultural system, children learn to farm from the moment they can walk, following their farmer parents and acquiring the necessary knowledge. For adults who did not grow up on a farm and decide to become a farmer, it can be a challenge to get adequate and sufficient training. Many details of farming are site-specific and based on experience. National governments often have agricultural universities or vocational schools, and state governments are known to support farmers by providing advice on specific farming issues. However, there are still gaps when it comes to bringing potential farmers up to speed quickly enough so that they can be successful and their business model is not hindered.

CHALLENGES FOR SUSTAINABLE CRFS

Challenges exist especially in the area of general agricultural education, but also in the area of vocational training for food crafts and in food technology education. Many university courses are focused on specialisations or research and do not offer practice-oriented programmes. In addition, agriculture is a political business - there are many different opinions on methods and best practices, especially when it comes to "sustainable agriculture". Agriculture and food trade curricula still focus on scaling up, mechanisation and industrialisation as a path to success, while many aspiring food producers have a very different mindset and aim for small-scale, artisanal, often low-tech production for a local market. It can be difficult to find quality, locally relevant information. In addition, not all students have the same access to the infrastructure or machinery used in their education. Well-educated farmers and food craftspeople are essential for implementing technical, social and environmental innovations.

EXAMPLE OF CHALLENGE

In Germany, most agricultural training courses, both vocational and academic, focus heavily on technological innovations in production, but do not focus on social or economic innovations such as new forms of regional marketing or community-supported business models (CSX), which could actually be a better path to sustainable livelihoods. In Italy, there are many opportunities to create and get funded training courses for professionals and technicians in agriculture, for example under the regional the Rural Development Programmes (such as the one from Campania), but not so many for potential new small farmers and agri-entrepreneurs.

EMERGING INNOVATION

1. Grassroots Initiatives

Grassroot initiatives offer informal advisory services. For the case of community-supported agriculture (CSA) in Germany, the CSA network offers a structured peer learning programme that enables new and aspiring CSA founders to learn from the collective experience of the more than 350 CSAs in the network. A functioning CSA differs in many ways from a regular farm, so the range of topics extends from highly diversified vegetable production to legal and financial aspects to social processes in prosumer groups.

2. Incubation Programmes

Incubation programmes can be a quick way to learn the best practices needed to start a CRFS project. These programmes often provide training in an informal setting over several weeks or a growing season. They are usually structured as a series of "crash courses" where participants learn best practices in a short period of time on topics such as business model, marketing and sales, farm planning or best practices for season extension. A course like this, as for example offered by Nabolagshager in Oslo, Norway, can be an excellent opportunity for aspiring farmers to network with each other and share experiences and problems.

CSA field visit, Càceres, Spain. Photo: URGENCI

3. Innovative vocational training

Innovative vocational trainings can also be organised by cities or municipalities. For example, the City of Paris has been running the School of Horticulture and Landscaping (École du Breuil) since 1867, which offers a wide range of training courses in the field of urban agriculture and gardening – from full-time trainings such as the *Brevet Professionnel* option Responsable d'Entreprises Agricoles spécialité "Fermes agroécologiques urbaines et périurbaines" (technical college diploma in agricultural business management with specialisation in agroecological farming in urban and peri-urban areas) to further education modules for professional gardeners and one-day introductory courses for interested citizens.

4. Innovative academic education

Academic institutions are increasingly engaged in new education programmes related to food systems and urban agriculture, which, in addition to traditional knowledge transfer, include the training of professionals with specific skills on: sustainable primary production techniques; sustainable approaches to crop protection; sustainable models and approaches such as the circular economy; sectoral policies, regulations and economic aspects related to innovations aimed at the ecological transition; the sustainability of food and consumption; waste management and energy production from renewable resources; sustainable methods and technologies or in food processing and packaging.

The University of Naples is developing a new degree course focused on Food Systems that will include practical elements such as trainings specifically dedicated to a business case study and a sustainability boot camp, helping students to develop skills that can be immediately useful for integrating sustainability into businesses operating in the agri-food sector, or even for developing new sustainable local food systems. It is not yet online but will be organised along similar lines to the "Green Management and Corporate Sustainability" course offered at Bocconi University in Milan.

RECOMMENDATIONS

1. Diversify academic and vocational training programmes to include environmental and social aspects and give students the opportunity to follow the "small-scale" and "up-scaling" pathways.

2. Offer training courses in local nurseries for interested students to gather and develop hands-on horticultural skills and activities and also to learn about new regional horticultural crafts in the agri-food sector. In addition, this will make it easier for professionals and students to interact.

3. Create differentiated training pathways in academic institutions for urban agriculture that deal comprehensively with urban agriculture and all its fields, and are not just a subcategory of an already existing training pathway.

4. Include innovative business models, including solidarity-based approaches, in both agricultural and food craftsmanship training courses.

04
THE POLICY ENVIRONMENT FOR SUSTAINABLE CRFS
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CIRCULARITY AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

Roof Water-Farm hydroponic greenhouse, Berlin, Germany. Photo: Grit Bürgow.

INTRODUCTION

Sustainable City-Region Food Systems have great potential to contribute to the transition to a circular economy. They could help close resource loops for a number of crucial resources

- which are becoming increasingly scarce - e.g., freshwater - and
- which are highly destructive to extract or produce - e.g., nitrogen, phosphate and potassium from fossil sources, animal feed such as soya produced on deforested land – or
- which are currently a waste product but could be converted into a resource - e.g., heat from buildings contributing to urban heat stress, or food waste from catering and other sources that are currently "downcycled" for biogas or even disposed of altogether.

The European food system in its current form is in many ways the opposite of a circular system: it relies heavily on fossil resources, water and inputs from deforested land imported from around the world into Europe, where the final product and associated waste are produced. The long transport distances make it impossible to close these resource loops and create problems at both ends rather than solutions within a loop. In theory, City-Region Food Systems have a very high potential to function as a more circular system than the current globalised food system, but certain regulations or even the lack of such regulations at EU and national government level prevent further development in this direction.

CHALLENGES FOR SUSTAINABLE CRFS

EU regulations on wastewater recycling for urban agriculture

For the grey and black water recycling sector in (urban) agriculture, there is a new EU regulation on minimum requirements for water reuse (2020/741), which was adopted in May 2020 and is currently being processed by member states for national implementation. This could open up new opportunities for greywater recycling to play a greater role in the CRFS if treatment and hygiene control requirements and permitted uses are formulated in such a way that smaller plants can demonstrate safety through treatment processes that are described as safe; rather than, for example, weekly laboratory testing. Another policy element that is missing for widespread implementation of this practice is the creation of incentives and possibly mandatory separate collection of grey water in new buildings and renovations of buildings above a certain size.

EU regulations on animal feed

Another area where waste streams could be turned into a valuable resource if the policy environment allowed it is animal feed. The regulation on animal protein (commonly known as the "Feed Ban"), adopted in 1994 and extended in 2001, which prohibits the feeding of any type of animal protein to certain farmed animals was amended in 2021 to allow the use of seven different species of insects as animal feed. However, the restrictions on what the insects themselves may be fed remain in place and preclude the use of kitchen waste and other potential sources of insect feed that would make insects a sustainable option by reducing the need for agricultural land for animal feed.

EXAMPLE OF CHALLENGE

The worsening freshwater crisis in many countries shows that water recycling is urgently needed. Technologies for small-scale greywater recycling, including monitoring and treatment systems are available and have been proven successful in both soil-based agriculture and in vertical farming systems based on hydroponics. Nevertheless, the policy environment for the implementation of this innovation is not yet in place. An example of this situation is the "Water House" in Berlin, which was developed and operated by Nolde and Partner for environmentally conscious developers and built as a "lighthouse project" with partial state funding. Proven safe and hygienic, it recycles up to 10 m³ of grey water to irrigate residents; allotments and a hydroponic greenhouse, and to supply toilets for 73 households. On the small scale on which it currently operates, it is more of an enthusiast proposition than a profit- seeking business.

EMERGING INNOVATION

1. Advantages of physical proximity

A locally integrated food economy - from farm to table to waste disposal and recycling - reduces transport costs, so that a resource cycle can be the more economical option. The food system can be interwoven with the urban fabric and other social and economic activities in the city by bringing together actors of different parts of the system and improving synergies more easily. This also includes a closer relationship between consumers and producers, creating a basis for greater awareness, respect and solidarity, leading to more sustainable consumption choices and/or active engagement as prosumers.

Greywater treatment plant at Water House, Berlin, Germany. Photo: Erwin Nolde.

2. Savings on infrastructure

The small-scale, highly localised use of treated greywater typical of a CRFS would not require a large upfront investment to build a separate wastewater system. Instead, a very large waste stream would be treated at its many points of origin and converted into a valuable resource that could also be used directly on site (or in close proximity), both for urban food production and for irrigation of parks and green roofs.

3. Nutrient recycling

A complementary approach that focuses on diverting nutrients from wastewater before they become pollutants is demonstrated by the start-up TOOPI, based in Bordeaux, France: working with organisers of large events and using specially-designed toilets, urine is collected separately and fermented to make it safe and hygienic, creating a valuable source of fertilizer for agriculture that is both cheaper and more effective than synthetic equivalents. TOOPI has received funding from the French Agency for Ecological Transition to take their process from proof-of-concept to implementation at scale, building processing facilities and a network of partner institutions in several French cities.

4. Food waste upcycling

Similarly, the production of insects as a sustainable high-value animal feed with the potential to replace destructive soy and fish meal, and also for human consumption, using catering and other waste products has been practiced in many parts of the world. Various aspects of insect production for food and feed have also been the subject of research by the FAO since 2003 and by European research institutions such as Wageningen University for about a decade.

RECOMMENDATIONS

1. Raise awareness of the need to use resources more sparingly, including freshwater, and disseminate information on the circular economy to the general public.

2. Implement regulations for the use of grey water in agriculture with provisions for use in typical urban crops and for safety control systems suitable for small farms.

3. Make separate greywater collection in all residential buildings above a certain size a legal requirement, combined with a support programme. (A model for this lies in the renewable energy programs such as the German 1,000 Roofs Programme and the Renewable Energy Sources Act (EEG), which kick-started decentralised solar energy generation in Germany).

4. Legalise the use of kitchen waste and other waste products that have been proven to be both safe and sustainable for use in the production of insects for anmal feed.

05
THE POLICY ENVIRONMENT FOR SUSTAINABLE CRFS
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FOOD SAFETY POLICY AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

Photo. FoodE photo library

INTRODUCTION

Food safety is one of the most important regulatory arenas of the food system. Maintaining a healthy and safe food supply for citizens is a huge undertaking that comes with an equally large number of rules and regulations. As the FoodE project focuses on smaller-scale producers, many of these initiatives have expressed difficulties in understanding food safety rules, gaining approval of food safety authorities, and obtaining infrastructure needed to follow food safety guidelines. There is also the opposite extreme, where locally and traditionally grown food from small businesses have a better reputation to consumers, despite being, in many cases, less regulated and less systematically controlled than larger retail and imported food (Herman et al., 2012; Pussemier et al., 2012). Creating a better policy environment that accommodates smaller producers who do not have access to large start-up capital is essential if we want to maintain food safety standards on a small-scale.

CHALLENGES FOR SUSTAINABLE CRFS

Starting a small food production business is hard enough in terms of obtaining the proper skills and resources. However, figuring out how to comply with food safety regulations designed for industrial production is just as big or even more challenging. With the emergence of many sustainable small-scale producers across Europe focusing on the local market, finding their place within food safety regulations has proved challenging. Food safety regulations have different implications for businesses from large to very small. Larger companies have dedicated staff and other resources to develop a separate team to coordinate implementation of the regulatory requirements to be compliant. However, this approach has proven effective for large companies, but for those that fall into the small and very small categories this approach is challenging. As many of these producers are pioneering either technology or production methodology, it can be difficult to obtain best practice case studies from government authorities. Many food safety regulations require encompassing infrastructure for cleaning or packing food, knowledge of new farming practices (for example, integrated pest management) and improved supervision of labour used on the farm, as well as greater capacity for record-keeping and documentation of decision-making. This has proven to be a barrier for small-scale producers who operate with little start-up capital and have developed business models that will never reach the scale to justify such investments in infrastructure. Finally, growing food in urban areas is also a challenge as it poses new risks that are not present in rural production systems.

EXAMPLE OF CHALLENGE

Nabolagshager AS, a social enterprise based in Oslo, Norway began experimenting with rooftop farming in 2017. After building a demonstration garden on a rooftop in the centre of Oslo, the group moved to develop business models that could ensure financial sustainability of the project while creating jobs for the local, minority youth. The most logical business model was the sale of vegetables and herbs grown on the rooftop to local restaurants and consumers.

A number of challenges quickly arose with this model. The first was that the rooftop was not private, but rather open for the public. This made it impossible to ensure that the food did not come in contact with other people who did not follow best hygiene practices.

Another challenge was the lack of infrastructure for post-production processes. Without professional sinks, fridges and packing rooms, Nabolagshager was unable to comply with the current food safety regulations. However, the scale of production did not justify the level of infrastructure investment required under the current regulatory framework.

Another example of a specific policy that creates a challenge is the German Foods, Consumer Goods and Feedstuffs Code (LFGB), enacted in 2005. It ensures compliance with hygiene standards in food production and includes regulations on production, storage, processing and preparation, separation of the means of production from the products when storing different products and on all transport routes. In addition, a specific legal permit (health certificate) is mandatory for the persons working with the processing of the products. This is legally enforced through regular controls and has a negative impact on urban agriculture as it is difficult for small businesses to comply with.

Photo: Canva.com by Alex Rath.

EMERGING INNNOVATION

1. Digital innovations

As proposed by FAO, advances in digital innovations can enable more affordable periodic testing for early detection of foodborne pathogens and improve traceability mechanisms to identify and remove contaminated products.

2. Collective action

Development of collective actions at different points of the agricultural cycle for meeting food safety challenges may enable the group to achieve economies of scale that would be unavailable to individual producers as proposed by Humphrey (2017).

3. Training and other support

Support should be given to smallholder farmers and other small-scale food producers, processors and traders, given the disadvantages they face with respect to scale, finance and capabilities. One possible solution are training programmes, another is the provision of support services to help with implementation of food safety systems and especially, with compliance to administrative procedures (these could be provided by governments, development agencies or business organisations).

4. Policy adaptation

The EU Commission issued a "Notice providing guidance on food safety management systems for food retail activities" in 2020, acknowledging that existing food safety regulations are not adapted to the situation of small-scale producers and providing for some simplified procedures. This being a very recent change, it remains to be seen if and how it will be implemented at the local level, and whether it will have the intended effect.

RECOMMENDATIONS

1. Adapt food safety regulations to take into account smaller-scale and innovative producers who are working in new arenas such as vertical farming or urban agriculture.

2. Simplify food safety management for small operators. The European Food Safety Authority (EFSA) has proposed a simplified approach to food safety management in small retail businesses such as grocery shops, butchers, and bakeries. The approach includes guidelines on how to identify the most relevant biological, chemical and physical hazards at each stage of the food production process, the activities or practices that make hazards more likely to occur and appropriate control measures.

3. Simplify control systems. Burdensome bureaucratic processes and technology prescriptions need to be adjusted to address the situation of small-scale producers. Doing so will help these sustainable food production organisations maintain good practices for consumer safety while also producing at a scale that better fits emerging business models.

4. Provide subsidies, training and administrative support to reduce the cost of capital investment, and certification to small-scale farmers and other urban food producers.

06
THE POLICY ENVIRONMENT FOR SUSTAINABLE CRFS
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POLICY SILOS AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

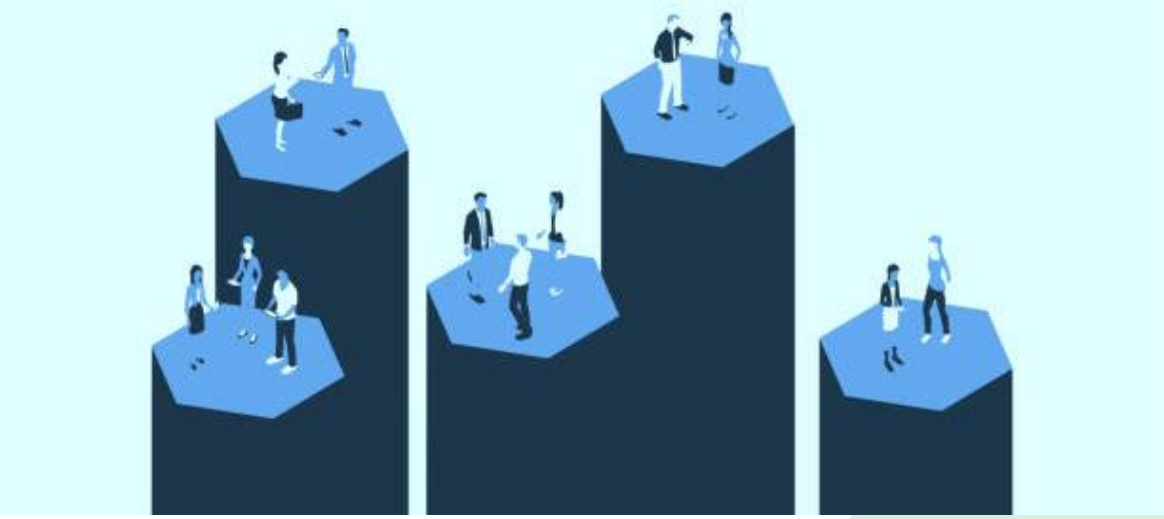

Image: iStockphoto

INTRODUCTION

"Food" is one of the most multifaceted aspects of human society, and is being shaped by policies in the health, agricultural, economic, social, environmental, labour, trade, urban development and educational sectors as well as the collaboration (or lack thereof) between cities and rural districts, between municipalities, regions and national governments, and between all sectors of society. The food system is also a major driver behind some of the greatest challenges human society is currently facing: it accounts for ⅓ of greenhouse gas emissions, is the biggest single cause of biodiversity loss and soil degradation, human and animal rights abuses are systemic, while over-, mal- and undernutrition are among the leading causes of premature death and disease globally. This would call for an integrated approach - however, policy making and governance more generally are sharply compartmentalized in terms of policy areas (silos), both geographically, and between the different levels of government. This applies to the EU itself as well as to every other government level down to the municipalities. Numerous reports and resolutions, from within European institutions and outside, have identified this governance process as one of the greatest obstacles for a food systems transformation aimed at replacing globalised structures and unsustainable production models with a more diverse, regionalised, sustainable food system.

CHALLENGES FOR SUSTAINABLE CRFS

The current food system and its policy environment are the result of numerous political decisions taken separately, over several decades in different policy fields such as agriculture, trade, social and labour regulations. This has resulted in shifting the European food system towards full commodification, enhancing the primacy of large over small companies, uniformity over diversity, and separation and competition rather than collaboration between stakeholders. Building a sustainable CRFS requires fundamental change after having reached this state. This cannot be achieved in the way that traditional siloed governance works - incremental and largely disparate changes made in separate policy arenas - but requires a whole-system view and concerted and coordinated action by all actors and at all levels. Otherwise, the deep contradictions between the existential needs and interests of different stakeholders will derail the process -

- contradictions such as:

- Developing short food chains built on a great diversity of small, local operators - while long-distance transport is subsidized and the majority of financial support goes to large operators and towards further upscaling
- Moving towards true cost accounting and the resultant higher prices for farmers and other food producers in order to reward those producing and preserving public goods, while 8.6% of Europe's population lives in food poverty and there is no accompanying social policy in place to ensure access to food for all
- Food is treated like any other commodity under the EU open market rules, putting a break on municipalities and regional public authorities who want to introduce sustainable and regional purchasing criteria, one of the great levers for setting a local food system transformation in motion
- Encouraging young farmers to enter the profession while they are being priced out of the land market due to the effects of fiscal and development policies

EXAMPLE OF CHALLENGE

A recent analysis by the European Commission showed how agricultural and climate policies are siloed and therefore incoherent. They found that Voluntary Coupled Support (VCS) is provided to support the production of fruits and vegetables, cotton and rice in Andalucia, whose production drives overexploitation of water resources. Furthermore, direct payments are given for agricultural activities on peatland/ wetland, with no conditions for limiting damage (which results in high levels of GHG emissions). And measures for forest investment are potentially incoherent with market stability and food security as afforestation potentially converts land from agricultural uses into forests.

Executive committee of the FPC for Upper Franconia, Germany, representing all parts of the food chain. Photo: Andreas Harbach

EMERGING INNOVATION

Setting food policy was not a traditional role of cities, with food provision left primarily to the market under a policy environment determined by the higher levels of government. However, cities all over Europe, as well as in other parts of the world, have realised that they can play a key role in the transformation towards sustainable city region food systems, that this calls for new modes of setting policy, and have started creating new structures and approaches to this aim.

1. Local, regional and national food strategies

In many cities, regions and countries, sustainable food strategies, often developed in a participatory process, have proven to be powerful catalysts for creating a shared awareness and vision, a coherent set of mutually reinforcing policy measures as well as a network of actors committed to their implementation (see for example France's National Food Plan "The Regions in Action" from 2019, Wallonia's "Manger Demain" strategy from 2018 and Norway's National Urban Agriculture Strategy from 2021 - the German state of Brandenburg has just started the process in 2022).

2. Improved coordination of food issues

Some municipalities and regional governments, including Turin (Italy), Bordeaux (France), Cologne (Germany) and the Belgian province of Wallonia have all created offices of "food policy coordination" within their administrative structure, charged with coordinating the activities of all relevant departments and stakeholders and driving the implementation of their food strategies.

3. Food policy platforms

Collaborations between cities and their neighbouring rural districts on land use planning and joint food infrastructure development such as the "Eco Model Regions" in several German states, or between cities, research institutions, regional and national government in joint food policy projects such as the Dutch "City Deal Voedsel" have been successful in putting the food system on the agenda and creating momentum for transformation on the ground. Food policy councils, multi-stakeholder platforms for food systems change, have emerged in more than 100 European cities, mostly at the instigation of civil society but with the active participation of local governments and actors from the food value chain, and have played a crucial role in creating a space beyond the walls of sectors and silos. These local Food Policy Councils have started creating regional networks to replicate the effect at higher government levels, but this process is still in its early stages.

RECOMMENDATIONS

1. Create either integrated food policies, or apply a „food in all policies" approach - with the collaboration of all relevant departments and stakeholders.

2. Create institutions for cross-departmental and cross-sectoral collaboration on food policy at all levels of government, where all relevant departments and stakeholders sit at the table.

3. Use these new structures to formulate a coherent vision of a desirable future and develop detailed, measurable strategies for how to get there.

4. Move away from treating food purely as a commodity and frame it in terms of human rights and public goods.

07
THE POLICY ENVIRONMENT FOR SUSTAINABLE CFRS
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FISHERIES POLICY AND THE DEVELOPMENT OF SUSTAINABLE CITY-REGION FOOD SYSTEMS

CASE STUDY

La Restinga, El Hierro, Spain. Photo: Jose Pascual-Fernández.

INTRODUCTION

The EU Common Fisheries Policy provides a general regulative framework for European fisheries. The European Commission sets the total allowable catches (fishing quotas) for each member state, which are then allocated by those states to specific fleets. It also allows differentiation in control systems between large-scale, small-scale, and recreational fisheries, leaving it up to each member state to set some of the rules and procedures for monitoring and enforcement. This has resulted in different approaches to the management of small-scale fisheries in different countries, with some countries more likely than others to allow local fisheries to participate in sustainable CRFS. Access to fishing opportunities and quotas has often disadvantaged small-scale fisheries. This fact sheet uses the case of the Canary Islands to illustrate the situation.

CHALLENGES

Tuna fishing for export has a long history in the Canary Islands, dating back to the early 19th century. Local small-scale fishers in Spain are organised in cofradías (fishers' associations) to control the first sale of the catch and to regulate a variety of issues related to fishing, such as proposals to regulate fishing gear in order to achieve sustainable use of resources. In some Canary Islands, cofradías also manage the marketing of the catches. They compete for resources with both large-scale and recreational fishers and face a number of policies that disadvantage them:

Small-scale fleets in the Canary Islands have received only a tiny share of the fishing quotas for Atlantic Bluefin and Big Eye tuna, despite the fact that these species have been caught in the archipelago in the past, the fishery is of socio-economic importance and the pole and line fishing technique has a favourable environmental balance. Atlantic Bluefin and Big Eye Tuna are two very high-value species on which Tenerife fishers traditionally make a living and which add considerable value to the local economy.

Large-scale fleets have traditionally been able to lobby for favourable conditions; subsidies and advantageous fishing quotas increase their profitability. In addition, the high fishing capacity of industrial tuna fleets in the open sea using fish aggregating devices (FADs) and unsustainable fishing gear such as large purse seine nets with a high proportion of small catches can affect tuna stocks, impacting the viability of artisanal fleets that depend on these resources.

Photo: Jose Pascual-Fernández

Competition from industrial fleets, imports, illegal products and new consumer trends pose major market challenges for small-scale fisheries. Developing strategies to improve the value and market position of fishery products from artisanal fisheries is crucial to ensure the long-term viability of artisanal fisheries. It is necessary to differentiate the local product from those of industrial fleets or imports from other parts of the world and to take advantage of new commercial opportunities, such as alliances with the restaurant sector or new customer segments interested in sustainable city-regional food systems. Strong organisations are needed to develop new marketing strategies.

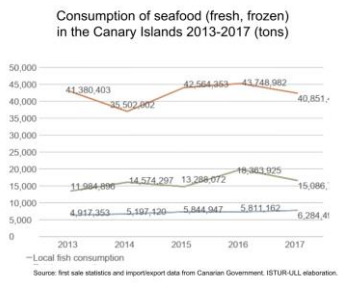
EXAMPLE OF CHALLENGE

The World Health Organisation recommends a daily intake of 500 mg of - omega-3 fatty acids which can be obtained mainly from certain organisms of aquatic origin. While in Spain citizens aged 65 and over consumed on average almost 19 kilos of fresh fish per capita in 2020, the figure for younger people under 35 was just four kilos. Notwithstanding the traditional attachment to the sea, fresh fish consumption in the Canary Islands is only half the Spanish average. Furthermore, the overweight/obesity rate among school-age children in the Canary Islands is over 44%, one of the highest in Spain. Meanwhile, 80-90% of tuna catches (six species) in Tenerife are exported raw (6-9000 tons a year), while thousands of tons of frozen tuna loins are imported. The consumption of frozen and fresh fish in the Canary Islands can be estimated at over 40,000 tons a year. Between 9 and 17% of that amount is from local sources (estimated at around 5,500 tons). At the same time, almost three times the local consumption is exported (more than 15,000 tons). Better use of local seafood resources in the Canarian markets is strongly needed.

EMERGING INNOVATION

A government policy focused on strengthening fisheries organisations would enable them to develop the necessary capacity to take advantage of new processing and marketing opportunities in response to new trends among local consumers.

These measures should first include the development of processing facilities on each island to transform raw fish into cuts that are in demand locally and to preserve a large proportion of these cuts through freezing. The products of artisanal fisheries must be clearly distinguishable from those of the large fleets, from other world markets and from illegal products through publicly controlled labelling. Information campaigns and education in schools and universities can be used to promote local fish consumption. The pilot project by Islatuna, the University of La Laguna and other FoodE and local stakeholders and partners in the FoodE project has shown that projects involving different actors to link local producers with local consumers can improve the profitability of the sector and the sustainability of small-scale fisheries. Taken together, these measures would add value to local seafood catches, increase the number and quality of jobs related to local seafood processing and distribution in the archipelago, and help restore local cultural ties with local marine resources.



RECOMMENDATIONS

1. Establish an appropriate quota allocation for the main tuna species for the artisanal fleet of the Canary Islands, taking into account historical catch levels and socio-economic importance, in order to promote the viability of the artisanal fleet in the Canary Islands.

2. Improve the capacity of local fisheries organisations for collective action and marketing opportunities, including the establishment of processing facilities on each island.

3. Establish a legal framework that reflects the reality of artisanal fisheries.

4. Promote artisanal fisheries to foster food security, secure employment and livelihoods in coastal areas and contribute to the conservation of local maritime heritage and the protection of the marine environment.

5. Reduce fish imports to measurably reduce the carbon footprint of the food supply in the Canary Islands.

6. Involve public administrations in developing appropriate policies and legislation. Public institutions should invest in human capital and collective action in the fisheries sector to effectively manage this change.