BAE
Bio-based and Applied Economics

AIEAA
ASSOCIAZIONE ITALIANA DI ECONOMIA AGRARIA E APPLICATA

Keynote speech of the 11th AIEAA Conference

Towards a new generation of (agri-) food policies

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Abstract. The succession of systemic crises in the last 20 years have affected our lives and have shaken the old order. The global community, represented by UN-based institutions, has encouraged a common effort to address global challenges. In the agri-food sector, one of the most relevant to the emerging societal challenges, the need of a new generation of agri-food policies is evident. The present paper reviews the recent literature on transformative policies, identifying their key characteristics - directionality, reflexivity, and market articulation - and proposing a framework to adapt these characteristics to the policy cycle.

Keywords: transformative food policies, transition, policy cycle, policy mix.
JEL Codes: Q18.

OPEN ACCESS

Citation: G. Brunori (2023). Towards a new generation of (agri-) food policies. *Bio-based and Applied Economics* 12(2): 103-113. doi: 10.36253/bae-14003

Received: November 26, 2022
Accepted: May 16, 2023
Published: August 05, 2023

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Editor: Fabio Bartolini, Emilia Lamonaca.

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1. INTRODUCTION

The succession of systemic crises in the last 20 years have affected our lives and have shaken the old order, built upon the primacy of economy and trade over social and environmental problems. The global community, represented by UN-based institutions, has encouraged a common effort to address global challenges. Despite all difficulties, and many stops and go, there is now a wide consensus on global challenges, and agreements on climate, biodiversity and sustainable development goals have been embodied into national laws and have been turned into quantified targets and into accountability mechanisms (TAP network, 2021).

International agreements have activated new frameworks for the public debate at national level and generated new dynamics within political and economic communities. In the new context, a growing number of private and public actors commit to sustainability objectives. Pushed by an increasing consumers' sensitiveness, many companies tend to shift the arena of competition on sustainability issues by providing higher standards that allow them to communicate sustainability values (Giovannucci et al., 2014). Policy initiatives encourage European food business to coordinate sustainability standards and their communication and punish greenwashing. Backed by international agreements, the most sensitive sectors of the public administra-

tion to sustainability gain power on more conservative administrative bodies and become drivers of change. Research and innovation policies encourage the production of new ideas and the dismissal of old paradigms, selecting research projects on their capacity to have an impact on societal challenges. In the political domain, environmental movements have started to bring governments into Courts[1] claiming that they don't respect their climate obligations.

In the agri-food domain these dynamics are particularly relevant, given the importance of agriculture and food on climate and sustainable development goals. Many influential reports in the last years have agreed on the need to transform the way we eat, produce, distribute food[2]. As the UN general secretary have stated in his Summary and Statement of Action of the Food System Summit of 2021, food systems are contributing up to one-third of greenhouse gas emissions, up to 80 per cent of biodiversity loss and use up to 70 per cent of freshwater, and three billion people — almost half of all humanity — could not afford a healthy diet. The Food System Summit has mobilized tens of thousands of people in food system dialogues aimed at making proposals for food system transformation.

The issue is not whether to change, but how and how fast. One of the problems, on this regard, is that we cannot change the system with the same policy instruments used in different historical contexts (Rogge and Stadler, 2021). A new generation of policies is needed. This paper will try to address this issue by developing a reflection around the following questions: What are the qualities that a new generation of policies should have? What should be done to foster a new generation of policies?

2. THE CHARACTERISTICS OF TRANSFORMATIVE POLICIES

According to a growing number of scholars and practitioners, transformative goals require transformative policies (UNSRID, 2016; Rogge et al., 2020; Giurca et al. 2022, Haddat et al. 2022), that are able to activate processes of structural change by affecting the root causes and the deep structures of the systems on which they operate. The difference between the new generation of policies and the old 'grand reform' approaches is the awareness of the complexity of structural change, the awareness that transformation cannot be imposed in a top-down way and that organic, all-encompassing solutions are hard to succeed. Transformative policies operate into arenas wherein a multiplicity of actors struggle to influence policymaking (Loorbach et al, 2015), and where sectors of the same governments pursue different objectives and operate according to different logics.

Having this in mind, policymaking is not seen as a timeless mechanism where outcomes follow decisions automatically. Rather, policymaking is seen as a process, articulated into phases characterized by different dynamics (Howlett, 2019). In the 'problem definition' phase, knowledge, interests and values are mobilized to 'frame' a policy problem in terms of its causes, outcomes, responsibilities, actors involved. In the 'agenda setting' phase policy problems gain or lose priority in the policymaking agenda. In the 'policy design' phase, policies are deliberated and adopted by institutional bodies. In the 'implementation' phase, policies are applied in the various contexts and deploy their outcomes. Implementation can include also monitoring and evaluation, which provides information on the efficiency and of the effectiveness of policies.

Each of these phases involves different categories of actors and networks, and different expertise. The policy process interacts with the political process, as political actors (parties, movements, members of representative bodies, media) interact with policymakers in all phases.

The impact of policies on socio-technical systems depends on the characteristics of the system: the capacity of its actors to adapt, the robustness of its rules, the vulnerability of its components, the sensitiveness to specific measures, the distribution of power within the system. Feedbacks from socio-technical systems can alter policy decisions and their implementation (Rogge et al., 2020), as when Macron was forced to withdraw its proposal of taxing fuel under the push of the movement of the 'gilets jaunes'.

The policy process can undergo rounds of depoliticisation and repoliticisation (Wiesner, 2021). Depoliticisation occurs when the problem definition is no longer contested, so that policy design is carried out outside the political spotlight and made mainly by experts. Repoliticisation occurs when the effectiveness of the policy, or even the problem definition, is put into discussion. During repoliticization, the agenda setting and policy design are supported or contrasted by competing advocacy coalitions (Mintrom et al., 1996). During depoliticization, policy design and policy implementation are carried out through policy networks, composed by public officers and stakeholders' organizations who share the same assumptions, the same problem definitions, the same objectives.

[1] https://www.unep.org/news-and-stories/story/battle-against-climate-change-courts-become-new-frontier

[2] We could cite among others: the FAO SOFI 2021 (FAO, 2022); Global Panel on Food Systems for Nutrition (2020); IFPRI (2020); SAPEA (2020); Willet et al. (2019), Brunori et al. (2020)

Transformative policies intervene in this process with the goal to remove barriers to change and to support change makers. They also can repoliticize the policy problem providing new evidence and new ideas for problem definition. They can be introduced to activate processes of change within the administration itself and give power to 'institutional entrepreneurs' within the administrations.

Transformative policies differ from other policies for three main aspects: a) values and principles to which they are inspired; b) the knowledge base necessary to manage them; c) the intervention pathways they adopt.

2.1 Values and principles

The transformative potential of policies depends on their capacity to appeal to shared values and principles. The more they are based on consensus, the less they are likely to face open contestation. International agreements such as the Sustainable Development Goals provide plenty of transformative values and principles. But these principles have not prevailed without resistance. They have progressively challenged the market-centered principles embodied into the so-called 'Washington Consensus', that constituted the key assumptions of economic policies in the capitalist world. As Williamson - one of the first to introduce the term - pointed out, the Washington Consensus postulated the primacy of market forces, recommending budget discipline, market liberalization, price stability (Williamson, 2003). Serra and Stiglitz (2008) have provided a radical critique to it, pointing to the fact that this consensus fails to address social and environmental consequences of policies. Birdsall and Fukuyama (2011) have observed that developing countries, after the Asian crisis, have given much more emphasis to social policies rather than on efficiency. Critiques to the Washington Consensus have stressed the relevance of market failures, pointing out that not always markets generate optimal outcomes. After the crisis of 2007, the Obama administration openly contradicted the Washington Consensus introducing an aggressive program of public spending (Rehman, 2010), and opening a new phase of economic policies. The Next Generation EU and the Inflaction Reduction Act of Biden go in the same direction.

The Paris agreement and the Agenda 2030, both of 2015, reflects a radical change in approach. The emerging new consensus around Sustainable Development[3] introduces a hierarchy between ecological, social, and economic goals. The notion of Anthropocene, now at the basis of the concept of sustainability, implies that human activities cannot trespass 'planet boundaries', environmental pressure levels above which human habitats could become less stable and hospitable (Willet et al. 2019). As Kate Raworth (2017) has highlighted, not only biophysical planet boundaries, but also social boundaries should be considered. In her 'doughnut economy', called in this way because it is represented by two concentric circles, Raworth (2017) explains that while the ceiling of a 'safe and just operating space' is given by biophysical constraints, the floor of this space is represented by minimum social standards: not respecting them put stability of human systems at risk. These metaphors raise the questions: are policies we are designing keeping the planet within the operating space? Do they improve the desired outcomes without creating harms to other outcomes? In this approach, market forces are considered in a much more pragmatic way, while public policies as well as civil society get more weight in the definition of policies.

After Trump, the COVID and in the middle of the Ukrainian crisis, the Sustainable Development consensus looks much weaker than in 2015. The international order looks in transition from a bipolar to something different, maybe a multipolar world. War and tensions between superpowers have weakened the authority of international institutions. Common global trade rules are undermined by protectionist policies. Globalisation turns into regional economic spheres of influence. Public deficit spending aimed at coping with the multiple crises has generated inflation and debt. In the meanwhile, last summer droughts and the intensification of extreme meteorological events show that the climate crisis is still there. The tension between those who think that the crisis shows that the urgency of the transition is even more necessary and those who want to rethink it is more and more evident. For Europe, keeping a strong emphasis on Sustainable Development Goals is a way to gain a leadership based on principles universally recognized rather than on force. So far, the roadmap established by the Green Deal strategy is proceeding fast: the main concern is related to the capacity to Member States to follow. Here is the role of transformative policies.

2.2 Knowledge base

Transformative policies require a new knowledge base (Clark and Dickson, 2003). In the economic field, most of the concepts emerging in the sustainability debate are generated outside the old economic toolbox and make pressure on economists to open their studies

[3] For an illustration of the term 'consensus framework' with reference to food security, see Mooney e Hunt, 2009.

to other fields of knowledge. Economists are encouraged to abandon mechanical system approaches in favor of complexity and to consider (positive and negative) feedbacks, emergent properties, unintended consequences of choice, and trade-offs related to different perceptions of agents (Arthur, 2021). Attention to complexity brings to consider the hybridity of the systemic connections: the notion of socio-technical systems (Geels, 2004) captures the interplay between social and technological domains, and the notion of 'socio-ecological systems' (Anderies et al., 2004) looks at how human activities generate well-being as well as pressure on natural resources. System approaches are inductive - that is, they start from empirical evidence to build theory - and the empirical work is finalized to build representations of systems around specific problems (Gharajedaghi, 2011), so to produce knowledge immediately useful for practical purposes.

System approaches are aware that different sets of actors can develop multiple representations of systems, none of them intrinsically 'true' or 'false', and that actors behave according to their representations of the system. This principle applies also to science-based representations, the differences between which depends on their conceptual assumptions and their systems of values (Bené et al. 2021). This also opens the way to a new generation of quantitative models, such as agent-based models (LeBaron and Winker, 2008) and system dynamics (Uriona and Grobbelaar, 2019). Applied to policies, this approach emphasizes that policymakers deal with a multiplicity of system representations based on different actors' perspectives and values, and their task is to broker between different representations. For example, reading food systems with the lens of food security is different from reading it with the lens of competitiveness, and seeing food as a commodity might convey a representation of the system much different than in case of considering food a human right (SAPEA, 2020). Stakeholders' participation in building representations of the systems is thus necessary to the success of transformation policies. For example, concepts such as the food environment, central in the debate on sustainable food systems, have a strong subjective component, related to the time-space patterns of daily lives (Mattioni et al. 2020). Citizens' involvement on food system appraisal can open researchers' eyes on otherwise neglected aspects.

Policymaking, rather than being considered external to socio-technical systems, is increasingly considered as an endogenous variable (Smith and Stirling, 2007), affecting and being affected by system actors and activities.

Once emancipated from market failure approaches and exposed to other knowledge domains, the thought in this field has undertaken research pathways based on systemic concepts such as food environment, food-resources nexus, resilience, circularity, ecosystem services (Galli et al. 2020).

A stronger attention to societal challenges also has implied a greater attention to 'actionability' of knowledge produced by research (Kirckoff et al. 2013), meaning that research should provide responses to problems that fit to users' needs. Obsolete approaches to scientific research tend to separate scientists from the rest of society and to create a unidirectional flow of information from research to practice. In the new approach, engagement of researchers with policymakers and stakeholders in all phases of research is necessary to build a common language and a shared representation of the systems observed. Interaction helps to develop a shared understanding of problems, needs, barriers to solutions. This implies acknowledging the complementarity of different types of knowledge and the need to find different criteria for knowledge validation (Cundill et al., 2015; Jacobi et al. 2022).

2.3 Intervention pathways

In a post-Washington consensus, market forces can even become barriers to transformation or drivers of degradation. When market loses its primacy, State and Civil Society gain a stronger role. Mazzucato (2013) proposes an entrepreneurial State, taking the example of the Apollo program which brought humans on the moon. More in general, it is said that sustainability cannot be achieved without transitions, and that management of transitions implies managing structural change (Loorback, 2007). According to Weber and Rohracker (2012) system approaches search for solutions to problems by shaping differently the patterns of interaction in a system (Ericksen et al., 2012; Haladi, Rao, 2010). The growing literature on transitions shows that transformative policies must have three properties: directionality (that is, goals of change defined in the public sphere), reflexivity (that is, capacity to learn from experience), market articulation (that is, influencing the way markets are shaped) (Grillitsch et al., 2019).

Directionality implies building visions, establishing long term goals, setting pathways (Weber and Rorhacker, 2012). For this reason, consensus frameworks are important, as they support legitimacy of policy directions. Policies based on directionality principles make use of strategic tools: they tend to facilitate rather than prescribe, have a contractual basis, and rely upon the autonomy of social forces. Figure 1 represents three pathways for policy processes: one initiated by civil society, one by business, and the third by government

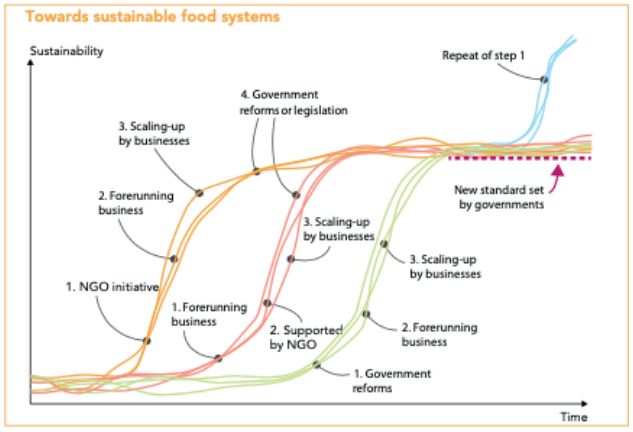

Figure 1. Transformation pathways (Source: UNEP, 2016).

reforms (UNEP, 2016). In the first and the second pathways the State intervenes with regulation when the conditions are already ripe, after that NGO initiatives and business have opened the way. Organic farming can be considered an example of the second pathway, as the European Regulation came after a bottom-up process of innovation carried out by forerunning business backed by NGOs. Palm oil-related initiatives have been started by NGOs mobilization and have been incorporated into business practices (Oosterveer, 2016). In a complex policy system as the European one, where there are multiple level of governance, local administrations or forerunning Member States can play this initiating role. Soft law, as in the case of voluntary standards or the EU code of conduct on responsible food business and marketing practices[4], can activate societal and business energies and prepare the terrain for hard law.

Directionality also implies active efforts to pursue coherence between policies. For example, it has been observed that policies aimed at reducing carbon emissions might create pressures on biodiversity, and that policies supporting biofuel could put food security at risk (Standish et al. 2020), not to speak of the compatibility between the new CAP and the Green Deal (Guyomard et al., 2020). However, hardly coherence can be addressed with fully coherent, all-encompassing policy design. As van Bers et al. (2016) point out, barriers to change can be related to lack of access to resources, effectiveness of formal institutions, lock-in to a reigning paradigm. For de Jesus and Mendonca (2018), barriers can be classified into 'hard' (technological and financial) and 'soft' (institutional and cultural). In a concept of policy as a process, there is a need for actors, networks and institutions ('institutional entrepreneurs') that foster coherence with the general objectives, and policies that support them removing barriers to change. The presence of enablers and barriers to transformation make us also aware of the need to address the problems with policy mixes rather than with single, and separated, policy measures (Rogge et al., 2020).

The second property, reflexivity, is based on the awareness that governing the transformation implies managing uncertainties, systemic trade-offs, cross-sectoral interactions, power dynamics and conflicting perspectives (European Commission, 2021). This implies that the policy process would be better based on experiment, learning, and adaptation. In the transformative intervention logic, innovation is at the center of policies, as a catalyst for transformation (de Boer et al., 2021). Innovation can contribute to address trade-offs (for example, between economic and environmental outcomes) by providing win-win solutions. Given the open nature of transformation processes, bottom-up innovation is encouraged to provide insights on levers and barriers to change. Examples of these policies already exist in the European landscape: in the second pillar of CAP, Operational Groups are conceived of as living laboratories for innovation, and the EIP partnership provides a space for comparison, sharing and reflection. Potentially, many rural development measures might have the character of experimentation, provided that they are framed into mechanisms that foster learning. When reflexivity is understood as a key property of policies for transformation, effective governance mechanisms should be developed to ensure that bottom-up innovation activates policy learning. Innovation, in fact, regards also policies: given the complexity of the processes, hardly transformation can be made without learning from policy experiments at lower scale (Mytelka and Smith, 2002).

Given its transformative power, it is important to point out that innovation has not only a technological dimension: social and institutional innovation can play an equal or even greater role. And in any case, it is increasingly recognized that technical, social, and economic domains are not separated from each other, as they operate upon socio-technical and socio-ecological systems. When they challenge the basic assumptions and the principles on which systems operate, all types of innovation concur to system innovation (OECD, 2015).

The third property, market articulation, rests on the fact that market are powerful mechanisms that contribute to orient actors' behavior. When in conflict with actors' economic interests, policies are much harder to succeed. Agricultural economics has long been associated with policy-based orientation, involving actions on supply (such as quotas, price support, or standards)

[4] https://food.ec.europa.eu/system/files/2021-06/f2f_sfpd_coc_final_en.pdf

or on demand (through taxation). However, perceiving markets as context-specific systems of rules and resources that influence actors' behavior allows for significant progress. This understanding helps us grasp how policies can shape actors' choice environment, making them more conducive to change. In the realm of food, there exists a vast body of literature on social innovation, specifically targeting the transformation of market behavior among actors (Chiffoleau and Loconto, 2018). Farmers' markets and purchasing groups, for instance, defy conventional market forces and establish novel market institutions. Voluntary schemes, such as organic farming and geographical indications, create market spaces for innovative products in their introduction phase (Giovannucci et al. 2014). Public procurement is now considered a key strategic policy tool for dietary change, especially when considering specific population groups such as primary school students (Neto and Gama Caldas, 2018). Public procurement can also open markets to innovative products. Nutrition or sustainability labelling aim at orienting consumer preferences (Brown et al. 2020: the debate on nutriscore vs nutrinform in Europe shows how economic interests can be affected by information.

3. POLICY MIXES FOR TRANSFORMATION

The new generation of policies should be evaluated for their capacity to remove the barriers to transformation and to create synergies between agents of change. Important barriers to transformation are often linked to the way administration bodies are articulated, which also affect the way knowledge is produced. Alternative problem framings, mentioned earlier, can reflect separation between different bodies of knowledge.

A clear understanding of the policy process, of the drivers, the barriers, the relevant actors and their relative power is the key to transformative policies, which are based on policy mixes rather than single solutions. Policy analysis should start from a sound assessment of the policy process before identifying solutions. Table 1 illustrates a tentative toolbox for transformative policies in the agri-food domain, articulated into the different steps of the policy process.

Table 1. Transformative policies and the policy cycle.

problem definition	agenda setting	design	implementation
Transformation fora	Roadmaps for transition	Supply-side and demand-side Win-win solutions	Information systems Accountability Addressing resistance Formative evaluation
Transformative governance			

3.1 Problem definition

Transformation implies a redefinition of existing policy problems and the emergence of new ones. Problem definition is highly politically sensitive, so transformation management requires a careful management of stakeholders' involvement. Transformation fora gather stakeholders and administrations to deliberate around specific goals. For example, Policy Labs activated with the Fit4food2030 project[5] are participatory and experimental spaces that bring stakeholders together in a series of meetings with dedicated themes and methods. Policy Labs build a network of diverse stakeholders from different parts of the food system. Together, the stakeholders analyse the current food system and related R&I system in their country or region, identify barriers and opportunities and work on innovating R&I policies. In the aftermaths of EXPO2015, hundreds of municipalities have activated food policy fora to address problems such as nutrition, food quality, relocalization of food systems (Lever et al. 2019). Food communities and Rural Districts, introduced in the Italian legislation, could have the same role in redefining rural needs.

Transformative policies imply decisions on issues the knowledge about which is uncertain and contested, also within the scientific community. Controversies on GMOs, pesticides, the impact of livestock on the environment have animated the policy debate in the last decade. For this reason, a specific attention should be given to the role of scientists. In a context of 'consensus frameworks' such as the sustainability development goals, scientists are supposed to support the process of consolidation or the adaptation of the frameworks through ideas and evidence (Duncan et al., 2022). While on one side they need to resist to capture by policymakers willing to legitimate their decisions, hardly scientists can claim a neutrality between opposing knowledge claims. On the other hand, not necessarily personal convictions should be separated from scientific judgement, as neutrality is not synonym of objectivity, a key ethical principle for scientists. Transformative policies imply commitment to change, and this can give scientists, depending on the context where they operate, the role of 'advocates for change' (that is, look for alliances for change based on scientific evidence) or 'honest brokers' (who make a synthesis of different and

[5] https://fit4food2030.eu/policy-labs/

sometime opposing position and provide ranges of solutions and related implications) (Pielke, 2012).

3.2 Agenda setting

In the agenda setting phase priorities are established. In complex political systems, transformational goals are embodied into the agenda setting process through policy roadmaps. Roadmaps are strategic tools that serve to involve and to align the multiplicity of actors involved in the transformation. They need to be flexible enough to adapt to the conditions of the context, and at the same time they should be capable to mobilize the actors, commit and make them accountable. Policy roadmaps should be based on a clear understanding of the dynamics of the systems on which policies should intervene, of the forces that support the change and those who oppose. The choice of policy instruments and the sequence of the steps to be taken should be based on an analysis of the leverage points, the barriers, the potential consequences of specific choices, stressing the consequentiality of the measures to be taken and their graduality. The need to overcome barriers to change would encourage the search of win-win solutions, and if not possible, participation would identify the groups that could be damaged and the size of the costs they would suffer, so to establish fair compensations.

The Green Deal provide the most relevant example of roadmap, as it defines the goals and desired outcomes related to food, and lists the major steps needed to reach them. A roadmapping approach is implicit in the performance-based approach to the CAP, as achieving specified targets would imply the identification of the steps necessary for transformation and a constant monitoring of the progress.

3.3 Policy design

In the design phase, the complexity of food systems requires an approach to system innovation based on policy mixes, able to address the root causes of the policy problems, mobilize all relevant actors, aim at a variety of objectives. Traditionally, CAP has intervened mainly on the supply side, while much less attempts have been made to address demand. The Green Deal and the Farm to Fork mention the need on acting on the demand side to pursue healthier diets, for example through public procurement, labelling, and education. The project Fit-4Food2030[6] has developed a dataset with 460 policy tools, clustered into six goals: Innovation, Equitable outcomes and conditions, Viable and socially balanced agri-food business, Reduced environmental impacts, Food safety, Balanced and sufficient diets for all. The datasets also classify the tools according to the type of instrument, such as Regulation, R&I, Information, Standards, Labelling measures, Border measures[7].

As the transformation has the power to change substantially the relations of power in the system and the distribution of costs and benefits, policy mixes should also look for win-win solutions, such as compensation schemes for the losers and incentives for the transition.

3.4 Implementation

In the implementation side, the capacity to distribute responsibilities across the system will be crucial. Rather than models based on central administration exerting its disciplinary power upon the actors, contractual models are being developed, based on agreed objectives, clear performance indicators and monitoring of results, which implies accountability of the beneficiaries. The CAP has introduced this new model, but its implementation won't be easy, given the number of actors involved and the complexity of the issues. Measures such as the new eco-schemes or the environmental and climate commitments under the 'second pillar' will need relevant monitoring and control activities to deploy their effects. 'Carbon farming', for example, still raise questions about their effectiveness and their costs (Dumbrell et al. 2016). Digitalization of administrative procedures and effective information systems could reduce transaction costs and improve communication between business, administrations, and civil society (Ehlers et al., 2021). Important steps ahead in the process of sharing Integrated Administration and Control System (IACS) data are made, but the process is slowed down by the reluctancy of Member States to share their data given the concern that more transparency could mean more sanctions (OECD, 2019). In this stage, ideally policy evaluation is a key resource for learning. However, different evaluation models can have different transformational potential. While evaluation of results, linked to payments, can help to structure the principal-agent relationship and provide information in the wider public space, formative evaluation[8] could provide feedback

[6] https://fit4food2030.eu/policy-labs/

[7] https://knowledgehub.fit4food2030.eu/wp-content/uploads/2020/08/FIT4FOOD2030_T2.2-extra_Policy-Cards_190316.pdf

[8] A formative approach to policy evaluation is " astyle of evaluation which is conducted with the participation of stakeholders with the main purpose of improving the definition and implementation of the interventions being evaluated" (Molas-Gallart, 2021)

information to stakeholders to improve their processes, to understand trade-offs, and to learn from failures.

3.5 Transformative governance

Given the importance of the dynamics of the policy cycle in the success or failure of policies, the issue of governance is gaining more and more prominence. Transformative policies imply first of all governance management: as Hoppe (1988) points out, policy problems and governance are the two coins of the same medal, because the way policies are problematized, designed and implemented depend on the actors, networks, and institutions that are involved in the process. Given that drivers and barriers are embodied into actors and networks, the best way to activate processes of change is involving them. The choice of who is involved, in which stage of the process, for what decisions, and the instruments to encourage interaction, is key to effective policies. The design of food policies, for example, requires a big effort to involve actors and administrations belonging to a large variety of areas.

Depending on their composition, governance arrangements can give different weight to the potential outcomes. Bringing together stakeholders belonging to different phases of the supply chain might bring to new problem framings. Involving stakeholders that in general are not involved in policymaking might provide transformative outcomes. Governance can also affect the weight given to different drivers into decisions, as each stakeholder brings different values, knowledge, and interests. Likewise, governance influences the activities and the actors that policy making takes into consideration.

The governance arrangements that have accompanied the Green Deal and the Farm to Fork at EU Commission level are significant. Given that the strategy affects many directorates, the implementation of the strategy has been assigned to a dedicated unit under the Executive vice-presidency of the European Commission, with the power to coordinate the other directorates. Another example of potentially transformative governance is the blossoming of urban food strategies after the Expo 2015, which shows the intention of municipalities to become key actors of food policies and to generate a bottom-up change.

4. CONCLUDING REMARKS

In this paper we claim that a new generation of policies is needed. These new policies are based on system approaches, are conceived of as mixes of different policy tools concurring to given objectives, are aware of the policy cycle and therefore of the distance between expected and real impact.

One of the limits of these policies is related to the fact that they need time. As participation and deliberation are key principles for their success, there is the risk that the rapidity of change and the succession of crises could outprecede decisions or make them ineffective, as the long process of construction of the new CAP has demonstrated. More experience on how to design and implement these policies might speed up the process.

Given that research on transformative policies is at its infancy, there is a strong need for research on these themes, to open the way to a new generation of agri-food policy studies, that reflect on the assumptions and on the methodological bases of agri-food studies. We have observed that the notion of transformative policies implies an attention to socio-technical and institutional mechanisms that regulate food systems. A system approach blurs the boundaries between agriculture, food, natural resources, nutrition, and health, and takes into consideration multicausality, unintended consequences, nonlinear processes. Stronger interdisciplinary approaches are needed, first of all with social and policy sciences. An emphasis on the role of policy actors as agents of transformation would shift the attention to agent-based models. The adoption of the concept of policy process, its articulation into policy stages, and the understanding of the feedbacks that policies receive from socio-technical systems, can help scholars to better understand the impact of policies on society, and to design effective evaluation methodologies.

From the methodological point of view, policy-related research implies a more intense dialogue with policymakers and stakeholders, participatory rather than extractive data collection, co-design of research questions, and continuous feedback on research outputs. This should reduce the distance between scientific outputs and policy outputs and contribute to reduce the time from problem framing to policy implementation.

A new generation of policies implies a new generation of researchers. A new model of collaboration between policy-makers and researchers should begin to experiment with new policy practices for transformation.

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