

Transparency solutions for transforming the food system



Deliverable 7.1

Transparency solutions for healthy, sustainable and safe food systems in existing policy

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Authors Christopher Bear & Ananya Mukherjee (Cardiff University);

Marta Lopez Cifuentes (University of Surrey)

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Executive Summary

This document examines the concept of transparency, and the role envisioned for it in contributing to the transformation of future food systems. It is the outcome of Task 7.1, which aimed to review how the potential roles of transparency in the food system are envisioned in existing policy, and also reports on aspects of Task 7.2, which worked with stakeholders from across the food system to identify key areas in which existing policy requires, constrains, or enables transparency.

The report argues that 'transparency' is frequently alluded to in policy and regulation that relate to the food system, but that the concept is, at best, loosely defined. A brief review of academic literature on the topic identifies a similar ambiguity in transparency's conceptualisation, where it has often been conflated, or used interchangeably with, the closely-related notion of traceability.

The immediate policy context for the TITAN project, and its concerns for transparency, is the *Farm to Fork Strategy*, which is an action towards the European Green Deal. While maintaining a focus on the importance of clear and accurate information to inform consumer purchases, the *Strategy* signals a shift towards a more systemic approach that acknowledges the influence of processors and retailers. Similar shifts can be identified in other recent and ongoing legislative activity, such as the Regulation on Deforestation-free Products, and the Green Claims Directive. While not the focus of this report, the role of international organisations (e.g. the UNFAO), national governments, non-governmental organisations (e.g. International Organisation for Standardisation) and third sector organisations (such as environmental charities) is acknowledged.

The policy review encompassed TITAN's areas of focus: environmental sustainability, food safety, and health and nutrition. While policy most frequently fails to define transparency explicitly, the review identified five themes that point towards an ethos of transparency: 1) openness; 2) explication of rules; 3) involvement of stakeholders; 4) standardisation of data/consistency of approach; and 5) independent and/or public scrutiny. It also argues that food system transparency is both about food itself and the governance and decision-making that surround it – and, crucially, that these two elements should be considered together.

Six 'visions' for transparency are identified in the report: 1) achieving confidence in the food system; 2) a desire to respond to consumer interests; 3) greater involvement of stakeholders in reviewing policy; 4) accountability; 5) greater scrutiny of policy-making; and 6) a means through which consistency of approach might be achieved. Intended audiences for transparency range from end-consumers and the general public to certifiers, value chain actors and public authorities.

Stakeholder interviews demonstrated divergence of understanding of 'transparency', ranging from an interest in being open through to more nuanced interpretations around agreement over the types of data to be shared, and the nature of sharing that should be undertaken. Stakeholder interviews identified the nature of infrastructure for data sharing as not only a factor that might enable transparency, but one that also can affect the interpretation of transparency.

The report highlights some of the challenges both of achieving a shared or consistent understanding of the concept of transparency, and of realising a more transparent food system through policy interventions.



Authors and Reviewers

Main Responsible		
Organization	Name	Mail
Cardiff University	Christopher Bear	bearck@cardiff.ac.uk
Author(s) / Contributor (s)		
Organization	Name	Mail
Cardiff University	Christopher Bear	bearck@cardiff.ac.uk
Cardiff University	Ananya Mukherjee	MukherjeeA5@cardiff.ac.uk
University of Surrey	Marta Lopez Cifuentes	m.lopezcifuentes@surrey.ac.uk
Reviewer(s)		
Organization	Name	Mail
Delft University of Technology	Siu Lie Tan	F.S.Tan@tudelft.nl
Wageningen University and Research	Verena Otter	verena.otter@wur.nl

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Introduction

The European Green Deal is the central strategy of the European Union to transform European society with a modern, resource-efficient and competitive economy, while addressing climate and environmental challenges. The *Farm to Fork Strategy* follows the path traced by the European Green Deal, while responding to increased public awareness and the growing demand for a Food System capable of providing healthy, sustainable and affordable food. All players in the Food Value Chain are called upon to contribute to this goal thanks to recent technologies and recent discoveries in the sector. *Farm to Fork* aims at setting a global standard that can overturn the current paradigm consisting of air, water and soil pollution, loss of biodiversity, climate change and excessive consumption of natural resources.

For such an agri-food system to flourish, consumers must have better access to healthy, sustainable and affordable food, with transparent information about the integrity and true value of a food, so that they can make the better food choices that are necessary to increase demand. Enhancing transparency is an essential element in achieving this goal.

TITAN intends to leverage transparency and digital innovations in the food sector to pursue this paradigm shift: transforming the food system into a demand-driven economy that provides consumers with healthy and sustainable food. To achieve this goal, TITAN will provide a broad platform for the development of pre-identified technologies and pilots that will be selected during the project through an open call for proposals, also by facilitating the involvement of primary and secondary stakeholders in this process, analysing current policy to set up a set of recommendations and finally setting up an inventory to identify current digital innovations and future challenges.

Work Package 7 (WP7) - Enabling policy solutions for transparent food supply chains — examines how a more transparent food system may be enabled through policy solutions, while also considering how the emergence of new technologies might require new forms of policymaking. The Work Package aims to understand how the impact of policy tools and their implementation of transparency solutions may be felt differently at different points in the food system, and to promote approaches that ensure transparency will have a positive impact at each point.

Objectives of the document

This document examines how transparency, and its role in contributing to the transformation of future food systems, is envisioned in existing European-level policy and regulation. It reviews key legislation in this area, exploring the ways in which transparency is defined and examining the intended outcomes of heightened transparency. It also reports on stakeholder interpretations of transparency, drawing on initial interviews conducted with actors from across the food system. It highlights some of the challenges both of achieving a shared or consistent understanding of the concept of transparency, and of realising a more transparent food system through policy interventions.

Associated Tasks

This Deliverable reports on the findings of Task 7.1 (Assessment of visions for transparency in the food system), which involved a desk-based review of policy documents. Additionally, it includes preliminary findings from Task 7.2 (Identification of areas where policy requires, constrains, or enables transparency), which involved qualitative research with key stakeholders across the food system.



How to read this document

This document aims to provide details on existing policy that impacts on transparency in and of the food system. It can be read with the Deliverables that will be elaborated within the framework of WP7. It also provides a policy context for the TITAN project as a whole, so may be read as background for Deliverables from other Work Packages.



1. Background

The concept of transparency has been at the centre of debates about, and policy on, the safety and sustainability of the food system for over two decades. Prompted in particular by food-related crises and scandals in the 1990s, such as the BSE crisis (Vos, 2000), transparency has frequently been promoted as a route to greater trust in food and its governance. Transparency in food supply chains has formed a focus for international organisations, such as the United Nations (UN) (e.g. Codex Alimentarius), the International Standards Organisation (ISO) and the European Union (EU). With some irony, however, the definition of transparency in policy and regulation remains inconsistent at best, and often highly opaque. Policies, laws and regulations frequently adopt the term but do not define it. This tendency is mirrored in much of the academic literature (Manning, 2018).

This report begins to address these issues, examining how transparency, and its role in contributing to the transformation of future food systems, is envisioned in multiple ways. If solutions are to be developed that enable greater transparency in food systems, it is vital that there is a shared understanding of the concept, or an awareness of its multiple interpretations.

The report begins with a brief review of academic literature on food system transparency, reviewing aspects of the concept's development and its association with the closely related concept of traceability. The methodology underpinning subsequent analysis and discussion is outlined in Section 3. Through Section 4, the report outlines debate and practice around food system transparency in the European Union, beginning with the wider policy context (4.1). It explores the different ways that policy defines, and envisions, transparency (4.2) and contrasts such visions with those of stakeholders from across the food system (4.3). The penultimate section looks at some of the most significant ongoing developments around food system transparency in the EU. Finally, the report concludes by highlighting key issues that policymakers should be aware of in taking these themes forward.

2. Academic literature: conceptualizing transparency

A considerable literature has developed around the notion of transparency in the food system. Much of this emerged through a focus on so-called 'alternative food networks' (AFNs) that developed through the early 2000s, where alterity referred not only (for instance) to smaller scales of production and to shorter supply chains but also to the types and qualities of information that accompany food through supply chains. Such AFNs varied from direct selling (Renting et al., 2003), which might rely on trust between, for example, a farmer and a consumer, to third party certification that would make visible, or provide reassurance about, stages of supply chains that would more conventionally have been invisible to end-consumers (Eden et al., 2008). This practice of making visible various aspects of food supply chains was often referred to as a move towards greater transparency. Goodman (2004: 5), for instance, argued that 'globalised, agro-industrial space...works to conceal production practices and environmental degradation from distant consumers' – something that AFNs attempt to counter.

Despite this interest in transparency, its definition has often been loose at best. One of the earliest definitions of the term was provided by Hofstede (2003: 18), who proposed that it refers to 'the extent to which all the netchain's stakeholders have a shared understanding of, and access to, the product-related information that they request, without loss, noise, delay and distortion'. Others have built on this definition. Manning (2018: 160), for example, highlights the diverse requirements of stakeholders within a food supply chain; they need not only make information about a product available but do so 'to a disparate range of stakeholders each with different needs and expectations.'



Understood through such a lens, transparency implies more than the disclosure of information; different stakeholders might require different information, and provision of the wrong types (or too much) of information could even obfuscate rather than clarify. Mol (2014: 51), therefore, argued that 'transparency-in-practice should be judged on its merits: transparency of what, for whom, and by whom'.

Alongside discussion of transparency, a significant literature has built around the related concept of 'traceability'. Traceability has been defined as 'the ability to track the history, location, and function of an entity' (Astill et al., 2019: 241) and, as such, might best be understood as a key steppingstone on the route to transparency. In turn, improved traceability has been argued to lead to greater consumer trust in claims made about food (Martinez and Epelbaum, 2011), providing assurance about its authenticity and potentially increasing the accountability of FSCs. In light of this, much of the recent focus on traceability has shifted to the development or application of technologies that might aid the tracking of food entities as they move through a supply chain, such as those that form the focus of TITAN (artificial intelligence [AI], blockchain, and Internet of Things). Literature in this area has often conflated transparency and traceability, or has used the two terms interchangeably, sometimes leading to an assumption that ensuring traceability is sufficient in addressing concerns around transparency. Building on Turilli and Floridi (2009), Manning (2018) argues that 'transparency reflects perceptions of information availability and depends not only on factors such as the availability of information, but also on the context of the information that is made available, that is, voluntarily or not, and in a structured way or reluctantly and whether it is in a format that aids the recipient's decision-making process.' Traceability, in other words, is just one step on the ladder towards transparency. Twenty years on from his original definition, therefore, the questions posed by Hofstede (2003: 18) around the implications of transparency remain highly pertinent:

All actors may have to provide additional data to the others, as well as to stakeholders who are not involved in the flow of products, such as government bodies. What are the costs? Does it entail power shifts? What does it mean for the workload of a farmer? What degree of trust between actors is a precondition? Does transparency call for, or cause, fundamental changes in netchain communication and governance structures?

Nonetheless, changes in tracking technologies, consumer concerns about the food they eat, geographical and sectoral differences in supply chains, and a shift in understanding away from supply chains towards a food systems approach indicate a need to continue revisiting and augmenting those questions. The increasing technologization of tracking and traceability, for example, hold ethical, financial and organizational challenges, the implications of which are not fully understood (and, indeed, are continuing to emerge alongside technological developments). Meanwhile, the shift to a systems perspective (Sonnino et al., 2019) in both the academic literature and in policy development moves away from a linear approach, where food (and the data that accompanies it) follows a path from producer to consumer and instead incorporates a greater variety of stakeholders including government bodies, non-governmental organizations, charities, and a diversity of value chains to greatly increase both the diversity of stakeholders and the flows of information.



3. Methodology

This Deliverable draws on a combination of: 1) a review of policy documents; and 2) a series of semi-structured interviews with stakeholders from across the food system. This section briefly outlines the approach taken to data collection and analysis.

3.1 Review of policy documents

An initial review of the European Commission policies website (European Commission, 2022b) was undertaken in November 2022. The review involved three key stages: 1) an identification of policies relating to sustainability, health, and safety; 2) an identification of policies in each theme relating to food; and 3) a search of all resulting policy documents for keywords transparency, transparent, traceability and traceable. 'Policy' is an increasingly ambiguous term, and food policy is a 'contested space' (Lang et al., 2009: 21) but the documents searched for this review included: legislation, regulations, strategic guidelines/plans, delegated acts/regulations, implemented acts/regulations, white papers, directives, and action plans.

During the first stage, as outlined above, the keyword 'health' returned 38 policy themes, with only those directly related to food supply chains (indicated in bold) taken forward to the second stage.: animal health; cancer; crisis preparedness and response in public health; cross-border healthcare; customs; digital health; digital society; environment; EU health policy explained; European standards; food safety; health and food audits and analysis; health and safety at work; health and structural funds; health and the investment plan; health and well-being of young people; health data collection; health indicators; health programme; health systems performance assessment; health technology assessment; health workforce; international cooperation in public health; international ocean governance; maritime affairs and fisheries; medical devices; mental health; migrants' health; nutrition and physical activity; plant health and biosecurity; public health; research and innovation; research and innovation in health; role of sport in society; social determinants and health inequalities; state of health in the EU; steering EU public health.

In the first stage search of keyword 'safety', 20 policy themes were returned, again with only those directly related to food supply chains (indicated in bold) being further searched: agriculture and rural development; anti-money laundering and countering the financing of terrorism; borders and security; customs; customs and security; digital economy and society; digital society; employment and social affairs; European neighbourhood policy; foreign affairs and security policy; integrated maritime policy; international cooperation on migration; international customs cooperation; living and working in another EU country; plant health and biosecurity; preventing and fighting terrorism; research and innovation; security industry; support for global security; transport themes¹.

The first stage search of keyword 'sustainability' returned only three policy themes: aquaculture policy; common fisheries policy (CFP); transport themes. The first two were taken forward to stage 2.

¹ Transport themes were not included in the document search because there is no specific theme for transport in food systems. The transport policy themes identified were: mobility strategy; passenger rights; security and safety; clean transport, urban transport; sustainable transport; infrastructure and investment; intelligent transport systems; research and innovation; international relations; public services obligation; transport of dangerous goods; the EU air safety list; summertime; logistics and multimodal transport; digital transport and logistics forum; social issues.



In stage 2, the themes identified in stage 1 were further searched for policies relating to food. Each theme in the policies website included a general description of the topic, links to regulations/legislation and further information. In some cases, position papers, statements, white papers and other documents were also listed in the background of the policies. All of these were included in the analysis. The initial search returned 204 policy documents (see Appendix A).

During stage 3, those documents were searched using the keywords transparency, transparent, traceability and traceable. In total, 56 documents included explicit reference to 'transparency' (see Appendix B), while 62 referred explicitly to 'traceability' (see Appendix C).

Section 5 highlights some significant recent developments that impact the development and implementation of *Green Deal* proposals and that go beyond elements of the initial review.

3.2 Stakeholder interviews

Alongside the review of policy documents, interviews were conducted with a range of stakeholders representing pre-consumer aspects of the food system. These were conducted in collaboration with WP2 and/or WP3. In total, 32 individuals participated in these interviews. 13 of these were with representatives (generally CEOs) of SMEs that offer technological solutions to the sharing of data and information across food supply chains. 10 participants represented regional, national and international sector associations. These associations represent the interests of different sectors, including different stages in their supply chains). The remaining 9 participants represented a variety of interests, including food transportation, border security, and food producers. These participants are not representative of all potential stakeholders. As is typical of qualitative research in the social sciences, the intention is to highlight a range of perspectives rather than aim for statistical significance. In selecting participants, particularly those who were from sectoral associations, we were especially conscious of the need to include a range of sectors, each with (for example) different levels of technologization, concerns around safety and adulteration, and around environmental impacts.

The interviews were conducted in a semi-structured format, working from an initial list of questions but with the flexibility to follow-up on topics raised by the participants and explore issues that had not originally been anticipated by the research team. The majority of interviews lasted between 45-90 minutes and were generally conducted in English, though sometimes with the assistance of a translator. All interviews took place online, through Teams, and were led by members of the research team (including through collaboration with WPs 2 and 3). They were recorded and transcribed prior to analysis using the qualitative coding software NVivo. The interview protocol was approved by ethics committees at Cardiff University, Delft Technical University, and Wageningen University. All participants who are quoted in this report provided written informed consent. In line with that consent, their names, and the names of their organisations, have been removed so as to protect their interests. For the purposes of this Deliverable, they are referred to purely by participant numbers.

Policymakers have not been interviewed for this Deliverable. However, their views and experiences form an important focus for WP7 and will be studied in Task 7.3. The analysis of these interviews will form the basis for Deliverable 7.3.



4. Food system transparency in European Union policy

4.1 The context

The current focus on transparency in the food system in EU policy is driven by ongoing developments around the European Green Deal. Setting out an aim for Europe to be 'the first climate neutral continent in the world' (European Commission, no date-a), the Green Deal is the EU's strategy for meeting its target of net zero by 2050, in line with the Paris Agreement. The Farm to Fork Strategy (European Commission, 2020) is a key action towards this, with the central aim of shifting 'the current EU food system towards a sustainable model' (European Council, 2023). Although the term itself only appears once in the Strategy, the actions it proposes 'focus on information and marketing' (Science Advice for Policy by European Academies, 2023a: 17) and, thus, the availability, exchange and communication of data are at its heart. The Farm to Fork Strategy provides the key policy context for the TITAN project.

Farm to Fork builds on a range of longer-standing European initiatives, many of which are discussed in more detail below. Particularly central to the governance of food safety, for example, is the General Food Law (Regulation (EC) No 178/2002), which underpins all EU measures around food and feed. This Regulation established the European Food Standards Agency (EFSA), which remains at the centre of its approach to risk analysis and management. It also aims to enhance consumer confidence in food and the food system, particularly through 'transparency of decision-making' (European Commission, no date-c), and through providing 'a basis for consumers to make informed choices in relation to the foods they consume' (Regulation (EC) No 178/2002, Article 8). EU legislation on nutrition and health, therefore, 'starts from the premise that a well-informed consumer is able to make rational decisions and tends to focus mainly on food labelling' (Science Advice for Policy by European Academies, 2023a: 17)

Food policy has often worked from the assumption that better-informed consumers will drive a move to higher standards of food production (e.g. in relation to impacts on animal welfare or the environment) (e.g. Defra, 2022). However, advice underpinning the Farm to Fork Strategy noted that consumers 'have very limited power individually', and that the 'strong influence of food processing and retail sectors have on producer and consumer choices warrants a greater focus of sustainability policies and initiatives' (European Commission Directorate-General for Research and Innovation - Group of Chief Scientific Advisors, 2020: 38). The resulting publication of Farm to Fork signals a shift beyond the producer-consumer relationship to take a more holistic – or 'systemic' – approach and integrate a greater variety of actors from across the food system, such as processors and retailers. As European Commission Directorate-General for Research and Innovation - Group of Chief Scientific Advisors (2020: 38) notes, a policy shift towards the inclusion of more food system actors could 'include requirements for accessible, transparent and comparable sustainability information to support proper market functionality, due diligence and traceability'. A more comprehensive review of the EU's current policy landscape in relation to sustainability and food consumption is provided by Science Advice for Policy by European Academies (2023b).

The specific food policy contexts studied in subsequent sections are: a) routes to improving health and nutrition; b) food safety; and c) sustainability. Policies addressing health and nutrition focus on routes through which consumers might make improved health choices in relation to the food they eat. The central focus for this work has been Regulation (EC) No 1924/2006, which established the legal framework for the nutritional and health claims that can appear on products. However, a central



objective of the more recent *Farm to Fork Strategy* is to facilitate a shift to healthier diets, particularly through 'empower[ing] consumers to make informed, healthy and sustainable food choices' (European Commission, 2020: 14). Central to this is a consistent approach to front-of-pack labelling to provide greater clarity and assurance to consumers.

Food safety policy in the European Union 'centres on the concept of traceability both of inputs (e.g. animal feed) and of outputs (e.g. primary production, processing, storage, transport and retail sale)', with a focus on 'food hygiene, animal health and welfare, and plant health and to control contamination from external substances, such as pesticides' (European Union, 2023). Policies focus on risks associated with potential outbreaks of food-related disease such as BSE, swine flu from poultry, or any zoonotic diseases which have the potential to jump into the human food chain (e.g. Regulation [EU] 2016/429). Policy also addresses risks that stem from transfer of any pests into land and soil resulting from the introduction of plant or animal species from another country, necessitating the use of rigorous monitoring of food and food transportation activities from different countries and observing the relevant regulations related to such activities (e.g. Implemented Regulation 2021/404).

The Farm to Fork Strategy is also at the centre of policy moves in the European Union that aim for a transition to sustainable food systems (European Commission, 2020). Adopting a systems approach, this strategy aims to improve the sustainability of all aspects of the food system, from production to consumption. While affecting practices of production, processing, transportation and suchlike, successful implementation of the strategy is also reliant on the provision of trustworthy and clear data and information, whether for the end consumer, for regulatory purposes, or for those at earlier points in a supply chain.

Debate in the EU around the role of transparency, traceability and data sharing in the food system is also further contextualized by policies and standards from other international organisations, as well as developments in individual countries. In the realm of food safety, for instance, Codex Alimentarius continues to provide an international reference point for the creation of standards and the assessment of food-related risks. Forming part of the Food and Agriculture Organisation and World Health Organisation's joint Food Standards Programme, it aims to 'protect the health of consumers and ensure fair practices in the food trade' (FAO and WHO, 2019: 2). The EU became a member of the Codex Alimentarius Commission (CAC) in 2003 (Council Decision 2003/822/EC) and, as such, is both 'a selective policy recipient' and policymaker within the Commission (Poli, 2004: 16). The CAC promotes traceability and product tracing as one tool that can aid in the improvement of food safety through protecting consumers 'against food-borne hazards and deceptive marketing practices,' while facilitating 'trade on the basis of accurate product description' (Codex Alimentarius Commission, 2006: 1). In 2022, the Council of the EU stressed its desire to integrate 'sustainability considerations into the work of the Codex Alimentarius Commission' (Council of the European Union, 2022: 5).

Non-governmental organisations also frame ongoing practice in the EU. Of particular significance is the International Organisation for Standardization (ISO), which establishes basic principles and requirements around food traceability through its standard on *Traceability in the feed and food chain* (ISO 22005: 2007). The main objective of this is to ensure the safety of food products through the ability to track and trace their movement through a food and feed chain and recall them if unsafe (International Organisation for Standardisation, 2007: 3).

The practices of individual EU Member States are often driven by EU Regulations (which apply uniformly to all Member States). However, Member States have autonomy over how they meet the



requirements set out in EU Directives and over the implementation of schemes set out in Regulations. The implementation of eco-schemes, relating to climate, animal welfare and the environment, in the Common Agricultural Policy, is an example of the latter – though Regulation 2021/2115 requires Member States to 'ensure transparency' around 'the criterion used to assess' these schemes.

Member States may also develop their own innovative practices in areas beyond EU coverage. Finland, for example, places considerable emphasis on the possibilities raised by digitalisation throughout the food system, ranging from digitised farming (enabling better management of crops, pest management as well as in the use of fertilisers, drainage, irrigation and crop harvesting), alongside potential for greater traceability and an increased 'selection of information offered to consumers' (Ministry of Agriculture and Forestry of Finland, 2017: 18).

Further, practice and debate around transparency, traceability and data sharing in the EU food system is contextualised by developments in countries beyond the EU. Especially prominent at present is the development of the UK Food Data Transparency Partnership (UK Government, 2023). This initiative resulted from a recommendation in the *National Food Strategy* to introduce mandatory reporting for all 'food businesses with over 250 employees', with a focus on improving consumer health and animal welfare, while reducing environmental impacts (Dimbleby, 2021: 147). The original intention for this partnership was to standardise the reporting of key metrics in these areas, to 'streamline data reporting requirements' and increase the consistency of marketing claims to benefit consumers (Defra, 2022: 6). However, due in part to concerns around the potential cost to businesses, reporting on health metrics will now be voluntary, while sustainability metrics will focus only on scope 3 greenhouse gas emissions (Footprint, 2023).

Finally, policy around food system transparency is influenced by third sector organisations, such as environmental charities. A new report commissioned by WWF UK and WWF EU (Haynes, 2023) stated that there is very little transparency on the sharing of information or data with regards to food production and consumption in the EU. The lack of transparency hinders effective policy making with reference to sustainable food production and consumption. Two main barriers have been identified behind little or no transparency on data sharing. One, is lack of publicly available data and also lack of transparency on marketing policies of food retailers. The second reason for lack of publicly available data is variation in data collection methodologies across countries such as Belgium, France, UK and Sweden and lack of standardised approaches (Haynes, 2023). The report further states the need for a more unified approach to data recording globally speaking. This should include both production and consumption data and would enable proper accountability, and better monitoring and evaluation of food price including a clear understanding of how policies influence food price, data availability and the like.

While food policy has traditionally referred to public policy and legislation, these increasingly operate in tandem with private policy, established within supply chains, and led especially by retailers (Lang and Heasman, 2015). This report does not extend to such areas, but it is important to acknowledge the role of such actors in the policy landscape. As Lang and Heasman (2015: 2) note, 'the modern view of food policy...is that food policy is itself a contested terrain, fought over and created through complex processes of stakeholder engagement.' These aspects will be explored further in subsequent Tasks and Deliverables.

This section has provided some general context around the regulation of food in the European Union. While the *Farm to Fork Strategy* represents a step-change in its systems approach, it builds on a longer



trajectory of regulation that links different stages of the food supply chain, from production to consumption. In turn, European regulation both influences, and is influenced by, international organisations, ranging from the governmental to the private. The next section moves to examine the place of 'transparency' within such policy and regulation.

4.2 Placing transparency in European policy on food systems

Transparency has been at the heart of policy debates in the European Union for much of the past three decades. The Treaty on European Union provides a foundation for these debates, requiring its institutions to maintain 'an open, transparent and regular dialogue with representative associations and civil society' (Article 11), leading to decisions being 'taken as openly as possible and as closely as possible to the citizen'.

As indicated in Section 3.1, as of November 2022, 56 food-related European Commission policy documents made explicit reference to transparency. Despite the centrality, and ever-increasing prominence, of transparency in debates around the safety and sustainability of the food system, and the role of food system actors in improving health and nutrition, the term often remains poorly-defined as a policy aim. This stems from a wider reluctance to define transparency in European Union policy; Vos et al. (2023: 48) observe that 'the Treaties do not provide a definition of the term,' leaving it open for interpretation by institutions and case law. This section summarizes definitions — explicit and implicit — of transparency within European Union policy. Because of its close association to transparency, this section also reviews definitions of traceability within EU policy. This provides background for Section 4.3, which reviews the diverse purposes envisioned for transparency.

Some of the most high-profile food-related EU policy documents give a central role to transparency. The EC White Paper on Food Safety (2010), for instance, asserts that '[g]reater transparency at all levels of Food Safety policy is the golden thread throughout the whole White Paper.' Similarly, one of the actions at the centre of the EU's Farm to Fork Strategy is to introduce 'non-legislative initiatives to improve transparency' (European Commission, 2020: 21). This aim is illustrative of the ambiguity that surrounds transparency aims in much EU food-related policy, where the term is used but not defined or explained. Similar instances can be identified, for instance, in Regulation (EC) 853/2004 ('since all food produced in accordance with the hygiene rules will normally be in free circulation throughout the Community, the procedure allowing Member States to exercise flexibility should be fully transparent'), Regulation (EC) 178/2002 ('In order for there to be confidence in the scientific basis for food law, risk assessments should be undertaken in an independent, objective and transparent manner, on the basis of the available scientific information and data') and COM(2012) 6 final/2 of 15.2.2012 ('a new EU framework to increase transparency and adequacy of information to consumers on animal welfare for their purchase choice').

While the examples above illustrate the lack of clarity in calls for transparency, they also point towards the diverse contexts in which food-related policies might seek transparency. These vary from the information that consumers receive about food to the monitoring of food production, and the approach for developing processes, frameworks and policies. Section 4.4 provides further detail on the contexts within which transparency is sought, and on the purposes it is intended to serve. These largely mirror the two aspects of transparency identified by the Chief Executive of the UK's Food Standards Agency: 'transparency in the way we make policy decisions and transparency about what is in our food' (Miles, 2021). While these could be treated as separate realms, we examine the two together as, ultimately, both contribute to the openness around the provenance of food, whether



providing information about the food itself, or contributing to the potential for greater confidence in the way it is monitored and governed.

Despite the noted ambiguity, the review of policies identified five themes that point towards an ethos of transparency: openness; explication of rules; involvement of stakeholders; standardisation of data/consistency of approach; and independent and/or public scrutiny. These are now discussed in turn in more detail.

Openness is frequently associated with transparency in the documents reviewed. In some instances, it is explicitly identified as the central criterion for transparency. For instance, the 2010 White paper on food safety states that:

Transparency involves not only the rapid, open, presentation of the findings and recommendations of the Authority, but also implies that the processes followed in reaching them are as open as possible, in order to respond to the fundamental right of access of citizens as laid down in the Treaty.

Similar aims are expressed elsewhere, focusing especially on the openness of consultation processes (Regulation 1169/2011; Directive 2001/18/EC) and the development of food law (Regulation [EC] 178/2002).

The desire for openness relates closely to the requirement for independent and/or public scrutiny. This, again, is an aim of the 2010 White Paper on Food Safety, which asserts that 'Transparency will result in the necessary public scrutiny'. In relation to the policy-making process itself, the White Paper states that transparency might be achieved by 'involving all the stakeholders and allowing them to make effective contributions to new developments.' The precise nature of openness called for across the policies, however, varies. In Regulation 1924/2006, for example, transparency is achieved through the production of 'a public register containing the lists' of approved nutrition and health claims made on foods. In contrast, Regulation (EU) 1760/2000 requires the development of 'the framework in which...information is made available to consumers by sufficient and clear labelling of the product,' going on to state that 'the objective of labelling is to give maximum transparency in the marketing of beef'. Transparency, in other words, can involve openness about processes and structures (see also, for instance, Regulation 178/2002), as well as about the food itself (see also, for instance, Council Directive 2001/110/EC; Regulation [EU] 1760/2000), and can vary from the publication of information to the active involvement of stakeholders in policy-making processes.

The final two approaches to transparency (standardization of data/consistency of approach, and explication of rules) might be viewed as more passive. They do not involve increased openness *per se*, but aim to bring greater clarity to processes, structures and decisions. Explication of rules is a focus, for instance, of Council Regulation 834/2007, which asserts that it is 'appropriate to define more explicitly the objectives, principles and rules applicable to organic production, in order to contribute to transparency and consumer confidence'. Regulation (EC) 66/2010 similarly states that, in relation to the EU Ecolabel, competent bodies' 'rules of procedure shall be such as to ensure transparency in the conduct of their activities as well as the involvement of all interested parties'. Finally, Regulation 2017/625 requires the use of 'standard data formats' in the development of risk assessments in the food chain 'for the purpose of increased transparency'. As in previous examples, the explication of rules is a criterion for transparency both of food itself and of the policymaking around it.



Beyond the areas identified thus far, traceability is a cross-cutting theme that relates to openness, standardization of data and inviting independent or public scrutiny of data. Traceability has been a central requirement of EU food legislation since 2002 (178/2002/EC). The 2010 White Paper on Food Safety further emphasised the requirement for traceability along the food chain, including its establishment as one of the 'common principles underlying food legislation' in the Action Plan on Food Safety. Traceability is defined in Regulation (EC) No 178/2002 as 'the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution' (see also Regulation (EU) 2018/848). This central requirement is augmented in specific areas. For example, in relation to hygiene rules for food of animal origin, Regulation (EC) No 853/2004 stipulates that food business operators 'should ensure that all products of animal origin that they place on the market bear either a health mark or an identification mark'. In contrast to the ambiguity around definitions of transparency, traceability is subject to technical and rigid specification (though see Islam and Cullen, 2021). For example, Commission Regulation (EU) No 1337/2013 for the application of Regulation (EU) No 1169/2011 provides the following steps for implementation of traceability requirements:

- 1. Food business operators, at each stage of production and distribution of the meat referred to in Article 1, shall have in place and use an identification and registration system.
- 2. That system shall be applied in such a way as to ensure:
- (a) the link between the meat and the animal or group of animals from which it has been obtained, at the slaughter stage this link being the responsibility of the slaughterhouse; and
- (b) the transmission of the information relating to the indications referred to in Articles 5, 6 or 7, as appropriate, together with the meat, to the operators at the subsequent stages of production and distribution.

Each food business operator shall be responsible for the application of the identification and registration system, as laid down in the first subparagraph, within the stage of production and distribution at which it operates.

The food business operator who packs or labels the meat in accordance with Articles 5, 6 or 7 shall ensure the correlation between the batch code identifying the meat supplied to the consumer or mass caterer and the relevant batch or batches of meat from which the pack or labelled batch is constituted. All packs with the same batch code shall correspond to the same indications in accordance with Articles 5, 6 or 7.

3. The system referred to in paragraph 1 shall record, in particular, the arrival at and the departure from the establishment of the food business operator, of animals, carcases or cuts, as appropriate, and ensure a correlation between arrivals and departures.

While transparency might be viewed as an underpinning ethos for food policy in the European Union, therefore, traceability could in contrast be understood as a technical requirement that provides one potential route to transparency.



In the policy documents reviewed here, transparency is generally viewed as an unambiguous requirement, or as an inherently positive aim. Regulation (EU) 2019/1381 on the transparency and sustainability of the EU risk assessment in the food chain, however, is more cautious, noting the problems that can be found around disclosure of data:

It is...necessary to strengthen the transparency of the risk assessment in a proactive manner. All scientific data and information supporting requests for authorisations or for approvals under Union law as well as other requests for scientific output should be made publicly available in a proactive manner and be easily accessible as early as possible in the risk assessment process. However, such disclosure to the public should be without prejudice to any rules concerning intellectual property rights or to any provisions of Union law protecting the investment made by innovators in gathering the information and data supporting relevant applications or notifications. It should be ensured that such disclosure to the public is not considered to be permission for further uses or exploitation, without jeopardising the proactive character of disclosure to the public and the easy public access to the disclosed data and information. To ensure the transparency of the risk assessment, a summary of the pre-submission advice should be made public only once a corresponding application or notification has been made public in accordance with the applicable rules on transparency.

This paragraph illustrates the problems associated with requirements for poorly-defined transparency: the levels of openness that can realistically be achieved will vary considerably between contexts, whether because of availability of data, the commercial implications of data sharing, or because of the costs associated with data sharing (for example). This regulation goes on to state that:

To determine what level of proactive disclosure to the public strikes the appropriate balance, the relevant rights of the public to transparency in the risk assessment process should be weighed up against the rights of applicants or notifiers, taking into account the objectives of Regulation (EC) No 178/2002.

Transparency, therefore, is a contested concept, open to interpretation and subject to debate.

4.3 Visions for transparency

The previous section outlined the factors underpinning interpretations of transparency in European Union food-related policies. This section builds on that, examining the purposes it aims to serve, and the groups at which it is directed. While Section 4.2 alluded to such themes (e.g. a purpose being to increase openness of data), this section asks *why* such openness may be desirable, and for whom. As noted at the end of 4.2, the nature of, and desirability for, transparency in and around the food system is a political issue and may be contested by different stakeholders. It is important, therefore, to consider not only how transparency is defined, but why it is called for, as this may affect not only the approaches taken, but also the appetite for uptake.

Mirroring the discussion in 4.2, a number of policies do not make explicit their vision for transparency; it is assumed to be positive and uncontested and appears as an end-point rather than a route to a



larger goal. For example, Regulation (EU) 2021/2115 requires Member States to 'take into account the level of sustainability and ambition of [eco-schemes], based on objective and transparent criteria.'

Nonetheless, six specific visions or purposes for transparency can be identified in the documents reviewed. The first – and dominant – purpose is achieving 'confidence.' Transparency is viewed as a necessary step in achieving confidence in a number of policies. For example:

- 'in order for there to be **confidence** in the scientific basis for food law, risk assessments should be undertaken in an independent, objective and transparent manner, on the basis of the available scientific information and data' (Regulation [EC] No 178/2002)
- 'It is necessary to ensure that **consumer confidence** and the **confidence of trading partners** is secured through the open and transparent development of food law and through public authorities taking the appropriate steps to inform the public where there are reasonable grounds to suspect that a food may present a risk to health' (Regulation [EC] No 178/2002)
- 'It is therefore appropriate to define more explicitly the objectives, principles and rules applicable to organic production, in order to contribute to transparency and consumer confidence as well as to a harmonised perception of the concept of organic production.'

 (Council Regulation 834/2007)
- 'Since 1997, the Commission has implemented a new approach to ensure transparency by making available to the public all information on scientific advice and on inspections and controls. This policy is a key element in **risk communication and public confidence** and has therefore to be actively pursued' (2010 White paper on food safety)
- 'Following the instability in the market in beef and beef products caused by the bovine spongiform encephalopathy crisis, the improvement in the transparency of the conditions for the production and marketing of the products concerned, particularly as regards traceability, has exerted a positive influence on consumption of beef. In order to maintain and strengthen the confidence of consumers in beef and to avoid misleading them, it is necessary to develop the framework in which the information is made available to consumers by sufficient and clear labelling of the product.' (Regulation (EU) 1760/2000)
- 'Transparency and data reporting is also important for maintaining the **trust of the consumer** and other stakeholders in the sector' (COM[2021] 236 final; emphases added)

These examples often focus on confidence of consumers and the wider public, but policies such as Regulation (EC) No 178/2002 aim for heightened confidence throughout and beyond the food system. As in 4.2, transparency is viewed as something that can result in confidence both about food itself and the policy- and decision-making that surrounds it.

Closely connected to the previous examples is a desire to respond to 'consumer interests. For example:



- 'In view of the close link between the quality of honey and its origin, it is indispensable that full information on those matters be available so that the consumer is not misled regarding the quality of the product. The particular consumer interests as regards the geographical characteristics of honey and full transparency in this regard necessitate that the country of origin where the honey has been harvested should be included in the labelling.' (Council Directive 2001/110/EC)
- Taking into account the interest of producers in communicating the product and farming characteristics, and the interest of consumers in receiving adequate and transparent product information, it should be possible to determine the place of farming and/or the place of origin, on a case-by-case basis at the appropriate geographical level, while taking into account the specific characteristics of some sectors, in particular concerning processed agricultural products. (EU Regulation 1308/2013, emphases added)

A third vision for the role of transparency is the greater involvement of stakeholders in reviewing policy. The 2010 *White Paper on Food Safety* states that transparency around policy-making will allow stakeholders to 'make effective contributions to new developments' (emphasis added).

Fourthly, transparency is closely related to accountability, which in turn is related to the ability of different groups to scrutinise data and decision-making. This could be in relation to the advice received by regulators where, for instance, 'in the event of diverging scientific opinions between scientific bodies, procedures should be in place to resolve the divergence or provide the risk managers with a transparent basis of scientific information' (Regulation (EC) No 178/2002, emphasis added). Alternatively, transparency may be a route to greater scrutiny of diverse actors in the food system. While the most high-profile focus tends to be on the ability of end-consumers to scrutinise production practices, EU Regulation 2021/2117 stipulates that 'to increase the transparency of producer organisations, the statutes of producer organisations should also enable producer members to scrutinise democratically the accounts and budgets of the organisation.'

Fifth, transparency can be a route to greater scrutiny of the policy-making process itself:

It is important that all steps in policy making are taken in full openness. However good a new system may be, without this transparency the consumers will not be able to follow the development of the new measures and fully appreciate the improvements which they bring. Transparency will result in the necessary public scrutiny and ensure democratic control and accountability. (2010 White paper on food safety, emphasis added)

Finally, transparency is identified as a means through which consistency of approach might be achieved:

The transparency of rating criteria is particularly necessary so that best practices can be compared and, in time, the development of a **consistent approach** at Union level considered. (Regulation 2017/625, emphasis added)



Within these six visions for transparency in and around the food system, the intended 'audiences' for transparency include end-consumers, the general public, third party organisations (such as assessors, certifiers and NGOs), economic operators and public authorities. Regulations relating to the Common Agricultural Policy, for example, put an emphasis on the improvement of market transparency, which EU Regulation 2021/2017 states 'is relevant for the proper functioning of the supply chain.' While aiming to improve market transparency more generally (see also EU Regulation 2021/2116), the focus of these policies remains on producers. For instance:

In order to support viable farm income and resilience of the agricultural sector across the Union to enhance long-term food security, there is a need to improve the farmers' position in the value chain, in particular by encouraging forms of cooperation that involve and benefit farmers, as well as by promoting short supply chains and improving market transparency. (Regulation 2021/2115)

They also focus on the relationship between the EU (and its institutions), Member States and CAP beneficiaries, noting a 'need for greater transparency regarding distribution of funds' (EU Regulation 2021/2116). In such examples, interpretations of transparency as relating to openness and accountability refer not to food itself but to the organisations and institutions that govern the food system, including 'world markets' (EU Regulation 2021/2116).

In other cases, considerable emphasis is placed on ensuring that customers and buyers are well-informed prior to making their purchase and to ensure that they are making optimal choices in relation to sustainability, food safety and health. In the *Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030* (COM/2021/236), for instance, emphasis is placed on ensuring 'more accurate information and transparency about how aquaculture activities are carried out...to meet the increasing consumer demand for sustainable products.' In these guidelines, however, responsibility for the provision of accurate information does not lie solely with the producer or retailer; they note the need for 'more structured guidance to EU Member States on how to obtain and report data,' while better coordinating 'reporting obligations and...streamlin[ing] reporting procedures.' In other words, a focus on information for consumers draws on (or drives) changing responsibilities across the food system, ranging from the roles of different levels of government in the coordination of data sharing through to producers, retailers and others in the food supply chain in providing and communicating information accurately.

This more systemic approach to transparency can be seen most explicitly in legislation relating to the European Green Deal. For instance, the *Green Deal Industrial Plan for the Net Zero Age* (COM[2023] 62 final) states that:

it is key that consumers can make their choices based on transparent and reliable information on the sustainability, durability and carbon footprint of the products. Market transparency is a tool facilitating uptake of technologically and environmentally superior net-zero products.

Greater sustainability would be, in other words, the combined result of market transparency, consumer power and changing practices throughout food supply chains (which in turn would be driven by more accurate and standardised approaches to sustainability reporting).

The proposal for the *Green Claims Directive* (COM/2023/166 final) attempts to operationalise some aspects of these systemic approaches to transparency, where transparency is directed at, and the responsibility of, multiple food system actors. It proposes to establish criteria for the assessment of



environmental claims on products, aiming to enhance consumer trust in the claims (including on or about food). While it ultimately focuses on labelling and their 'fairness of their display in marketing to consumers,' it places a burden of substantiation on businesses in the supply chain. Although the proposed Directive will not adopt a standard methodology for the substantiation of claims, it does require that any claims made about the environmental credentials of a product meet minimum criteria (such as relying on 'recognised scientific evidence', demonstrating that the 'claim is not equivalent to requirements imposed by law,' and assesses the product from a 'life-cycle perspective'). Where a claim is made, information must be made available on the product and substantiation on (for example)

the underlying studies or calculations used to assess, measure and monitor the environmental impacts, environmental aspects or environmental performance covered by the claim, without omitting the results of such studies or calculations and, explanations of their scope, assumptions and limitations, unless the information is a trade secret.

Although the *Green Claims Directive* is typically unwilling to establish a clear definition of 'transparency,' it is indicative of the move towards a more systemic vision of transparency, which relies on accountability, openness consistency, while concurrently targeting multiple food system actors (including consumers, regulators, producers and other actors such as certifying organisations). Similar moves can be found in other proposed legislation, such as the *Directive on Corporate Sustainability Due Diligence* (COM/2022/71 final), which aims to 'help EU companies in all sectors of the economy to assess and manage sustainability risks and impacts with respect to the core human rights and environmental risks, including across their value chains'.

This section has shown that, while visions for the purpose transparency might serve are often explicit in European Union policy, there remains a lack of clarity over its form. While greater transparency may indeed boost consumer confidence (for example), the form it takes, the data it covers, and the modes of communication adopted are significant but often sidelined in high-level policy documents. It has also highlighted the increasingly systemic vision for transparency, where transparency is a relational achievement that results from the interactions and collaborations of multiple stakeholders from across the food system.

4.4 Visions for traceability

Traceability has been used within EU Regulations and policies relating to the food system in four main contexts: a) to ensure food safety; b) to ascertain the authenticity of food; c) to eliminate health risks; and d) to minimise environmental damage. As noted previously, while the notion of transparency is open to considerable interpretation, traceability might be understood as a more objective term, denoting the ability 'to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution' (Regulation [EC] No 178/2002). Nonetheless, Borit (2016: 232) has identified a lack of 'interpolicy horizontal consistency' within EU food law, differentiating between the application of the General Food Law (Regulation [EC] No 178/2002), which 'leads to a generic (nonspecific) lowwarranty traceability of the food supply chain' and 'a second, more complex model...followed in rules regulating products such as those derived from GMO [genetically modified organisms]'. Borit argues



that the inconsistent approach to traceability risks damage to public trust, as 'both the legislature and the consumers could develop a false sense of security' (ibid).

While perhaps easier to define than transparency, traceability is similarly open to different purposes and visions. Specifically, EU food-related policy has envisioned traceability in four related ways:

- 1. Information sharing in order to enable consumers to make informed choices and to ensure that food safety standards are maintained, building consumer confidence (e.g. Regulation (EC) No 178/2002);
- 2. Eliminating risks within the food supply chain by enabling withdrawal of food and feed that are high risk in terms of health and safety, and as part of disease control measures (e.g. *White Paper on Food Safety* [COM (1999) 719 final];
- 3. Monitoring products and withdrawing them if they are deemed risky in terms of causing damage to animal health or the environment (e.g. Regulation (EC) No 1830/2003); and
- 4. Ensuring quality control and compliance with regulatory requirements for organic production (e.g. Regulation (EU) 2018/848)

As such, traceability might be viewed as a technical or procedural issue, in contrast to transparency, which relates more to actual and perceived openness and trust.

4.5 Stakeholder definitions of food system transparency

Any uncertainty around the meaning of transparency will affect the implementation of policies in this area. This section, therefore, examines stakeholder understandings of transparency in the food system. It offers a preliminary analysis of the stakeholder interviews that were conducted during Task 7.2 (as outlined in Section 3.2). During these interviews, participants were asked to provide a definition of food system transparency from the perspective of the organisation for which they work. In a similar way to policy documents, there was no clear agreement on what the term means. This lack of agreement was explicitly noted by one participant, who commented that 'everyone is talking about transparency, transparency, transparency, but at the end of the day, I can understand that there is not a single understanding' (Participant 31). Here, therefore, we review the variety of perspectives on transparency expressed by stakeholders.

At the simplest level, participants argued that transparency equates to making data or information available. This was characterised by some as 'sharing' (Participant 18), and as 'being open' (Participant 4), involving 'free flow of information between the stakeholders' (Participant 7). Participant 1 argued, however, that sharing is, in itself, insufficient as a definition of transparency:

transparency is the ability for any actor in the supply chain to access the information that was commonly agreed to be shared. So there is for me, there are two elements: there is access to information, unfettered access to information; and you have to agree [on what is to be shared].

A more nuanced perspective was offered by Participant 14, who felt that 'transparency is the ability to see'. This goes beyond the availability of information about food and hints at the importance of that information's accessibility. Participant 9 similarly differentiated between these two aspects: 'transparency in that sense is very much about data sharing and the accessibility of the right data'. Some participants emphasised the relationship between transparency and the end consumer. For



instance, 'transparency would mean for us...gathering all the data of the supply chain from the producer and until the final consumer' (Participant 20), and where 'transparency is for the end consumer to be able to know all the information regarding the production of the product. And from the field to the shelf' (Participant 12). However, Participant 7 felt that the opportunities for data to be shared with consumers were yet to be maximised:

it would be useful if there was some push towards the sharing of this information with consumers. So say OK, there are, besides the ingredients and the nutritional values, there is a lot of other information that can be useful for the consumer to make an informed decision.

Nonetheless, Participant 10 warned that 'the most important obstacle' to transparency is 'to understand what kind of information we have to transfer, because I don't think that all the information is useful'. Similarly, Participant 34 stated that 'there is a limit to transparency,' going on to define transparency in the food system as emerging when 'the information is given to the right person at the right time.' In other words, the mode of communication, and selection of information to communicate, can impact the level of transparency achieved; providing too much of the wrong type of information might further obfuscate rather than illuminate:

transparency first will not work because I mean the amount of information that is shared these days is so that at the end of the day...the result is completely the opposite. And...I mean, it's flooding people with information. (Participant 31)

These perspectives were neatly drawn together by Participant 6, who again argued that transparency is 'related with knowing the origin and the composition of the food products' but elaborated on this, noting:

it's also the way that the product was produced and if it was in accordance to something – specific regulations – [...] and the capacity to prove that is the transparency you know, so that what we are selling or what the food industry is selling is actually, you know, fully proof somehow for the consumers. Or for all their stakeholders in the food value chain.

For this participant, the provision of data was not sufficient to provide transparency: the data might relate to confirmation that a standard or regulation was being adhered to, and would provide proof of origin and composition. They also note that transparency might not only be valuable for an end consumer but for all stakeholders in the value chain.

Others emphasised the importance of engendering trust in the food system, particularly for end consumers. For example, Participant 3 commented that 'transparency is based on trust'. Participant 11 built on this, arguing that trust, in turn, is built on openness:

we assimilate transparency with trust, so companies - companies will openly communicate what they are doing, how they work, what are their providers, their suppliers? Where their food products come from and how they are produced. So [...] all these aspect translating to trust, the trust of consumers towards the food system.

However, another participant differentiated between openness and sharing. For him, 'transparency is keeping records of what you are doing and having this information available in case needed, but not



automatically to anyone' (Participant 31). In other words, data can be shared *if necessary*, and only to certain actors. Here, therefore, confidence in the food would be based on trust in the system of monitoring and regulation, rather than on fuller access to data for all.

While openness and sharing, alongside trust in data (and the food it represents) were widely viewed as desirable, Participant 8 highlighted that such attributes were difficult to achieve without an appropriate supporting infrastructure:

one of the key things is, of course, opening the data, but the next thing is to make sure that the infrastructure for data flow is set up because that's a huge problem within the food value chain that we have a lot of data, but it's not connected, and it doesn't flow from one level of the value chain to the other.... So simple things like that, just making sure you can get the data from one place to the other in a digital, simple, seamless way.

As Participant 3 put it, 'to be transparent, we need to offer to the digital support that helps people to share information more accurately'; the infrastructure is, in other words, significant in ensuring the veracity of the data that is shared. Participant 4 offered a contrasting perspective on this issue, arguing that there is a:

misconception that transparency means full transparency, and if you're being transparent...that everything will be out in the open or even with blockchain, that all the data are necessarily visible, while in some cases you just need to make certain connects, use connections or you can have something called zero knowledge proofs where you're not... sharing the underlying data, but just saying that something is indeed correct.

The nature of the infrastructure for data sharing, or the technology that supports this, can therefore affect the interpretation of transparency. While data sharing itself remains important in the type of system discussed by Participant 4, it is not the visibility, or even openness, of this data that matters most. Here, confidence and trust in the reliability of the system that is put in place is more significant.

5. Obstacles and challenges in achieving transparency

The overarching theme from previous sections is the lack of clear definition of 'transparency'. While achieving transparency around food and associated policy- and decision-making remains a laudable objective, the failure of current policy to define the term means that it is open to considerable interpretation by actors within and beyond food systems. As a result, expectations around the levels of transparency that might be achieved could be difficult to manage.

Calls for greater transparency in the food system have often been driven by a desire to build consumer confidence both in food and the regulation that surrounds it, empowering them to make sustainable, healthy and safe decisions about the food they eat. As a result, labelling has frequently been a key route to assuring consumers about the voracity and authenticity of the food they buy, building in turn on increasingly standardized reporting on nutrition, and on a heightened focus on traceability. This area of the *Farm to Fork Strategy* was to be taken forward through a new Sustainability Labelling Framework, along with a revision of Regulation (EU) No 1169/2011 on the provision of food information to consumers (European Commission, no date-f). Combined, these initiatives were intended to introduce mandatory harmonised front-of-pack labelling for nutrition and voluntary



harmonised labelling for sustainability and built on responses to earlier consultations where, for instance, over 90% of respondents noted 'the lack of transparency on whether products are sustainable as a barrier to more sustainable choices to some or a high extent' (European Commission, 2022a).

However, the promotion of a systemic approach in and beyond the *Farm to Fork Strategy* implies moving beyond consumer concerns, incorporating the 'missing links' (Sonnino et al., 2014: 181) of the post-production stages of the food system. As such, the implementation of transparency is the responsibility of actors across the food system, driving change at all steps through better-informed decision-making. Viewed thus, transparency could be equally important to (for instance) retailers, wholesalers, transporters and suchlike – 'the "middle part" of the food system' (Bock et al., 2022: 34) – in assessing the impact of their decision-making on sustainability, health and food safety.

Transparency requirements are likely to be diverse across these different actors: information that brings clarity and openness to one actor may bring opacity and obfuscation to another. In this respect, developing a single definition of transparency and associated requirements may neither be achievable nor desirable; rather, the development and explication of underlying principles of transparency could provide a solid basis for further topic-specific definitions.

Alongside the conceptual challenge of defining transparency, a central focus of current policy debate is the delivery of greater traceability in the food system. The Farm to Fork Strategy, for example, highlights the 'enhanced traceability system' envisaged in the proposals for a revised Regulation on fisheries control (COM/2018/368 final). The proposed change encompasses both more detailed recording of catches (recorded at the level of individual fishing trips) but also the digitalization of fisheries data. Similar proposals can be found in the recent Regulation on deforestation-free products (Regulation [EU] 2023/1115), which includes requirements for 'traceability to the plot of land' (European Commission Directorate-General for Environment, 2023: 1) through, for instance, use of Geographic Information Systems (GIS) and the use of satellite technologies for identification of deforestation, and digital tracing of products (such as cocoa or soy). Such requirements demonstrate the potential role of digital technologies in enhancing not only the traceability of specific products but also the assessment of the product's impact. Digital technologies hold considerable potential in improving the transparency of the food system, radically affecting the amount of data that can be held, the consistency of its format, and the purposes to which it can be put.

In cases such as those above, digital approaches to transparency and traceability are often presented as something of a panacea. EU Regulation 2021/2017, for example, notes that:

Blockchain, connecting devices and enhancing the scope of the "Internet of Things" (IoT) economy, is a promising technology for many areas such as supply chains, recording land titles, insurance markets, or any other type of transaction or record that can be translated in a digital form. It thus has high potential to improve market transparency and efficiency of food supply chains.

However, these technologies also raise considerable challenges and concerns. The proposals in relation to products associated with deforestation, for example, have been met with concerns about costs and potential timelines for implementation (Politico, 2023). The costs associated with implementation and adoption of transparency-related technologies, such as Blockchain, Internet of Things and Artificial Intelligence, can be off-putting — or unrealistic — for many food system actors.



Willingness to adopt such technologies may differ by sector and geographical region, as well as between individuals (e.g. on the basis of education and age). While there is already significant uptake of the technologies identified above within the EU food system, this often results from private initiatives, either at the level of individual companies or in response to private standards and requirements. A key challenge for their integration into EU and government monitoring systems is the 'lack of common standards' (Patel et al., 2023: 9) across different platforms.

A recent FAO report on the *Future of Food Safety* (FAO, 2022) engaged directly with such issues, arguing that while regulatory policies and strategies exist to reduce food fraud, the availability of more information or data may not necessarily ensure more transparency. It argued that the emphasis should instead be on a resilient food supply chain based on trust and a strong socio-economic system where supply chain actors and collaborators reciprocate with each other in a coordinated way that reduces uncertainty and the need for too much control. The report identifies food fraud as an acquired social behaviour and suggests that the solutions to food safety should therefore be sought within social parameters which would ensure effective behavioural change instead of being reliant on excessive data-based techniques.

One of the most significant ongoing challenges to the formalisation of new transparency initiatives around food in the EU is the faltering status of legislation associated with the Green Deal. A 'flagship' initiative of the Farm to Fork Strategy (European Commission, no date-d), it was expected that a full framework proposal for the Sustainable Food System Law would be presented in September 2023. However, reports in mid-October 2023 suggested that this will no longer be presented in advance of the EU elections in 2024 (Foote, 2023). The proposals for a Sustainable Labelling Framework (European Commission, no date-b) appear to be affected similarly (Poole and Patel, 2023). In the likely immediate absence of these legislative programmes, moves to increase food system transparency from the EU level are more fragmented than anticipated.

Nonetheless, and as outlined in previous sections, recent and likely future legislation – such as the Regulation on deforestation-free products ([EU] 2023/1115), the proposed Green Claims Directive (see European Commission, no date-e), and the proposed Directive on Corporate Sustainability Due Diligence (COM/2022/71 final) along with voluntary measures such as those set out in the *Code of Conduct on Responsible Food Business and Marketing Practices* (European Commission, 2021) – all point towards a more systemic approach to the enhancement of transparency, requiring the collaboration and alignment of multiple actors. There is also a more widespread focus on encouraging the development of 'common methodologies and data sharing practices' (European Commission, 2021: 20).

6. National initiatives

In the likely absence of the previously-expected European-wide transparency initiatives, developments in individual Member States (and from beyond the European Union) offer guidance as to possibly future policy directions for food system transparency.

For instance, voluntary nutrition labelling is being pursued by a number of countries. The Netherlands is adopting Nutri-Score for this purpose from January 2024 (Netherlands National Government, 2023). Developed originally by the French government, this is becoming an increasingly common route to nutrition labelling, used in countries including Belgium, Switzerland, Luxembourg and Germany (Santé



Publique France, 2023). However, it has not been universally welcomed in these countries, where concerns persist about a) its voluntary nature; and b) its imperfect relationship with government nutritional guidelines.

An equivalent approach to labelling food for its impact on the climate is being pursued in Denmark, which is developing a state-controlled climate label. The intention behind the investment is to produce 'one unified brand,' 'to avoid a forest of brands that just confuse' (The Danish Veterinary and Food Administration, 2022). Again, the intention is that this label should be voluntary.

As noted in Section 4.1, the development of the UK Food Data Transparency Partnership intends to improve mechanisms for data-sharing within and around the food system. The ultimate aim is to provide more accurate and consistent information for consumers, in turn driving a move to more sustainable and healthy food production. While its ambition has been scaled back, it has the opportunity to build on existing and ongoing work in this area. For instance, the UK's Food Standards Agency (FSA) has conducted key work on the role of Blockchain in 'ensuring transparency and efficiency in food supply chains' (Food Standards Agency, no date: 6). A key recommendation from that report was that regulators should not take responsibility for setting up, defining and managing Blockchains 'as the scope could increase to beyond regulation' (Food Standards Agency, no date: 13). The report concluded that Blockchain can offer 'real potential benefits,' that the 'underlying technology is not a challenge to implement or use,' but that 'hurdles' relating to (e.g.) 'trust, legal frameworks, process and data definition and ease of interoperability' reduce its immediate desirability for regulators (Food Standards Agency, no date: 14). As an alternative, the FSA explored the potential role of Food Data Trusts (FDTs) (Food Standards Agency, 2021). The purpose of such FDTs is to enable the sharing of data between organisations through the establishment of clear and strict rules; the FDT performs a data stewardship function.

7. Conclusions

This report has highlighted the central role of 'transparency' in debates around the food system in the EU. Although these have recently been driven in particular by the Green Deal and Farm to Fork Strategy, the report has demonstrated the concept's longer-standing significance. Despite the uncertainty around the future of Farm to Fork legislation, the longevity of concerns around transparency in the EU, along with ongoing developments around (for instance0 the Deforestation-free Products Regulation and the Green Claims Directive will ensure that it remains a very live topic.

A central theme in the report is the ambiguity of the concept of transparency itself. Its interpretation – whether in academic literature, policy documents, or by stakeholders from across the food system – varies considerably, from the most simple level of making data and/or information available, through to more complex concerns around the establishment of trust. The conceptualization of food system transparency also goes considerably beyond information about food itself and extends to the decision-making processes, regulation and monitoring that surrounds the food; indeed, it is such practices that often determine the nature of information that is produced about food, so the two realms cannot be separated.

Alongside this, the report has also emphasized the often-similar ambiguity about the purpose envisaged for increased transparency. Most commonly, it is framed as benefiting consumers and enabling them to make better-informed decisions that will benefit their health, while reducing the environmental impacts of food. While this remains important, work around the *Farm to Fork Strategy*



shifted greater focus to those in the middle of supply chains, such as manufacturers and retailers, because of the influence they yield. Again, a central purpose for improved transparency is envisioned here as benefiting both consumers and the environment.

However, such ambiguities – as evidenced in the stakeholder responses outlined in Section 4.5 – do not engender a shared vision and, as a corollary, there is uncertainty about what a more transparent food system might look like or require. We argue, therefore, that future policy that aims to enhance food system transparency should set out with a clear definition and vision. This should address questions including: What is transparency? What aspects of the food system are being made transparent? What purposes does transparency serve? Who is responsible for increasing food system transparency? How will the implementation of transparency-related processes and practices impact differently across the food system?

Further, much existing policy around food system transparency is less than explicit about the routes through which to achieve it. Traceability initiatives often provide a basis for visions of transparency, offering data about the movement of a product (and its components) from point-to-point along a supply chain. As we have noted, however, traceability is one step – often procedural and technical – on the transparency ladder, with transparency being built not only on product data but also trust in the wider system (which could include regulation and monitoring). The introduction of new technologies, such as Blockchain, the Internet of Things, and Artificial Intelligence, offers considerable scope for the production of greater quantities of supply chain data with greater consistency and reliability, but it is vital that policymakers engage with these in relation to potential beneficiaries of the data; as noted in Section 4, the provision of the wrong types of data in the wrong places can lead to obfuscation and opaqueness rather than transparency.

Finally, while ongoing work around data sharing, labelling and traceability continue to encourage innovation around the provision of information about food, any move away from the underpinning philosophy of the *Farm to Fork Strategy* risks the continuation of a fragmented approach to food system transparency in the EU. While recent and ongoing legislative work puts an increasing emphasis on a systemic approach, where transparency might result from the involvement, alignment and collaboration of multiple stakeholders from across the food system, this still falls short of the innovative holistic approach that was originally intended. Developing a clearly-defined systemic approach to transparency in the food system, focusing not only on the production of data but also on the social relations that surround that data, and which goes beyond individual sectors, stakeholder groups and issues, should form an important focus for future integrated policymaking.



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Appendix A: Policy documents included in original search

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Directive 2002/53/EC on the	https://eur-lex.europa.eu/legal-
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Farm to fork strategy	https://food.ec.europa.eu/system/files/2020-05/f2f_action-
	plan 2020 strategy-info_en.pdf



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No 579/2014 granting	content/EN/TXT/PDF/?uri=CELEX:32
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provisions of Annex II to	
Regulation (EC) No 852/2004	
Commission Regulation (EU)	https://eur-lex.europa.eu/legal-
2021/382 amending the	content/EN/TXT/PDF/?uri=CELEX:32021R0382&from=EN
Annexes to Regulation (EC)	
No 852/2004	
Directive 1999/2/EC	https://eur-lex.europa.eu/legal-
	content/EN/TXT/?uri=celex%3A31999L0002
Implementing Decision (EU)	https://eur-lex.europa.eu/legal-
2019/300	content/EN/TXT/PDF/?uri=CELEX:32019D0300&from=EN



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Decision No 1082/2013/EU	https://eur-lex.europa.eu/legal-
D'	content/EN/TXT/PDF/?uri=CELEX:32013D1082&from=EN
Directive 91/676/EEC	https://eur-lex.europa.eu/legal-
D'	content/EN/TXT/PDF/?uri=CELEX:31991L0676&from=EN
Directive 2009/32/EC	https://eur-lex.europa.eu/legal-
Day 1411 - (511) 2040 (4000	content/EN/TXT/PDF/?uri=CELEX:32009L0032&from=EN
Regulation (EU) 2019/1009	https://eur-lex.europa.eu/legal-
Danishing (EC) No. 2002 (2002	content/EN/TXT/PDF/?uri=CELEX:32019R1009&from=EN
Regulation (EC) No 2003/2003	https://eur-lex.europa.eu/legal-
Day 1411 - (550) No 245 (02	content/EN/TXT/PDF/?uri=CELEX:32003R2003&from=EN
Regulation (EEC) No 315/93	https://eur-lex.europa.eu/legal-
D 1 :: (511) 2047/2470	content/EN/TXT/PDF/?uri=CELEX:31993R0315&from=EN
Regulation (EU) 2017/2158	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32017R2158&from=EN
Regulation (Euratom)	https://eur-lex.europa.eu/legal-
2016/52	content/EN/TXT/PDF/?uri=CELEX:32016R0052&from=EN
Regulation (EC) No 1881/2006	https://eur-lex.europa.eu/legal-
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2018/1096	content/EN/TXT/PDF/?uri=CELEX:32018R1096&from=EN
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Council Directive 84/500/EEC	https://eur-lex.europa.eu/legal-
of 15 October 1984	content/EN/TXT/PDF/?uri=CELEX:31984L0500&from=EN
Council Decision 1999/879/EC	https://eur-lex.europa.eu/legal-
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Regulation (EC) No 183/2005	https://eur-lex.europa.eu/legal-
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Regulation (EC) No 767/2009	https://eur-lex.europa.eu/legal-
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Implementing Regulation (EU)	https://eur-lex.europa.eu/legal-
2019/1715	content/EN/TXT/PDF/?uri=CELEX:32019R1715&from=EN



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Regulation (EC) No 999/2001	https://eur-lex.europa.eu/legal-	
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COM(2012) 6 final/2 of	https://eur-lex.europa.eu/resource.html?uri=cellar:4ef28104-	
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Directive 1999/74/EC	https://eur-lex.europa.eu/legal-	
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Decision 92/583/EEC	https://eur-lex.europa.eu/legal-	
Decision 92/383/EEC		
Decision (EU) 2017/436	content/EN/TXT/PDF/?uri=CELEX:31992D0583&from=EN	
Decision (EO) 2017/436	https://eur-lex.europa.eu/legal- content/EN/TXT/PDF/?uri=CELEX:32017D0436&from=EN	
Decision (EU) 2017/2207		
Decision (EU) 2017/2307	https://eur-lex.europa.eu/legal-	
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Agreement between the EU	https://eur-lex.europa.eu/legal-	
and Chile on trade in organic	content/EN/TXT/PDF/?uri=CELEX:22017A1214(01)&from=EN	
products		
Council Regulation (EC) No	https://eur-lex.europa.eu/legal-	
1255/97	content/EN/TXT/PDF/?uri=CELEX:31997R1255&from=EN	
Regulation (EC) No 1/2005	https://eur-lex.europa.eu/legal-	
B 1 11 / 120 01 1000 /	content/EN/TXT/PDF/?uri=CELEX:32005R0001&from=EN	
Regulation (EC) No 1099/2009	https://eur-lex.europa.eu/legal-	
	content/EN/TXT/PDF/?uri=CELEX:32009R1099&from=EN	
Directive 89/384/EEC	https://eur-lex.europa.eu/legal-	
	content/EN/TXT/PDF/?uri=CELEX:31989L0384&from=EN	
Regulation (EU) 2016/2031	https://eur-lex.europa.eu/legal-	
	content/EN/TXT/PDF/?uri=CELEX:32016R2031&from=EN	
Directive 93/51/EEC	https://eur-lex.europa.eu/legal-	
	content/EN/TXT/PDF/?uri=CELEX:31993L0051&from=EN	
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176 final	e9d1-11e4-892c-01aa75ed71a1.0002.03/DOC_1&format=PDF	
Communication (COM(2015)	https://eur-lex.europa.eu/resource.html?uri=cellar:3cc2bfe5-	
176 final Annex	<u>e9d1-11e4-892c-01aa75ed71a1.0002.03/DOC_2&format=PDF</u>	



Implementing Desigion	https://our.lov.ouropa.ou/logal
Implementing Decision 2011/884/EU	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32011D0884&from=EN
Directive 2001/18/EC	https://eur-lex.europa.eu/resource.html?uri=cellar:303dd4fa-
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Commission Regulation (EC)	https://eur-lex.europa.eu/legal-
No 65/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0065&from=EN
Regulation (EC) No 1829/2003	https://eur-lex.europa.eu/legal-
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Regulation (EC) No 1946/2003	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32003R1946&from=EN
Directive (EU) 2015/412	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32015L0412&from=EN
Directive 2009/41/EC	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32009L0041&from=EN
Directive 86/278/EEC	https://eur-lex.europa.eu/legal-
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Regulation (EC) No 1610/96	https://eur-lex.europa.eu/legal-
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Regulation (EC) No 469/2009	https://eur-lex.europa.eu/legal-
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Regulation (EU) No 528/2012	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32012R0528&from=EN
Regulation (EC) No 1107/2009	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32009R1107&from=EN
Regulation (EC) No 396/2005	https://eur-lex.europa.eu/legal-
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Directive 2009/128/EC	https://eur-lex.europa.eu/legal-
De redeti en (EU) 2040 /4024	content/EN/TXT/PDF/?uri=CELEX:32009L0128&from=EN
Regulation (EU) 2019/1021	https://eur-lex.europa.eu/legal-
Regulation (EC) No 1924/2006	content/EN/TXT/PDF/?uri=CELEX:32019R1021&from=EN
Regulation (EC) NO 1924/2006	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:02006R1924-
20 May 2020: Report on	20141213&from=EN https://food.ec.europa.eu/system/files/2020-05/labelling-
front-of-pack nutrition	nutrition fop-report-2020-207 en.pdf
labelling	<u> inditition_lop-report-2020-207_en.pdr</u>
20 May 2020: Commission	https://food.ec.europa.eu/system/files/2020-
Staff Working Document	05/labelling nutrition-claims swd 2020-96 sum en.pdf
Commission Regulation (EU)	https://eur-lex.europa.eu/legal-
No 1337/2013	content/EN/TXT/PDF/?uri=CELEX:32013R1337&from=en
Commission Implementing	https://eur-lex.europa.eu/legal-
Regulation (EU) 2018/775	content/EN/TXT/PDF/?uri=CELEX:32018R0775&from=EN
Implementing Regulation (EU)	https://eur-lex.europa.eu/legal-
No 828/2014	content/EN/TXT/PDF/?uri=CELEX:32014R0828&from=EN
Commission Directive	https://eur-lex.europa.eu/legal-
2006/141/EC	content/EN/TXT/PDF/?uri=CELEX:32006L0141&from=EN
Commission Directive	https://eur-lex.europa.eu/legal-
1999/21/EC	content/EN/TXT/PDF/?uri=CELEX:31999L0021&from=EN
Commission Regulation (EC)	https://eur-lex.europa.eu/legal-
No 953/2009	content/EN/TXT/PDF/?uri=CELEX:32009R0953&from=EN
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Commission Directive	20070620&from=EN
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2007/29/EC	content/EN/TXT/PDF/?uri=CELEX:32007L0029&from=EN
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No 41/2009	content/EN/TXT/PDF/?uri=CELEX:32009R0041&from=EN
Regulation (EU) No 609/2013	https://eur-lex.europa.eu/legal-
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1169/2011	content/EN/TXT/PDF/?uri=CELEX:32011R1169&from=en
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Regulation (EU) No	content/EN/TXT/PDF/?uri=CELEX:32013R1155&from=EN
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Commission Regulation	https://eur-lex.europa.eu/legal-
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Regulation (EC) No 1925/2006	
White paper: A Strategy on	https://ec.europa.eu/health/archive/ph_determinants/life_style
Nutrition, Overweight, and	/nutrition/documents/nutrition_wp_en.pdf
Obesity-related health issues	https://bashbass.com/sustans/files/2016
EU Action Plan on Childhood	https://health.ec.europa.eu/system/files/2016-
Obesity 2014-2020	11/childhoodobesity actionplan 2014 2020 en 0.pdf
Regulation (EU) 2019/2072	https://eur-lex.europa.eu/legal-
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Regulation (EU) 2020/2211	https://eur-lex.europa.eu/legal-
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Council Directive 96/22/EC	https://eur-lex.europa.eu/legal-
Population 1700/2000	content/EN/TXT/PDF/?uri=CELEX:31996L0022&from=EN
Regulation 1760/2000	https://eur-lex.europa.eu/legal- content/EN/TXT/PDF/?uri=CELEX:32000R1760&from=EN
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Council directive 2008/71/EC	content/EN/TXT/PDF/?uri=CELEX:32008L0071&from=EN
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21/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0021&from=EN
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2008/119/EC	content/EN/TXT/PDF/?uri=CELEX:32008L0119&from=EN
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- Council Directive 30/30/10	content/EN/TXT/PDF/?uri=CELEX:31998L0058&from=EN
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EU Regulation 1308/2013	https://eur-lex.europa.eu/legal-
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EU Regulation 2021/2117	https://eur-lex.europa.eu/legal-
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CAP specific objective: Farmer	file:///C:/Users/mlope/Downloads/cap-specific-objectives-brief-
position in value chains	3-farmer-position-in-value-chains en 0.pdf
CAP specific objective:	file:///C:/Users/mlope/Downloads/cap-specific-objectives-brief-
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Biodiversity and farmed	6-biodiversity en 0.pdf
landscapes	o blodiversity em o.pur
CAP specific objective: Health,	file:///C:/Users/mlope/Downloads/cap briefs 9 final 0.pdf
Food & Antimicrobial	me, me, osers, more, bowmouds, edp shers 5 mai o.pai
Resistance	
CAP cross-cutting objectives:	file:///C:/Users/mlope/Downloads/cap briefs 10 simplification
Driving simplification	0.pdf
Delegated Regulation (EU)	https://eur-lex.europa.eu/legal-
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2020/1794	content/EN/TXT/PDF/?uri=CELEX:02020R1794-
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2021/716	content/EN/TXT/PDF/?uri=CELEX:32021R0716&from=EN
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2022/474	content/EN/TXT/PDF/?uri=CELEX:32022R0474&from=EN
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2021/1189	content/EN/TXT/PDF/?uri=CELEX:32021R1189&from=EN
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Delegated Regulation (EU)	https://eur-lex.europa.eu/legal-
2021/715	content/EN/TXT/PDF/?uri=OJ:L:2021:151:FULL&from=EN
Delegated Regulation (EU)	https://eur-lex.europa.eu/legal-
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2021/1691	content/EN/TXT/PDF/?uri=CELEX:32021R1691&from=EN
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2021/771	content/EN/TXT/PDF/?uri=CELEX:32021R0771&from=EN
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farming/organic-actio	
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competitive EU aquaculture	
for the period 2021 to 2030	
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Regulation (EU) 2019/473 https://eur-lex.europa	.eu/legal-
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Council Regulation (EC) No	https://eur-lex.europa.eu/legal-
1005/2008	content/EN/TXT/PDF/?uri=CELEX:02008R1005-
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Regulation (EU) 2017/2403	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32017R2403&from=EN



Appendix B: Policies that explicitly refer to transparency

Name	Link
Regulation (EU) 2019/5	https://eur-lex.europa.eu/legal-
	content/EN/TXT/?uri=celex%3A32019R0005
Regulation (EC) No	https://eur-lex.europa.eu/legal-
726/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0726&from=EN
Regulation (EU) 2021/690	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32021R0690&from=EN
Farm to fork strategy	https://food.ec.europa.eu/system/files/2020-05/f2f action-
	plan 2020 strategy-info en.pdf
Regulation (EU) 2016/429	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:02016R0429-20191214&from=EN
Regulation 1169/2011	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:02011R1169-20180101&from=EN
White paper on food safety	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:51999DC0719&from=EN
Regulation 2019/6	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32019R0006&from=EN
REGULATION (EU) 2017/625	https://eur-lex.europa.eu/legal-
, , ,	content/EN/TXT/PDF/?uri=CELEX:32017R0625&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
834/2007 (until 2021)	content/EN/TXT/PDF/?uri=CELEX:32007R0834&from=EN
Directive 2008/90/EC	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32008L0090&from=EN
Regulation (EU) 2018/848	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
Council Directive	https://eur-lex.europa.eu/legal-
2001/110/EC	content/EN/TXT/PDF/?uri=CELEX:32001L0110&from=EN
Regulation (EC) No 66/2010	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32010R0066&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
1924/2006	content/EN/TXT/PDF/?uri=CELEX:32006R1924&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
1331/2008	content/EN/TXT/PDF/?uri=CELEX:32008R1331&from=EN
Regulation (EU) 2019/1381	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32019R1381&from=EN
Regulation (EU) 2015/2283	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32015R2283&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
178/2002	content/EN/TXT/PDF/?uri=CELEX:32002R0178&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
853/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0853R(01)&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
852/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0852R(01)&from=EN
Implementing Decision (EU)	https://eur-lex.europa.eu/legal-
2019/300	content/EN/TXT/PDF/?uri=CELEX:32019D0300&from=EN
Decision No 1082/2013/EU	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32013D1082&from=EN
Regulation (EU) 2019/1009	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32019R1009&from=EN



Regulation (EC) No	https://eur-lex.europa.eu/legal-
282/2008	content/EN/TXT/PDF/?uri=CELEX:32008R0282&from=EN
-	
Regulation (EC) No	https://eur-lex.europa.eu/legal-
767/2009	content/EN/TXT/PDF/?uri=CELEX:32009R0767&from=EN
COM(2012) 6 final/2 of	https://eur-lex.europa.eu/resource.html?uri=cellar:4ef28104-3fd5-
15.2.2012	4e07-ad6c-e3f4ca9faea3.0002.03/DOC_2&format=PDF
Agreement between the EU	https://eur-lex.europa.eu/legal-
and Chile on trade in	content/EN/TXT/PDF/?uri=CELEX:22017A1214(01)&from=EN
organic products	
Regulation (EC) No 1/2005	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32005R0001&from=EN
Regulation (EU) 2016/2031	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32016R2031&from=EN
Directive 2001/18/EC	https://eur-lex.europa.eu/resource.html?uri=cellar:303dd4fa-07a8-
	4d20-86a8-0baaf0518d22.0004.02/DOC 1&format=PDF
Regulation (EC) No	https://eur-lex.europa.eu/legal-
1829/2003	content/EN/TXT/PDF/?uri=CELEX:32003R1829&from=EN
Directive (EU) 2015/412	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32015L0412&from=EN
Regulation (EU) No	https://eur-lex.europa.eu/legal-
528/2012	content/EN/TXT/PDF/?uri=CELEX:32012R0528&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
1107/2009	content/EN/TXT/PDF/?uri=CELEX:32009R1107&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
396/2005	content/EN/TXT/PDF/?uri=CELEX:32005R0396&from=EN
Directive 2009/128/EC	https://eur-lex.europa.eu/legal-
Directive 2003/128/16	content/EN/TXT/PDF/?uri=CELEX:32009L0128&from=EN
Regulation (EU) 2019/1021	
Regulation (EO) 2019/1021	https://eur-lex.europa.eu/legal-
Description (EC) No.	content/EN/TXT/PDF/?uri=CELEX:32019R1021&from=EN
Regulation (EC) No	https://eur-lex.europa.eu/legal-
1924/2006	content/EN/TXT/PDF/?uri=CELEX:02006R1924-20141213&from=EN
20 May 2020: Report on	https://food.ec.europa.eu/system/files/2020-05/labelling-
front-of-pack nutrition	nutrition_fop-report-2020-207_en.pdf
labelling	Internal Control of the Control of t
Regulation (EU) No	https://eur-lex.europa.eu/legal-
1169/2011	content/EN/TXT/PDF/?uri=CELEX:32011R1169&from=en
White paper: A Strategy on	https://ec.europa.eu/health/archive/ph_determinants/life_style/n
Nutrition, Overweight, and	utrition/documents/nutrition_wp_en.pdf
Obesity-related health	
issues	
EU Action Plan on	https://health.ec.europa.eu/system/files/2016-
Childhood Obesity 2014-	11/childhoodobesity actionplan 2014 2020 en 0.pdf
2020	
Regulation 1760/2000	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32000R1760&from=EN
Regulation (EU) 2021/2115	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32021R2115&from=EN
EU Regulation 1308/2013	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32013R1308&from=EN



EU Regulation 2021/2117	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32021R2117&from=EN
Delegated Regulation (EU)	https://eur-lex.europa.eu/legal-
2020/2146	content/EN/TXT/PDF/?uri=CELEX:32020R2146&from=EN
Delegated Regulation (EU)	https://eur-lex.europa.eu/legal-
2021/1697	content/EN/TXT/PDF/?uri=CELEX:32021R1697&from=EN
Organic action plan	https://agriculture.ec.europa.eu/farming/organic-farming/organic-
	action-plan_en
Strategic guidelines for a	https://eur-lex.europa.eu/resource.html?uri=cellar:bab1f9a7-
more sustainable and	b30b-11eb-8aca-01aa75ed71a1.0022.02/DOC_1&format=PDF
competitive EU aquaculture	
for the period 2021 to 2030	
Regulation (EU) 2016/1627	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32016R1627&from=EN
Regulation (EU) 2021/1139	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32021R1139&from=EN
Regulation (EU) 2019/473	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32019R0473&from=EN
Council Regulation (EC) No	https://eur-lex.europa.eu/legal-
1005/2008	content/EN/TXT/PDF/?uri=CELEX:02008R1005-20110309&from=EN
Regulation (EU) 2017/2403	https://eur-lex.europa.eu/legal-
	content/EN/TXT/PDF/?uri=CELEX:32017R2403&from=EN



Appendix C: Policies that explicitly refer to traceability

Name	Link
Regulation (EU)	https://eur-lex.europa.eu/legal-
2019/4	content/EN/TXT/PDF/?uri=CELEX:32019R0004&from=EN
Regulation (EU)	https://eur-lex.europa.eu/legal-
2021/690	content/EN/TXT/PDF/?uri=CELEX:32021R0690&from=EN
Farm to fork	https://food.ec.europa.eu/system/files/2020-05/f2f_action-plan_2020_strategy-
strategy	info_en.pdf
Regulation (EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R0429-
2016/429	<u>20191214&from=EN</u>
Implemented	https://eur-lex.europa.eu/legal-
Regulation	content/EN/TXT/PDF/?uri=CELEX:32021R0404&from=EN
2021/404	
White paper on	https://eur-lex.europa.eu/legal-
food safety	content/EN/TXT/PDF/?uri=CELEX:51999DC0719&from=EN
REGULATION	https://eur-lex.europa.eu/legal-
(EU) 2017/625	content/EN/TXT/PDF/?uri=CELEX:32017R0625&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 834/2007	content/EN/TXT/PDF/?uri=CELEX:32007R0834&from=EN
(until 2021)	
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1830/2003	content/EN/TXT/PDF/?uri=CELEX:32003R1830&from=EN
Directive	https://eur-lex.europa.eu/legal-
2008/90/EC	content/EN/TXT/PDF/?uri=CELEX:32008L0090&from=EN
Regulation (EU)	https://eur-lex.europa.eu/legal-
2018/848	content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1332/2008	content/EN/TXT/PDF/?uri=CELEX:32008R1332&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 2065/2003	content/EN/TXT/PDF/?uri=CELEX:32003R2065&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1333/2008	content/EN/TXT/PDF/?uri=CELEX:32008R1333&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1334/2008	content/EN/TXT/PDF/?uri=CELEX:32008R1334&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 178/2002	content/EN/TXT/PDF/?uri=CELEX:32002R0178&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 853/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0853R(01)&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 852/2004	content/EN/TXT/PDF/?uri=CELEX:32004R0852R(01)&from=EN
Commission	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R0382&from=EN
2021/382	
amending the	
Annexes to	
Regulation (EC)	
No 852/2004	
Directive	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31999L0002
1999/2/EC	



Implementing	https://eur-lex.europa.eu/legal-
Decision (EU)	content/EN/TXT/PDF/?uri=CELEX:32019D0300&from=EN
2019/300	CONTENT/ EN/ 1X1/1 DI / : UII = CELEX.32013D0300&ITOIII = EN
Regulation (EU)	https://eur-lex.europa.eu/legal-
2019/1009	content/EN/TXT/PDF/?uri=CELEX:32019R1009&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 2003/2003	content/EN/TXT/PDF/?uri=CELEX:32003R2003&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 282/2008	content/EN/TXT/PDF/?uri=CELEX:32008R0282&from=EN
Regulation (EU)	https://eur-lex.europa.eu/legal-
No 10/2011	content/EN/TXT/PDF/?uri=CELEX:32011R0010&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1935/2004	content/EN/TXT/PDF/?uri=CELEX:32004R1935&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 183/2005	content/EN/TXT/PDF/?uri=CELEX:32005R0183&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 767/2009	content/EN/TXT/PDF/?uri=CELEX:32009R0767&from=EN
Implementing	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32019R1715&from=EN
2019/1715	
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 2160/2003	content/EN/TXT/PDF/?uri=CELEX:32003R2160&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 999/2001	content/EN/TXT/PDF/?uri=CELEX:32001R0999&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1/2005	content/EN/TXT/PDF/?uri=CELEX:32005R0001&from=EN
Regulation (EU)	https://eur-lex.europa.eu/legal-
2016/2031	content/EN/TXT/PDF/?uri=CELEX:32016R2031&from=EN
Communication	https://eur-lex.europa.eu/resource.html?uri=cellar:3cc2bfe5-e9d1-11e4-892c-
(COM(2015)	<u>01aa75ed71a1.0002.03/DOC_1&format=PDF</u>
176 final	
Directive	https://eur-lex.europa.eu/resource.html?uri=cellar:303dd4fa-07a8-4d20-86a8-
2001/18/EC	<u>Obaaf0518d22.0004.02/DOC_1&format=PDF</u>
Commission	https://eur-lex.europa.eu/legal-
Regulation (EC)	content/EN/TXT/PDF/?uri=CELEX:32004R0065&from=EN
No 65/2004	
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1829/2003	content/EN/TXT/PDF/?uri=CELEX:32003R1829&from=EN
Regulation (EC)	https://eur-lex.europa.eu/legal-
No 1946/2003	content/EN/TXT/PDF/?uri=CELEX:32003R1946&from=EN
Directive (EU)	https://eur-lex.europa.eu/legal-
2015/412 Regulation (EC)	content/EN/TXT/PDF/?uri=CELEX:32015L0412&from=EN https://eur-lex.europa.eu/legal-
No 1107/2009	content/EN/TXT/PDF/?uri=CELEX:32009R1107&from=EN
Regulation (EU)	https://eur-lex.europa.eu/legal-
2019/1021	content/EN/TXT/PDF/?uri=CELEX:32019R1021&from=EN
Commission	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32013R1337&from=en
No 1337/2013	Somethy English of the Selection of the
.10 1001/2010	



	-
Regulation (EU)	https://eur-lex.europa.eu/legal-
2019/2072	content/EN/TXT/PDF/?uri=CELEX:32019R2072&from=EN
Regulation	https://eur-lex.europa.eu/legal-
1760/2000	content/EN/TXT/PDF/?uri=CELEX:32000R1760&from=EN
Council	https://eur-lex.europa.eu/legal-
regulation (EC)	content/EN/TXT/PDF/?uri=CELEX:32004R0021&from=EN
No 21/2004	
Regulation (EU)	https://eur-lex.europa.eu/legal-
2021/2115	content/EN/TXT/PDF/?uri=CELEX:32021R2115&from=EN
EU Regulation	https://eur-lex.europa.eu/legal-
1308/2013	content/EN/TXT/PDF/?uri=CELEX:32013R1308&from=EN
Delegated	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R1189&from=EN
2021/1189	
Delegated	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=OJ:L:2021:151:FULL&from=EN
2021/715	
Delegated	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R0771&from=EN
2021/771	
Implementing	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R0279&from=EN
2021/279	
Implementing	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R2119&from=EN
2021/2119	
Delegated	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R1698&from=EN
2021/1698	
Delegated	https://eur-lex.europa.eu/legal-
Regulation (EU) 2021/2306	content/EN/TXT/PDF/?uri=CELEX:32021R2306&from=EN
	https://our.lov.our.go.go./loggl
Implementing	https://eur-lex.europa.eu/legal-
Regulation (EU)	content/EN/TXT/PDF/?uri=CELEX:32021R2307&from=EN
2021/2307	https://agriculture.ec.europa.eu/farming/organic-farming/organic-action-
Organic action plan	plan en
Commission	
	https://eur-lex.europa.eu/legal- content/EN/TXT/PDF/?uri=CELEX:32017L1279&from=EN
Implementing Directive (EU)	CONTENT ENTREPT : UIT-CELEA.32017L1279QITOITI=EN
2017/1279	
Commission	https://eur-lex.europa.eu/legal-
Implementing	content/EN/TXT/PDF/?uri=CELEX:32019L0523&from=EN
Directive (EU)	CONTENT LIN INTERIOR SUIT CLLEN. 32013L0323QII UIII - EIN
2019/523	
Strategic	https://eur-lex.europa.eu/resource.html?uri=cellar:bab1f9a7-b30b-11eb-8aca-
guidelines for a	01aa75ed71a1.0022.02/DOC_1&format=PDF
more	01447 3C47 141.0022.02/ DOC_1&IOIIII4L-FDI
sustainable and	
competitive EU	
competitive EU	



aquaculture for	
the period	
2021 to 2030	
Council	https://eur-lex.europa.eu/legal-
Regulation (EC)	content/EN/TXT/PDF/?uri=CELEX:32007R1100&from=EN
No 1100/2007	
Regulation (EU)	https://eur-lex.europa.eu/legal-
2019/833	content/EN/TXT/PDF/?uri=CELEX:32019R0833&from=en
Regulation (EU)	https://eur-lex.europa.eu/legal-
2017/2403	content/EN/TXT/PDF/?uri=CELEX:32017R2403&from=EN



Appendix D: Glossary of key words

Types of EU	Description	Source
policies	1	Little Herrican Pet B. B. B. Little B.
Legislation	Legislative	https://ec.europa.eu/info/law/law-making-process/types-eu-
	acts are	<u>law_en</u>
	adopted	
	following one of the	
	legislative	
	procedures	
	set out in the	
	EU treaties	
	(ordinary or	
	special). The	
	EU can pass	
	laws only in	
	those areas	
	where its	
	members	
	have	
	authorised it	
	to do so, via	
	the EU	
	treaties.	
Regulations	Regulations	https://ec.europa.eu/info/law/law-making-process/types-eu-
	are legal acts	law_en
	that apply	
	automatically	
	and uniformly	
	to all EU	
	countries as	
	soon as they	
	enter into	
	force,	
	without	
	needing to be	
	transposed	
	into national	
	law. They are	
	binding in	
	their entirety on all EU	
	countries.	
Strategic	Strategic	https://ec.europa.eu/info/strategy-documents/strategic-plans-
guidelines/pla	plans are	management-plans en
ns	planning	management plans en
113	documents	
	where	
	departments	



	1	
	they will	
	contribute to	
	the	
	Commission's	
	broader	
	political	
	goals, and	
	define	
	specific	
	department	
	objectives for	
	a five-year	
	period.	
Delegated	Delegated	https://ec.europa.eu/info/law/law-making-process/types-eu-
	acts are	
acts/regulatio		<u>law_en</u>
ns	legally	
	binding acts	
	that enable	
	the	
	Commission	
	to	
	supplement	
	or amend	
	non-essential	
	parts of EU	
	legislative	
	acts, for	
	example, in	
	order to	
	define	
	detailed	
	measures.	
Implemented	Implementing	https://ec.europa.eu/info/law/law-making-process/types-eu-
acts/regulatio	acts are	law en
ns	legally	
	binding acts	
	that enable	
	the	
	Commission –	
	under the	
	supervision of	
	committees	
	consisting of	
	EU countries'	
	representativ	
	es – to set	
	conditions	
	that ensure	
	that EU laws	
	are applied	
	uniformly.	



\A/la:ta manana	Гиманаан	https://wk.prosticellev.themeeprostors.com/0.502
White papers	European	https://uk.practicallaw.thomsonreuters.com/0-503-
	Commission	<u>0558?transitionType=Default&contextData=(sc.Default)&firstPa</u>
	documents	ge=true
	containing	
	proposals for	
	EU action in a	
	specific area.	
	In some cases	
	they follow a	
	Green Paper,	
	published to	
	launch a	
	consultation	
	process at EU	
	level. White	
	papers can	
	launch	
	debates	
	between the	
	EU	
	institutions	
	and	
	stakeholders,	
	test appetite	
	for particular	
	policy	
	preferences	
	and, if	
	favourably	
	received, can	
	result in	
	proposals for	
	EU	
	legislation, an	
	action plan or	
	other soft law	
	measures.	
Directive	Directives	https://ec.europa.eu/info/law/law-making-process/types-eu-
	require EU	<u>law_en</u>
	countries to	
	achieve a	
	certain result,	
	but leave	
	them free to	
	choose how	
	to do so. EU	
	countries	
	must adopt	
	measures to	
	incorporate	
	them into	



	national law	
	(transpose) in	
	order to	
	achieve the	
	objectives set	
	by the	
	directive.	
	National	
	authorities	
	must	
	communicate	
	these	
	measures to	
	the European	
	Commission.	
Action plan	Action Plans	https://ec.europa.eu/futurium/en/action-plans/what-action-
Action high	are made up	plan.html
	of concrete	<u>pian.num</u>
	proposals for Better	
	Regulation,	
	Better	
	Funding and	
	Better	
	Knowledge,	
	related to the	
	theme of the	
	Partnership.	
	These	
	proposals can	
	be regarded	
	as non-	
	binding	
	contributions	
	to the design	
	of future and	
	the revision	
	of existing EU	
	legislation,	
	instruments	
	and	
	initiatives.	
	The	
	coordinator(s	
) of each	
	Partnership	
	are	
	responsible	
	for	
	coordinating	
	the drafting	
	Line draiting	



of the Action	
Plan.	