A sustainable food system for the European Union

A systematic review of the European policy ecosystem

SAPEA
Science Advice for Policy by European Academies

This systematic review has been produced under the auspices of the SAPEA consortium, as a deliverable under Grant Agreement 737432 "Science Advice for Policy by European Academies" that was signed by the consortium and the European Commission on 22 November 2016.

- ISBN 978-3-9820301-7-3
- DOI 10.26356/sustainablefoodreview
- Downloadable from www.sapea.info/food

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SAPEA, Science Advice for Policy by European Academies. (2020). *A sustainable food system for the European Union: A systematic review of the European policy ecosystem*. Berlin: SAPEA.
DOI 10.26356/sustainablefoodreview

Version history

Version	Date	Summary of changes
1.0	9 April 2020	First published version

SAPEA

Science Advice for Policy by European Academies

A sustainable food system for the European Union: A systematic review of the European policy ecosystem

Informs SAPEA's Evidence Review Report no. 7,
'A sustainable food system for the European Union'

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Introduction

The European Commission's Group of Chief Scientific Advisors has identified the development of an EU sustainable food system as a high priority topic. To that end, the Group has adopted a scoping paper, *Towards an EU sustainable food system: Insights from the social sciences* (European Commission Group of Chief Scientific Advisors, 2019). It recognises that the transition to a sustainable food system is, in many aspects, a social process. The advisors have been asked by the European Commission to address the uptake of insights from the social sciences in developing more holistic, system-wide approaches to sustainability challenges facing food systems.

Specifically, the European Commission made a request to the Group of Chief Scientific Advisors to:

> use social sciences insights to map and analyse the various components of food systems and their dynamics in relation to sustainability objectives. What are workable paths to deliver an inclusive, just and timely transition to an EU sustainable food system, considering 'co-benefits' for health, the environment, and socio-economic aspects, including the socio-economic situation of farming, and addressing territorial imbalances, the rural-urban divide, food waste as well as responsible consumer behaviour?

The purpose of the science advice is to provide a better understanding of the mechanisms underlying the food system, including factors contributing to:

- system transformation and changes in policy instruments
- mapping the main barriers and enablers of change
- assessing policy integration challenges
- behavioural interventions
- models of food system governance

In particular, evidence should be examined that is relevant to EU/global, member state and local levels.

The advisors asked the SAPEA (Science Advice for Policy by European Academies) consortium to conduct an evidence review to support its work. In addition to a SAPEA Evidence Review Report (SAPEA, 2020), the advisors also requested SAPEA to provide a comprehensive, systematic and structured literature review of the policy ecosystem, particularly at EU/global level.

The process and results of the systematic review are detailed in this report.

Aims of the systematic review

The aims of the systematic literature review are set out in a specification of work (unpublished), which supports the scoping paper. The review seeks to achieve a broad understanding of the present policy system and how it has developed to the present day, as well as a good understanding of changes already happening. Conducted by a specialist review team, the review is a study of policy and policy transformation, identifying what is possible within the present policy ecosystem of individual policy instruments and policies. It builds on existing policy recommendations to explore factors that might facilitate or speed up a 'just' transition towards an EU sustainable food policy.

The review summarises the available evidence for the following questions:

- What are the main institutions/organisations supporting/carrying the main relevant policy instruments?
- What are the main interest and lobbies involved, and what is their respective power/influence?
- What are the incentives built into these instruments?
- How are shifts/transitions potentially achieved? What/who initiates these shifts/transitions, and what determines successful delivery? How is resistance overcome?
- What is required to achieve a 'just' (fair) shift/transition?
- What evidence exists with respect to the potential pace of change that might be achieved for a transition to an EU sustainable food system and what factors determine this?

A list of the main relevant policy instruments has been provided as a starting point (see Annex 1, p.106).

The SAM unit provided a working definition of a sustainable food system as one that:

> provides and promotes safe, nutritious and healthy food of low environmental impact for all current and future EU citizens in a manner that itself also protects and restores the natural environment and its ecosystem services, is robust and resilient, economically dynamic, just and fair, and socially acceptable and inclusive. It does so without compromising the availability of nutritious and healthy food for people living outside the EU, nor impairing their natural environment.

Method of approach

Systematic reviews are:

> literature reviews that adhere closely to a set of scientific methods that explicitly aim to limit systematic error (bias), mainly by attempting to identify, appraise and synthesise all relevant studies (of whatever design) in order to answer a particular question (or set of questions).
>
> *(Petticrew & Roberts, 2006)*

A systematic review is therefore a "review of existing research using explicit, accountable, rigorous research methods" (Gough, Oliver & Thomas, 2017), aiming to maximise transparency, objectivity and repeatability.

Although systematic reviews started in clinical medicine, they are becoming increasingly frequent in the social sciences as a method for reviewing complex issues, interventions and outcomes, i.e. finding out 'what works' (Boaz, Ashby & Young, 2002). For policymakers, systematic reviews "may provide robust, reliable summaries of the most reliable evidence: a valuable backdrop of evidence on which decisions about policy can draw" (Petticrew & Roberts, 2006).

The approach to systematic reviews in the Scientific Advice Mechanism (SAM) is set down in the document *Common understanding of evidence reviews* (SAPEA, 2017). The SAM normally uses a combined methods approach, whereby structured literature review and expert judgement are used iteratively to optimise evidence gathering and reduce bias.

Systematic review process

This systematic review has been carried out by specialist staff at Cardiff University. A Review Team was formed at the beginning of the process, comprising methodologists, a subject expert and project manager. It has been supported by an Advisory Panel of food system experts, together with the SAPEA Working Group (see Annex 2, p.116, for details of membership). The detailed protocol was developed and approved in consultation with the Advisory Panel and the SAPEA Working Group. The full protocol is published as Annex 1, p.106.

The process has been overseen throughout by the Advisory Panel and Working Group. The Review Team has reported progress at meetings of the Advisory Panel (two held in Cardiff, on 21 May and 30 July 2019) and the Working Group (three meetings held, in May, June and September 2019).

The preliminary draft of the final report was reviewed at the July meeting of the Advisory Panel and subsequently via email. A revised draft was presented at the September meeting of the SAPEA Working Group.

The penultimate draft was completed by the end of October and made available to the GCSA, SAPEA Working Group and Advisory Panel for review.

This report is divided into two parts. Part 1 describes the systematic review carried out on named policy instruments, which analysed the full text of 205 peer-reviewed empirical studies. Part 2 provides an overview of a further 430 publications that discuss broader EU policy and were analysed at keyword/abstract level only.

References

Boaz, A., Ashby, D., & Young, K. (2002). *Systematic review: what have they got to offer evidence-based policy and practice?* London, ESRC UK Centre for Evidence-Based Policy and Practice. Retrieved from: https://www.kcl.ac.uk/sspp/departments/politicaleconomy/research/cep/pubs/papers/assets/wp2.pdf

European Commission Group of Chief Scientific Advisors. (2019). *Towards an EU sustainable food system: Insights from the social sciences.* (Updated September 25). Brussels: European Commission. Retrieved from: https://ec.europa.eu/research/sam/pdf/meetings/hlg_sam_102019_scoping_paper_sustainable-food.pdf

Gough, D., Oliver, S. & Thomas, J. (2017). *An introduction to systematic reviews*. (2nd ed.). London: Sage.

Petticrew, M. & Roberts, H. (2006). *Systematic reviews in the social sciences: A practic al guide*. Oxford: Blackwell.

SAPEA (Science Advice for Policy by European Academies). (2017). *Common understanding of evidence reviews.* Unpublished.

Part 1. Named policies

1.1. Introduction

Adopting a systematic review methodology, this review comprised a social science-based evaluation of empirical research papers, looking at the policy instruments landscape at EU level. This included how the instrument has developed, what has been implemented, key influencing players and any identified barriers and enablers to success.

1.2. Method of approach

The search methodology for the systematic review was designed to identify recent empirical research studies, focusing on named EU policies and published in peer-reviewed journals. A 'named-policy' search was developed in one database (Scopus) and tested for its sensitivity — i.e. its ability to pick up known relevant studies. It was then adapted and run across a further seven databases covering the social science literature, seeking publications from 2014 to 2019 (see Annex 1, p.106, for details). A call for evidence was also sent out to the Working Group and Advisory Panel for additional papers meeting the inclusion criteria along with the review protocol for discussion and agreement.

Following completion of the search and deduplication in an EndNote database, all records were assessed at both title/abstract and full text stages against the agreed inclusion criteria. Papers were selected for inclusion only if they were published in a peer-reviewed journal, and included a methods section describing the primary research methods or the secondary data/modelling analysis that had been undertaken. No further quality appraisal was carried out. No books or grey literature (such as government reports) were included. Research papers based on authors' arguments and reflection, and without a stated research methodology, were also excluded.

Content from each included publication was coded in NVivo software with tagging according to:

- evidence relating to one or more of the review questions
- individual instrument(s)
- generic policy area

- member state/EU wide
- any research gaps identified

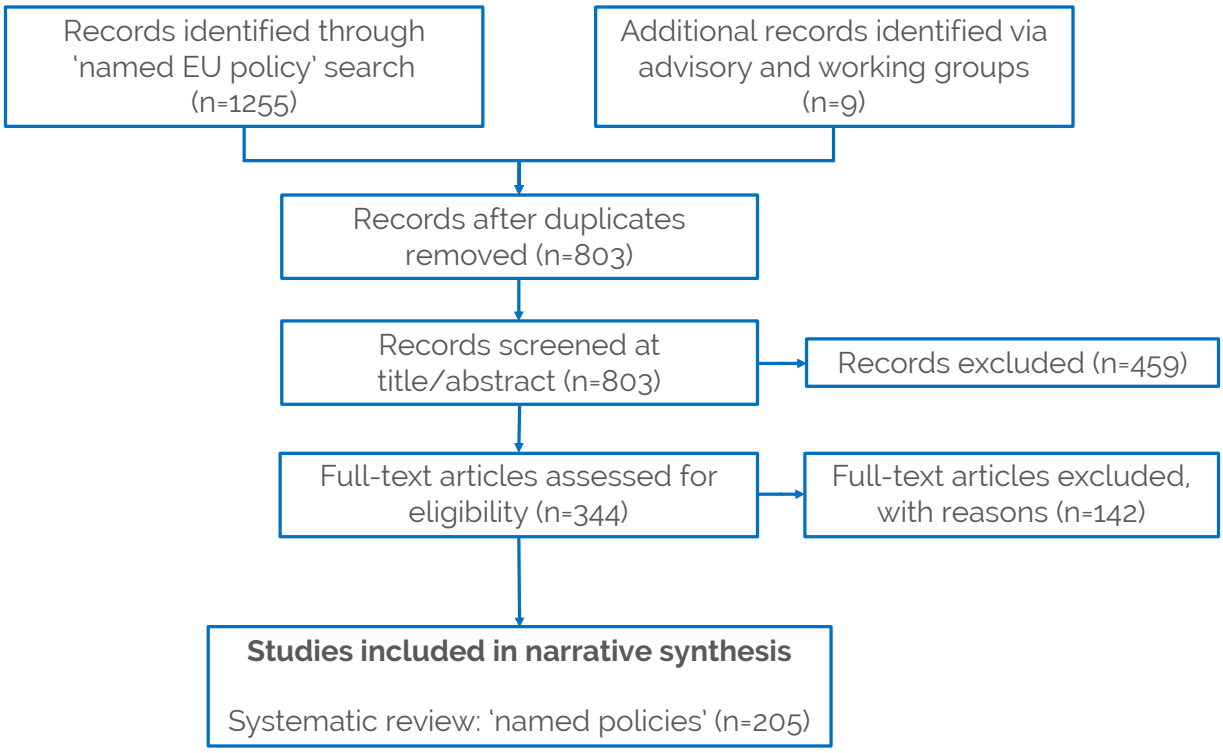
The coding framework was developed by two researchers independently, in keeping with the evidence identified, with the final framework agreed by discussion.

A narrative synthesis of findings from this body of research, in relation to each of the review questions, was written up by researcher with subject expertise and a systematic review methodologist. This included an analysis of policy- or member state-specific findings as well as those more generalisable across the EU.

A further 430 journal publications were assessed as potentially relevant, based on much broader search (3346 records in all) for studies discussing EU policy in general terms. A broad description of this dataset is provided in Part 2.

1.3. Results

Of 803 records identified by the search, 344 potentially met the inclusion criteria at title/abstract stage and 205 were included in the review.



This is a full summary of findings from the review. Studies are presented in four sections:

- section 1.3.1 looks at policy effects across sectors

- section 1.3.2 considers fisheries policy
- section 1.3.3, p.19, considers marine and water policy
- section 1.3.4, p.24, covers agriculture, biodiversity, and rural development

The majority of studies fall within the sectors of agriculture and rural development, followed by fisheries, and marine and water policy. Very few studies look at the effects of policies across sectors, for example, how the effects of agricultural and water policies interact, but those that do are considered in section 1.3.1 below.

1.3.1. Policy effects across sectors

There is a limited but important set of studies that consider the policy effects across sectors. Between the main sectors of agriculture, energy and water,[1] consideration of effects between the agricultural and water policy sectors are found to be most advanced but still not harmonious (Venghaus & Hake, 2018). In terms of the ecosystem services concept, the coherence with existing policies is found to be moderate; policies showing very high coherence are confined to the policy arenas that address natural ecosystems, forestry, or agriculture. Given the sectoral nature of most EU policies and the limited options for revision in the near future, opportunities for improving coherence are most apparent in furthering the integration of the ecosystem services concept in the implementation of existing EU policies at national and regional levels (Bouwma et al., 2018). Virtual Water Trade (VWT)[2] analysis is presented as a process to evaluate the intertwining effects of water, agriculture and trade policies, which are often made separately in respective sectors (Antonelli, Tamea, & Yang, 2017). In terms of how to approach integrated consideration for phosphate run-off policy under the WFD, it was found that a bottom-up approach and stakeholder inclusion were both possible and needed (Micha, Roberts, Ryan, O'Donoghue, & Daly, 2018).

1.3.2. Fisheries policy

This section presents evidence on fisheries policy, namely the Common Fisheries Policy.

1.3.2.1. Institutions and organisations supporting/carrying the main relevant policy instruments

Governance institutions and organisations identified in the literature include EU institutions (e.g. European Commission, European Court of Justice, European Court of Justice, the Directorate-General for Maritime Affairs and Fisheries [DG-MARE]), regional structures (e.g. Advisory Councils, High-Level Groups), member states and

1 Namely the Common Agricultural Policy (CAP), EU Energy Strategy and Water Framework Directive (WFD).

2 https://waterfootprint.org/en/water-footprint/national-water-footprint/virtual-water-trade/

their government departments (e.g. the UK Department for Environment, Food and Rural Affairs [DEFRA]). Discussion of the role of institutions is included where applicable throughout the summary.

1.3.2.2. Incentives in policy instruments

This section comments on the incentives built into policy instruments that are identifiable in the literature. The Common Fisheries Policy (CFP) was a focus in 47 studies. The policy incentives identified were:

- Discard Ban/Landing Obligation [8]
- Maximum Sustainable Yield [6]
- Total Allowable Catches [8]
- Transferrable Fishing Concessions [2]
- Fishing Partnership Agreements [2]
- Individual Transferrable Quotas [1]
- Eco-labels [1]

Table 1. Most commonly researched incentives, Common Fisheries Policy

Theme	Subtheme	Articles
Common Fisheries Policy	In general / Other	25
	Discard ban / Landing obligation	8
	Total allowable catch	8
	Maximum sustainable yield	6

1.3.2.3. Power and influence of interest and lobby groups

This section covers findings that relate to the research question about the relative power and influence of the main interest and lobby groups involved in the policymaking process. Studies found that leading up to the 2013 reforms to the Common Fisheries Policy (CFP), the influence of EU Commissioners as policy entrepreneurs was notable (Fuchs, 2017), as was the role played by environmental interest groups, which employed coalition building and informational lobbying tactics to influence Common Fisheries Policy (CFP) reform (Orach, Schluter, & Osterblom, 2017). More broadly, studies comment on the influence of scientific advice on fisheries policy and management. Scientific advice to support management, including the implementation of an ecosystem approach to fisheries management in the EU, is provided by the International Council for the Exploration of the Sea (ICES), but this role is limited by the inconsistency between science and management (Ballesteros, Chapela et al. 2018). Scientific advice provided by the ICES to EU fisheries ministers to set Total Allowable Catches (TACs) levels is consistently overridden (Borges, 2018) and the closed-door nature of negotiations prevents identification of those member

states with most influence in the raising of TACs above scientific advice (Carpenter, Kleinjans, Villasante, & O'Leary, 2016).

1.3.2.4. Barriers and enablers of shifts or transitions

This section relates to the research question about how shifts or transitions may potentially be achieved and what barriers or enablers may determine successful delivery. The literature commented on governance, particularly with regards to regionalisation, management, monitoring and mitigation.

Governance limitations

In terms of governance and the limitations of policy tools, studies found that:

- The CFP is ineffective as a multi-level governance resource policy and further development of regionalisation and regulation is needed to account for different decision-making contexts (Belschner et al., 2019).
- Governance system gaps and uneven distributions of rights, responsibilities, and incentives may be responsible for lack of conservation outcomes in EU fisheries before the 2013 CFP reforms (Battista, Kelly, Erickson, & Fujita, 2018).
- Following 2013 reforms, regionalisation is only facilitated to a limited degree by the present application of Article 18 and narrow interpretations of stakeholder involvement by High Level Groups, with the Commission functioning top-down and detached from the Advisory Councils [Baltic Sea and North Sea] (Eliasen, Hegland, & Raakjær, 2015; Leite & Pita, 2016).
- Fishery Local Action Groups in EU fisheries are implemented in different ways and generate different effects, even when political discourse and sectoral planning pursue similar objectives [Galicia and Ireland] (Piñeiro-Antelo, Felicidades-García, & O'Keeffe, 2019).

In terms of approaches to monitoring and mitigation, evidence exists that poor baseline population and bycatch data prevent an adaptive, evidence-based approach to monitoring and mitigation, and the effectiveness of a threshold-based precautionary approach to management remains unclear (Dolman, Baulch, Evans, Read, & Ritter, 2016).

Studies of the effects of policy instruments reveal their potential and the barriers that need to be overcome for effective shifts. For example, the economic effects of the landing ban could be positive if data inadequacies can be overcome, new management modes for enforcement are found, the quota inflexibility problem is resolved, and the logistical issues and cultural shift needed to deal with unwanted catch at sea and on land are addressed [UK] (Catchpole, Elliott, Peach, Mangi, & Gray, 2018). Also in relation to allowable catches, a modelling study found that over-harvesting is aggravated if the catch level is set low and is not properly enforced (De Giovanni & Lamantia, 2018).

Seafood labelling provisions under the CFP (2011 and 2013) were found to be inadequate, due to the exclusion of prepared and processed products and aquatic invertebrates, and the requirements of mass caterer operators with respect to labelling remain too vague (D'Amico, Armani, Gianfaldoni, & Guidi, 2016).

Governance opportunities

In terms of opportunities, studies found potential in tailored and flexible approaches to policy tools, in new governance structures, and through consultation with stakeholders.

In terms of the need for flexibility, there is evidence that:

- Solutions tailored within the context of specific fisheries could meet the strong inter-fishery preference differences that exist for management measures proposed under the CFP reform process (Fitzpatrick, Maravelias, Eigaard, Hynes, & Reid, 2017).
- Sufficient flexibility in relation to the discard ban will better protect North Sea saithe and cod stock and increase profits of fishers in the long term (Simons, Doring, & Temming, 2015).
- Flexibility in management targets for Maximum Sustainable Yields (MSY) is needed to minimise risk from sustained fishing at the upper bound of the range (Ulrich et al., 2017) and that flexibility will allow fishers to find their own solutions to reducing unwanted catches and will encourage them to internalise the costs of catching unwanted fish, motivate them to avoid unwanted catch, and alter their fishing practices (Catchpole, Ribeiro-Santos, Mangi, Hedley, & Gray, 2017).

Potential enablers of change were identified in new governance arrangements:

- Advisory Councils could facilitate bottom-up participation in fisheries management by representing a wide range of stakeholder perceptions (Soma et al., 2018).
- A Fishing Industry Committee can help assure good governance and recovery of fish stock [Ireland] (Clarke & Egan, 2017).

Studies of stakeholder acceptability as an enabler of change found that:

- Fishers support good data collection to assure Fully Documented Fisheries, although there is mistrust of how the data will be used, and they would prefer implementation using a reference fleet or self-sampling over Remote Electronic Monitoring systems [England and Northern Ireland]) (Mangi, Dolder, Catchpole, Rodmell, & de Rozarieux, 2015).
- Consensus between diverse interest groups on specific high level sustainability objectives, especially on social and economic issues, can facilitate acceptability of lower level management measures under the CFP [Baltic and North Seas] (Goti-Aralucea et al., 2018).

- Hybrid forms of participation for effective management of coastal aquaculture are supported by aquaculture professionals and stakeholders (Martinez-Novo, Lizcano, Herrera-Racionero, & Miret-Pastor, 2017).

In terms of evidence of effective enablers of change, a study found that the recovery of Celtic herring fisheries was ensured though a reduction in total and total allowable catch and resulting mortality reduction, combined with changes in governance and local industry-led initiatives [Ireland] (Clarke & Egan, 2017).

1.3.2.5. A just and fair transition

This section presents findings from the literature that relate to the theme of a just and fair transition. The theme is understood to relate to potential 'winners' and 'losers' of a shift in the food system towards greater sustainability and takes account of socio-economic inequalities, access and participation opportunities, the impact of EU policies outside the EU, and the challenges of sustainability trade-offs.

Socio-economic inequalities and the impact of the 2013 CFP reforms

A number of studies comment on the way that reforms to the Common Fisheries Policy will affect small-scale companies and less-economically developed areas. This includes policy instruments such as the discard ban, fixed quota allocations, and transferrable fishing concessions. In relation to the discard ban, evidence suggests that:

- Small-scale fisheries perceive that it will be difficult and expensive and was developed with industrial fisheries in mind (Villasante et al., 2016).
- To be fair, it should include all vessels with quota in the region, and the goals and incentives should be clear and stable to allow active partnership [Denmark/Sweden] (Eliasen, 2014).
- There will be practical difficulties with the ban, both on-board and on-land [Greece, Italy, Portugal, Spain] (Maynou et al., 2018).
- Fixed Quota Allocations are found to have marginalised the social and environmental benefits of small scale fisheries and allow the increasing domination of larger-scale businesses [inshore UK] (Anbleyth-Evans & Williams, 2018), and supply risks exist to small- and medium-sized cod and haddock processing companies due to restrictions in Total Allowable Catch (Mardle & Metz, 2017).
- Transferable Fishing Concessions can be much more effective to achieve economically and socially sustainable fisheries if a part of national quotas is reserved to small-scale fishermen who are using more selective fishing techniques than large-scale fishermen (Kanik & Kucuksenel, 2017).

- Individual Transferable Quotas induced fleet change from smaller- to larger-scale vessels and may impede the achievement of environmental targets and fail to protect small-scale fisheries [Denmark] (Dinesen et al., 2018).
- The Operational Fisheries Policy within the CFP presents limited opportunities for the coastal fisheries to generate income and alternative employment impacts, mainly due to the small size of the sector and weak links with the rest of the economy at local level [Greece] (Loizou, Chatzitheodoridis, Polymeros, Michailidis, & Mattas, 2014).
- In terms of governance, evidence exists that transformation of small-scale fisheries' governance at the operational, institutional, and the meta-levels would support SSF Guidelines and CFP co-governance goals [globally] (Chuenpagdee & Jentoft, 2018).

Access to participatory governance

Issues of unequal access, representation and participation in fisheries governance are raised in relation to Regional Advisory Councils (RACs),[3] which were found to have limited impact on progressive and sustainable environmental governance due to problems with representation, particularly due to conflicting rationalities of different stakeholder groups [Baltic Sea] (Linke & Jentoft, 2014, 2016). It was found that the fairness of Total Allowable Catch (TAC) quota-swapping between member states and by Producers Organisations is compromised because networks of fishermen and POs aim for a stable and flexible system but not all POs and fishermen have (equal) access to the required information for quota swapping (Hoefnagel, de Vos, & Buisman, 2015).

Impact of EU policy outside the EU

Evidence of the impact of EU policy outside the EU is presented in relation to Policy Coherence for Development (PCD), bilateral fishing agreements, and trade-related regulatory measures. Findings state that bureaucratic arrangements and Impact Assessment have substantially failed to clarify the real impact of EU policies on (different types of) developing countries for the achievement of Policy Coherence for Development (PCD) (Carbone & Keijzer, 2016). EU fisheries policies often contribute to depleting fish stocks, distort economic policies and harm fishers' communities [Africa] (Gegout, 2016) and bilateral fishing agreements with developing states hinder rather than aid local development (Antonova, 2016). Finally, EU trade-related regulatory measures create some consistency between measures to combat IUU fishing and international trade rules but the extent to which the measures will be enforced by primary importer's partners remains to be seen (Leroy, Galletti, & Chaboud, 2016).

3 https://ec.europa.eu/fisheries/sites/fisheries/files/docs/publications/pcp2008_factsheets_en.pdf

Sustainability trade-offs and challenges

The literature discusses how trade-offs in relation to sustainability present challenges for EU policy as certain goals are prioritised over others. Evidences show that in relation the CFP:

- Experts and interest groups identify an overemphasis on conservation and a lack of attention to the welfare of fisherman (Orach et al., 2017).
- The 2013 reforms were found to contain a lack of instruments to address social sustainability (Prellezo & Curtin, 2015).
- The regulations for fishing deep sea stocks in the North-East Atlantic would lead to large short-term reductions in landings and a 400m depth rule could mitigate these losses while still protecting deep sea habitats [UK] (Mangi et al., 2016).
- Evidence also questions the utilisation of traditional fisheries management measures of sustainability in relation to chronically over-fished stocks, and data-deficiency is identified as a barrier to alternative approaches (Steadman, Appleby, & Hawkins, 2014).
- In relation to Sustainable Development Goal 14 ("Conserve and sustainably use the oceans, seas and marine resources for sustainable development"), progress is found to be variable by country (positive in Estonia, negative in Belgium and Ireland), with lack of progress driven by increasing fishing mortality and reduced willingness to set Total Allowable Catch in accordance with scientific advice (Rickels, Weigand, Grasse, Schmidt, & Voss, 2019).

1.3.2.6. Pace of change

There was very little focus on the potential pace of change to a more sustainable food system. Some studies mapped future scenarios as part of an evaluation of policy alternatives, but there was no specific evidence on the pace at which change may be achieved. One study estimated that 'pretty good yields' for most European stocks is possible within a few years following exploitation levels of 50–80% of the maximum, which could also lead to substantially higher profits for the fishers and significant positive economic consequences for the fishing sector (Froese et al., 2018).

1.3.3. Marine and water policy

This section presents evidence on marine and water policy. The main named policies are the Marine Strategy Framework Directive (MSFD) and the Water Framework Directive (WFD). These are considered together to allow for consideration of similar issues across different named policies (e.g. with Framework Directives).

1.3.3.1. Institutions and organisations supporting/carrying the main relevant policy instruments

Governance institutions and organisations identified in the literature include EU institutions (e.g. European Commission, European Court of Justice, European Court of Justice, the Directorate-General for Maritime Affairs and Fisheries [DG-MARE]), regional governance structures, member states, and their government departments (e.g. the UK Department for Environment, Food and Rural Affairs [DEFRA]). Discussion of the role of institutions is included where relevant throughout the summary.

1.3.3.2. Incentives in policy instruments

The Marine Strategy Framework Directive (MSFD) was a focus in 21 studies, the Water Framework Directive (WFD) in 12 studies. The main specific aspects of the policy instruments discussed in this section are: Programmes of Measures (PoM)[4] which support implementation of the MSFD; and Good Environmental Status (GES) in relation to the WFD.

1.3.3.3. Power and influence of interest and lobby groups

This section covers findings that relate to the research question about the relative power and influence of the main interest and lobby groups involved in the policymaking process. The literature presents evidence of public participation, and how the different approaches of member states influenced policymaking and governance.

Different approaches by member states

In relation to delivery of the MSFD, the influence of member states varied in terms of completion of Programmes of Measures (PoM) between member states that either relied on existing measures [UK], created new measures to cover gaps [Spain] or failed to submit in part [Greece] (Boyes, Elliott, Murillas-Maza, Papadopoulou, & Uyarra, 2016). WFD implementation in Norway was influenced by the domestic choice of an inclusive and decentralised water management model which has triggered processes of bottom-up governance and integration, and policy layering has proved successful despite resistance and cognitive priors (Indset & Stokke, 2015). Institutional arrangements in different member states were found to influence MSFD implementation; less-established institutions, institutional challenges, and non-EU countries [Mediterranean] may enable new solutions appropriate to reaching Good Environmental Status (GES) (Jouanneau & Raakjær, 2014).

4 http://cdr.eionet.europa.eu/help/WFD/WFD_762_2018/Documents/PoM_2018_ReportingGuidance

In relation to the principle of subsidiarity, the influence of member states is shown to affect the potential of integrated management. Member states' use of existing data, methodologies and targets from related environmental policies corresponds to higher levels of coherence among countries, while a limited use of such policies produces less coherence [Northeast Atlantic] (Cavallo, Elliott, Touza, & Quintino, 2016). Member states are likely to put national interests before the benefit of a coherent and integrated regional approach for MSFD due to budget differences, economic sector predominance, lack of staff and the short MSFD timescale (Cavallo, Elliott, Touza, & Quintino, 2017). Lack of trans-boundary cooperation, due to resistance or inability of member states, suggests that the subsidiarity principle may be an impediment to integrated marine management through the MSFD (Cavallo, Borja, Elliott, Quintino, & Touza, 2019).

Public participation

In terms of the influence of the public, the literature provides evidence of public engagement, interest and influence in relation to maritime planning and produce labelling. Active public engagement for management of coastal zones in the context of the MFD in Norway, the MSFD in Greece and the Maritime Spatial Planning (MSP) Directive in Sweden led to capacity building (Oen et al., 2016), and there was a high level of public interest on effects of MSFD in Ireland (Norton & Hynes, 2014). Certification labels were more effective than convenient preparation formats in helping consumers identify high-quality oyster products [Italy] (Carlucci, De Devitiis, Nardone, & Santeramo, 2017).

1.3.3.4. Barriers and enablers of shifts or transitions

This section relates to the research question about how shifts or transitions may potentially be achieved and what barriers or enablers may determine successful delivery. The literature commented on policy effectiveness and interactions, governance limitations and opportunities, and the potential of ecosystems-based approaches to management.

Policy effectiveness and interaction

In terms of policy effectiveness, there is evidence that the Marine Strategy Framework Directive (MSFD) has the potential to be the most effective policy to achieve and maintain healthy waters in the EU marine regions, with regional variation in complexity (Freire-Gibb, Koss, Margonski, & Papadopoulou, 2014). However, meaningful comparisons of MSFD implementation between member states is impossible due to different data collection methods and costs (Levrel et al., 2014) [France].

In terms of limitations to policy effectiveness, evidence shows that gaps in the scholarship on WFD implementation across the EU limits understanding of policy effectiveness

(Boeuf & Fritsch, 2016; Flavio, Ferreira, Formigo, & Svendsen, 2017). Good Environmental Status achievement is limited by:

- EU Framework Directives having no clear operative for implementation
- a lack of joined-up effort with other Directives
- ambiguity about the role and contribution of each Directive
- geographical overlaps with other Directives; incomplete implementation of other Directives; time lag barrier between the Directive proposals
- the evolution of concepts, which are only integrated in most recent policies (e.g. Ecosystem-Based Approach)
- delayed Programmes of Measures (PoMs) from member states
- Member states' over-reliance on existing measures
- pressure from Blue Growth initiatives with low current regulation and information (Boyes et al., 2016)

Addressing multiple interactions between socio-economic and ecological systems in aquatic ecosystems is found to be possible across EU policy (Lago et al., 2019). Decision Support Frameworks (DSFs) offer opportunities for integrated advice processes, but definition of common standards and institutionalisation of the use of DSFs are required at national and European levels (Macher et al., 2018).

Governance

The literature discusses ways in which governance acts as a barrier or enabler to transition. Flexibility is reported to be important as there is no single solution for governance of the MSFD that will fit all regional seas or appeal to all stakeholders within a regional sea [Baltic, Black, Mediterranean Seas and North-East Atlantic Ocean] (Hendriksen, Jouanneau, Koss, & Raakjaer, 2014; van Hoof, Hendriksen, & Bloomfield, 2014). Cooperation towards MSFD implementation has been supported by multi-stakeholder platforms and these have further potential (Cavallo et al., 2019).

Progress on WFD objectives can be made by:

- improved understanding of the causes of deterioration under conditions of multiple stress
- using evidence and dialogue to select the best management solutions
- greater policy integration in planning and implementing measures (Carvalho et al., 2019)

Ecosystems-based approach to management

Studies provide evidence of factors enabling a transition to ecosystem-based management (EBM). This can be supported by: implementing policies with the same EBM aims — viz. the Birds and Habitats Directive, Water Framework Directive (WFD), Marine Strategy Framework Directive (Rouillard et al., 2018); and building science-policy interfaces to design and implement adaptive policies through the development of new tools and practical frameworks (Garmendia et al., 2017).

In terms of barriers, it was found that EU legislation does not provide a fully coherent framework for the implementation of a complex systems approach to the management of EU marine social–ecological systems (Bigagli, 2015). Transition of EU policies towards the WFD Integrated River Basin Management paradigm is limited by different interpretations on the WFD objectives and exemptions, ambiguity and compromises observed by its Common Implementation Strategy, and lack of real support for the policy (Giakoumis & Voulvoulis, 2018). The Ecosystems Approach to Fisheries Management (EAFM) is limited by fragmented science-stakeholder-policy interactions at the eco-region level and absence of clear guidance on how to combine the CFP and the MSFD and their associated goals and governance systems (Ramírez-Monsalve, Raakjær, Nielsen, Laksa, et al., 2016; Ramírez-Monsalve, Raakjær, Nielsen, Santiago, et al., 2016).

1.3.3.5. A just and fair transition

This section presents findings from the literature that relate to the theme of a just and fair transition. The theme is understood to relate to potential 'winners' and 'losers' of a shift in the food system towards greater sustainability and takes account the challenges of sustainability trade-offs.

Sustainability trade-offs and challenges

Discussion of sustainability trade-offs and challenges appears in the literature in relation to specific policy instruments. In relation to the EU Blue Growth Strategy, evidence suggests that economic growth through this strategy is inappropriate for an ecologically viable and socially just use of the oceans (Hadjimichael, 2018). In relation to the MSFD, the designation of four Marine Conservation Zones in the Irish Sea would incur job losses but be unlikely to have a significant effect on the fisheries section and regional economy [Northern Ireland] (Moore, Lamond, & Appleby, 2016); and MSFD programmes with greatest benefit for welfare of the public are those that target pollution and ensure fisheries are both sustainable and safe to eat [Ireland] (Norton & Hynes, 2014). Variation between the three pillar sustainability policy and one-dimensional protection of water quality under WFD and Natura 2000 networks may limit sustainable multi-functionality and scope of the ecosystem services concept (Kistenkas & Bouwma, 2018). Also in relation to the WFD, achieving Good Environmental Status would not have an undue

negative impact on fishery sector incomes, and could, with appropriate investments in processing and marketing, deliver increased economic benefits for Black Sea countries [Black Sea] (Goulding, Stobberup, & O'Higgins, 2014). The need for specific water policies in Mediterranean and Central/Eastern European countries is mainly driven by final demand for, and exports of, agricultural products (Di Cosmo, Hyland, & Llop, 2014).

1.3.3.6. Pace of change

There was very little focus on the potential pace of change to a more sustainable food system in relation to water and marine policy. One study commented on the underestimation of timeframes for implementation and integration in relation to the WFD. 'Good Ecological Status' will not be achieved by 2027, due to lack of resources and difficulties working with other policy sectors at the river basin level, causing dilemma between member states' desire to keep ambitions high and the practical realities of predicting what they think they can achieve by 2027 (Carvalho et al., 2019).

1.3.4. Agriculture and rural development

This section covers evidence relating to agriculture, rural development and biodiversity. The main named policies are the Common Agricultural Policy, Rural Development Policy, and the Biodiversity Strategy.

1.3.4.1. Institutions and organisations supporting/carrying the main relevant policy instruments

Governance institutions and organisations identified in the literature include EU Institutions (e.g. European Commission, European Court of Justice, the Directorate General for Agriculture and Rural Development [DG-AGRI]), member states, and their government departments (e.g. the UK Department for Environment, Food and Rural Affairs [DEFRA]; the Spanish Ministry of Agriculture, Fisheries and Food [MAGRAMA]). Discussion of the role of institutions is included where relevant throughout the summary.

1.3.4.2. Incentives in policy instruments

130 studies looked at agricultural policy. The Common Agricultural Policy was a focus in 112 studies; Rural Development Policy in 9 studies; and the Biodiversity Strategy in 7 studies.

The policy incentives explored specifically in the literature were:

- Basic payment scheme [29]
- Agri-environmental schemes [17]
- Greening payments [16]
- Young farmers payment [2]

- New entrants scheme [1]
- Co_2 emissions pricing [1]
- Good Agricultural and Environmental Condition (GEAC) requirements [1]

Table 2. Most commonly researched incentives, Common Agricultural Policy

Theme	Subtheme	Articles
Common Agricultural Policy	In general / Other	43
	Basic payment scheme	29
	Agri-environmental schemes	17
	Greening payments	16
	Young farmers income support	2

1.3.4.3. Power and influence of interest and lobby groups

This section covers findings that relate to the research question about the relative power and influence of interest and lobby groups involved in the policymaking process. The literature presents evidence on agricultural and environmental lobby groups, and how different member states influenced policymaking and governance.

Influences and lobby groups

In relation to the CAP, there is evidence of the long-running power and influence of the agricultural lobby throughout its development (Germond, 2015). In the latest round of reforms, environmental actors have increased access to the decision-making process but that does not necessarily give them much influence (Alons, 2017). Evidence is also presented on the influence of non-governmental organisations, civil society, and state organisation lobbying to secure a new aid programme to replace the European Union Food Distribution Programme for the Most Deprived Persons (MDP) of the community (1987–2013),[5] which was ruled to be too tenuously linked to agriculture to be funded through the CAP (Caraher, 2015). The General Agreement on Tariffs and Trade [GATT] and World Trade Organisation [WTO] have influenced the development of the CAP (Garcia-Duran, Casanova, & Eliasson, 2019; Kiryluk-Dryjska, 2016) and this has been a necessary factor explaining its transformation from a highly to a less trade distorting policy (C. Daugbjerg, 2017). Legislatively, the influence of the principle of environmental integration may have significant potential but it is thought to exert more of a political importance than true legal significance, due to lack of defined scientifically determined targets set to be achieved in respect of the natural environment (Ferraris, 2018) [art.11 TFEU].[6]

5 Formerly part of the Common Agricultural Policy.

6 Article 11 of the Treaty of the Functioning of the European Union (TFEU) sets out an all-encompassing legal duty to integrate environmental protection requirements in the policies and activities of the EU.

Member states

The literature also discusses how influence operates at member state level. In Belgium, MPs focused on local implementation of a CAP reform rather than trying to influence at EU level (Randour & Wolfs, 2017). In Germany, federal state parliamentarians' policy orientation is influenced by political group affiliation and closeness to interest groups rather than constituency socio-structural factors (Gladrow, Englert, & Ewert, 2015). German delegates influenced glyphosate renewal by voting in favour rather than abstaining for domestic political reasons (Tosun, Lelieveldt, & Wing, 2019). In the German media, EU-level speakers assumed the most visible role in CAP reform debate, alongside the German government, journalists and farmers (Zschache, 2015). Administrative adaptation to CAP is influenced by cultural and institutional differences in member states; in some, both formal and informal administrative structures adapt to the CAP [Denmark], or administrative adaptation is limited to formal structures [Greece] (Chatzopoulou, 2015).

In terms of influence on particular CAP incentives, state auditing had a disincentive effect on farmers' sign-up for agri-environmental schemes in Hungary (Kovacs, 2015), and member state authorisation of subsidies is a disincentive to farmers to avoid risk themselves by applying on-farm strategies [Poland] (Lipińska, 2016). In terms of collective power, New member states added influence on the issues of CAP direct payments and redistributive reform but lack a broader long-term vision to influence the reform agenda [Central and Eastern Europe] (Kosior, 2014).

1.3.4.4. Barriers and enablers of shifts or transitions

This section relates to the research question about how shifts or transitions may potentially be achieved and what barriers or enablers may determine successful delivery. The literature commented on these in relation to differences in policy design, interpretation, and framing, education and development of human capital, participation of providers in planning and decision-making, data and monitoring, CO2 emissions and specific CAP policy incentives such as subsidies and agri-environmental schemes.

Policy design, interpretation, and framing

Policy design and delivery is noted as a central concern that has become the most extensively considered problem of the CAP, while other dimensions such as farms, consumers, regions, markets and trade, environment, taxpayers and budget, are less extensively considered (Kuhmonen, 2018a). Addressing CAP issues as wicked, networked, driver-dependent and punctuated problems observing systems dynamics is thought to be an enabler for change (Kuhmonen, 2018b). Flexibility in policy design can be positive in enabling member states to tailor the direct payments to their national needs and maintain integration of the enlarged EU (Henke et al., 2018). On the other hand, fragmentation of

objectives partially impairs the effectiveness and efficiency of the new CAP, and hurts the information and expectation level of the ultimate stakeholders (Cvik & Pelikánova, 2019).

The literature discusses how policy discourses and framing can shape outcomes in ways that may enable or prevent food system shifts. Discourses associated with the different agricultural policy paradigms are used strategically and selectively at EU level and domestically to shape outcomes (Alons, 2019; Alons & Zwaan, 2016; Erjavec & Erjavec, 2015). The use of consensus framing, for example on 'food security', can mask different causal analyses, and can create a barrier to action and progress addressing issues (Candel, Breeman, Stiller, & Termeer, 2014). Effective integration of environmental objectives in the CAP is thought to be hindered by an incomplete policy transformation from exceptionalist to post-exceptionalist agriculture (Alons, 2017).

A study of stakeholder views identified diverse perspectives on nutrition consideration within the CAP across the EU, particularly between agricultural or trade, and public health. Key findings suggested the need for communication and agreement of clear high-level nutrition guidelines, clarity on the EU mandate to address nutrition-related health concerns via policy, and stronger engagement of civil society in the issues (Walls, Cornelsen, Lock, & Smith, 2016).

Education and development of human capital

The literature reports on the enabling capacity of human capital for change in relation to farm system, economic performance, agricultural practices, and policy scrutiny. Human capital characteristics are reported to be statistically significant for the attainment of high farm economic performance, while an ageing farm population has a negative effect on the economic performance of agriculture (Giannakis & Bruggeman, 2015). A Farm Advisory Service is thought to have potential benefits for capacity building and organisation of farmers [Spain] (Abbasi, Esparcia, & Saadi, 2019). In relation to organic farming, farmer attitude (Papadopoulos, Karelakis, Zafeiriou, & Koutroumanidis, 2015) and education and training within EU programmes are enablers to take up in Greece (Papadopoulos, Zafeiriou, Karelakis, & Koutroumanidis, 2018). In Germany, human and social capital were enablers for conversion to organic wine for some, but sceptical attitudes to these and doubts around environmental benefits were barriers for others (Siepmann & Nicholas, 2018). In terms of practices, a study of agricultural land owners found that they often consider their negative impacts on freshwater ecosystems insignificant and believe that a change of agricultural practices is unnecessary (Flavio et al., 2017). Greater policy scrutiny in regional governments is thought to have been enabled by media coverage of CAP reform (Randour & Wolfs, 2017).

Participation of providers in planning and decision-making

In relation to biodiversity, conservation within the CAP can be enabled through collaborative governance, for which stakeholders expressed a preference, as opposed to administrative level hierarchy [Sweden and Germany] (Velten et al., 2018). Current biodiversity management in Sweden and Germany is thought to be ineffective due to actor fragmentation (Leventon et al., 2017). Better design of agricultural policy and governance could be enabled by taking account of: social networks, information flows, regulations and social pressure [Germany] (Hauck, Schmidt, & Werner, 2016); and better understanding of the relationships between farmers' world-views and their practices (Vuillot et al., 2016).

Knowledge, data and monitoring

Gaps in the literature and knowledge prevent needs being integrated into policy and practice in relation to:

- High Nature Value Farmland and effectiveness of Rural Development Programmes (Lomba et al., 2014; Lomba et al., 2017)
- Agro-forestry and ecosystems services (Fagerholm, Torralba, Burgess, & Plieninger, 2016)
- Young farmers, innovation, succession and farm structure (Zagata & Sutherland, 2015)

Opportunities exist to enhance data and modelling through different channels. These include:

- new scientific interest in the use of farm models to improve agricultural management (Reidsma, Janssen, Jansen, & van Ittersum, 2018)
- a mapping methodology for Green Infrastructure (GI) networks that could be applied to implementation of the EU Biodiversity Strategy, European Regional Development Funds or the Rural Development Programmes (Reidsma et al., 2018)
- expert estimates that may complement the evaluation of agri-environmental schemes at the national or regional level in cases where complex policy objectives prevent a comprehensive evaluation, based on objective measures (Baur & Schlapfer, 2018)

Subsidies as barriers

A range of studies suggest that subsidies are ineffective for the change they are intended to initiate. In terms of overall changes, it was found that economic incentives trigger fewer overall change intentions for farmers (Buelow & Cradock-Henry, 2018). The introduction of decoupling with the 2003 CAP reform weakens the effect that subsidies have on technical efficiency [Western European countries] (L. Latruffe, Bravo-Ureta, Carpentier, Desjeux,

& Moreira, 2017), and the single payment scheme in Portugal does not clearly promote agricultural activity outside traditional zones and does not explicitly improve farming output (Martinho, 2015). CAP subsidies are also questioned as support for the introduction of new crops [Austria] (Niedermayr, Kapfer, & Kantelhardt, 2016).

The literature also provides mixed assessments of the effectiveness of subsidies. The effect of subsidies on technical efficiency may be positive, null, or negative, depending on the country (Laure Latruffe & Desjeux, 2016) and can be negative or positive based on the country (Majchrzak & Pająk, 2017), farm speciality, and the efficiency measure being considered [France] (Laure Latruffe & Desjeux, 2016).

Subsidies as enablers

As enablers of change, CAP subsidies play a major role in the economy of the Aragon area of Spain (Pérez, Alcántara, & López, 2014), have a positive effect on farm efficiency in Ireland (Cillero, Thorne, Wallace, Breen, & Hennessy, 2018), and enhance organic production in Sweden (Jaime, Coria, & Liu, 2016). In Poland, subsidies contributed to a catalysing impact on labour productivity (Pawłowska & Rembisz, 2018) and receiving more, and more diverse, subsidy support was shown to positively correlate with levels of sustainability in farming practices (Sulewski & Wąs, 2018). Irish agri-food producers experience a small positive impact on productivity and income as a result of CAP subsidies but temporary adverse effects on Gross Domestic Product (GDP) from policy change can occur in some sectors (Boysen, Jensen, & Matthews, 2016). Studies of potential changes to CAP payments suggest that a decrease of CAP payments would increase the number of farmers exiting the industry and decreasing herd size and intensity [Scotland] (Barnes, Sutherland, Toma, Matthews, & Thomson, 2016), and a reduction of the CAP budget by 20% would affect farm incomes by 20–25% in southern Finland (Lehtonen & Niemi, 2018).

2013 greening measures

Greening measures introduced in the 2013 CAP reforms are found to be enablers of economic and environmental change in certain contexts. Evidence suggests that economic and environmental impacts across the EU are rather small but positive (Gocht et al., 2016) and CAP greening will not contribute much to improving the provision of public goods, possibly because many farms subject to CAP greening comply with the greening requirements in the baseline (Louhichi, Ciaian, Espinosa, Perni, & Paloma, 2018). A perspective from the Baltic Sea countries suggests that greening causes a decline in the area of main crops, increases crop prices, slightly intensifies production on the remaining areas, and brings only a marginal increase in farm income (Wąs, Zawalińska, & Britz, 2014).

Of the 2013 reforms the most constraining measure for farmers is reported to be the Ecological Focus Areas (EFA),[7] followed by crop diversification (Louhichi et al., 2018). Advisory bodies and farmers in Sweden (Nilsson et al., 2019) and ecologists from 17 European countries (Pe'er et al., 2017) believe that EFAs are too complex and biodiversity benefits are unclear. Shortcomings in the implementation of EFAs will undermine environmental benefits and confidence [Germany, Sweden] (Sahrbacher, Hristov, & Brady, 2017). The move from traditional to regionalised CAP Pillar 1 payments increased the negative financial impact of greening on most farms but it was substantially lower than the financial sacrifice of not adopting the greening measures and, thus, not qualifying for payments [Scotland] (Ahmadi, Shrestha, Thomson, Barnes, & Stott, 2015).

CO_2 emissions

Evidence exists of potential enablers of shifts to reduce food system related CO2 emissions. Emissions pricing in agriculture can be enabled by focusing on large farms, considering voluntary and mandatory instruments, and ensuring political feasibility of interaction of emissions pricing with the CAP (Grosjean et al., 2018). Modelling studies evidence the importance of reducing food waste to reduce emissions, both pre-market withdrawal of food (Porter, Reay, Bomberg, & Higgins, 2018) and food waste in general (Usubiaga, Butnar, & Schepelmann, 2018). Policy measures already implemented in the agricultural sector in France, Portugal and Spain may limit carbon emissions but there is still much to be done to meet the Kyoto protocol (Zafeiriou & Azam, 2017).

Agri-environmental schemes

The literature suggests some effectiveness of agri-environmental schemes (AES), and a range of limitations. In Sweden, certified organic farming is exclusively driven by agri-environmental subsidies (Jaime et al., 2016). AES can be effective for conserving wildlife on farmland, but they are expensive and need to be carefully designed and targeted (Batary, Dicks, Kleijn, & Sutherland, 2015). They tend to reduce productivity and technical efficiency (Quiroga, Suárez, Fernández-Haddad, & Philippidis, 2017) and funds are too small to prevent transition to large-scale farming in the New member states [Poland and Sweden] (Öhlund, Zurek, & Hammer, 2015). Producers think they do not encourage food production, holistic farmers think they do not support green food culture and landowners think they are not supporting farm succession or new entrants [UK] (Raymond, Reed, Bieling, Robinson, & Plieninger, 2016). Schemes are reported to present an administrative burden to member states that can take priority over environmental goals [Germany] (Weber, 2015).

7 https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/income-support/greening_en

Uptake of agri-environmental measures in highly productive landscapes was low, suggesting that they do not motivate farmers to provide a broader portfolio of ecosystem services [Germany] (Frueh-Mueller et al., 2018). Participation in Agri-Environmental Measures (AEM) is more likely in less intensive production systems but per-committed hectare AEM premiums tend to be lower in these areas (Zimmermann & Britz, 2016). In relation to farmers' voluntary take up of agri-environmental schemes, the presence of non-agricultural actors did not fundamentally challenge the dominant position of agricultural administrations and farmers' groups [France] (Benoit & Patsias, 2017). Key drivers for participation in AESs include fair payments, lower household dependency on agricultural incomes, age and education levels, the presence of a successor and the ability to make progressive rather than step changes to agricultural activities (Lastra-Bravo, Hubbard, Garrod, & Tolon-Becerra, 2015).

1.3.4.5. A just and fair transition

This section presents findings from the literature that relate to the theme of a just and fair transition. The theme is understood to relate to potential winners and losers of a shift in the food system towards greater sustainability and takes account of the differences between Old and New member states, the challenges of sustainability trade-offs, socio-economic disparities between regions and in more rural areas, worker welfare, and inequities due to size of operation. It also covers issues around environmental sustainability, and the impacts of EU policy outside the EU.

Old and new member states

A large collection of studies discusses differences between older and newer EU member states, in terms of the impacts of policy and policy reforms, different socio-economic needs, and relative disadvantage between those states with an established farming sector under EU policy and those newly entering or adjusting. Overall, the literature suggests that older member states benefit from an advantage through longer support under EU policies and that newer member states may be subject to significant challenges and relative disadvantage.

In terms of differences in the farming sector and structural support, evidence suggests that most old EU countries have an efficient crop production process in terms of output for resources used, likely due to CAP policies (Toma, Miglietta, Zurlini, Valente, & Petrosillo, 2017), and that Old member states have lower agricultural subsidies and lower outputs compared to New States (Svoboda, Lososová, & Zdeněk, 2015). Farm structure varies between Old and New member states, with an apparent shortage of young farmers in countries where small-scale holdings are prevalent, particularly Portugal, Italy, Romania and Greece (Zagata & Sutherland, 2015).

Particular challenges in New member states include shifts in the farming system towards more intensive agriculture, challenges in mountainous areas, subsistence farming, rural development and farm abandonment. For example, in New member states, organic farms and livestock systems in hilly and mountainous areas, are expected to show a decline in the numbers of livestock while specialist dairy units are expected to increase (Giannoccaro, Viscecchia, & De Gennaro, 2015). Within New member states, sector-wide and country-specific factors impact on the performance of milk processing companies with profitability significantly related to the interest rate (negatively) and to market concentration (positively) (Zdráhal, Chmelíková, & Blažková, 2018). CAP developments in Slovakia are found to be focused on maintenance of intensive large-scale farming rather than reflecting local site-specific needs to manage the diversity of agricultural mountain landscapes (including small-scale) (Bezak & Mitchley, 2014).

Further cases of potential disadvantage to newer states include:

- higher risks of farm abandonment in Portugal, Spain, Italy, Greece, Latvia, Estonia, Finland, Sweden and Ireland (Terres et al., 2015)
- little impact of rural development measures in Hungary because EU subsidies concentrate on already well-supported regions (Bakucs, Ferto, Varga, & Benedek, 2018)
- farmers in Romania being strongly disfavoured compared to old EU member states due to the emphasis on subsistence farming (Ciutacu, Chivu, & Andrei, 2015)
- negative effects of direct payments on environmental sustainability were larger in Lithuania than in Italy (Volkov & Melnikiene, 2017)
- finally, landscape transformation rates in protected (Natura 2000) sites show greater change in new member states both within and outside protected areas, with agricultural abandonment mostly driven by CAP policy and socio-economic drivers (Kallimanis et al., 2015)

Evidence suggests that there will be winners and losers in changes to the CAP budget and subsidies. From the 2014-2020 CAP budget cuts, winners are the Netherlands and Germany, losers are Romania and Poland (Boulanger & Philippidis, 2015), and the reforms will bring little variation in payments for many countries, thus not sufficiently address the unequal distribution of funds (Larrubia Vargas, 2017). Redistribution of direct payments between Old and New member states after 2013 will put new pressures on countries receiving direct per-hectare payments significantly over the EU average such as Greece, Italy and Cyprus (Giannakis & Bruggeman, 2015).

There was a focus around agri-environmental funds in the literature, with evidence of different impacts in different places. Agri-environmental funds were thought to be too small to prevent transition towards large-scale farming in New member states [Poland] (Öhlund et al., 2015), while Romanian farms rely heavily on them and would be at risk

of abandonment without (Jitea, Dumitras, & Simu, 2015). Perceptions of the schemes also differed, Hungarian farmers view agri-environmental subsidy accountability systems (and audit culture) as unjust and are sceptical about the 'real' purposes of the legislation (Kovacs, 2015), and efficiency is variable with Hungary, Malta, Luxembourg and Netherlands being the only efficient countries over the period 2008-2012 (Turčeková, Svetlanská, Kollár, & Záhorský, 2015). Overall, New member states feature comparatively low Agri-Environmental Premiums over total utilised agricultural area, where high AE per UAA payments are achieved in high- intensity production systems and countries with an emphasis on agri-environmental policy such as Luxembourg, Finland, Austria and Ireland (Zimmermann & Britz, 2016).

Sustainability trade-offs

The literature presents a number of ways in which finding sustainable solutions will require trade-offs between economic, social and environmental goals, and of the challenges presented by competing priorities. In relation to CAP, it is suggested that the multiple layers of CAP introduce competing priorities from environmentalists and sustainable intensification promoted by farmers (Medina & Potter, 2017), that CAP does not effectively promote transformation to sustainable practice (Öhlund et al., 2015), and that there is policy conflict between renewable energy (biomass) and food production in the context of CAP (Philippidis, M'Barek, & Ferrari, 2016). It is also said that CAP policies leading to 'best agricultural practice' can maintain ecosystem services without depressing production (Toma et al., 2017).

In relation to organic farming, environmental outcomes are better with the agri-environmental measures within the CAP compared to conventional and no-CAP situations [Italy] (Pacini, Merante, Lazzerini, & Van Passel, 2015). It is also said that organic agriculture in Europe, to a large extent spurred by changes to CAP, displays characteristics traditionally associated with capitalist agriculture, which increases pressure on small organic farmers who have not been able to benefit from the opportunities presented by the greening measures (Konstantinidis, 2018).

In terms of the impact of competing priorities on land use, CAP subsidies reduced the rate of agricultural to urban land conversion (Ustaoglu & Williams, 2017) but achieving no net loss in biodiversity and ecosystem services is challenging with the current levels of land demand (Schulp, Van Teeffelen, Tucker, & Verburg, 2016). Natura 2000 conservation policy may moderate land use change inside Protected Areas (PAs) in favour of conservation goals, but broadscale EU policies like the CAP and socio-economic drivers (like transition from planned to market economy) are more likely to explain land-cover transformation (Kallimanis et al., 2015). Due to varied impacts, policymakers should weigh carefully the pros and cons of the direct and indirect overall economic, environmental

and land use impacts of a subsidy on agricultural labour at the expense of the Pillar I CAP budget (Helming & Tabeau, 2018).

The literature also reports on challenges in integrating policy concerns and justifying expenditure. It was found that the social-cultural value of wood pastures is not integrated into EU agricultural and conservation policies (Plieninger et al., 2015), that the public are willing to pay to mitigate the adverse environmental effects of agriculture, and EU rural development policies are regarded as beneficial [Cyprus] (Ragkos & Theodoridis, 2016). Justification for greening payments is complicated to achieve in a hilly part of Italy if environmental rules are not very restrictive and based on uniform measures across territories, but restrictive rules could limit payment benefits to farms, with possible larger environmental damage (e.g. land abandonment) (Cortignani, Gobattoni, Pelorosso, & Ripa, 2018).

Rural development and regional disadvantage

Evidence shows regional variation in impacts of support and potential for rural development. The importance of CAP support to rural areas varies widely across the EU in ways that are not reflected by the economic importance of agriculture (Espinosa et al., 2014) and also depends on inter-sectoral and inter-regional linkages (Bonfiglio et al., 2016). High economic performance is 94% less likely in farm sectors with a high share of agricultural land in less-favoured areas (Giannakis & Bruggeman, 2015), and the remotest and the most agricultural EU regions tend to show a lower expenditure intensity for KT&I measures, so not prioritising knowledge transfer and innovation (Bonfiglio et al., 2017). Regional variations in exemption from greening may create concerns and require an increased level of environmental protection (Bertaglia, Angileri, & Fasbender, 2016).

In terms of redressing regional imbalances, CAP Pillar 2 payments are pivotal to small family farms located in upland and hilly areas of Italy (Galluzzo, 2016), and to olive production on sloping lands in Spain (Rocamora-Montiel, Glenk, & Colombo, 2014). Participation of Italian farmers in the growth-orientated measures of the rural development policy elicited a productivity increase and, eventually, positive growth rates in farm performance (Salvioni & Sciulli, 2018).

The literature suggests that territorial cohesion requires flexible integration and coordination of bottom-up and top-down approaches, and 'spatially targeted' and 'space blind' policies. EU Cohesion Policy has a positive influence on economic growth in all regions but its impact is stronger in socio-economically advanced areas and is maximised when complemented by Rural Development and CAP funds, which can concentrate some benefits in the most deprived areas (Crescenzi & Giua, 2016). The Leader programme was found to be successful, but attempts to mainstream[8] the underlying

8 Changing the Leader programme by integrating it into Rural Development Programmes (RDPs).

concept into Rural Development Programmes was hampered by administrative structures and diminished contributions to local social innovation [Ireland and Austria] (Dax, Strahl, Kirwan, & Maye, 2016).

Worker welfare and farm income

Evidence of the ways in which EU policy influences welfare and social issues and may contribute to a more just and fair transition, is discussed in a number of studies. Benefits exist in that decoupled payments protect the majority of EU countries from the economic variations in price of agricultural products, but there are variations between countries (Majchrzak & Pająk, 2017). Particular benefits of EU policy for welfare are that direct CAP payments since 2013 have improved the social situation of small farms in Lithuania (Volkov, Balezentis, Morkunas, & Streimikiene, 2019), and that payments for public goods provision may be to some extent a remedy for market imperfections particularly beneficial to small farms (Czyzewski & Majchrzak, 2018). Potential benefits are seen in a partnership model that combines efforts of elder farmers with beginning gardeners (Vidickiene & Gedminaite-Raudone, 2019) [Lithuania], and in the Young Farmer Payment that is expected to be successful if barriers of farm succession (feeling in control, involvement in decision-making) and access to credit are overcome (May, Arancibia, Behrendt, & Adams, 2019). The continuation of CAP funding could help sustain cultural landscapes by limiting abandonment (Schulp, Levers, Kuemmerle, Tieskens, & Verburg, 2019), and a converged CAP payment model with a greening component, although significantly reducing farm income, will not affect tomato-producing land use [Italy] (Solazzo, Donati, Arfini, & Petriccione, 2014). EU-wide, it is found that the shift in CAP expenditure from the support of farm production activities towards supporting rural development and the provision of public goods and externalities is also in line with supporting farmers' income (Ciaian, Kancs, & Paloma, 2015).

In terms of limitations, several studies drew attention to the way that capitalisation of Basic Payment Scheme (BPS) payments in land values and rental prices following 2003 and 2013 reforms favours landowners rather than tenant farmers and compromises the ability of the policy to achieve its goals (Ciaian, Kancs, & Espinosa, 2018; Di Corato & Brady, 2019; Feichtinger & Salhofer, 2016). The problem is thought to stem from the general or universal design of the system and not the facility to choose passive farming per se (Di Corato & Brady, 2019).

Further ways in which policy and support or undermine social justice are found in the following studies: collaborative supply chains could improve the position of beef producers, who have the least power in the supply chain (Smeets Kristkova & García Alvaréz Coque, 2015); Swedish farmers dependent on rural development payments feel trapped and powerless, and payments have not specifically enhanced environmental sustainability measures (Eksvärd & Marquardt, 2018); and winners of the liberalisation of

'planting rights' under Common Market Organization (CMO) reforms, are owners of land and new entrants to the sector, losers are present owners of planting rights and wine producers who currently own their vineyard (Deconinck & Swinnen, 2015).

Small vs large business

This section considers evidence of how CAP subsidies may disproportionately benefit large producers, and where small producers may need additional support. Historically, large producers, rather than smallholding family farmers, were the primary beneficiaries of CAP subsidies as well as the main producers of surpluses, but resistance was strong and smallholder farming and the preservation of artisanal, sustainable and environmentally friendly agriculture remain important in agricultural discourses (Germond, 2015). Across the EU, concentration of direct CAP payments is heterogeneous across member states but land is increasingly controlled by big producers (Severini & Tantari, 2015). In the UK, big producers are a strong political lobby group and receive greater relative CAP payments (Medina & Potter, 2017). In Hungary and Slovenia, CAP subsidies represent a stable source of farm income but are not targeted to the smaller farms with the highest level of income variability (Bojnec & Ferto, 2019). An assessment of proposed progressive capping of subsidies in the Czech Republic found that large farms are equally dependent on subsidies as other farms (Křístková & Ratinger, 2014).

Environmental sustainability

The potential for EU policy to contribute to environmental benefits and sustainability is found to be limited by:

- ineffective implementation (Ecological Focus Areas) (Sahrbacher et al., 2017)
- ambiguity of concepts (green infrastructure and ecosystem services) (Salomaa et al., 2017)
- overly general measures (to embrace the diversity of European landscapes including alpine) (Penko Seidl & Golobič, 2018)

To maintain ecosystem services at 2010 levels, it was found that artificial land needs to be compensated by 2.2% additional green infrastructure (Maes et al., 2015).

Key factors influencing abandonment, and therefore environmental impact, are farm stability (income, low adaptation, ageing farmer, low education, small farm and enrolment in agricultural schemes) and regional context (weak land marker, previous abandonment and low population density) (Terres et al., 2015).

In relation to soil, the benefits of policy are mixed. Current and proposed CAP policies and instruments are considered inadequate to stimulate large-scale adoption of climate-smart soil carbon agricultural projects across Europe (Verschuuren, 2018). Soil loss has

been reduced by 9.5% on average in Europe, and by 20% for arable lands through Good Agricultural and Environmental (GAEC) requirements of the CAP and the Soil Thematic Strategy, but 4 million ha. of croplands have unsustainable soil loss rates (Panagos et al., 2015). 60 years of agricultural policies on the provision of the Soil Erosion Prevention (SEP) service in a Mediterranean extensive silvo-pastoral system finds some unintended effects of agricultural policy mechanisms on ecosystem service provision and highlight the need for context-based policies, tailored to the environmental constraints and potentials of each region (Guerra, Metzger, Maes, & Pinto-Correia, 2016).

Impact of EU policy outside EU

Studies assessing the impact of EU policy outside the EU found that 2014–2020 CAP expenditure cuts have muted impacts on EU and world agricultural markets or indeed EU agricultural output (Boulanger & Philippidis, 2015), and that data were inadequate to assess Policy Coherence for Development and the effects of 2013 and possible future policy reforms on developing countries (Carbone & Keijzer, 2016).

1.3.4.6. Pace of change

There was very little focus on the potential pace of change to a more sustainable food system in relation to agricultural or rural development policy, but the effect of incremental policy layering throughout the history of CAP was noted. The history of CAP is said to show the limitations of the 'big bang' reform approach, and the difficulty of radically altering its principle mechanisms and vested interests (Germond, 2015). Gradual change through layering may create sustainability dynamics that can result in lasting reform trajectories (Carsten Daugbjerg & Swinbank, 2016).

1.4. Named policy review summary

This review primarily summarises recent publications in social science journals which have a methods section describing the type of empirical research carried out to explore an aspect of a named EU policy, and is structured around the following questions (see also 1.1. Introduction, p.11):

- What are the main institutions/organisations supporting/carrying the main relevant policy instruments?
- What are the main interest and lobbies involved, and what is their respective power/influence?
- What are the incentives built into these instruments?
- How are shifts/transitions potentially achieved? What/who initiates these shifts/transitions, and what determines successful delivery? How is resistance overcome?

- What is required to achieve a 'just' (fair) shift/transition?
- What evidence exists with respect to the potential pace of change that might be achieved for a transition to an EU sustainable food system and what factors determine this?

As demonstrated in the sections above, the evidence base aligns with these questions to varying degrees. There is little specifically on the role of institutions and organisations, the evidence on policy instruments is patchy, and discussion of the potential pace of change is almost entirely absent. There is a fair evidence base from which to consider potential opportunities and limitations for shifts and transitions, and on certain aspects of social justice. Overall, the findings identify many barriers that will need to be overcome to 'deliver an inclusive, 'just' and timely transition to an EU sustainable food system' while providing less direct evidence in terms of solutions. The evidence base is largest in relation to agriculture and rural development, followed by fisheries, and the protection of marine and inland waters. Drawing on the research questions where possible, the following sections summarise the main themes brought to light by the review.

In relation to fisheries, evidence is focused around the 2013 reforms to the Common Fisheries Policy. Key themes in the reform process are the roles and influence of EU Commissioners, environmental groups, scientific advisors, and member states. Evidence exists that unequal power dynamics and lack of transparency may be current barriers to a fair transition. Reporting on the transition to new governance arrangements under the 2013 reforms reveals progress, as well as limitations, and there is a large evidence base on the need and opportunities for further development. Evidence reveals the need for flexibility and the potential in tailored and flexible approaches to policy tools, new governance structures, and through consultation with stakeholders. Socio-economic inequalities potentially compromise a just and fair transition, with particular concerns that the reforms will impact small-scale fisheries harder, that access to participatory governance will not be equal, and that insufficient attention is paid to policy impacts outside the EU. Evidence exists of a number of issues with the landing obligation, discard ban, and quotas, particularly in relation to poor data that prevents effective monitoring, mitigation, and adaptive responses.

Similar themes emerge from the evidence in relation to the Marine Strategy Framework Directive and the Water Framework Directive, in particular around the challenges of integrated management across member states, the principle of subsidiarity, and the potential for coherence through the use of existing data, methodologies and targets from related environmental policies. The need for flexibility and stakeholder engagement is highlighted, and the influence of public interest and engagement is noted. The legislative and policy context is found to not currently be providing a coherent framework for an ecosystems-based approach to management for either marine or inland waters, and more integrated tools, frameworks and interfaces are needed. Gaps in the scholarship on

the Water Framework Directive limit understandings of policy effectiveness in this area, but evidence of the significant challenges of reaching 2027 targets was noted.

Scholarship on agriculture and rural development covers a range of themes including the powerful influence of lobby groups on policy development over the history of CAP, the effects of policy framing, layering and fragmentation, the influence of member states in tailoring the policy to national needs, and the challenges of ambiguity around concepts such as green infrastructure and ecosystems services. Research and data collection are good and improving, but most evidence relates to a limited aspect of the production process, or focuses on the limitations of current practices, rather than on what could work in terms of a more sustainable transition. Evidence shows that the impact of subsidies varies considerably across member states, as well as regionally. Many studies draw on the differences between old and new EU Members, and highlight the relative disadvantage of new members, and the issue of farm abandonment. There is evidence of the potential in improving human capital and in efforts to reduce CO2 emissions in agriculture. Evidence of the impact of capitalisation of Basic Payment Scheme (BPS) payments in land values was highlighted as a policy limitation, and greening measures introduced by the 2013 reforms show relatively limited effects, and particularly question Ecological Focus Areas. The evidence base for agri-environmental measures is notable, and includes motivation for take-up, impacts, and effectiveness

1.5. Discussion

The working definition of a sustainable food system provided for this report is one that:

> provides and promotes safe, nutritious and healthy food of low environmental impact for all current and future EU citizens in a manner that itself also protects and restores the natural environment and its ecosystem services, is robust and resilient, economically dynamic, just and fair, and socially acceptable and inclusive. It does so without compromising the availability of nutritious and healthy food for people living outside the EU, nor impairing their natural environment.

The evidence presented in this report provides social sciences insights into the dynamics between EU policy and these food system sustainability objectives. The consideration given to economic equity, social justice and environmental integrity varies between sectors. As discussed in the following sections, more attention is given to economic and social factors in the relation to agricultural and rural development policy, and more of a focus is made of environmental considerations in relation to water management policy. There is a reasonable evidence base on sustainability trade-offs and competing priorities in all sectors, which could usefully be expanded in future research.

In relation to fisheries, evidence is strongest on environmental impacts and found to be most lacking in relation to social aspects of sustainability. The 2013 reforms to the CFP

are reported to contain a lack of policy instruments to address social sustainability, and the evidence base in this report shows that issues relating to social sustainability receive less attention than those relating to conservation and environmental integrity. Noted sustainability trade-offs include the need to balance short term reductions in landings with long term habitat protection. Overall, the evidence base highlights the criticality of chronically over-fished stocks and the need for traditional fisheries management to be updated, including by overcoming data-deficiency and following scientific advice.

The scholarship on inland and marine water policy is focused on environmental integrity and water quality, with less attention given to economic and social aspects of sustainability. The ecosystems approach to water and fisheries management offers opportunities for more holistic sustainability thinking, but the evidence suggests that this potential is limited by fragmented science-stakeholder-policy interactions at the eco-region level and lack of clarity around objectives and integrated governance. The Blue Growth Strategy is noted for tensions between economic growth and environmentally viable and socially just use of the oceans, and trade-offs between fishing sector incomes and conservation objectives.

The scholarship on agriculture and rural development provides evidence on a range of sustainability considerations but is particularly strong on economic considerations. Studies also discuss interlinked social and economic impacts of subsides, regional disadvantage, worker welfare, farm income, and scale of farm and producer businesses. The literature on environmental integrity is less developed, but includes consideration of policy interaction with CO_2 emissions, and a small body of evidence of the impact of policy on soils. Trade-offs and competing priorities are noted in relation to agricultural intensification, renewable energy and food production, urbanisation, and the socio-cultural value of landscapes.

Another important area for future research is to look at policy effects across sectors. This is a notably limited area of research in this review (Section 1.3.1), but consideration of interlinking policy effects is essential for a holistic understanding of the food system.

Overall, the findings of this review identify many barriers that will need to be overcome to "deliver an inclusive, 'just' and timely transition to an EU sustainable food system" while providing less direct evidence in terms of solutions. Some clear themes emerge in terms of guiding what might work for policy development in relation to production that have a good evidence base. These include:

- reduce policy fragmentation and join up related instruments and directives (section 1.3.3.4, p.21; section 1.3.4.4, p.26)
- further develop the potential of multi-stakeholder and multi-level governance and participation and evaluate promising alternative models of cooperative governance (section 1.3.2.4, p.15; section 1.3.2.5, p.17; section 1.3.3.4, p.21)

- in relation to the CFP discard ban and landing obligation, further explore flexibility in operation and regional solutions and data systems, seeking common ground regarding economic and environmental trade-offs (section 1.3.2.5, p.17)
- in relation to CAP payments, there is a good evidence base for differential effects across small and large-scale farming, and old and new member states regarding the economic, environmental, and social aspects of sustainability transitions (section 1.3.4.4, p.26; section 1.3.4.5, p.31)

1.6. Concluding remarks

The studies included in this review are peer-reviewed empirical research looking at named EU policies (as described in Annex 1, p.106). The body of evidence provides a breadth of approaches and perspectives, focused mainly on production in agriculture and fisheries, with some literature on water policy. This represents just one section of the food system (pre-farm gate) rather than whole system change, and a focus on the core policies CAP, CFP, MSFD, and WFD.

To consider systemic change in the food system as a whole there is a need to complement this evidence base with analysis of a broader range of policy domains and policy instruments, for example from public food procurement to land use planning, and to consider the limitations of a lack of policy and governance integration around food.

As stated in 1.1. Introduction, a further 433 journal publications were assessed as potentially relevant, based on a much broader search (3346 records in all) for studies discussing EU policy in general terms. Given time and funding constraints, it was not possible to synthesise this full body of evidence nor to arrange translation of nine papers published in languages other than English. However, an overview of this supplementary evidence base (based on title/abstract only) is provided in Part 2 of this report, which demonstrates the breadth of food-related policy and adds a useful resource for further evidence of particular aspects of EU food policy.

The nature of evidence in this review is largely problem-based and focuses on what is not working rather than providing evidence of what is. This may be due to the culture of research, or a result of the focus on empirical research and impacts, which excluded more reflective studies. It is also important to note that the review does not include recommendations made by authors, unless these were based on evidence of them working. It also does not include books or grey literature (such as government reports) or research papers based on authors' arguments and reflection, making the nature of evidence purely empirical studies with a stated research methodology.

Thus, while this is an important body of literature, it is a subset of the entirety of social science-based thinking in the area of EU policy development.

1.7. References

Abbasi, F., Esparcia, J., & Saadi, H. A. (2019). From Analysis to Formulation of Strategies for Farm Advisory Services (Case Study: Valencia – Spain). an Application through Swot and Qspm Matrix. *European Countryside, 11*(1), 43-73. doi:http://dx.doi.org/10.2478/euco-2019-0004

Ahmadi, B. V., Shrestha, S., Thomson, S. G., Barnes, A. P., & Stott, A. W. (2015). Impacts of greening measures and flat rate regional payments of the Common Agricultural Policy on Scottish beef and sheep farms. *Journal of Agricultural Science, 153*(4), 676-688. doi:https://doi.org/10.1017/S0021859614001221

Alons, G. (2017). Environmental policy integration in the EU's common agricultural policy: greening or greenwashing? *Journal of European Public Policy, 24*(11), 1604-1622. doi:https://doi.org/10.1080/13501763.2017.1334085

Alons, G. (2019). The advantage of paradigmatic contestation in shaping and selling public policies. *Journal of Public Policy*. doi:https://doi.org/10.1017/S0143814X19000060

Alons, G., & Zwaan, P. (2016). New Wine in Different Bottles: Negotiating and Selling the CAP post-2013 Reform. *Sociologia Ruralis, 56*(3), 349-370. doi:https://doi.org/10.1111/soru.12088

Anbleyth-Evans, J. W., & Williams, C. (2018). Fishing for Justice: England's Inshore Fisheries' Social Movements and Fixed Quota Allocation. [Pescando por la justicia: Movimientos sociales de las pesquerías de bajura de Inglaterra y la asignación de cuotas fijas]. *Human Geography, 11*(1). Retrieved from https://hugeog.com/fishing-for-justice-englands-inshore-fisheries-social-movements-and-fixed-quota-allocation/

Antonelli, M., Tamea, S., & Yang, H. (2017). Intra-EU agricultural trade, virtual water flows and policy implications. *Science of the Total Environment, 587*, 439-448. doi:https://doi.org/10.1016/j.scitotenv.2017.02.105

Antonova, A. S. (2016). The rhetoric of "responsible fishing": Notions of human rights and sustainability in the European Union's bilateral fishing agreements with developing states. *Marine Policy, 70*, 77-84. doi:https://doi.org/10.1016/j.marpol.2016.04.008

Bakucs, Z., Ferto, I., Varga, A., & Benedek, Z. (2018). Impact of European Union development subsidies on Hungarian regions. *European Planning Studies, 26*(6), 1121-1136. doi:https://doi.org/10.1080/09654313.2018.1437394

Barnes, A., Sutherland, L. A., Toma, L., Matthews, K., & Thomson, S. (2016). The effect of the Common Agricultural Policy reforms on intentions towards food production: Evidence from livestock farmers. *Land Use Policy, 50*, 548-558. doi:https://doi.org/10.1016/j.landusepol.2015.10.017

Batary, P., Dicks, L. V., Kleijn, D., & Sutherland, W. J. (2015). The role of agri-environment schemes in conservation and environmental management. *Conservation Biology, 29*(4), 1006-1016. doi:https://doi.org/10.1111/cobi.12536

Battista, W., Kelly, R. P., Erickson, A., & Fujita, R. (2018). Fisheries Governance Affecting Conservation Outcomes in the United States and European Union. *Coastal Management, 46*(5), 388-452. doi:https://doi.org/10.1080/08920753.2018.1498711

Baur, I., & Schlapfer, F. (2018). Expert Estimates of the Share of Agricultural Support that Compensates European Farmers for Providing Public Goods and Services. *Ecological Economics, 147*, 264-275. doi:https://doi.org/10.1016/j.ecolecon.2018.01.022

Belschner, T., Ferretti, J., Strehlow, H. V., Kraak, S. B. M., Doring, R., Kraus, G., . . . Zimmermann, C. (2019). Evaluating fisheries systems: A comprehensive analytical framework and its application to the EU's Common Fisheries Policy. *Fish and*

Fisheries, 20(1), 97-109. doi:https://doi.org/10.1111/faf.12325

Benoit, M., & Patsias, C. (2017). Greening the agri-environmental policy by territorial and participative implementation processes? Evidence from two French regions. *Journal of Rural Studies, 55*, 1-11. doi:https://doi.org/10.1016/j.jrurstud.2017.07.016

Bertaglia, M., Angileri, V., & Fasbender, D. (2016). The Geographic Distribution and Characterisation of EU Arable Land Affected by the 'Greening' of the Common Agricultural Policy. *EuroChoices, 15*(3), 39-46. doi:https://doi.org/10.1111/1746-692X.12109

Bezak, P., & Mitchley, J. (2014). Drivers of change in mountain farming in Slovakia: from socialist collectivisation to the Common Agricultural Policy. *Regional Environmental Change, 14*(4), 1343-1356. doi:https://doi.org/10.1007/s10113-013-0580-x

Bigagli, E. (2015). The EU legal framework for the management of marine complex social-ecological systems. *Marine Policy, 54*, 44-51. doi:https://doi.org/10.1016/j.marpol.2014.11.025

Boeuf, B., & Fritsch, O. (2016). Studying the implementation of the Water Framework Directive in Europe: a meta-analysis of 89 journal articles. *Ecology and Society, 21*(2). doi:https://doi.org/10.5751/ES-08411-210219

Bojnec, S., & Ferto, I. (2019). Do CAP subsidies stabilise farm income in Hungary and Slovenia? *Agricultural Economics-Zemedelska Ekonomika, 65*(3), 103-111. doi:https://doi.org/10.17221/190/2018-AGRICECON

Bonfiglio, A., Camaioni, B., Coderoni, S., Esposti, R., Pagliacci, F., & Sotte, F. (2016). Where does EU money eventually go? The distribution of CAP expenditure across the European space. *Empirica, 43*(4), 693-727. doi:https://doi.org/10.1007/s10663-016-9354-2

Bonfiglio, A., Camaioni, B., Coderoni, S., Esposti, R., Pagliacci, F., & Sotte, F. (2017). Are rural regions prioritizing knowledge transfer and innovation? Evidence from Rural Development Policy expenditure across the EU space. *Journal of Rural Studies, 53*, 78-87. doi:https://doi.org/10.1016/j.jrurstud.2017.05.005

Borges, L. (2018). Setting of total allowable catches in the 2013 EU common fisheries policy reform: possible impacts. *Marine Policy, 91*, 97-103. doi:https://doi.org/10.1016/j.marpol.2018.01.026

Boulanger, P., & Philippidis, G. (2015). The EU budget battle: Assessing the trade and welfare impacts of CAP budgetary reform. *Food Policy, 51*, 119-130. doi:https://doi.org/10.1016/j.foodpol.2015.01.004

Bouwma, I., Schleyer, C., Primmer, E., Winkler, K. J., Berry, P., Young, J., . . . Vadineanu, A. (2018). Adoption of the ecosystem services concept in EU policies. *Ecosystem Services, 29*, 213-222. doi:https://doi.org/10.1016/j.ecoser.2017.02.014

Boyes, S. J., Elliott, M., Murillas-Maza, A., Papadopoulou, N., & Uyarra, M. C. (2016). Is existing legislation fit-for-purpose to achieve Good Environmental Status in European seas? *Marine Pollution Bulletin, 111*(1-2), 18-32. doi:https://doi.org/10.1016/j.marpolbul.2016.06.079

Boysen, O., Jensen, H. G., & Matthews, A. (2016). Impact of EU agricultural policy on developing countries: A Uganda case study. *The Journal of International Trade & Economic Development, 25*(3), 377-402. doi:https://doi.org/10.1080/09638199.2015.1069884

Buelow, F., & Cradock-Henry, N. (2018). What You Sow Is What You Reap? (Dis-) Incentives for Adaptation Intentions in Farming. *Sustainability, 10*(4). doi:https://doi.org/10.3390/su10041133

Candel, J., Breeman, G., Stiller, S., & Termeer, C. (2014). Disentangling the consensus frame of food security: the case of the EU Common Agricultural Policy reform debate. *Food Policy, 44*, 47-58. doi:http://dx.doi.org/10.1016/j.foodpol.2013.10.005

Caraher, M. (2015). The European Union Food Distribution programme for the Most Deprived Persons of the community, 1987-2013: From agricultural policy to social inclusion policy? *Health Policy, 119*(7), 932-940. doi:https://doi.org/10.1016/j.healthpol.2015.05.001

Carbone, M., & Keijzer, N. (2016). The European union and policy coherence for development: Reforms, results, resistance. *European Journal of Development Research, 28*(1), 30-43. doi:https://doi.org/10.1057/ejdr.2015.72

Carlucci, D., De Devitiis, B., Nardone, G., & Santeramo, F. G. (2017). Certification Labels Versus Convenience Formats: What Drives

the Market in Aquaculture Products? *Marine Resource Economics, 32*(3), 295-310. doi:https://doi.org/10.1086/692091

Carpenter, G., Kleinjans, R., Villasante, S., & O'Leary, B. C. (2016). Landing the blame: The influence of EU member states on quota setting. *Marine Policy, 64*, 9-15. doi:https://doi.org/10.1016/j.marpol.2015.11.001

Carvalho, L., Mackay, E. B., Cardoso, A. C., Baattrup-Pedersen, A., Birk, S., Blackstockf, K. L., . . . Solheim, A. L. (2019). Protecting and restoring Europe's waters: An analysis of the future development needs of the Water Framework Directive. *Science of the Total Environment, 658*, 1228-1238. doi:https://doi.org/10.1016/j.scitotenv.2018.12.255

Catchpole, T. L., Elliott, S., Peach, D., Mangi, S. C., & Gray, T. S. (2018). How to deal with the EU landing obligation: lessons from an English discard ban sea trial. *Ices Journal of Marine Science, 75*(1), 270-278. doi:https://doi.org/10.1093/icesjms/fsx119

Catchpole, T. L., Ribeiro-Santos, A., Mangi, S. C., Hedley, C., & Gray, T. S. (2017). The challenges of the landing obligation in EU fisheries. *Marine Policy, 82*, 76-86. doi:https://doi.org/10.1016/j.marpol.2017.05.001

Cavallo, M., Borja, A., Elliott, M., Quintino, V., & Touza, J. (2019). Impediments to achieving integrated marine management across borders: The case of the EU Marine Strategy Framework Directive. *Marine Policy, 103*, 68-73. doi:https://doi.org/10.1016/j.marpol.2019.02.033

Cavallo, M., Elliott, M., Touza, J., & Quintino, V. (2016). The ability of regional coordination and policy integration to produce coherent marine management: Implementing the Marine Strategy Framework Directive in the North-East Atlantic. *Marine Policy, 68*, 108-116. doi:https://doi.org/10.1016/j.marpol.2016.02.013

Cavallo, M., Elliott, M., Touza, J., & Quintino, V. (2017). Benefits and impediments for the integrated and coordinated management of European seas. *Marine Policy, 86*, 206-213. doi:https://doi.org/10.1016/j.marpol.2017.09.035

Chatzopoulou, S. (2015). When Do National Administrations Adapt to EU Policies? Variation in Denmark and Greece. *International Journal of Public Administration, 38*(2), 104-115. doi:https://doi.org/10.1080/01900692.2014.930752

Chuenpagdee, R., & Jentoft, S. (2018). Transforming the governance of small-scale fisheries. *Maritime Studies, 17*(1), 101-115. doi:https://doi.org/10.1007/s40152-018-0087-7

Ciaian, P., Kancs, D., & Espinosa, M. (2018). The Impact of the 2013 CAP Reform on the Decoupled Payments' Capitalisation into Land Values. *Journal of Agricultural Economics, 69*(2), 306-337. doi:https://doi.org/10.1111/1477-9552.12253

Ciaian, P., Kancs, D., & Paloma, S. G. Y. (2015). Income distributional effects of CAP subsidies Micro evidence from the EU. *Outlook on Agriculture, 44*(1), 19-28. doi:https://doi.org/10.5367/oa.2015.0196

Cillero, M. M., Thorne, F., Wallace, M., Breen, J., & Hennessy, T. (2018). The Effects of Direct Payments on Technical Efficiency of Irish Beef Farms: A Stochastic Frontier Analysis. *Journal of Agricultural Economics, 69*(3), 669-687. doi:https://doi.org/10.1111/1477-9552.12259

Ciutacu, C., Chivu, L., & Andrei, J. V. (2015). Similarities and dissimilarities between the EU agricultural and rural development model and Romanian agriculture. Challenges and perspectives. *Land Use Policy, 44*, 169-176. doi:https://doi.org/10.1016/j.landusepol.2014.08.009

Clarke, M., & Egan, A. (2017). Good luck or good governance? The recovery of Celtic Sea herring. *Marine Policy, 78*, 163-170. doi:https://doi.org/10.1016/j.marpol.2016.10.025

Cortignani, R., Gobattoni, F., Pelorosso, R., & Ripa, M. N. (2018). Green payment and perceived rural landscape quality: A cost-benefit analysis in central Italy. *Sustainability (Switzerland), 10*(8). doi:https://doi.org/10.3390/su10082910

Crescenzi, R., & Giua, M. (2016). The EU Cohesion Policy in context: Does a bottom-up approach work in all regions? *Environment and Planning A, 48*(11), 2340-2357. doi:https://doi.org/10.1177/0308518X16658291

Cvik, E. D., & Pelikánova, R. M. (2019). The (MIS)Compliance of Objectives of New Cap - Legislative, Academic and General Public Perspectives. *European Countryside,*

11(1), 143-161. doi:https://doi.org/10.2478/euco-2019-0009

Czyzewski, B., & Majchrzak, A. (2018). Market Versus Agriculture in Poland - Macroeconomic Relations of Incomes, Prices and Productivity in Terms of the Sustainable Development Paradigm. *Technological and Economic Development of Economy, 24*(2), 318-334. doi:https://doi.org/10.3846/20294913.2016.1212743

D'Amico, P., Armani, A., Gianfaldoni, D., & Guidi, A. (2016). New provisions for the labelling of fishery and aquaculture products: Difficulties in the implementation of Regulation (EU) n. 1379/2013. *Marine Policy, 71*, 147-156. doi:https://doi.org/10.1016/j.marpol.2016.05.026

Daugbjerg, C. (2017). Responding to Non-Linear Internationalisation of Public Policy: The World Trade Organization and Reform of the CAP 1992-2013. *Jcms-Journal of Common Market Studies, 55*(3), 486-501. doi:10.1111/jcms.12476

Daugbjerg, C., & Swinbank, A. (2016). Three Decades of Policy Layering and Politically Sustainable Reform in the European Union's Agricultural Policy. *Governance, 29*(2), 265-280. doi:http://dx.doi.org/10.1111/gove.12171

Dax, T., Strahl, W., Kirwan, J., & Maye, D. (2016). The Leader programme 2007–2013: Enabling or disabling social innovation and neo-endogenous development? Insights from Austria and Ireland. *European Urban and Regional Studies, 23*(1), 56-68. doi:https://doi.org/10.1177/0969776413490425

De Giovanni, D., & Lamantia, F. (2018). Dynamic Harvesting Under Imperfect Catch Control. *Journal of Optimization Theory and Applications, 176*(1), 252-267. doi:https://doi.org/10.1007/s10957-017-1208-y

Deconinck, K., & Swinnen, J. (2015). The economics of planting rights in wine production. *European Review of Agricultural Economics, 42*(3), 419-440. doi:https://doi.org/10.1093/erae/jbu028

Di Corato, L., & Brady, M. V. (2019). Passive farming and land development: A real options approach. *Land Use Policy, 80*, 32-46. doi:https://doi.org/10.1016/j.landusepol.2018.09.029

Di Cosmo, V., Hyland, M., & Llop, M. (2014). Disentangling Water Usage in the European Union: A Decomposition Analysis. *Water Resources Management, 28*(5), 1463-1479. doi:https://doi.org/10.1007/s11269-014-0566-6

Dinesen, G. E., Rathje, I. W., Hojrup, M., Bastardie, F., Larsen, F., Sorensen, T. K., . . . Eigaard, O. R. (2018). Individual transferable quotas, does one size fit all? Sustainability analysis of an alternative model for quota allocation in a small-scale coastal fishery. *Marine Policy, 88*, 23-31. doi:https://doi.org/10.1016/j.marpol.2017.10.038

Dolman, S., Baulch, S., Evans, P. G. H., Read, F., & Ritter, F. (2016). Towards an EU Action Plan on Cetacean Sycatch. *Marine Policy, 72*, 67-75. doi:https://doi.org/10.1016/j.marpol.2016.06.020

Eksvärd, K., & Marquardt, K. (2018). From change to transition? Learning from environmental protection activities in Sweden. *Agroecology and Sustainable Food Systems, 42*(2), 189-209. doi:https://doi.org/10.1080/21683565.2017.1373381

Eliasen, S. Q. (2014). Cod avoidance by area regulations in Kattegat - experiences for the implementation of a discard ban in the EU. *Marine Policy, 45*, 108-113. doi:https://doi.org/10.1016/j.marpol.2013.11.020

Eliasen, S. Q., Hegland, T. J., & Raakjær, J. (2015). Decentralising: The implementation of regionalisation and co-management under the post-2013 Common Fisheries Policy. *Marine Policy, 62*, 224-232. doi:https://doi.org/10.1016/j.marpol.2015.09.022

Erjavec, K., & Erjavec, E. (2015). 'Greening the CAP' - Just a fashionable justification? A discourse analysis of the 2014-2020 CAP reform documents

Food Policy, 51, 53-62. doi:https://doi.org/10.1016/j.foodpol.2014.12.006

Espinosa, M., Psaltopoulos, D., Santini, F., Phimister, E., Roberts, D., Mary, S., . . . Paloma, S. G. Y. (2014). Ex-Ante Analysis of the Regional Impacts of the Common Agricultural Policy: A Rural-Urban Recursive Dynamic CGE Model Approach. *European Planning Studies, 22*(7), 1342-1367. doi:https://doi.org/10.1080/09654313.2013.786683

Fagerholm, N., Torralba, M., Burgess, P. J., & Plieninger, T. (2016). A systematic map of ecosystem services assessments around European agroforestry. *Ecological Indicators, 62*, 47-65. doi:https://doi.org/10.1016/j.ecolind.2015.11.016

Feichtinger, P., & Salhofer, K. (2016). The Fischler Reform of the Common Agricultural Policy and Agricultural Land Prices. *Land Economics, 92*(3), 411-432. doi:https://doi.org/10.3368/le.92.3.411

Ferraris, L. (2018). The Role of the Principle of Environmental Integration (Article 11 TFEU) in Maximising the "Greening" of the Common Agricultural Policy. *European Law Review, 43*(3), 410-423. Retrieved from https://uk.practicallaw.thomsonreuters.com/Document/I5B0A6870703011E8A16DBB18B42F7F1E/View/FullText.html?skipAnonymous=true

Fitzpatrick, M., Maravelias, C. D., Eigaard, O. R., Hynes, S., & Reid, D. (2017). Fisher's preferences and trade-offs between management options. *Fish and Fisheries, 18*(5), 795-807. doi:https://doi.org/10.1111/faf.12204

Flavio, H. M., Ferreira, P., Formigo, N., & Svendsen, J. C. (2017). Reconciling agriculture and stream restoration in Europe: A review relating to the EU Water Framework Directive. *Science of the Total Environment, 596*, 378-395. doi:https://doi.org/10.1016/j.scitotenv.2017.04.057

Freire-Gibb, L. C., Koss, R., Margonski, P., & Papadopoulou, N. (2014). Governance strengths and weaknesses to implement the marine strategy framework directive in European waters. *Marine Policy, 44*, 172-178. doi:https://doi.org/10.1016/j.marpol.2013.08.025

Froese, R., Winker, H., Coro, G., Demirel, N., Tsikliras, A. C., Dimarchopoulou, D., . . . Matz-Lück, N. (2018). Status and rebuilding of European fisheries. *Marine Policy, 93*, 159-170. doi:https://doi.org/10.1016/j.marpol.2018.04.018

Frueh-Mueller, A., Krippes, C., Hotes, S., Breuer, L., Koellner, T., & Wolters, V. (2018). Spatial correlation of agri-environmental measures with high levels of ecosystem services. *Ecological Indicators, 84*, 364-370. doi:https://doi.org/10.1016/j.ecolind.2017.09.008

Fuchs, D. (2017). Windows of opportunity for whom? Commissioners, access, and the balance of interest in European environmental governance. *Social Sciences, 6*(3). doi:https://doi.org/10.3390/socsci6030073

Galluzzo, N. (2016). An analysis of the efficiency in a sample of small Italian farms part of the FADN dataset. *Agricultural Economics-Zemedelska Ekonomika, 62*(2), 62-70. doi:https://doi.org/10.17221/37/2015-AGRICECON

Garcia-Duran, P., Casanova, M., & Eliasson, L. J. (2019). International institutions and domestic policy: assessing the influence of multilateral pressure on the European Union's agricultural policy. *Journal of European Integration, 41*(2), 131-146. doi:https://doi.org/10.1080/07036337.2018.1553963

Garmendia, M., Sauzade, D., Beaumont, N., Boteler, B., Pascual, M., Boudine, T., . . . Markandya, A. (2017). The Adaptive Marine Policy (AMP) toolbox: Supporting policy-makers developing adaptive policies in the Mediterranean and Black Sea. *Marine Policy, 84*, 99-109. doi:https://doi.org/10.1016/j.marpol.2017.07.009

Gegout, C. (2016). Unethical power Europe? Something fishy about EU trade and development policies. *Third World Quarterly, 37*(12), 2192-2210. doi:https://doi.org/10.1080/01436597.2016.1176855

Germond, C. S. (2015). An emerging anti-reform green front? Farm interest groups fighting the 'agriculture 1980' project, 1968-72. *European review of history, 22*(3), 433-450. doi:http://dx.doi.org/10.1080/13507486.2014.1000268

Giakoumis, T., & Voulvoulis, N. (2018). The Transition of EU Water Policy Towards the Water Framework Directive's Integrated River Basin Management Paradigm. *Environmental Management, 62*(5), 819-831. doi:https://doi.org/10.1007/s00267-018-1080-z

Giannakis, E., & Bruggeman, A. (2015). The highly variable economic performance of European agriculture. *Land Use Policy, 45*, 26-35. doi:https://doi.org/10.1016/j.landusepol.2014.12.009

Giannoccaro, G., Viscecchia, R., & De Gennaro, B. C. (2015). Influence of the CAP reform on livestock Outlook for selected European regions by 2020. *Outlook on Agriculture, 44*(4), 303-308. doi:https://doi.org/10.5367/oa.2015.0218

Gladrow, O., Englert, H., & Ewert, S. (2015). Agricultural policy in Laender parliaments: factors which determine policy orientations of agricultural committee members in German federal state, i.e. Laender parliaments. *Berichte Uber Landwirtschaft,*

93(2). doi:http://dx.doi.org/10.12767/buel.v93i2.77

Gocht, A., Espinosa, M., Leip, A., Lugato, E., Schroeder, L. A., Van Doorslaer, B., & Paloma, S. G. Y. (2016). A grassland strategy for farming systems in Europe to mitigate GHG emissions—An integrated spatially differentiated modelling approach. *Land Use Policy, 58*, 318-334. doi:https://doi.org/10.1016/j.landusepol.2016.07.024

Goti-Aralucea, L., Fitzpatrick, M., Döring, R., Reid, D., Mumford, J., & Rindorf, A. (2018). "Overarching sustainability objectives overcome incompatible directions in the Common Fisheries Policy". *Marine Policy, 91*, 49-57. doi:https://doi.org/10.1016/j.marpol.2018.02.006

Goulding, I. C., Stobberup, K. A., & O'Higgins, T. (2014). Potential economic impacts of achieving good environmental status in Black Sea fisheries. *Ecology and Society, 19*(3). doi:https://doi.org/10.5751/ES-06817-190332

Grosjean, G., Fuss, S., Koch, N., Bodirsky, B. L., De Cara, S., & Acworth, W. (2018). Options to overcome the barriers to pricing European agricultural emissions. *Climate Policy, 18*(2), 151-169. doi:https://doi.org/10.1080/14693062.2016.1258630

Guerra, C. A., Metzger, M. J., Maes, J., & Pinto-Correia, T. (2016). Policy impacts on regulating ecosystem services: looking at the implications of 60 years of landscape change on soil erosion prevention in a Mediterranean silvo-pastoral system. *Landscape Ecology, 31*(2), 271-290. doi:https://doi.org/10.1007/s10980-015-0241-1

Hadjimichael, M. (2018). A call for a blue degrowth: Unravelling the European Union's fisheries and maritime policies. *Marine Policy, 94*, 158-164. doi:https://doi.org/10.1016/j.marpol.2018.05.007

Hauck, J., Schmidt, J., & Werner, A. (2016). Using social network analysis to identify key stakeholders in agricultural biodiversity governance and related land-use decisions at regional and local level. *Ecology and Society, 21*(2). doi:https://doi.org/10.5751/ES-08596-210249

Helming, J., & Tabeau, A. (2018). The economic, environmental and agricultural land use effects in the European Union of agricultural labour subsidies under the Common Agricultural Policy. *Regional Environmental Change, 18*(3), 763-773. doi:https://doi.org/10.1007/s10113-016-1095-z

Hendriksen, A., Jouanneau, C., Koss, R., & Raakjaer, J. (2014). Fishing for opinions: Stakeholder views on MSFD implementation in European Seas. *Marine Policy, 50*, 353-363. doi:https://doi.org/10.1016/j.marpol.2014.03.009

Henke, R., Benos, T., De Filippis, F., Giua, M., Pierangeli, F., & Pupo D'Andrea, M. R. (2018). The New Common Agricultural Policy: ow do member states Respond to Flexibility? *Journal of Common Market Studies, 56*(2), 403-419. doi:https://doi.org/10.1111/jcms.12607

Hoefnagel, E., de Vos, B., & Buisman, E. (2015). Quota swapping, relative stability, and transparency. *Marine Policy, 57*, 111-119. doi:https://doi.org/10.1016/j.marpol.2015.03.012

Indset, M., & Stokke, K. B. (2015). Layering, administrative change and national paths to Europeanization: the case of the water framework directive. *European Planning Studies, 23*(5), 979-998. doi:http://dx.doi.org/10.1080/09654313.2014.915014

Jaime, M. M., Coria, J., & Liu, X. P. (2016). interacItions between CAP Agricultural and Agri-Environmental Subsidies and Their Effects on the Uptake of Organic Farming. *American Journal of Agricultural Economics, 98*(4), 1114-1145. doi:https://doi.org/10.1093/ajae/aaw015

Jitea, M. I., Dumitras, D. E., & Simu, V. A. (2015). An ex-ante impact assessment of the Common Agricultural Policy reform in the North-Western Romania. *Agricultural Economics-Zemedelska Ekonomika, 61*(2), 88-103. doi:https://doi.org/10.17221/116/2014-AGRICECON

Jouanneau, C., & Raakjær, J. (2014). 'The Hare and the Tortoise': Lessons from Baltic Sea and Mediterranean Sea governance. *Marine Policy, 50*, 331-338. doi:https://doi.org/10.1016/j.marpol.2014.03.006

Kallimanis, A. S., Touloumis, K., Tzanopoulos, J., Mazaris, A. D., Apostolopoulou, E., Stefanidou, S., . . . Pantis, J. D. (2015). Vegetation coverage change in the EU: patterns inside and outside Natura 2000 protected areas. *Biodiversity and Conservation, 24*(3), 579-591. doi:https://doi.org/10.1007/s10531-014-0837-9

Kanik, Z., & Kucuksenel, S. (2017). The promise of transferable fishing concessions on EU fisheries. *Natural Resource Modeling, 30*(2). doi:https://doi.org/10.1111/nrm.12128

Kiryluk-Dryjska, E. (2016). Negotiation analysis using the theory of moves-Theoretical background and a case study. *Journal of Policy Modeling, 38*(1), 44-53. doi:https://doi.org/10.1016/j.jpolmod.2015.10.002

Kistenkas, F. H., & Bouwma, I. M. (2018). Barriers for the ecosystem services concept in European water and nature conservation law. *Ecosystem Services, 29*, 223-227. doi:https://doi.org/10.1016/j.eoser.2017.02.013

Konstantinidis, C. (2018). Capitalism in Green Disguise: The Political Economy of Organic Farming in the European Union. *Review of Radical Political Economics, 50*(4), 830-852. doi:https://doi.org/10.1177/0486613417717482

Kosior, K. (2014). The Impact of Central and Eastern Europe on the Common Agricultural Policy. *Romanian Journal of Political Science, 14*(1), 116-147. Retrieved from http://www.sar.org.ro/polsci/?p=1101

Kovacs, E. K. (2015). Surveillance and state-making through EU agricultural policy in Hungary. *Geoforum, 64*, 168-181. doi:https://doi.org/10.1016/j.geoforum.2015.06.020

Křístková, Z., & Ratinger, T. (2014). Potential Distributional Effects of the Common Agricultural Policy's Reform and Induced Structural Change. *Ekonomický ústav SAV a Prognostický ústav SAV, 62*(5), 476-494. Retrieved from https://www.ceeol.com/search/article-detail?id=158432

Kuhmonen, T. (2018a). The Evolution of Problems Underlying the EU Agricultural Policy Regime. *Sociologia Ruralis, 58*(4), 846-866. doi:https://doi.org/10.1111/soru.12213

Kuhmonen, T. (2018b). Systems view of future of wicked problems to be addressed by the Common Agricultural Policy. *Land Use Policy, 77*, 683-695. doi:https://doi.org/10.1016/j.landusepol.2018.06.004

Lago, M., Boteler, B., Rouillard, J., Abhold, K., Jahnig, S. C., Iglesias-Campos, A., . . . Hugh, M. (2019). Introducing the H2020 AQUACROSS project: Knowledge, Assessment, and Management for AQUAtic Biodiversity and Ecosystem Services aCROSS EU policies. *Science of the Total Environment, 652*, 320-329. doi:https://doi.org/10.1016/j.scitotenv.2018.10.076

Larrubia Vargas, R. (2017). The common agricultural policy and its reforms: Reflections about the 2014-2020 reform. *Cuadernos Geograficos, 56*(1), 124-147. Retrieved from http://revistaseug.ugr.es/index.php/cuadgeo/article/view/4634/5312

Lastra-Bravo, X. B., Hubbard, C., Garrod, G., & Tolon-Becerra, A. (2015). What drives farmers' participation in EU agri-environmental schemes?: Results from a qualitative meta-analysis. *Environmental Science & Policy, 54*, 1-9. doi:https://doi.org/10.1016/j.envsci.2015.06.002

Latruffe, L., Bravo-Ureta, B. E., Carpentier, A., Desjeux, Y., & Moreira, V. H. (2017). Subsidies and Technical Efficiency in Agriculture: Evidence from European Dairy Farms. *American Journal of Agricultural Economics, 99*(3), 783-799. doi:https://doi.org/10.1093/ajae/aaw077

Latruffe, L., & Desjeux, Y. (2016). Common Agricultural Policy support, technical efficiency and productivity change in French agriculture. *Review of Agricultural, Food and Environmental Studies, 97*(1), 15-28. doi:https://doi.org/10.1007/s41130-016-0007-4

Lehtonen, H., & Niemi, J. S. (2018). Effects of reducing EU agricultural support payments on production and farm income in Finland. *Agricultural and Food Science, 27*(2), 124-136. doi:https://doi.org/10.23986/afsci.67673

Leite, L., & Pita, C. (2016). Review of participatory fisheries management arrangements in the European Union. *Marine Policy, 74*, 268-278. doi:https://doi.org/10.1016/j.marpol.2016.08.003

Leroy, A., Galletti, F., & Chaboud, C. (2016). The EU restrictive trade measures against IUU fishing. *Marine Policy, 64*, 82-90. doi:https://doi.org/10.1016/j.marpol.2015.10.013

Leventon, J., Schaal, T., Velten, S., Danhardt, J., Fischer, J., Abson, D. J., & Newig, J. (2017). Collaboration or fragmentation? Biodiversity management through the common agricultural policy. *Land Use Policy, 64*, 1-12. doi:https://doi.org/10.1016/j.landusepol.2017.02.009

Levrel, H., Jacob, C., Bailly, D., Charles, M., Guyader, O., Aoubid, S., . . . Mongruel, R. (2014). The maintenance costs of marine natural capital: A case study from the initial assessment of the Marine Strategy

Framework Directive in France. *Marine Policy, 49*, 37-47. doi:https://doi.org/10.1016/j.marpol.2014.03.028

Linke, S., & Jentoft, S. (2014). Exploring the phronetic dimension of stakeholders' knowledge in EU fisheries governance. *Marine Policy, 47*, 153-161. doi:https://doi.org/10.1016/j.marpol.2013.10.010

Linke, S., & Jentoft, S. (2016). Ideals, realities and paradoxes of stakeholder participation in EU fisheries governance. *Environmental Sociology, 2*(2), 144-154. doi:https://doi.org/10.1080/23251042.2016.1155792

Lipińska, I. (2016). Manageing the Risk in Agriculture Production: The Role of Government. *European Countryside, 8*(2), 86-97. doi:https://doi.org/10.1515/euco-2016-0007

Loizou, E., Chatzitheodoridis, F., Polymeros, K., Michailidis, A., & Mattas, K. (2014). Sustainable development of rural coastal areas: Impacts of a new fisheries policy. *Land Use Policy, 38*, 41-47. doi:https://doi.org/10.1016/j.landusepol.2013.10.017

Lomba, A., Guerra, C., Alonso, J., Honrado, J. P., Jongman, R., & McCracken, D. (2014). Mapping and monitoring High Nature Value farmlands: Challenges in European landscapes. *Journal of Environmental Management, 143*, 140-150. doi:https://doi.org/10.1016/j.jenvman.2014.04.029

Lomba, A., Strohbach, M., Jerrentrup, J. S., Dauber, J., Klimek, S., & McCracken, D. I. (2017). Making the best of both worlds: Can high-resolution agricultural administrative data support the assessment of High Nature Value farmlands across Europe? *Ecological Indicators, 72*, 118-130. doi:https://doi.org/10.1016/j.ecolind.2016.08.008

Louhichi, K., Ciaian, P., Espinosa, M., Perni, A., & Paloma, S. G. Y. (2018). Economic impacts of CAP greening: application of an EU-wide individual farm model for CAP analysis (IFM-CAP). *European Review of Agricultural Economics, 45*(2), 205-238. doi:https://doi.org/10.1093/erae/jbx029

Macher, C., Bertignac, M., Guyader, O., Frangoudes, K., Fresard, M., Le Grand, C., . . . Thebaud, O. (2018). The role of technical protocols and partnership engagement in developing a decision support framework for fisheries management. *Journal of Environmental Management, 223*, 503-516. doi:https://doi.org/10.1016/j.jenvman.2018.06.063

Maes, J., Barbosa, A., Baranzelli, C., Zulian, G., Silva, F. B. E., Vandecasteele, I., . . . Lavalle, C. (2015). More green infrastructure is required to maintain ecosystem services under current trends in land-use change in Europe. *Landscape Ecology, 30*(3), 517-534. doi:https://doi.org/10.1007/s10980-014-0083-2

Majchrzak, A., & Pająk, K. (2017). Intervention in Agriculture in Terms of Economic Fluctuations – The Case of the European Union member states. [Interwencjonizm w sektorze rolnym w warunkach wahaŃ koniunktury – przypadek paŃstw członkowskich unii europejskiej]. *Journal of Agribusiness and Rural Development, 44*(2), 393-401. doi:https://doi.org/10.17306/J.JARD.2017.00301

Mangi, S. C., Dolder, P. J., Catchpole, T. L., Rodmell, D., & de Rozarieux, N. (2015). Approaches to fully documented fisheries: practical issues and stakeholder perceptions. *Fish and Fisheries, 16*(3), 426-452. doi:https://doi.org/10.1111/faf.12065

Mangi, S. C., Kenny, A., Readdy, L., Posen, P., Ribeiro-Santos, A., Neat, F. C., & Burns, F. (2016). The economic implications of changing regulations for deep sea fishing under the European Common Fisheries Policy: UK case study. *Science of the Total Environment, 562*, 260-269. doi:https://doi.org/10.1016/j.scitotenv.2016.03.218

Mardle, S., & Metz, S. (2017). Impacts of current EU regulation on the UK whitefish value chain. *Marine Policy, 84*, 52-59. doi:https://doi.org/10.1016/j.marpol.2017.07.001

Martinez-Novo, R., Lizcano, E., Herrera-Racionero, P., & Miret-Pastor, L. (2017). Aquaculture stakeholders role in fisheries co-management. *Marine Policy, 76*, 130-135. doi:https://doi.org/10.1016/j.marpol.2016.11.015

Martinho, V. J. P. D. (2015). Output impacts of the Single Payment Scheme in Portugal A regression with spatial effects. *Outlook on Agriculture, 44*(2), 109-118. doi:https://doi.org/10.5367/oa.2015.0203

May, D., Arancibia, S., Behrendt, K., & Adams, J. (2019). Preventing young farmers from leaving the farm: Investigating the effectiveness of the young farmer payment using a behavioural approach.

Land Use Policy, 82, 317-327. doi:https://doi.org/10.1016/j.landusepol.2018.12.019

Maynou, F., Gil, M. D., Vitale, S., Giusto, G. B., Foutsi, A., Rangel, M., . . . Damalas, D. (2018). Fishers' perceptions of the European Union discards ban: perspective from south European fisheries. *Marine Policy, 89*, 147-153. doi:https://doi.org/10.1016/j.marpal.2017.12.019

Medina, G., & Potter, C. (2017). The nature and developments of the Common Agricultural Policy: lessons for European integration from the UK perspective. *Journal of European Integration, 39*(4), 373-388. doi:https://doi.org/10.1080/07036337.2017.1281263

Micha, E., Roberts, W., Ryan, M., O'Donoghue, C., & Daly, K. (2018). A participatory approach for comparing stakeholders' evaluation of P loss mitigation options in a high ecological status river catchment. *Environmental Science and Policy, 84*, 41-51. doi:https://doi.org/10.1016/j.envsci.2018.02.014

Moore, F., Lamond, J., & Appleby, T. (2016). Assessing the significance of the economic impact of Marine Conservation Zones in the Irish Sea upon the fisheries sector and regional economy in Northern Ireland. *Marine Policy, 74*, 136-142. doi:https://doi.org/10.1016/j.marpol.2016.09.025

Niedermayr, A., Kapfer, M., & Kantelhardt, J. (2016). Regional heterogeneity and spatial interdependence as determinants of the cultivation of an emerging alternative crop: The case of the Styrian Oil Pumpkin. *Land Use Policy, 58*, 276-288. doi:https://doi.org/10.1016/j.landusepol.2016.07.033

Nilsson, L., Clough, Y., Smith, H. G., Alkan Olsson, J., Brady, M. V., Hristov, J., . . . Dänhardt, J. (2019). A suboptimal array of options erodes the value of CAP ecological focus areas. *Land Use Policy, 85*, 407-418. doi:https://doi.org/10.1016/j.landusepol.2019.04.005

Norton, D., & Hynes, S. (2014). Valuing the non-market benefits arising from the implementation of the EU Marine Strategy Framework Directive. *Ecosystem Services, 10*, 84-96. doi:https://doi.org/10.1016/j.ecoser.2014.09.009

Oen, A. M., Bouma, G. M., Botelho, M., Pereira, P., Haeger-Eugensson, M., Conides, A., . . . Slob, A. (2016). Stakeholder involvement for management of the coastal zone. *Integrated environmental assessment and management, 12*(4), 701-710. doi:https://doi.org/10.1002/ieam.1783

Öhlund, E., Zurek, K., & Hammer, M. (2015). Towards sustainable agriculture? The EU framework and local adaptation in Sweden and Poland. *Environmental policy and governance, 25*(4), 270-287. doi:http://dx.doi.org/10.1002/eet.1687

Orach, K., Schluter, M., & Osterblom, H. (2017). Tracing a pathway to success: How competing interest groups influenced the 2013 EU Common Fisheries Policy reform. *Environmental Science & Policy, 76*, 90-102. doi:https://doi.org/10.1016/j.envsci.2017.06.010

Pacini, G. C., Merante, P., Lazzerini, G., & Van Passel, S. (2015). Increasing the cost-effectiveness of EU agri-environment policy measures through evaluation of farm and field-level environmental and economic performance. *Agricultural Systems, 136*, 70-78. doi:https://doi.org/10.1016/j.agsy.2015.02.004

Panagos, P., Borrelli, P., Poesen, J., Ballabio, C., Lugato, E., Meusburger, K., . . . Alewell, C. (2015). The new assessment of soil loss by water erosion in Europe. *Environmental Science and Policy, 54*, 438-447. doi:https://doi.org/10.1016/j.envsci.2015.08.012

Papadopoulos, S., Karelakis, C., Zafeiriou, E., & Koutroumanidis, T. (2015). Going sustainable or conventional? Evaluating the CAP's impacts on the implementation of sustainable forms of agriculture in Greece. *Land Use Policy, 47*, 90-97. doi:https://doi.org/10.1016/j.landusepol.2015.02.005

Papadopoulos, S., Zafeiriou, E., Karelakis, C., & Koutroumanidis, T. (2018). Organics or not? Prospects for uptaking organic farming. *New Medit, 17*(1), 13-22. doi:https://doi.org/10.30682/nm1801b

Pawłowska, A., & Rembisz, W. (2018). The Relationship of Investments and Subsidies to Labour Productivity in Agriculture in Poland between 2010 and 2015. *Wieś i Rolnictwo, 181*(4), 25-42. Retrieved from http://kwartalnik.irwirpan.waw.pl/710/zwiazek-miedzy-inwestycjami-i-doplatami-do-inwestycji-a-produktywnoscia-pracy-w-rolnictwie-w-polsce-w-latach-20102015

Pe'er, G., Zinngrebe, Y., Hauck, J., Schindler, S., Dittrich, A., Zingg, S., . . . Lakner, S. (2017). Adding Some Green to the Greening: Improving the EU's Ecological Focus Areas

for Biodiversity and Farmers. *Conservation Letters, 10*(5), 517-530. doi:https://doi.org/10.1111/conl.12333

Penko Seidl, N., & Golobič, M. (2018). The effects of EU policies on preserving cultural landscape in the Alps. *Landscape Research, 43*(8), 1085-1096. doi:https://doi.org/10.1080/01426397.2018.1503237

Pérez, L. P. Y., Alcántara, J. R. M., & López, A. M. (2014). Beyond income transfers to farmers, the macroeconomic spillover of CAP payments in Aragon (Spain), 2007-2013. *New Medit, 13*(4), 30-38. Retrieved from https://newmedit.iamb.it/2014/12/08/beyond-income-transfers-to-farmers-the-macroeconomic-spillover-of-cap-payments-in-aragon-spain-2007-2013/

Philippidis, G., M'Barek, R., & Ferrari, E. (2016). Is 'Bio-Based' Activity a Panacea for Sustainable Competitive Growth? *Energies, 9*(10). doi:https://doi.org/10.3390/en9100806

Piñeiro-Antelo, M. D. L. Á., Felicidades-García, J., & O'Keeffe, B. (2019). The FLAG scheme in the governance of EU coastal areas. The cases of Ireland and Galicia (Spain). *Marine Policy*. doi:https://doi.org/10.1016/j.marpol.2019.01.013

Plieninger, T., Hartel, T., Martin-Lopez, B., Beaufoy, G., Bergmeier, E., Kirby, K., . . . Van Uytvanck, J. (2015). Wood-pastures of Europe: Geographic coverage, social-ecological values, conservation management, and policy implications. *Biological Conservation, 190*, 70-79. doi:https://doi.org/10.1016/j.biocon.2015.05.014

Porter, S. D., Reay, D. S., Bomberg, E., & Higgins, P. (2018). Production-phase greenhouse gas emissions arising from deliberate withdrawal and destruction of fresh fruit and vegetables under the EU's Common Agricultural Policy. *Science of the Total Environment, 631-632*, 1544-1552. doi:https://doi.org/10.1016/j.scitotenv.2018.03.089

Prellezo, R., & Curtin, R. (2015). Confronting the implementation of marine ecosystem-based management within the Common Fisheries Policy reform. *Ocean & Coastal Management, 117*, 43-51. doi:https://doi.org/10.1016/j.ocecoaman.2015.03.005

Quiroga, S., Suárez, C., Fernández-Haddad, Z., & Philippidis, G. (2017). Levelling the playing field for European Union agriculture: Does the Common Agricultural Policy impact homogeneously on farm productivity and efficiency? *Land Use Policy, 68*, 179-188. doi:https://doi.org/10.1016/j.landusepol.2017.07.057

Ragkos, A., & Theodoridis, A. (2016). Valuation of environmental and social functions of the multifunctional Cypriot agriculture. *Land Use Policy, 54*, 593-601. doi:https://doi.org/10.1016/j.landusepol.2016.03.023

Ramírez-Monsalve, P., Raakjær, J., Nielsen, K. N., Laksa, U., Danielsen, R., Degnbol, D., . . . Degnbol, P. (2016). Institutional challenges for policy-making and fisheries advice to move to a full EAFM approach within the current governance structures for marine policies. *Marine Policy, 69*, 1-12. doi:https://doi.org/10.1016/j.marpol.2016.03.016

Ramírez-Monsalve, P., Raakjær, J., Nielsen, K. N., Santiago, J. L., Ballesteros, M., Laksá, U., & Degnbol, P. (2016). Ecosystem Approach to Fisheries Management (EAFM) in the EU - Current science-policy-society interfaces and emerging requirements. *Marine Policy, 66*, 83-92. doi:https://doi.org/10.1016/j.marpol.2015.12.030

Randour, F., & Wolfs, W. (2017). Belgian regional parliaments and the European Union: an analysis of parliamentary scrutiny in agricultural and environmental policies. *Journal of Legislative Studies, 23*(2), 221-237. doi:https://doi.org/10.1080/13572334.2017.1329988

Raymond, C. M., Reed, M., Bieling, C., Robinson, G. M., & Plieninger, T. (2016). Integrating different understandings of landscape stewardship into the design of agri-environmental schemes. *Environmental Conservation, 43*(4), 350-358. doi:https://doi.org/10.1017/S037689291600031X

Reidsma, P., Janssen, S., Jansen, J., & van Ittersum, M. K. (2018). On the development and use of farm models for policy impact assessment in the European Union - A review. *Agricultural Systems, 159*, 111-125. doi:https://doi.org/10.1016/j.agsy.2017.10.012

Rickels, W., Weigand, C., Grasse, P., Schmidt, J., & Voss, R. (2019). Does the European Union achieve comprehensive blue growth? Progress of EU coastal states in the Baltic and North Sea, and the Atlantic Ocean against sustainable development goal 14. *Marine Policy*. doi:https://doi.org/10.1016/j.marpol.2019.103515

Rocamora-Montiel, B., Glenk, K., & Colombo, S. (2014). Territorial management contracts as a tool to enhance the sustainability of sloping and mountainous olive orchards: Evidence from a case study in Southern Spain. *Land Use Policy, 41*, 313-324. doi:https://doi.org/10.1016/j.landusepol.2014.06.016

Rouillard, J., Lago, M., Abhold, K., Röschel, L., Kafyeke, T., Mattheiß, V., & Klimmek, H. (2018). Protecting aquatic biodiversity in Europe: How much do EU environmental policies support ecosystem-based management? *Ambio, 47*(1), 15-24. doi:https://doi.org/10.1007/s13280-017-0928-4

Sahrbacher, A., Hristov, J., & Brady, M. V. (2017). A combined approach to assess the impacts of Ecological Focus Areas on regional structural development and agricultural land use. *Revue d'Etudes en Agriculture et Environnement, 98*(3), 111. doi:https://doi.org/10.1007/s41130-017-0051-8

Salomaa, A., Paloniemi, R., Kotiaho, J. S., Kettunen, M., Apostolopoulou, E., & Cent, J. (2017). Can green infrastructure help to conserve biodiversity? *Environment and Planning C: Government and Policy, 35*(2), 265-288. doi:https://doi.org/10.1177/0263774X16649363

Salvioni, C., & Sciulli, D. (2018). Rural development policy in Italy: the impact of growth-oriented measures on farm outcomes. *Agricultural Economics-Zemedelska Ekonomika, 64*(3). doi:https://doi.org/10.17221/73/2016-AGRICECON

Schulp, C. J. E., Levers, C., Kuemmerle, T., Tieskens, K. F., & Verburg, P. H. (2019). Mapping and modelling past and future land use change in Europe's cultural landscapes. *Land Use Policy, 80*, 332-344. doi:https://doi.org/10.1016/j.landusepol.2018.04.030

Schulp, C. J. E., Van Teeffelen, A. J. A., Tucker, G., & Verburg, P. H. (2016). A quantitative assessment of policy options for no net loss of biodiversity and ecosystem services in the European Union. *Land Use Policy, 57*, 151-163. doi:https://doi.org/10.1016/j.landusepol.2016.05.018

Severini, S., & Tantari, A. (2015). Which factors affect the distribution of direct payments among farmers in the EU member states? *Empirica, 42*(1), 25-48. doi:https://doi.org/10.1007/s10663-013-9243-x

Siepmann, L., & Nicholas, K. A. (2018). German winegrowers' motives and barriers to convert to organic farming. *Sustainability (Switzerland), 10*(11). doi:https://doi.org/10.3390/su10114215

Simons, S. L., Doring, R., & Temming, A. (2015). Modelling fishers' response to discard prevention strategies: the case of the North Sea saithe fishery. *Ices Journal of Marine Science, 72*(5), 1530-1544. doi:https://doi.org/10.1093/icesjms/fsu229

Smeets Kristkova, Z., & García Alvaréz Coque, J. M. (2015). Competitiveness of the EU beef sector - A case study. *Agris On-line Papers in Economics and Informatics, 7*(2), 77-92. Retrieved from https://online.agris.cz/archive/2015/2/8

Solazzo, R., Donati, M., Arfini, F., & Petriccione, G. (2014). A PMP model for the impact assessment of the Common Agricultural Policy reform 2014-2020 on the Italian tomato sector. *New Medit, 13*(2), 9-19. Retrieved from https://newmedit.iamb.it/2014/06/08/a-pmp-model-for-the-impact-assessment-of-the-common-agricultural-policy-reform-2014-2020-on-the-italian-tomato-sector/

Soma, K., Nielsen, J. R., Papadopoulou, N., Polet, H., Zengin, M., Smith, C. J., . . . Gümüş, A. (2018). Stakeholder perceptions in fisheries management - Sectors with benthic impacts. *Marine Policy, 92*, 73-85. doi:https://doi.org/10.1016/j.marpol.2018.02.019

Steadman, D., Appleby, T., & Hawkins, J. (2014). Minimising unsustainable yield: Ten failing European fisheries. *Marine Policy, 48*, 192-201. doi:https://doi.org/10.1016/j.marpol.2014.03.030

Sulewski, P., & Wąs, A. (2018). Awareness of Sustainable Agriculture among Polish Farmers – Beneficiaries of the CAP. *Wieś i Rolnictwo, 181*(4), 43-65. Retrieved from http://kwartalnik.irwirpan.waw.pl/709/swiadomosc-trwalego-rolnictwa-wsrod-polskich-rolnikow-beneficjentow-wspolnej-polityki-rolnej

Svoboda, J., Lososová, J., & Zdeněk, R. (2015). Analysis of operating costs of subsidies in the field of agriculture of EU countries. *Agris On-line Papers in Economics and Informatics, 7*(4), 161-173. Retrieved from https://online.agris.cz/archive/2015/4/16

Terres, J. M., Scacchiafichi, L. N., Wania, A., Ambar, M., Anguiano, E., Buckwell, A., . . . Zobena, A. (2015). Farmland abandonment

in Europe: Identification of drivers and indicators, and development of a composite indicator of risk. *Land Use Policy, 49*, 20-34. doi:https://doi.org/10.1016/j.landusepol.2015.06.009

Toma, P., Miglietta, P. P., Zurlini, G., Valente, D., & Petrosillo, I. (2017). A non-parametric bootstrap-data envelopment analysis approach for environmental policy planning and management of agricultural efficiency in EU countries. *Ecological Indicators, 83*, 132-143. doi:https://doi.org/10.1016/j.ecolind.2017.07.049

Tosun, J., Lelieveldt, H., & Wing, T. S. (2019). A Case of 'Muddling Through'? The Politics of Renewing Glyphosate Authorization in the European Union. *Sustainability, 11*(2). doi:https://doi.org/10.3390/su11020440

Turčeková, N., Svetlanská, T., Kollár, B., & Záhorský, T. (2015). Agri-environmental performance of EU member states. *Agris On-line Papers in Economics and Informatics, 7*(4), 199-208. Retrieved from https://online.agris.cz/archive/2015/4/19

Ulrich, C., Vermard, Y., Dolder, P. J., Brunel, T., Jardim, E., Holmes, S. J., . . . Rindorf, A. (2017). Achieving maximum sustainable yield in mixed fisheries: a management approach for the North Sea demersal fisheries. *Ices Journal of Marine Science, 74*(2), 566-575. doi:https://doi.org/10.1093/icesjms/fsw126

Ustaoglu, E., & Williams, B. (2017). Determinants of Urban Expansion and Agricultural Land Conversion in 25 EU Countries. *Environmental Management, 60*(4), 717-746. doi:https://doi.org/10.1007/s00267-017-0908-2

Usubiaga, A., Butnar, I., & Schepelmann, P. (2018). Wasting Food, Wasting Resources: Potential Environmental Savings Through Food Waste Reductions. *Journal of Industrial Ecology, 22*(3), 574-584. doi:https://doi.org/10.1111/jiec.12695

van Hoof, L., Hendriksen, A., & Bloomfield, H. J. (2014). Sometimes you cannot make it on your own; drivers and scenarios for regional cooperation in implementing the EU Marine Strategy Framework Directive. *Marine Policy, 50*, 339-346. doi:https://doi.org/10.1016/j.marpol.2014.03.031

Velten, S., Schaal, T., Leventon, J., Hanspach, J., Fischer, J., & Newig, J. (2018). Rethinking biodiversity governance in European agricultural landscapes: Acceptability of alternative governance scenarios. *Land Use Policy, 77*, 84-93. doi:https://doi.org/10.1016/j.landusepol.2018.05.032

Venghaus, S., & Hake, J. F. (2018). Nexus thinking in current EU policies - The interdependencies among food, energy and water resources. *Environmental Science & Policy, 90*, 183-192. doi:https://doi.org/10.1016/j.envsci.2017.12.014

Verschuuren, J. (2018). Towards an EU Regulatory Framework for Climate-Smart Agriculture: The Example of Soil Carbon Sequestration. *Transnational Environmental Law, 7*(2), 301-322. doi:https://doi.org/10.1017/S2047102517000395

Vidickiene, D., & Gedminaite-Raudone, Z. (2019). Servitization as A Tool to Increase Vitality of Ageing Rural Community. *European Countryside, 11*(1), 85-97. doi:http://dx.doi.org/10.2478/euco-2019-0006

Villasante, S., Pita, C., Pierce, G. J., Guimeráns, C. P., Rodrigues, J. G., Antelo, M., . . . Coll, M. (2016). To land or not to land: How do stakeholders perceive the zero discard policy in European small-scale fisheries? *Marine Policy, 71*, 166-174. doi:https://doi.org/10.1016/j.marpol.2016.05.004

Volkov, A., Balezentis, T., Morkunas, M., & Streimikiene, D. (2019). Who Benefits from CAP? The Way the Direct Payments System Impacts Socioeconomic Sustainability of Small Farms. *Sustainability, 11*(7). doi:https://doi.org/10.3390/su11072112

Volkov, A., & Melnikiene, R. (2017). CAP direct payments system's linkage with environmental sustainability indicators. *Public Policy and Administration, 16*(2), 231-244. doi:https://doi.org/10.13165/VPA-17-16-2-05

Vuillot, C., Coron, N., Calatayud, F., Sirami, C., Mathevet, R., & Gibon, A. (2016). Ways of farming and ways of thinking: do farmers' mental models of the landscape relate to their land management practices? *Ecology and Society, 21*(1). doi:https://doi.org/10.5751/ES-08281-210135

Walls, H. L., Cornelsen, L., Lock, K., & Smith, R. D. (2016). How much priority is given to nutrition and health in the EU Common Agricultural Policy? *Food Policy, 59*, 12-23. doi:https://doi.org/10.1016/j.foodpol.2015.12.008

Wąs, A., Zawalińska, K., & Britz, W. (2014). Impact of "Grening" the Common

Agricultural Policy on Sustainability of European Agriculture: from Perspective of the Baltic Sea Countries. *Journal of Agribusiness and Rural Development, 34*(4), 191-212. Retrieved from http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171344071

Weber, A. (2015). Implementing EU co-financed agri-environmental schemes: Effects on administrative transaction costs in a regional grassland extensification scheme. *Land Use Policy, 42*, 183-193. doi:https://doi.org/10.1016/j.landusepol.2014.07.019

Zafeiriou, E., & Azam, M. (2017). CO2 emissions and economic performance in EU agriculture: Some evidence from Mediterranean countries. *Ecological Indicators, 81*, 104-114. doi:https://doi.org/10.1016/j.ecolind.2017.05.039

Zagata, L., & Sutherland, L. A. (2015). Deconstructing the 'young farmer problem in Europe': Towards a research agenda. *Journal of Rural Studies, 38*, 39-51. doi:https://doi.org/10.1016/j.jrurstud.2015.01.003

Zdráhal, I., Chmelíková, G., & Blažková, I. (2018). Sector-wide and country-specific drivers of firm performance in the visegrad group dairy industry. *Agris On-line Papers in Economics and Informatics, 10*(4), 89-100. doi:https://doi.org/10.7160/aol.2018.100410

Zimmermann, A., & Britz, W. (2016). European farms' participation in agri-environmental measures. *Land Use Policy, 50*, 214-228. doi:https://doi.org/10.1016/j.landusepol.2015.09.019

Zschache, U. (2015). Reflecting the global? The common agricultural policy and its perception in public media discourse. *Journal of contemporary European studies, 23*(2), 253-271. doi:http://dx.doi.org/10.1080/14782804.2015.1029253

Part 2. Generic policies

2.1. Introduction

From the systematic literature search, a further 430 journal publications were assessed as potentially relevant, based on a much broader search (3346 records in all) for studies discussing EU policy in general terms. Given time and funding constraints, it was not possible to synthesise this full body of evidence. Instead, the results were mapped to a set of core themes, with a very brief description of the literature set retrieved under each sub-theme.

2.2. Method of approach

The approach to this review determined that studies would be reviewed by abstract and keywords only. The studies are then grouped according to theme. The categories follow the terminology used by authors in keywords and abstracts. There may be some overlap in categories, for example, between terms such as 'food security' and 'food safety', but this mapping does not attempt to merge categories; instead, it follows the self-identified terminology of authors.

The search results include studies focusing on a range of member states across the EU, as well as discussion of EU-wide issues and evidence. The territorial scope of the research is given, where it was provided by authors in keywords or abstract. For example, if there is empirical evidence or case studies located in a specific country, this is given in brackets alongside the reference. Where multiple EU countries are discussed in a paper, or where the author's discussion has EU-wide scope, no specific territory is given.

It is important to note that, unlike the review described in Part 1, which sifted out those results that did not include a methods section, this set of results is not exclusively made up of empirical evidence. It contains some viewpoint and discussion articles.

2.3. Results

The findings from this search include a broad range of issues shaping the food system and transitions to sustainability. The findings are grouped under the following themes and sub-themes.

Table 3. List of themes and statistical analysis of articles by sub-theme

Theme	Subtheme	Articles
Agricultural production	Production and productivity	13
	Technical efficiency	2
Environmental impacts	Impacts	5
	Assessment tools	10
	Water	7
	Soil	9
	Climate change	14
Rural development and alternatives to conventional agriculture	Multifunctionality	9
	Agricultural extension programmes	3
	Agri-environmental schemes	8
	Organic farming	4
	Agroecology	6
	Sustainable farming	2
	Biofuels	5
	Genetic modification	10
	Rural development	28
Agricultural economics and bio-economy	Agricultural economics	25
	Public benefits	4
	Bio-economy	4
Food industry innovation and systems	Food industry and innovation	12
	Supply chain	10
	Agrifood systems	7
	Sustainability indicators	4
	Public procurement	3
	Risk management	3
	Food waste	8
	Trade	9

Theme	Subtheme	Articles
Social movements, alternative networks, and welfare	Cooperatives	9
	Farmer knowledge	2
	Social movements	6
	Alternative food networks and economies	6
	Food security	18
	Animal welfare	2
Legal and regulatory frameworks	Law	5
	Trade law	6
	Food safety	19
	Food fraud	1
Sustainable diet and consumer behaviour	Nutrition and public health	8
	Consumer behaviour and sustainable consumption	12
	Sustainable livelihoods	1
	Food labelling	2
EU governance and policymaking	EU governance	2
	Policy design, theoretical frameworks, and models	20
	Policy impact and assessment tools	4
Urban food and urban-rural linkages	Urban food strategies	8
	Periurban agriculture	2
	Effects of urbanisation	2
Marine environment and fisheries	Fisheries management: actors and strategies	16
	Fisheries policy and regulation	18
	Aquaculture	12
	Marine economy	7
	Ecosystem approach	6
	Marine spatial planning and protected areas	14

The high-level analysis of studies allows the dataset to be mapped, but not analysed in detail according to the specific research questions and themes set out in the Specification of Work. Where possible, it is identified where studies address themes in the research questions, for example, on the subject of power and influence, lobby groups, institutions, justice, barriers and enablers, and pace of change. Without reading the full study, it has not been possible to link evidence with the research questions at this stage.

The following sections set out a mapping of the search results.

2.3.1. Agricultural production

This section covers literature related to agricultural production, mostly in terms of conventional production methods and the policies and technologies that support it.

2.3.1.1. Agricultural production and productivity

The literature on agricultural production covers studies on strategy, innovation and decision-making, including the following.

The agricultural activity concept for simulating strategic agricultural production decisions [France] (Hammouda, Wery, Darbin, & Belhouchette, 2018); dairy farmers' business strategies in Central and Eastern Europe [Lithuania, Poland, Slovenia] (Verhees, Malak-Rawlikowska, Stalgiene, Kuipers, & Klopcic, 2018); insights on agricultural advisory service providers in Europe (Knierim et al., 2017); the benefits of belonging to producer groups [Poland] (Bajan & Czubak, 2018); and trends in family labour, hired labour and contract work [France] (Dupraz & Latruffe, 2015). The literature on innovation in production includes reconceptualising translation in agricultural innovation [EU] (Ingram, Dwyer, Gaskell, Mills, & Wolf, 2018); and competitive advantage through product innovations [Poland] (Goryńska-Goldmann, 2017).

The literature also covers the use of assessments in relation to agricultural production, including: agricultural development pathways (de Roest, Ferrari, & Knickel, 2018); analysis of efficiency and productivity in the EU at farm and regional level (Martinho, 2017); assessing energy neutrality [France] (Harchaoui & Chatzimpiros, 2018); and measuring and understanding the drivers of agricultural innovation [Ireland] (Läpple, Renwick, & Thorne, 2015).

Literature on agricultural productivity includes studies on the impact of policy, including: Common Agricultural Policy reforms on intentions towards food production [Scotland] (A. J. Barnes, Sutherland, Toma, Matthews, & Thomson, 2016); the influence of diversification on the long-term viability of the agricultural sector [Scotland, Sweden] (A. P. Barnes, Hansson, Manevska-Tasevska, Shrestha, & Thomson, 2015).

2.3.1.2. Technical efficiency

In terms of technical efficiency and the impact of technology, the literature covers: the adoption of precision agricultural technologies by EU farmers [Belgium, Germany, Greece, Netherlands, UK] (A. P. Barnes et al., 2019); and determinants of technical efficiency in agriculture in New EU member states [Central and Eastern Europe] (Bojnec, Ferto, Jámbor, & Tóth, 2014).

2.3.2. Environmental impacts of agriculture

This section includes literature on the environmental impacts of agriculture, in terms of general sustainability and resilience, specific water and soil issues, impacts of and adaptation to climate change, and assessment tools and methods.

2.3.2.1. Environmental impacts

Literature focusing on the environmental impacts of agriculture includes: CAP reform 2014-20 and olive farming systems [Spain] (Mili, Judez, & De Andres, 2017); sustainability-risk-resilience and good agricultural and environmental conditions (Poláková, 2018); sustainability of land use practices and agricultural production (Fanelli, 2019); CAP and ecosystem services (van Zanten et al., 2014); and greenhouse gas emissions and economic performance (Zafeiriou, Mallidis, Galanopoulos, & Arabatzis, 2018).

2.3.2.2. Assessment tools

In relation to tools for assessment of the environmental impact of agriculture, the literature covers: life cycle assessment (Achten & Acker, 2016); greenhouse gas modelling [Austria] (Amon et al., 2014); sustainability assessment frameworks for agriculture (Slatmo, Fischer, & Roos, 2017); environmental footprints and scenario analysis [Spain] (Cazcarro, Duarte, Sánchez-chóliz, Sarasa, & Serrano, 2015); applying the ecosystem services framework to pasture-based livestock farming (Rodriguez-Ortega et al., 2014); an eco-efficiency evaluation of agricultural production (Rybaczewska-Błazejowska & Gierulski, 2018); and a management-based system of payments for ecosystem services for agri-environmental policy (Rodriguez-Ortega, Olaizola, & Bernues, 2018). Assessments include evaluating sustainable intensification of arable farms [UK] (Gadanakis, Bennett, Park, & Areal, 2015); stimulating the social and environmental benefits of agriculture and forestry (Knickel & Maréchal, 2018); and impact assessment of changes in greening practices [Italy] (Cortignani & Dono, 2019).

2.3.2.3. Water and agriculture

The literature on water use in agriculture covers: integration of water and agricultural policies [Spain] (Cabello Villarejo & Madrid Lopez, 2014); the benefits of integrated management policies [France] (Crastes et al., 2014); sustainability assessment of irrigation practice based on the water-energy-food nexus framework [Tunisia] (De Vito, Portoghese, Pagano, Fratino, & Vurro, 2017); analysis of farmers' drought risk perception (Duinen, Filatova, Geurts, & Veen, 2015); modelling for agricultural policies and water resources planning coordination (Gandolfi et al., 2014); policy scenarios for the Ecosystem Water Food Energy (EWFE) nexus [Mediterranean] (Karabulut, Udias, & Vigiak, 2019); and a consumption-based approach to virtual water flows (Serrano, Guan, Duarte, & Paavola, 2016).

2.3.2.4. Soil and soil carbon

Studies focusing on soils include: the institutional economics of agricultural soil ecosystem services [Germany] (Bartkowski, Hansjürgens, Möckel, & Bartke, 2018); soil loss due to wind erosion (Borrelli, Lugato, Montanarella, & Panagos, 2017); and a qualitative framework for assessing the vulnerability of national and regional food systems to phosphorus scarcity (Cordell & Neset, 2014).

In relation to soil carbon, studies focus on: communicating soil carbon science to farmers (Ingram et al., 2016); and a farm perspective on manageing soil carbon (Ingram et al., 2014). In relation to policy and governance, the literature covers: a tool to analyse instruments for soil governance: the REEL-framework [Germany] (Juerges, Hagemann, & Bartke, 2018); ex-ante evaluation of policy measures to enhance carbon sequestration [Germany] (Hermann, Sauthoff, & Musshoff, 2017); the effects of the EU agricultural and environmental policies on the sustainability of Mediterranean soils [Portugal] (Nunes et al., 2017); and an assessment of policies affecting sustainable soil management in Europe and selected member states (Turpin et al., 2017).

2.3.2.5. Agriculture and climate change

Literature linking climate change with food systems includes studies related to: food security, blue water, green water and soils (Benoit, 2016, 2017); the impact of climate change on food production in relation to provisioning ecosystem services [UK] (Fezzi et al., 2014); and a European knowledge hub on climate change in agriculture (Saetnan & Kipling, 2016).

Studies on climate change adaptation strategies include: crop insurance as a strategy for adaptation [Italy] (Falco, Adinolfi, Bozzola, & Capitanio, 2014); adaptations in irrigated agriculture [Mediterranean] (Harmanny & Malek, 2019); transformations in Nordic agriculture [Sweden, Norway] (Juhola, Klein, Käyhkö, & Neset, 2017); and long-term investment strategies by orchardists (McClatchey, Reedy, Savo, Verde, & Rodríguez, 2014).

Policy-related literature includes: challenges of integrating agriculture into climate change mitigation policy frameworks (Fellmann et al., 2018); actions to implement policies on land management and carbon storage at EU level (Fernandez-Getino, Alonso-Prados, & Santin-Montanya, 2018); stakeholder perspectives from Western Europe [Netherlands; UK; Italy; Spain] (Kalfagianni & Kuik, 2017); the impact of policy and climate change scenarios on trade-offs and synergies [Austria] (Kirchner et al., 2015); agricultural policy integration and coordination patterns in EU climate policies (N. M. Schmidt, 2019); and the role of decision-making policies in fisheries management response to climate change (Pentz & Klenk, 2017).

2.3.3. *Rural development and alternatives and adaptations to conventional agriculture*

This section details a number of adaptations or alternatives to conventional agriculture. These include different conceptualisations of farming, policies and strategies for rural development, changes to practices, diversification of crops, and genetic modification of organisms.

2.3.3.1. Multifunctionality in agriculture

Literature on multifunctionality in agriculture covers a range of themes including: the dynamics of large farms [Italy] (de Rooij, Ventura, Milone, & van der Ploeg, 2014; Ploeg, Rooij, Ventura, & Milone, 2014); issues for small ruminants [Spain] (Dubeuf & Sayadi, 2014); nature–gender relations in agrobiodiversity (Burandt & Mölders, 2017); market rationality in agricultural governance [England, South Australia] (Fielke & Wilson, 2017); crop diversification policy (Mahy, Dupeux, Van Huylenbroeck, & Buysse, 2015); and high nature value mountain farming systems [France, Ireland] (O'Rourke, Charbonneau, & Poinsot, 2016). Discussion of tools includes a framework to evaluate extended value (Fagioli, Rocchi, Paolotti, Slowinski, & Boggia, 2017), and literature with a focus on actors covers producer movements [extra-EU] (A. K. Hart, McMichael, Milder, & Scherr, 2016).

2.3.3.2. Agricultural extension programmes

Agricultural extension is discussed in relation to: the impact on farm-level income (Cawley, O'Donoghue, Heanue, Hilliard, & Sheehan, 2018); and the role and impact of financial incentives [Ireland] (Läpple & Hennessy, 2015a, 2015b).

2.3.3.3. Agri-environmental schemes

Literature on agri-environmental schemes (AES) covers the role of actors such as network bridging organisations in compensation payments [Belgium] (Dedeurwaerdere, Polard, & Melindi-Ghidi, 2015), and stakeholders in the programmes [Slovenia, Croatia] (Glumac, Franic, & Udovc, 2017). Discussion of potential barriers and enablers to change include: impact on farm performance (Arata & Sckokai, 2016); ecosystem services delivery [UK] (Arnott, Chadwick, Harris, Koj, & Jones, 2019); policy integration [UK] (Dwyer, 2014); the application of boundary organisation theory to develop conservation [UK] (Franks, 2016); collaborative governance arrangements for delivery [northwest EU] (Westerink et al., 2017); and a conceptual model to integrate the regional context (Zasada et al., 2017).

2.3.3.4. Organic farming

Literature on organic farming covers: system archetypes perspectives (Brzezina et al., 2017); new regulations in Poland (Mickiewicz & Lisiak, 2017); the food raw materials market under the new financial plan for 2014-2020 (Szamrowski & Pawlewicz, 2014); and efficiency

and productivity in vineyards [Spain] (Aldanondo-Ochoa, Casasnovas-Oliva, & Arandia-Miura, 2014).

2.3.3.5. Agroecology

Literature on agroecology covers: transformative learning in Europe (Anderson, Maughan, & Pimbert, 2018); initiatives in Spain (Amat Montesinos & Ortiz Pérez, 2015); agro-ecosystems as ecological funds for collective design [France] (Berthet, Segrestin, & Hickey, 2016); and experiences of translating agroecology into policy in France and the UK (Ajates Gonzalez, Thomas, & Chang, 2018). Challenges and action points to amplify agroecology in Europe are raised (Wezel et al., 2018) and forecasting scenarios of biotechnology versus agroecology made (Schneider & Gill, 2016).

2.3.3.6. Sustainable farming

The literature related to sustainable farming includes: a social-ecological systems approach to sustainable farming and forestry (Dwyer et al., 2018); and determinants of the acceptance of sustainable production strategies [Austria, Belgium, Denmark, Finland, Italy, UK] (Naspetti et al., 2017).

2.3.3.7. Biofuels

Regarding biofuels, the literature covers: crop diversification trends in agro-energy [Italy] (Monteleone, Cammerino, & Libutti, 2018). Studies of assessment measures and practices include: sensitivity analysis of land in the EU for perennial biomass crops from freed-up agricultural land (Choi & Entenmann, 2019); and a framework and case study on biogas technology [Germany] (Markard, Wirth, & Truffer, 2016). In relation to policy, studies discuss: policy feedback and EU biofuels policy (Skogstad, 2017); and the impact of biofuel policies on crop acreages [Germany, France] (Gardebroek, Reimer, & Baller, 2017).

2.3.3.8. Genetically-modified organisms

Literature on institutions and actors related to genetically-modified organisms (GMOs) include: the role of the Court of Justice of the European Union's judgement on mutagenesis and international trade [France] (Carreño & Dolle, 2019); farmers' perceptions of coexistence measures (Tillie, Dillen, & Rodríguez-Cerezo, 2016); the EU's multilevel approach to the coexistence policy [EU] (Rodríguez-Entrena & Salazar-Ordóñez, 2015); and how industries deal with the problem of the non-GM crop regime in the EU (Inghelbrecht, Dessein, & Van Huylenbroeck, 2014). GM crop coexistence in practice is covered in relation to: choice for farmers and consumers (Pearsall, 2016); farm-level coexistence policies in the EU (Schenkelaars & Wesseler, 2016); national opt-outs and enclosure (Dobbs, 2017); economic impacts of zero thresholds for unapproved GMOs (Kalaitzandonakes, Kaufman, & Miller, 2014); and variety of risk governance in European

and international trade law (Winter, 2016). There is also literature related to food justice on the subject of the international regulatory framework for the use of GMOs and products as food aid [EU; US] (Vezzani, 2018).

2.3.3.9. Rural development

A range of literature covers rural development. This includes characterising and understanding rural development, including: operationalising the term 'resilience' in farms and rural regions (Ashkenazy et al., 2018); understanding mobilities, diversities, and hybridisations [Spain] (Camarero & Oliva, 2016); small and semi-subsistence farms in the EU (Davidova, 2014), Romania, and Bulgaria (Hubbard, Mishev, Ivanova, & Luca, 2014); resilience, sustainability and equity in farming and food systems [EU] (Knickel et al., 2018); diffusion of knowledge in land use change [UK] (Brown, Alexander, & Rounsevell, 2018); effects of public support on producer groups establishment [Czech Republic, Slovakia] (Kotyza & Tomšík, 2014); institutional impacts on the resilience of mountain grasslands [Austria, France, Norway] (Schermer et al., 2016); changing land use intensity in Europe (van der Sluis, Pedroli, Kristensen, Lavinia Cosor, & Pavlis, 2016); income diversification strategies based on European farm survey data (Weltin et al., 2017) and family farming in the development process [extra-EU] (Bonnal, Sourisseai, Loscha, Marzin, & Bosc, 2015).

This literature also includes assessments of integration, including: how agricultural performance differs in the New member states (Csaki & Jambor, 2016); integration in relation to Hungary (Csoba, 2017); rural border areas [Ukraine, Poland, Romania, Slovakia, Hungary] (Hazuda, Gotra, & Hazuda, 2017); and Romania (Ciutacu, Chivu, & Andrei, 2015).

Rural development in relation to policy covers: lessons for knowledge exchange and policy from integrated farm management for sustainable agriculture [UK] (Rose et al., 2019); structural change and agricultural policy for small and subsistence farms [New member states] (Erjavec, Falkowski, & Juvančič, 2014); the impact of the Rural Development Programme 2007–2013 [Poland] (Czubak & Bajan, 2016); the impact of project IPARD [Albania] (Bezhani, 2015); LEADER in European and Russian rural areas [Finland, Russia] (Kopoteva & Nikula, 2014); the impact of farm advisory services on adoption of rural development policies (De Rosa & Bartoli, 2017); the incidence of agricultural policy on the land market [Poland] (Czyzewski, Przekota, & Poczta-Wajda, 2017); cropping plan decisions under the new Common Agricultural Policy [Spain] (Galan-Martin, Pozo, Guillen-Gosalbez, Vallejo, & Esteller, 2015); impacts of Common Agricultural Policy reforms (2014-2020) on family farms (Segrelles Serrano, 2017); direct payments and permanent grasslands [UK, Germany, Switzerland] (Hecht, Moakes, & Offermann, 2016); analysis of target groups of rural development policies [Germany] (Hien, Franke, Piorr, Lange, & Zasada, 2014); the effectiveness of sustainable land management policies for combating desertification [Spain, Greece, Turkey, Tunisia, Morocco] (Salvati et al., 2016);

and assessment of how EU rural expenditure corresponds with regional development needs (Uthes, Li, & Kelly, 2017).

2.3.4. Agricultural economics and bio-economy

This section on agricultural economics covers the effects on agriculture of EU policy, global influences, market performance, and some of the particular conditions that exist in relation to New member states and sustainability. It includes literature related to valorising public benefits from agriculture, and studies on the bio-economy.

2.3.4.1. Agricultural economics

In relation to EU subsidies and policy, studies cover income mobility effects between market-based support and direct payments [Scotland] (Allanson, 2019); capitalisation of the single payment scheme into agricultural land rental prices under harmonisation of payments [Germany] (Allen Klaiber, Salhofer, & Thompson, 2017) and [Italy] (Guastella, Moro, Sckokai, & Veneziani, 2018); passive farming (Brady, Hristov, Sahrbacher, Soderberg, & Wilhelmsson, 2017); agricultural policies and structural change [France] (Ben Arfa, Daniel, Jacquet, & Karantininis, 2015) and [Finland] (Simola, 2018); policy and economic change in the agri-food sector [Ireland] (Donoghue & Hennessy, 2015); redistributive effects of CAP liberalisation (Deppermann, Offermann, & Grethe, 2016); declining discount rates and the Fisher Effect [UK] (Freeman, Groom, Panopoulou, & Pantelidis, 2015); and financial regulation of the agricultural sector [Ukraine] (Homyn, 2017).

Studies also take a global perspective, including: global investments in agricultural land and the role of the EU (Antonelli, Siciliano, Turvani, & Rulli, 2015); assessing the EU debt influencing factors (Brad, Popescu, Zaharia, Diaconeasa, & Mihai, 2018); analysis of energy and land use in worldwide agriculture (Ghisellini, Setti, & Ulgiati, 2016); the Eurasian integration of the agricultural sector (Ziyadin & Kabasheva, 2018); and contestability in the Australian wheat export industry [Austria] (O'Keeffe, 2017).

Studies that characterise the market include: profitability of agricultural work in the EU countries (Golas, 2014); profitability of value-added products in dairy farm diversification initiatives [Spain] (Alvarez, Garcia-Cornejo, Perez-Mendez, & Roibas, 2018); value-added and employment growth in EU primary agriculture and food processing (Donnellan & Hanrahan, 2017); variable economic performance of European agriculture (Giannakis & Bruggeman, 2015); and analysis of the competitiveness of Spanish agri-food exports at a time of crisis [Spain] (Chico, Sánchez, & García, 2014).

Studies that focus on economics in relation the New member states include: the influence of the abolition of quotas [Poland] (Baer-Nawrocka, Mrówczynska-Kaminska, & Kiryluk-Dryjska, 2014); and integration into the EU Common Agricultural Market [Czech Republic] (Clark, Smutka, Cechura, Prochazka, & Maitah, 2015; Dworak & Grzelak, 2015).

In relation to sustainable development, articles cover sustainable economic-environmental planning in Southeast Europe (Radovanovic & Lior, 2017); and employment for sustainable development in EU countries [EU] (Cyrek & Fura, 2019).

2.3.4.2. Public benefits from agriculture

Literature on public benefits from agriculture includes discussion of the role of economic actors in the production of private and public goods (Villanueva et al., 2015) and the role of private sector actions to valorise public benefits from agriculture and forestry (Brouwer et al., 2018). Empirically, the literature draws on: a framework to value multiple public goods of agriculture at supranational scales (Santos, Madureira, Ferreira, Espinosa, & Palma, 2016); and IPBES delegates' perceptions of challenges, needs, gaps and opportunities in policy uptake of "Nature's contributions to people" (Roger Keller, Keune, & Maynard, 2018).

2.3.4.3. Bio-economy

Regarding the bio-economy, literature covers: contexts, visions, guiding implementation principles and debates on bio-economy [Sweden, Germany, EU] (Meyer, 2017). Studies of assessment measures and practices include: sustainability certification and standardisation in a bio-based economy [EU] (Majer et al., 2018); and bioeconomy monitoring using a Sustainable Development Goal framework [EU] (Zeug, Bezama, Moesenfechtel, Jahkel, & Thran, 2019). In relation to policy, studies discuss sustainable development as a 'selling point' of the emerging EU bio-economy policy framework (Ramcilovic-Suominen & Pulzl, 2018).

2.3.5. Food industry innovation and systems

This section covers a range of aspects of the food system beyond production, including supply chain, trade, food waste, public procurement, risk management, and innovation.

2.3.5.1. Food industry and innovation

Literature on the food industry and innovation includes the role of actors such as universities [Italy] (Cardamone, Pupo, & Ricotta, 2018) and public support [Spain] (Acosta, Coronado, & Romero, 2015), and industry structure and trajectories [Denmark, Norway] (Klimek & Hansen, 2017). It includes policy insights in relation to: entrepreneurship in a pan-European public-private consortium [EU] (Bolzani, Carli, Fini, & Sobrero, 2015); evaluation and design of innovation policies in the agro-food sector [Italy] (Gagliardi, Niglia, & Battistella, 2014); public policy and academic engagement [Sweden] (McKelvey & Ljungberg, 2017); and a case study of the development of an integrated policy and support programme for micro rural food enterprises (McAdam, Quinn, McKitterick, Dunn, & Patterson, 2015). Studies of strategies around innovation include: pet food as a way to

use food waste as feed stuff [EU] (Castrica et al., 2018); a fair milk enterprise [Belgium] (Feyereisen & Mélard, 2014); a strategy for the sustainability of a food production system for the prosperity of low-income populations [Peru] (Fontana, Carmenado, Villanueva-Penedo, Ulloa-Salazar, & Santander-Peralta, 2018); an early warning system for the French milk market [France] (Bisson & Diner, 2017); and innovation and exports [Spain] (Alarcón & Sánchez, 2016).

2.3.5.2. Supply chain

Literature on supply chains covers a range of strategies for change, including: price risk perceptions and management strategies (Assefa, Meuwissen, & Oude Lansink, 2017); improving logistics efficiency of industrial districts [Italy] (Bottani, Rizzi, & Vignali, 2015); strategies and tools for eco-efficient local food supply scenarios [Italy] (Caputo, Ducoli, & Clementi, 2014); and sustainable purchasing in food retailing [Sweden, UK, Denmark] (Chkanikova, 2016).

Literature covers identifying viewpoints on innovation supply chains [Belgium, Italy, Finland, UK] (Mandolesi, Nicholas, Naspetti, & Zanoli, 2015); acceptability and use of electronic traceability systems in agri-food chains [Greece] (Pappa, Iliopoulos, & Massouras, 2018); and the emergence of new supermarket actors involved in local farming [France] (Rouget et al., 2016). In relation to justice, the literature includes unfair trading practices in the food supply chain (Schebesta, Verdonk, Purnhagen, & Keirsbilck, 2018).

Specifically in relation to supplying cities, studies cover: hybridisation of farmers' strategies between alternative and conventional food chains [UK] (Filippini, Marraccini, Houdart, Bonari, & Lardon, 2016); and the challenge of reconciling public policy with actors' preferences on short supply chains [France] (Gonçlaves, Morganti, & Blanquart, 2014).

2.3.5.3. Agri-food systems

Literature on agri-food covers: the processes of niche-regime interaction and regime reconfiguration (Bui, Cardona, Lamine, & Cerf, 2016); systemic ethics and inclusive governance [Belgium] (Bui et al., 2019); practice, assessment and governance of sustainable food system transitions (Maye & Duncan, 2017); the potential of industrial ecology in agri-food clusters (AFCs) [Italy] (Simboli, Taddeo, & Morgante, 2015); and ecological transitions within agri-food systems [France, Brazil] (Lamine, Bui, & Ollivier, 2015). Studies also cover interdependence in the agri-food sector (Mrówczynska-Kaminska, 2014); and vulnerabilities (Marsden, Moragues-Faus, & Sonnino, 2019).

2.3.5.4. Food system sustainability indicators

Studies of sustainability indicators cover: linkages with CAP direct payments [Lithuania, Italy] (Volkov & Melnikiene, 2017); sustainable intensification indicators [UK] (Mahon, Crute, Di Bonito, Simmons, & Islam, 2018); integration with policy planning theory [Italy] (Demartini, Gaviglio, & Bertoni, 2015); and a Delphi approach to sustainable food system metrics) [Mediterranean] (Allen, Prosperi, Cogill, Padilla, & Peri, 2019).

2.3.5.5. Public procurement

Articles on public procurement include carbon footprint analysis (Cerutti, Contu, Ardente, Donno, & Beccaro, 2016), EU certification schemes (Schebesta, 2018), and competing policy demands (Smith, Andersson, et al., 2016).

2.3.5.6. Risk management tools and behaviour

Discussion of the role of risk management tools in relation to the food system include: uneven natural hedge effects in the wheat sector and implications for risk management tools [France, Germany] (Feng, Patton, Binfield, & Davis, 2014); compensation payments and animal disease [UK] (R. Fraser, 2018); and feasibility of an area-yield insurance scheme in the EU [Finland] (Liesivaara & Myyrä, 2015).

2.3.5.7. Food waste

Literature on actors and influences in relation to food waste include: consumers' perspective on circular economy strategy for reducing food waste [Italy] (Borrello, Caracciolo, Lombardi, Pascucci, & Cembalo, 2017).

In relation to policy and governance, studies cover: potential food waste reduction to support sustainable production and consumption policies [Spain] (Garcia-Herrero et al., 2018); environmental implications of dynamic policies on food consumption and waste handling [EU] (M. Martin & Danielsson, 2016).

Potential barriers and enablers in relation to change on food waste include: tools for food waste valorisation strategies [Spain] (D. S. Martin et al., 2017); the use of systems models to identify food waste drivers (Grainger et al., 2018); household food waste practices and their policy implications in Finland (Schanes, Dobernig, & Gozet, 2018; K. Schmidt & Matthies, 2018) and across the EU-27 countries (Secondi, Principato, & Laureti, 2015).

2.3.5.8. Trade

In relation to trade, institutions are the subject of papers on: assessing the influence of multilateral pressure on the European Union's agricultural policy [EU] (Garcia-Duran, Casanova, & Eliasson, 2019); the World Trade Organization and reform of the CAP 1992-

2013 [EU] (Daugbjerg, 2017); and the European influence on agricultural trade negotiations (Garcia-Duran, Kienzle, & Millet, 2014). In terms of potential barriers and enablers of transition in relation to trade, articles cover: barriers in the EU-US agricultural trade within TTIP (Maltseva & Chupina, 2019); the impact of trade openness on technical efficiency in EU agriculture (J. Hart, Miljkovic, & Shaik, 2015); value chain dynamics of agri-food exports [Spain] (Mili, 2016); imported intermediate inputs and firms' productivity [France, Spain] (Olper, Curzi, & Raimondi, 2017); trade, import competition and productivity growth in the food industry [EU] (Olper, Pacca, & Curzi, 2014); and the impact of international trade in agricultural products on EU economic growth [extra EU] (Remeikiene, Rozsa, Gaspareniene, & Pěnčík, 2018).

2.3.6. Social movements, alternative networks, and welfare

This section covers the social innovation, alternative networks and governance arrangements, knowledge, food security and welfare.

2.3.6.1. Cooperatives

Literature on cooperatives includes a range of types of cooperative, including: agricultural cooperatives, multi-stakeholder cooperatives, and open cooperatives in food and farming [Spain, UK] (Ajates Gonzalez, 2017; Hernández Cáceres, 2017).

The literature discusses characteristics such as: market orientation and typology of agri-food cooperatives [Spain] (Camilleri & Izquierdo, 2016); post-socialist farmers' cooperatives [Central and Eastern Europe] (Hagedorn, 2014); different forms of integration of agri-food cooperatives [Northern Europe] (Cano Ortega, 2015); and position and performance of farmer cooperatives in the food supply chain of the EU-27 (Höhler & Kühl, 2014). In terms of policy and governance, the literature includes: farmer willingness to invest in cooperatives [Finland] (Alho, 2019); a project-based governance framework for agri-food cooperatives [Spain] (Herrera-Reyes, Carmenado, & Martinez-Almela, 2018); and how policy measures impact the position and performance of farmers' cooperatives (Brusselaers, Poppe, & Azcarate, 2014).

2.3.6.2. Farmer knowledge

Studies of farmers' knowledge include: informal and formal knowledges in sustainable and resilient agriculture (Šumane et al., 2018) and the reflective learning methodology (Moschitz & Home, 2014).

2.3.6.3. Social movements

Literature on social movements covers the role of actors such as the farmers' movement in Europe [France] (Demeulenaere, 2014) and the Green Party in Europe (Rovinskaya,

2015). Social movements are characterised as: an anthropology of direct democracy [Italy] (Grasseni, 2014); social innovation for food sovereignty [extra EU] (Juárez, Trentini, & Becerra, 2018); capacity building for food justice [UK] (Kneafsey, Owen, Bos, Broughton, & Lennartsson, 2017); and social capital in adaptive responses for sustainable agricultural management [Italy] (Ruiu, Seddaiu, & Roggero, 2017).

2.3.6.4. 'Alternative' food networks and economies

In relation to 'alternative' solutions, the literature discusses alternative food networks in relation to: a more-than-human ethic of care [UK] (Beacham, 2018); transformative politics [Spain, Greece] (Calvario & Kallis, 2017); food security [Spain, UK, Belgium] (Cerrada-Serra et al., 2018); grassroots social innovation for human development [Spain] (Pellicer-Sifres, Belda-Miquel, López-Fogués, & Boni Aristizábal, 2017); innovation for sustainable agriculture [Hungary] (Nemes & Augustyn, 2017); and future food policy [Spain, Italy] (Pinna, 2017).

2.3.6.5. Food security

Policy and governance in relation to food security covers: EU policy and global food security (Bureau & Swinnen, 2018; Candel & Biesbroek, 2018); hunger, food and social policy in austerity [UK] (Dowler & Lambie-Mumford, 2015); social policy and food banks [Turkey] (Çuhadar, 2017); implications for policy and practice of food security composite indices (Santeramo, 2015); and the potential for integrated food security governance [EU] (Moragues-Faus, Sonnino, & Marsden, 2017).

Potential barriers and enablers of change cover: system effects and determinants of food in/security [extra EU] (Craven, 2017); energetic approaches to food self-sufficiency [Poland] (Baer-Nawrocka & Sadowski, 2016); the agrarian processing industry as a guarantor of food security (Emelyanova & Mihaylova, 2017); integrated approaches to assessing sustainable food and nutrition security (Zurek et al., 2018); the challenge of matching food assistance with potential need [US] (Bacon & Baker, 2017); the relationship between food emergency and energy emergency [EU] (Bolognini, 2015); the potential of food stocks and grain reserves [Italy, China] (E. D. G. Fraser, Legwegoh, & Kc, 2015); risks and approval (Petetin, 2014); austerity and the geopolitics of global food security (Essex, 2014); household food insecurity [Germany] (Pfeiffer, Ritter, & Oestreicher, 2015); social innovation in food assistance practices [Netherlands, Italy, Ireland] (Hebinck et al., 2018); and immunity and biosecurity [UK] (Hinchliffe & Ward, 2014).

2.3.6.6. Animal welfare

Literature on animal welfare covers the design of an institutional network for improving farm animal welfare (Jones, Lensink, Mancini, & Tranter, 2017) and economic effects of

participation in animal welfare programmes [Germany] (Heise, Schwarze, & Theuvsen, 2018).

2.3.7. Legal and regulatory frameworks

This section details literature on legal and regulatory issues related to the food system, including food safety, food fraud, and trade.

2.3.7.1. Law

Legal literature regarding the food system covers EU agri-food chain legislation (Menditto, Anniballi, Auricchio, De Medici, & Stacchini, 2017); edible insects and EU law (Belluco, Halloran, & Ricci, 2017); bureaucratic role perceptions and the implementation of EU law [Sweden, Denmark] (Wockelberg, 2014); debates on the definition of protected designation of origin (Zappalaglio, 2019); and the benefits of farm animal welfare legislation [UK] (Bennett, Balcombe, Jones, & Butterworth, 2019).

2.3.7.2. Trade law

Trade law in relation to the food system includes: EU member states' Measures on Mandatory Country of Origin Labelling (COOL) [Romania, Belgium, France, Italy] (Carreño & Dolle, 2017); international trade law compatibility of market-related measures to combat illegal, unreported and unregulated (IUU) fishing [extra EU] (He, 2017; M. A. Young, 2016); trade defence cases targeting European food products (Coppo, 2018); TTIP (Kolev et al., 2016); and the challenges of enlargement and GATT trade negotiations (Seidel, 2019).

2.3.7.3. Food safety

Literature on institutions and governance in relation to food safety includes: the complex governance relationships in food safety regulation (Havinga & Verbruggen, 2017); governance of food safety regulation across EU member states (Bazzan, 2017); institutional roles in food systems governance and rural development [Ireland] (Conneely & Mahon, 2015); perceptions of accountability, transparency and effectiveness in Irish food risk governance (Devaney, 2016); external influences and domestic change in food safety [Eastern Europe] (Delcour, 2016); and the influence of context on food safety management (Kirezieva et al., 2015).

Literature on potential barriers and enablers of shifts and transitions includes: 'GLOBALGAP' as a regulation repository for farmers (de Raymond & Bonnaud, 2014; Naiki, 2014); the role of individual food security in assessment of population's food safety [Romania] (Bobe, Procopie, & Bucur, 2019); food safety and sustainability in wine making [Romania] (Epuran, Brătucu, Bărbulescu, Neacşu, & Madar, 2018); regulation of biotech foods [UK, US] (Petetin, 2017); certification schemes for food safety management in

the EU (Pop, Dracea, & Vlădulescu, 2018); application of food standards in EU member states (Tudela-Marco, Garcia-Alvarez-Coque, & Martí-Selva, 2017); affective and cognitive reactions towards emerging food safety risks (Vocht, Cauberghe, Uyttendaele, & Sas, 2015); bilateral interdependence and the adaptability of regulatory styles [China, EU] (Yasuda & Ansell, 2015); biosafety regulatory regimes in international environmental politics [US, EU] (Schulze & Tosun, 2016); and legal structures of food safety [Germany] (Stehfest & Henning, 2014).

The potential pace of change is covered in scenarios for policy making on food safety and nutrition (Bock & Bontoux, 2017); and the future of food safety and nutrition and trade-offs (Mylona et al., 2018).

2.3.7.4. Food fraud

Literature on food fraud covers the situational prevention of food fraud enterprise [Spain] (Lord, Spencer, Albanese, & Flores Elizondo, 2017).

2.3.8. Sustainable diets and consumer behaviour

This section covers research related to individual health, choice, diet and livelihood. It includes associated policy and assessment tools, as well as mechanisms such as food labelling that support them.

2.3.8.1. Nutrition and public health

Literature on policy and governance in relation to nutrition and public health includes: creating policies to break down the barriers (Stewart-Knox et al., 2016); fiscal policy to improve diets and prevent noncommunicable diseases (Thow et al., 2018); the role of epistemic policies in regulatory science (Todt & Luján, 2017). Literature in relation to barriers and enablers for change includes the impact of food and economic crises on diet and nutrition [Bulgaria] (Dimova, Gang, Gbakou, & Hoffman, 2014) and systematic reviews on agriculture, food, and nutrition interventions for sustainable food production and health (Haby, Chapman, Clark, & Galvão, 2016).

In relation to research, the literature covers: methodological controversy (Todt & Lujan, 2017); research priority setting (Timotijevic, Khan, Raats, & Braun, 2019); and the potential for 'responsible research and innovation' in the food and health domain (Khan et al., 2016).

2.3.8.2. Consumer behaviour and sustainable consumption

Literature on potential barriers and enablers of change in relation to diet includes: reducing meat consumption through substitution [UK] (Apostolidis & McLeay, 2016); diet-focused social innovation in transitions to more sustainable meat provisioning [UK] (Morris, Kirwan, & Lally, 2014); food choice and country of origin labelling (I. Fraser & Balcombe,

2018); socio-demographic predictors for sustainable consumerism [Germany] (Mohr & Schlich, 2016); consumers' attitudes and willingness to pay for food information (Nocella, Romano, & Stefani, 2014); perception of local food by consumers [Poland] (Radzymińska & Jakubowska, 2018); household preferences to reduce greenhouse gas footprint [France, Germany, Norway, Sweden] (Sköld et al., 2018); effects and success factors of sustainable consumption policy instruments (Wolff, Schönherr, & Heyen, 2017); sustainable retailing and consumer behaviour on food waste [UK] (C. W. Young, Russell, Robinson, & Chintakayala, 2018); and sustainable foods and consumer coping strategies [France Italy] (Moruzzi & Sirieix, 2015).

Policy and governance in relation to consumer behaviour includes: law and policymaking in the global creative economy [Denmark, Finland, Norway, Sweden] (Niva, Mäkelä, Kahma, & Kjærnes, 2014); and carbon footprint as an instrument for enhancing food quality [Spain] (Pattara, Russo, Antrodicchia, & Cichelli, 2017).

2.3.8.3. Sustainable livelihoods

Sustainable livelihoods research is documented in a global bibliometric analysis (C. Zhang, Fang, Chen, & Congshan, 2019).

2.3.8.4. Food labelling

Literature on food labelling covers the welfare effects of different labelling schemes [US] (Joseph, Lavoie, & Caswell, 2014) and an analysis of country of origin labelling under EU law and the EU's International Trade Obligations (Carreño, Dolle, & Rovnov, 2017).

2.3.9. EU governance and policymaking

This section covers literature on the ways that EU institutions function in relation to governance and policymaking, as well as governance and policymaking in member states. It includes the broader and more generic approaches to policy impact analysis and assessment tools, whereas specific applications of policy impact and assessment tools are included under the relevant sub-headings.

2.3.9.1. EU governance

Studies on governance cover the EU 'throughput' governance legitimacy in the EFSA [EU] (Chatzopoulou, 2015), and regionalism in EU states (Keating & Wilson, 2014).

2.3.9.2. Policy design, theoretical frameworks and models

Literature on actors and institutions in relation to policy design includes: the role of Commissioners and the balance of interest in European environmental governance (Fuchs, 2017); the role of government in forming agricultural policy (Morkūnas, Volkov,

Bilan, & Raišienė, 2018); and the influence of institutional procedures on the coherence of European Union policy formulation [EU] (Stroß, 2017).

Discussion of particular tools and frameworks is covered in a range of studies, including: the Multiannual Financial Framework 2014-20 (Stenbæk & Jensen, 2016); a theoretical framework for structural advancement of innovation ecosystems (Fernández, Kubus, & Pérez-Iñigo, 2018); models for comparative analysis of land cover and land use [Austria, Germany, Netherlands, UK, Slovenia] (Foški, Đurić, Tič, & Čekada, 2018); the AKIS concept and its relevance in selected EU member states [EU] (Knierim et al., 2015); methods and materials using the FEEM Indicators (Madau, Furesi, & Pulina, 2014); the use of Information Instruments to foster sustainable consumption (Pollex, 2017); and opportunities and challenges for mainstreaming the ecosystem services concept in the multi-level policymaking (Schleyer, Gorg, Hauck, & Winkler, 2015).

Potential barriers and enablers of change include: the potential of fuzzy cognitive mapping for agricultural policy design and communication [Scotland] (Christen, Kjeldsen, Dalgaard, & Martin-Ortega, 2015); food system lock-in [Finland] (Kuokkanen, Mikkila, Kuisma, Kahiluoto, & Linnanen, 2017); new directions for agricultural policies in the European Union's emerging states (Haller, 2014); law and policymaking in the global creative economy [EU, China] (Neuwirth, 2014); the sustainability of agricultural public policy [France] (Mouysset, 2014); and the influence of EU policy on agriculture [Poland] (Weiss & Bitkowska, 2014). Policy re-design in relation to Brexit is discussed in relation to UK food and farming policy [UK] (Curnow, 2018).

Literature questioning justice and fairness of policy design includes discussion of agricultural protection and support in the European Economic Community between 1962-92 (Spoerer, 2015). Pace or change, or futures, are considered in relation to: the CAP reform debate (Schramek, Rutz, & Dwyer, 2014); and local-global food chains (Smith, Lang, Vorley, & Barling, 2016).

2.3.9.3. Policy impact analysis and assessment tools

The discussion of policy impact assessment includes a range of considerations and approaches, including: the role of third-party certifications and auditing policies in sustainability (Mazé, Aït-Aïssa, Mayer, & Verjux, 2016); using the ecosystem services framework for policy impact analysis [Italy] (Chatzinikolaou, Viaggi, & Raggi, 2018); framing effectiveness in impact assessment [Netherlands, UK] (Rozema & Bond, 2015); and hotspots analysis and critical interpretation of food life cycle assessment studies for eco-innovation and policy support (Castellani, Sala, & Benini, 2017).

2.3.10. Urban food and urban-rural linkages

This section picks up issues related to urbanisation, agriculture in peri-urban environments, and strategies for urban food.

2.3.10.1. Urban food strategies

The transformative potential of urban food strategies is discussed in relation to: innovation in France (Jarrige & Perrin, 2017; Marty, 2014); Germany (Kropp, 2018); and across the EU (Olsson, 2018). Barriers and enablers for change are discussed in relation to: processes of participation [UK, Netherlands] (Hebinck & Page, 2017); urban political ecologies and food security in the UK (Moragues-Faus & Carroll, 2018) and Canada, the USA and UK (Sonnino, 2016); and policy patterns and practice implications [Italy] (Perrone, 2016).

2.3.10.2. Periurban agriculture

Periurban agriculture is characterised in terms of sustainable solutions [Canada, France, Belgium] (Bousbaine & Bryant, 2016) and incubators of innovation [Sweden] (Hochedez, 2016).

2.3.10.3. Effects of urbanisation

The impact of land take for urbanisation is discussed in relation to food security and agricultural production (Gardi, Panagos, Liedekerke, Bosco, & Brogniez, 2015); and economic factors [Germany] (Rose Keller & Vance, 2017).

2.3.11. Marine environment and fisheries

This section covers literature related to fisheries in terms of management, strategies, policy, regulation, and aquaculture. It includes the marine economy, marine spatial planning, and protected areas.

2.3.11.1. Fisheries management: actors and strategies

Literature on actors and institutions in fisheries management covers: the role of fishers' knowledge as an indicator of trends in abundance of species [North Sea] (Cleasby, Marshall, Macdonald, & Angus, 2014) and "bad" fishing locations [Denmark] (Eliasen & Bichel, 2016). It covers the influence of Spanish fishermen to the reform of the Common Fisheries Policy [Spain] (Garza-Gil, Amigo-Dobano, & Suris-Regueiro, 2017; Garza-Gil & Varela-Lafuente, 2015); multi-criteria decision-making for fisheries management [Mediterranean] (Gambino et al., 2015); the role of advisory councils [North Sea] (Hatchard & Gray, 2014); social norms on conservation programmes in shellfish fisheries [Spain] (Allo & Loureiro, 2017); and the socio-ecological production of landscapes and seascapes [Cyprus] (Gulay Cetinkaya, 2018); international fisheries diplomacy (Barkin, DeSombre,

Ishii, & Sakaguchi, 2018); and the role of international negotiation in fisheries partnership agreements (Zimmermann, 2017).

In terms of strategies and objectives, the literature includes cross-disciplinary studies (Bailey, 2016); geographical approaches to marine management [UK] (Cardwell & Thornton, 2015); economic and biological management objectives [Baltic] (Holma, Lindroos, Romakkaniemi, & Oinonen, 2019); regional management [France, Ireland, Spain, UK] (Le Floc'h et al., 2015); and adaptation strategies of small-scale fisheries (Prosperi et al., 2019).

Assessment literature covers Sustainability Impact Assessment (SIA) in fisheries (Malvarosa et al., 2019).

2.3.11.2. Fisheries policy and regulation

Fisheries policy and regulation literature include assessments of the sector from a social perspective [Northeast Atlantic] (Gansbauer, Bechtold, & Wilfing, 2016); instability impacts [EU] (Symes, Phillipson, & Salmi, 2015) and as a critical analysis of a subsidised sector (Lagares & Ordaz, 2014). Science-policy integration is covered in relation to: aquatic food security [Portugal, UK, Iceland] (Lopes, Ferreira, Vale, & Johansen, 2017); small-scale fisheries [Spain] (Sutton & Rudd, 2016); and marine historical ecology [North Sea] (Engelhard et al., 2016).

Literature on specific policy tools relates to: coastal models and limitations in Atlantic FLAGs [Spain, Portugal] (Piñeiro-Antelo, Felicidades-Garcia, & Lois-Gonzalez, 2019); mitigation of unwanted catches [Mediterranean, NE Atlantic] (Da-Rocha, Garcia-Cutrin, & Gutierrez, 2018); fish quotas [North Sea] (van Dijk, Hendrix, Haijema, Groeneveld, & van Ierland, 2017); the discard ban (Bellido Millan, Garcia-Rivera, & Sanchez Lizaso, 2015); the IUU[9] concept (Serdy, 2017); regulations (Miller, Bush, & Mol, 2014), and implementation (Elvestad & Kvalvik, 2015); regulation 1026/2012 (Vatsov, 2017); and voluntary guidelines for sustainable small-scale fisheries [extra EU] (Courtney, Pomeroy, & Brooks, 2019). The literature also covers the external and commercial dimensions of the EU fisheries policy (Mulazzani & Malorgio, 2014), legal problems with the EU´s dormant fisheries agreements (Teijo, 2018), and 'due regard' in the EEZ (Naert, 2019).

2.3.11.3. Aquaculture

In relation to aquaculture, the literature covers the role of stakeholders in policy (Krause et al., 2015); production (Lembo, Jokumsen, Spedicato, Facchini, & Bitetto, 2018); adaptive co-management [Sweden, Poland] (Stohr, Lundholm, Crona, & Chabay, 2014) and dialogue [Cyprus, Ireland, Israel, Italy, Norway, Scotland] (Alexander et al., 2016). Studies also cover the role of the marketplace in fishery management [UK] (Leadbitter

9 IUU: illegal, unreported and unregulated fishing.

& Benguerel, 2014); issues around substitutability [Spain] (García-Enríquez, Arteche, & Murillas-Maza, 2017); shocks to fish production [extra EU] (Gephart, Deutsch, Pace, Troell, & Seekell, 2017); and provisions for the labelling of fishery and aquaculture products (D'Amico, Armani, Gianfaldoni, & Guidi, 2016).

In relation to issues beyond EU waters, studies discuss the survival of seafood products from developing countries in the EU market (D. Zhang & Tveterås, 2019); weaknesses in the ethical framework of aquaculture related standards (Haugen, Bremer, & Kaiser, 2017); and sustainable intensification of aquaculture value chains between Asia and Europe (Little et al., 2018). In terms of infrastructure, the literature covers the challenges of multi-use platforms at sea for energy production and aquaculture (Stuiver et al., 2016).

2.3.11.4. Marine economy

In relation to the marine economy, studies cover: the economic implications of changing regulations for deep sea fishing under the Common Fisheries Policy [UK] (Mangi et al., 2016); (blue) growth accounting in small-scale EU fleets [Spain] (Da-Rocha, Guillen, & Prellezo, 2019); and economic trends [UK] (Morrissey, 2014).

Literature on production and covers shocks, trends, and consequences [extra EU] (Gephart et al., 2017); adaptive strategies for shellfish production [Canada] (Groesbeck, Rowell, Lepofsky, & Salomon, 2014); and the recovery of fish stocks [Celtic Sea] (Clarke & Egan, 2017).

Assessment literature economic assessment of the fishery stock-rebuilding policies [Mediterranean] (Da-Rocha, Prellezo, Sempere, & Antelo, 2017).

2.3.11.5. Ecosystem approach to management

The literature on the ecosystem approach to management includes discussion of Institutional dynamics [Baltic Sea] (Söderström & Kern, 2017); benefits to the commercial fishing industry [Scotland] (Brooker et al., 2018); and regionalisation (van Hoof, 2015).

Studies on tools to enable an ecosystems approach include: fishing selectivity as an instrument to reach management objectives (Fauconnet & Rochet, 2016); integration of environmental science in society [Baltic Sea] (Snoeijs-Leijonmalm et al., 2017); and the V-MESSES database for ecosystems services values [Mediterranean; Black Sea] (Skourtos et al., 2015).

2.3.11.6. Marine spatial planning and protected areas

Literature on marine spatial planning covers concepts of marine protection (Andrade, Frazão santos, Domingos, Ferreira, & Orbach, 2014; Frazão Santos, Domingos, Ferreira, Orbach, & Andrade, 2014; Thiele, 2015); the particularities of large marine protected areas

(LMPAs) [Adriatic Sea] (Bastari, Micheli, Ferretti, Pusceddu, & Cerrano, 2016), the Baltic Sea environment (Tynkkynen, 2015), and the channel ecosystem [UK] (Evariste et al., 2016). It also covers the coordination structures in the Directorate-General for Fisheries and Maritime Affairs of the European Commission (Wenzel, 2018).

In terms of policy and management, the literature covers: recent evolutions of maritime spatial planning in relation to the Baltic Sea (Ringbom & Joas, 2018) and across the EU (Friess & Grémaud-Colombier, 2019); appropriate scale and level in marine spatial planning [Baltic Sea] (Westholm, 2018). It includes studies of specific issues including: the social and economic impact of small-scale fisheries management measures in a marine protected area [Germany] (Goti-Aralucea, 2019); and challenges for policymakers around governance of multi-use platforms at sea for energy production and aquaculture (Stuiver et al., 2016). In relation to the Marine Strategy Framework Directive, the literature includes: a policy perspective on regulatory, institutional and stakeholder impediments to effective implementation (van Leeuwen et al., 2014) and structuring social data for the Framework Directive [Sweden] (Sundblad, Grimvall, Gipperth, & Morf, 2014).

2.4. Generic policies review summary

The findings of this supplementary review demonstrate a breadth of evidence on issues shaping the food system and transitions to greater sustainability. The bulk of the evidence relates to current policies and practices in agriculture, rural development, fisheries, and the food industry. There is also a large body of literature relating to food safety, food security, GMO, and innovation, which provides evidence of a fuller landscape of related literature. A smaller but important body of work is collected here that provides discussion and evidence relating to alternatives to conventional agriculture and food systems, including urban food strategies, alternative models of governance, and practices such as aquaculture. These suggest potential applicability to the research questions on barriers and enablers of transitions, a just and fair transition, and pace of change, but require more detailed analysis to make those connections.

Whilst only a limited review (based on title/abstract only) this supplementary evidence base demonstrates the breadth of food-related policy and adds a useful resource for further evidence of particular aspects of EU food policy.

2.5. References

Achten, W. M. J., & Acker, K. (2016). EU-Average Impacts of Wheat Production: A Meta-Analysis of Life Cycle Assessments. *Journal of Industrial Ecology, 20*(1), 132-144. doi:https://doi.org/10.1111/jiec.12278

Acosta, M., Coronado, D., & Romero, C. (2015). Linking public support, R&D, innovation and productivity: New evidence from the Spanish food industry. *Food Policy, 57*, 50. doi:http://dx.doi.org/10.1016/j.foodpol.2015.09.005

Ajates Gonzalez, R. (2017). Going back to go forwards? From multi-stakeholder cooperatives to Open Cooperatives in food and farming. *Journal of Rural Studies, 53*, 278. doi:https://doi.org/10.1016/j.jrurstud.2017.02.018

Ajates Gonzalez, R., Thomas, J., & Chang, M. (2018). Translating agroecology into policy: The case of France and the United Kingdom. *Sustainability (Switzerland), 10*(8). doi:https://doi.org/10.3390/su10082930

Alarcón, S., & Sánchez, M. (2016). Is there a virtuous circle relationship between innovation activities and exports? A comparison of food and agricultural firms. *Food Policy, 61*, 70. doi:http://dx.doi.org/10.1016/j.foodpol.2016.02.004

Aldanondo-Ochoa, A. M., Casasnovas-Oliva, V. L., & Arandia-Miura, A. (2014). Environmental efficiency and the impact of regulation in dryland organic vine production. *Land Use Policy, 36*, 275-284. doi:https://doi.org/10.1016/j.landusepol.2013.08.010

Alexander, K. A., Angel, D., Freeman, S., Israel, D., Johansen, J., Kletou, D., . . . Potts, T. (2016). Improving sustainability of aquaculture in Europe: Stakeholder dialogues on Integrated Multi-trophic Aquaculture (IMTA). *Environmental Science and Policy, 55*, 96-106. doi:https://doi.org/10.1016/j.envsci.2015.09.006

Alho, E. (2019). Farmer's willingness to invest in new cooperative instruments: a choice experiment. Annales de l'economie collective. *Annals of Public and Cooperative Economics, 90*(1), 161-186. doi:http://dx.doi.org/10.1111/apce.12226

Allanson, P. (2019). Marginal Analysis of Income Mobility Effects by Income Source with an Application to the Agricultural Policy Mix. *Journal of Agricultural Economics, 70*(1), 259-266. doi:https://doi.org/10.1111/1477-9552.12274

Allen Klaiber, H., Salhofer, K., & Thompson, S. R. (2017). Capitalisation of the SPS into Agricultural Land Rental Prices under Harmonisation of Payments. *Journal of Agricultural Economics, 68*(3), 710-726. doi:http://dx.doi.org/10.1111/1477-9552.12207

Allen, T., Prosperi, P., Cogill, B., Padilla, M., & Peri, I. (2019). A Delphi Approach to Develop Sustainable Food System Metrics. *Social Indicators Research, 141*(3), 1307-1339. doi:http://dx.doi.org/10.1007/s11205-018-1865-8

Allo, M., & Loureiro, M. L. (2017). The role of social norms on conservation programmes in shellfish fisheries. *Marine Policy, 84*, 134-141. doi:https://doi.org/10.1016/j.marpol.2017.07.008

Alvarez, A., Garcia-Cornejo, B., Perez-Mendez, J. A., & Roibas, D. (2018). The profitability of value-added products in dairy farm diversification initiatives. *Spanish Journal of Agricultural Research, 16*(2). doi:https://doi.org/10.5424/sjar/2018162-11813

Amat Montesinos, X., & Ortiz Pérez, S. (2015). Rurality of 15-M. Initiatives from the Alicante agroecology movement. [La ruralidad del 15-M. Iniciativas desde el movimiento agroecológico alicantino]. *ACME, 14*(1), 185-199. Retrieved from https://acme-journal.org/index.php/acme/article/view/1146

Amon, B., Winiwarter, W., Anderl, M., Baumgarten, A., Dersch, G., Guggenberger, T., . . . Zethner, G. (2014). Farming for a Better Climate (FarmClim) Design of an Inter- and Transdisciplinary Research Project Aiming to Address the "Science-Policy Gap". *Gaia-Ecological Perspectives for Science and Society, 23*(2), 118-124. doi:https://doi.org/10.14512/gaia.23.2.9

Anderson, C. R., Maughan, C., & Pimbert, M. P. (2018). Transformative agroecology learning in Europe: building consciousness, skills and collective capacity for food sovereignty. *Agriculture and Human Values*, 1-17. doi:http://dx.doi.org/10.1007/s10460-018-9894-0

Andrade, F., Frazão santos, C., Domingos, T., Ferreira, M. A., & Orbach, M. (2014). How sustainable is sustainable marine spatial

planning? Part i - linking the concepts. *Marine Policy, 49*, 59-65. doi:http://dx.doi.org/10.1016/j.marpol.2014.04.004

Antonelli, M., Siciliano, G., Turvani, M. E., & Rulli, M. C. (2015). Global investments in agricultural land and the role of the EU: Drivers, scope and potential impacts. *Land Use Policy, 47*, 98-111. doi:https://doi.org/10.1016/j.landusepol.2015.04.007

Apostolidis, C., & McLeay, F. (2016). Should we stop meating like this? Reducing meat consumption through substitution. *Food Policy, 65*, 74-89. doi:https://doi.org/10.1016/j.foodpol.2016.11.002

Arata, L., & Sckokai, P. (2016). The Impact of Agri-environmental Schemes on Farm Performance in Five E.U. Member States: A DID-Matching Approach. *Land economics, 92*(1), 167. Retrieved from https://muse.jhu.edu/article/606428

Arnott, D., Chadwick, D., Harris, I., Koj, A., & Jones, D. L. (2019). What can management option uptake tell us about ecosystem services delivery through agri-environment schemes? *Land Use Policy, 81*, 194-208. doi:https://doi.org/10.1016/j.landusepol.2018.10.039

Ashkenazy, A., Chebach, T. C., Knickel, K., Peter, S., Horowitz, B., & Offenbach, R. (2018). Operationalising resilience in farms and rural regions – Findings from fourteen case studies. *Journal of Rural Studies, 59*, 211. doi:https://doi.org/10.1016/j.jrurstud.2017.07.008

Assefa, T. T., Meuwissen, M. P. M., & Oude Lansink, A. G. J. M. (2017). Price risk perceptions and management strategies in selected European food supply chains: An exploratory approach. *NJAS - Wageningen Journal of Life Sciences, 80*, 15-26. doi:https://doi.org/10.1016/j.njas.2016.11.002

Bacon, C. M., & Baker, G. A. (2017). The rise of food banks and the challenge of matching food assistance with potential need: towards a spatially specific, rapid assessment approach. *Agriculture and Human Values, 34*(4), 899-919. doi:http://dx.doi.org/10.1007/s10460-017-9783-y

Baer-Nawrocka, A., Mrówczynska-Kaminska, A., & Kiryluk-Dryjska, E. (2014). The influence of the abolition of quotas on sugar beet and sugar production in the European Union. [Wplyw zniesienia systemu kwotowania na produkcje buraków cukrowych i cukru w Unii Europejskiej]. *Wies i rolnictwo, 162*, 169-183. Retrieved from https://www.ceeol.com/search/article-detail?id=38539

Baer-Nawrocka, A., & Sadowski, A. (2016). Food self-sufficiency of the European Union countries - energetic approach. [Samowystarczalnosc zywnosciowa krajow Unii Europejskiej - ujecie energetyczne]. *Journal of Agribusiness and Rural Development, 40*(2), 407-414. doi:http://dx.doi.org/10.17306/JARD.2016.44

Bailey, J. (2016). Adventures in cross-disciplinary studies: Grand strategy and fisheries management. *Marine Policy, 63*, 18-27. doi:https://doi.org/10.1016/j.marpol.2015.09.013

Bajan, B., & Czubak, W. (2018). Korzyści płynące z integracji poziomej w polskim rolnictwie na przykładzie grup producentów rolnych. [The Benefits of Horizontal Integration in Polish Agriculture Exampled by Agricultural Producer Groups]. Wieś i Rolnictwo, 180(3), 229. Retrieved from http://kwartalnik.irwirpan.waw.pl/690/korzysci-plynace-z-integracji-poziomej-w-polskim-rolnictwie-na-przykladzie-grup-producentow-rolnych

Barkin, J. S., DeSombre, E. R., Ishii, A., & Sakaguchi, I. (2018). Domestic sources of international fisheries diplomacy: A framework for analysis. *Marine Policy, 94*, 256-263. doi:https://doi.org/10.1016/j.marpol.2018.04.030

Barnes, A. J., Sutherland, L. A., Toma, L., Matthews, K., & Thomson, S. (2016). The effect of the Common Agricultural Policy reforms on intentions towards food production: Evidence from livestock farmers. *Land Use Policy, 50*, 548-558. doi:https://doi.org/10.1016/j.landusepol.2015.10.017

Barnes, A. P., Hansson, H., Manevska-Tasevska, G., Shrestha, S. S., & Thomson, S. G. (2015). The influence of diversification on long-term viability of the agricultural sector. *Land Use Policy, 49*, 404-412. doi:https://doi.org/10.1016/j.landusepol.2015.08.023

Barnes, A. P., Soto, I., Eory, V., Beck, B., Balafoutis, A., Sánchez, B., . . . Gómez-Barbero, M. (2019). Exploring the adoption of precision agricultural technologies: A cross regional study of EU farmers. *Land Use Policy, 80*, 163-174. doi:https://doi.org/10.1016/j.landusepol.2018.10.004

Bartkowski, B., Hansjürgens, B., Möckel, S., & Bartke, S. (2018). Institutional economics of agricultural soil ecosystem services. *Sustainability (Switzerland), 10*(7). doi:https://doi.org/10.3390/su10072447

Bastari, A., Micheli, F., Ferretti, F., Pusceddu, A., & Cerrano, C. (2016). Large marine protected areas (LMPAs) in the Mediterranean Sea: The opportunity of the Adriatic Sea. *Marine Policy, 68*, 165-177. doi:https://doi.org/10.1016/j.marpol.2016.03.010

Bazzan, G. (2017). Effective governance of food safety regulation across EU Member States: Towards operationalization. *European Journal of Risk Regulation : EJRR, 8*(3), 565-572. doi:http://dx.doi.org/10.1017/err.2017.37

Beacham, J. (2018). Organising food differently: Towards a more-than-human ethics of care for the Anthropocene: The Interdisciplinary Journal of Organization, Theory and Society The Interdisciplinary Journal of Organization, Theory and Society. *Organization, 25*(4), 533-549. doi:http://dx.doi.org/10.1177/1350508418777893

Bellido Millan, J. M., Garcia-Rivera, S., & Sanchez Lizaso, J. L. (2015). A quantitative and qualitative assessment of the discard ban in European Mediterranean waters. *Marine Policy, 53*, 149-158. doi:http://dx.doi.org/10.1016/j.marpol.2014.12.003

Belluco, S., Halloran, A., & Ricci, A. (2017). New protein sources and food legislation: the case of edible insects and EU law. *Food Security, 9*(4), 803-814. doi:https://doi.org/10.1007/s12571-017-0704-0

Ben Arfa, N., Daniel, K., Jacquet, F., & Karantininis, K. (2015). Agricultural Policies and Structural Change in French Dairy Farms: A Nonstationary Markov Model. *Canadian Journal of Agricultural Economics-Revue Canadienne D Agroeconomie, 63*(1), 19-42. doi:https://doi.org/10.1111/cjag.12036

Bennett, R., Balcombe, K., Jones, P., & Butterworth, A. (2019). The Benefits of Farm Animal Welfare Legislation: The Case of the EU Broiler Directive and Truthful Reporting. *Journal of Agricultural Economics, 70*(1), 135-152. doi:https://doi.org/10.1111/1477-9552.12278

Benoit, G. (2016). Food Security and Climate in the 21st Century: Blue Water, Green Water and Soils. *Futuribles*(413), 1. Retrieved from https://www.futuribles.com/en/revue/413/securite-alimentaire-et-climat-au-xxie-siecle-eaux/

Benoit, G. (2017). L'eau, l'alimentation et le climat : revenir aux sources du développement durable. [Water, food and the climate: Back to the origin of sustainable development El agua, la alimentación y el clima, volver a la fuente del desarrollo sostenible]. *Responsabilité & Environnement*(86), 15-19. Retrieved from https://search.proquest.com/docview/1894947922?accountid=9883

Berthet, E. T., Segrestin, B., & Hickey, G. M. (2016). Considering agro-ecosystems as ecological funds for collective design: New perspectives for environmental policy. *Environmental Science & Policy, 61*, 108-115. doi:https://doi.org/10.1016/j.envsci.2016.04.005

Bezhani, E. (2015). The result and the impact of project IPARD for the rural and agricultural development. *Mediterranean Journal of Social Sciences, 6*(2S1), 602-604. doi:https://doi.org/10.5901/mjss.2015.v6n2s1p602

Bisson, C., & Diner, Ö. Y. (2017). Strategic Early Warning System for the French milk market: A graph theoretical approach to foresee volatility. *Futures, 87*, 10-23. doi:https://doi.org/10.1016/j.futures.2017.01.004

Bobe, M., Procopie, R., & Bucur, M. (2019). Exploring the role of individual food security in the assessment of population's food safety. [Explorarea rolului securității alimentare individuale în evaluarea securității alimentare a populației]. *Amfiteatru Economic, 21*(51), 347-360. doi:http://dx.doi.org/10.24818/EA/2019/51/347

Bock, A. K., & Bontoux, L. (2017). Food safety and nutrition - how to prepare for a challenging future? New approaches for using scenarios for policy-making. *European Journal of Futures Research, 5*(1). doi:https://doi.org/10.1007/s40309-017-0119-3

Bojnec, t., Ferto, I., Jámbor, A., & Tóth, J. (2014). Determinants of technical efficiency in agriculture in new EU member states from Central and Eastern Europe. *Acta oeconomica, 64*(2), 197-217. doi:http://dx.doi.org/10.1556/AOecon.64.2014.2.4

Bolognini, S. (2015). The future of Agro-Energy in the European union considering the relationship between food emergency

and energy emergency. *European Food and Feed Law Review, 10*(3), 194-209. Retrieved from https://effl.lexxion.eu/article/EFFL/2015/3/5

Bolzani, D., Carli, G., Fini, R., & Sobrero, M. (2015). Promoting Entrepreneurship in the Agri-food Industry: Policy Insights from a Pan-European Public-Private Consortium. *Industry and Innovation, 22*(8), 753-784. doi:https://doi.org/10.1080/13662716.2015.1113860

Bonnal, P., Sourisseai, J.-M., Loscha, B., Marzin, J., & Bosc, P.-M. (2015). Family farming in the development process. Conclusions and recommendations. [Znaczenie rolnictwa rodzinnego w procesach rozwoju. Wnioski i rekomendacje]. *Wies i rolnictwo, 166*, 23-44. Retrieved from https://www.ceeol.com/search/article-detail?id=42276

Borrelli, P., Lugato, E., Montanarella, L., & Panagos, P. (2017). A New Assessment of Soil Loss Due to Wind Erosion in European Agricultural Soils Using a Quantitative Spatially Distributed Modelling Approach. *Land Degradation and Development, 28*(1), 335-344. doi:https://doi.org/10.1002/ldr.2588

Borrello, M., Caracciolo, F., Lombardi, A., Pascucci, S., & Cembalo, L. (2017). Consumers' Perspective on Circular Economy Strategy for Reducing Food Waste. *Sustainability, 9*(1). doi:https://doi.org/10.3390/su9010141

Bottani, E., Rizzi, A., & Vignali, G. (2015). Improving logistics efficiency of industrial districts: a framework and case study in the food sector. *International Journal of Logistics-Research and Applications, 18*(5), 402-423. doi:https://doi.org/10.1080/13675567.2014.945401

Bousbaine, A. D., & Bryant, C. R. (2016). The integration of action research and traditional field research to provide sustainable solutions to maintaining periurban agriculture. *Geographical Research, 54*(2), 176-186. doi:http://dx.doi.org/10.1111/1745-5871.12134

Brad, L., Popescu, G., Zaharia, A., Diaconeasa, M. C., & Mihai, D. (2018). Exploring the road to agricultural sustainability by assessing the EU debt influencing factors. *Sustainability (Switzerland), 10*(7). doi:https://doi.org/10.3390/su10072465

Brady, M. V., Hristov, J., Sahrbacher, C., Soderberg, T., & Wilhelmsson, F. (2017). Is Passive Farming A Problem for Agriculture in the EU? *Journal of Agricultural Economics, 68*(3), 632-650. doi:http://dx.doi.org/10.1111/1477-9552.12224

Brooker, E., Devenport, E., Hopkins, C. R., Hennige, S., Roberts, J. M., & Duncan, C. (2018). Scotland as a case study for how benefits of marine ecosystem services may contribute to the commercial fishing industry. *Marine Policy, 93*, 271-283. doi:https://doi.org/10.1016/j.marpol.2017.06.009

Brouwer, F., Mantino, F., Polman, N., Short, C., Sterly, S., & Rac, I. (2018). Private Sector Actions to Valorise Public Benefits from Agriculture and Forestry. *EuroChoices, 17*(3), 16-22. doi:https://doi.org/10.1111/1746-692X.12186

Brown, C., Alexander, P., & Rounsevell, M. (2018). Empirical evidence for the diffusion of knowledge in land use change. *Journal of Land Use Science, 13*(3), 269-283. doi:https://doi.org/10.1080/1747423X.2018.1515995

Brusselaers, J., Poppe, K., & Azcarate, T. G. (2014). Do policy measures impact the position and performance of farmers' cooperatives in the EU? *Annales de l'économie publique, sociale et coopérative, 85*(4), 531-553. doi:http://dx.doi.org/10.1111/apce.12050

Brzezina, N., Biely, K., Helfgott, A., Kopainsky, B., Vervoort, J., & Mathijs, E. (2017). Development of organic farming in europe at the crossroads: Looking for the way forward through system archetypes lenses. *Sustainability (Switzerland), 9*(5). doi:https://doi.org/10.3390/su9050821

Bui, S., Cardona, A., Lamine, C., & Cerf, M. (2016). Sustainability transitions: Insights on processes of niche-regime interaction and regime reconfiguration in agri-food systems. *Journal of Rural Studies, 48*, 92. doi:https://doi.org/10.1016/j.jrurstud.2016.10.003

Bui, S., Costa, I., De Schutter, O., Dedeurwaerdere, T., Hudon, M., & Feyereisen, M. (2019). Systemic ethics and inclusive governance: two key prerequisites for sustainability transitions of agri-food systems. *Agriculture and Human Values, 36*(2), 277-288. doi:http://dx.doi.org/10.1007/s10460-019-09917-2

Burandt, A., & Mölders, T. (2017). Nature–gender relations within a social-ecological perspective on European multifunctional agriculture: the case of agrobiodiversity. *Agriculture and Human Values, 34*(4), 955-967. doi:http://dx.doi.org/10.1007/s10460-016-9763-7

Bureau, J. C., & Swinnen, J. (2018). EU policies and global food security. *Global Food Security-Agriculture Policy Economics and Environment, 16*, 106-115. doi:https://doi.org/10.1016/j.gfs.2017.12.001

Cabello Villarejo, V., & Madrid Lopez, C. (2014). Water use in arid rural systems and the integration of water and agricultural policies in Europe: the case of Andarax River Basin. *Environment, Development and Sustainability, 16*(4), 957-975. doi:http://dx.doi.org/10.1007/s10668-014-9535-8

Calvario, R., & Kallis, G. (2017). Alternative Food Economies and Transformative Politics in Times of Crisis: Insights from the Basque Country and Greece. *Antipode, 49*(3), 597-616. doi:http://dx.doi.org/10.1111/anti.12298

Camarero, L., & Oliva, J. (2016). Understanding Rural Change: Mobilities, Diversities, and Hybridizations. *Socialni Studia, 13*(2), 93. doi:https://doi.org/10.5817/SOC2016-2-93

Camilleri, N., & Izquierdo, R. (2016). Market orientation and typology of agrifood cooperatives according to competitiveness. Case-study of Spanish citrus cooperatives. [OrientaciÓn al mercado y tipología de las cooperativas agroalimentarias en base a la competitividad. Caso-estudio de las citrícolas españolas]. *Revista de estudios cooperativos, 121*, 145-172. Retrieved from https://go.gale.com/ps/anonymous?id=GALE%7CA497612395&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=18858031&p=IFME&sw=w

Candel, J. J. L., & Biesbroek, R. (2018). Policy integration in the EU governance of global food security. *Food Security, 10*(1), 195-209. doi:https://doi.org/10.1007/s12571-017-0752-5

Cano Ortega, C. (2015). Hacia la calificación como entidad asociativa prioritaria: las diferentes formas de integración de las cooperativas agroalimentarias / Towards to qualification as associative priority entity: different forms of integration of agri-food cooperatives. *Revista de estudios cooperativos, 118*, 60-85. doi:https://doi.org/10.5209/rev_REVE.2015.n118.49064

Caputo, P., Ducoli, C., & Clementi, M. (2014). Strategies and Tools for Eco-Efficient Local Food Supply Scenarios. *Sustainability, 6*(2), 631-651. doi:https://doi.org/10.3390/su6020631

Cardamone, P., Pupo, V., & Ricotta, F. (2018). Exploring the relationship between university and innovation: evidence from the Italian food industry. *International Review of Applied Economics, 32*(5), 673-696. doi:http://dx.doi.org/10.1080/02692171.2017.1357681

Cardwell, E., & Thornton, T. F. (2015). The fisherly imagination: The promise of geographical approaches to marine management. *Geoforum, 64*, 157-167. doi:https://doi.org/10.1016/j.geoforum.2015.06.008

Carreño, I., & Dolle, T. (2017). A Myriad of EU Member States' Measures on Mandatory Country of Origin Labelling (COOL) of Food Compromise the EU Internal Market. *European Journal of Risk Regulation : EJRR, 8*(4), 779-786. doi:http://dx.doi.org/10.1017/err.2017.53

Carreño, I., & Dolle, T. (2019). The Court of Justice of the European Union's judgment on mutagenesis and international trade: A case of GMO, mutatis mutandis? *Global Trade and Customs Journal, 14*(3), 91-101. Retrieved from http://www.kluwerlawonline.com/abstract.php?area=Journals&id=GTCJ2019010

Carreño, I., Dolle, T., & Rovnov, Y. (2017). Country of Origin Labelling on the Rise in EU Member States – An Analysis under EU law and the EU's International Trade Obligations. *European Journal of Risk Regulation : EJRR, 8*(2), 414-423. doi:http://dx.doi.org/10.1017/err.2017.10

Castellani, V., Sala, S., & Benini, L. (2017). Hotspots analysis and critical interpretation of food life cycle assessment studies for selecting eco-innovation options and for policy support. *Journal of Cleaner Production, 140*, 556-568. doi:https://doi.org/10.1016/j.jclepro.2016.05.078

Castrica, M., Tedesco, D. E. A., Panseri, S., Ferrazzi, G., Ventura, V., Frisio, D. G., & Balzaretti, C. M. (2018). Pet food as the most concrete strategy for using food waste as feedstuffwithin the European context: A

feasibility study. *Sustainability (Switzerland), 10*(6). doi:https://doi.org/10.3390/su10062035

Cawley, A., O'Donoghue, C., Heanue, K., Hilliard, R., & Sheehan, M. (2018). The Impact of Extension Services on Farm-level Income: An Instrumental Variable Approach to Combat Endogeneity Concerns. *Applied Economic Perspectives and Policy, 40*(4), 585-612. doi:https://doi.org/10.1093/aepp/ppx062

Cazcarro, I., Duarte, R., Sánchez-chóliz, J., Sarasa, C., & Serrano, A. (2015). Environmental footprints and scenario analysis for assessing the impacts of the agri-food industry on a regional economy: a case study in Spain. *Journal of Industrial Ecology, 19*(4), 618-627. doi:http://dx.doi.org/10.1111/jiec.12209

Cerrada-Serra, P., Moragues-Faus, A., Zwart, T. A., Adlerova, B., Ortiz-Miranda, D., & Avermaete, T. (2018). Exploring the contribution of alternative food networks to food security. A comparative analysis. *Food Security, 10*(6), 1371-1388. doi:https://doi.org/10.1007/s12571-018-0860-x

Cerutti, A. K., Contu, S., Ardente, F., Donno, D., & Beccaro, G. L. (2016). Carbon footprint in green public procurement: Policy evaluation from a case study in the food sector. *Food Policy, 58*, 82-93. doi:https://doi.org/10.1016/j.foodpol.2015.12.001

Chatzinikolaou, P., Viaggi, D., & Raggi, M. (2018). Using the Ecosystem Services Framework for Policy Impact Analysis: An Application to the Assessment of the Common Agricultural Policy 2014-2020 in the Province of Ferrara (Italy). *Sustainability, 10*(3). doi:https://doi.org/10.3390/su10030890

Chatzopoulou, S. (2015). Unpacking the mechanisms of the EU 'throughput' governance legitimacy: The case of EFSA. *European Politics and Society, 16*(2), 159-177. doi:https://doi.org/10.1080/23745118.2014.974312

Chico, J. R., Sánchez, A. R. P., & García, M. J. (2014). Analysis of the competitiveness of Spanish agri-food exports at a regional level facing the current crisis. *Revista de Estudios Regionales*(101), 71-99. Retrieved from http://www.revistaestudiosregionales.com/documentos/articulos/pdf-articulo-2450.pdf

Chkanikova, O. (2016). Sustainable Purchasing in Food Retailing: Interorganizational Relationship Management to Green Product Supply. *Business Strategy and the Environment, 25*(7), 478-494. doi: https://doi.org/10.1002/bse.1877

Choi, H. S., & Entenmann, S. K. (2019). Land in the EU for perennial biomass crops from freed-up agricultural land: A sensitivity analysis considering yields, diet, market liberalization and world food prices. *Land Use Policy, 82*, 292-306. doi:https://doi.org/10.1016/j.landusepol.2018.11.023

Christen, B., Kjeldsen, C., Dalgaard, T., & Martin-Ortega, J. (2015). Can fuzzy cognitive mapping help in agricultural policy design and communication? *Land Use Policy, 45*, 64-75. doi:https://doi.org/10.1016/j.landusepol.2015.01.001

Ciutacu, C., Chivu, L., & Andrei, J. V. (2015). Similarities and dissimilarities between the EU agricultural and rural development model and Romanian agriculture. Challenges and perspectives. *Land Use Policy, 44*, 169-176. doi:https://doi.org/10.1016/j.landusepol.2014.08.009

Clark, J. S., Smutka, L., Cechura, L., Prochazka, P., & Maitah, M. (2015). The Law of One Price and the Czech Cereal Market Integration into the EU Common Agricultural Market. *Ekonomicky Casopis, 63*(8), 817-836. Retrieved from https://www.sav.sk/index.php?lang=en&doc=journal-list&part=article_response_page&journal_article_no=11891

Clarke, M., & Egan, A. (2017). Good luck or good governance? The recovery of Celtic Sea herring. *Marine Policy, 78*, 163-170. doi:https://doi.org/10.1016/j.marpol.2016.10.025

Cleasby, I. R., Marshall, C. T., Macdonald, P., & Angus, C. H. (2014). Fishers' knowledge as an indicator of spatial and temporal trends in abundance of commercial fish species: Megrim (Lepidorhombus whiffiagonis) in the northern North Sea. *Marine Policy, 45*, 228-239. doi:http://dx.doi.org/10.1016/j.marpol.2013.11.001

Conneely, R., & Mahon, M. (2015). Protected geographical indications: institutional roles in food systems governance and rural development. *Geoforum, 60*, 14-21. doi:http://dx.doi.org/10.1016/j.geoforum.2015.01.004

Coppo, G. (2018). The CAP under attack? Last developments in trade defence cases targeting European food

products. *Global Trade and Customs Journal, 13*(11-12), 519-531. Retrieved from http://www.kluwerlawonline.com/abstract.php?area=Journals&id=GTCJ2018060

Cordell, D., & Neset, T. S. S. (2014). Phosphorus vulnerability: A qualitative framework for assessing the vulnerability of national and regional food systems to the multidimensional stressors of phosphorus scarcity. *Global Environmental Change-Human and Policy Dimensions, 24*, 108-122. doi:https://doi.org/10.1016/j.gloenvcha.2013.11.005

Cortignani, R., & Dono, G. (2019). CAP's environmental policy and land use in arable farms: An impacts assessment of greening practices changes in Italy. *Science of the Total Environment, 647*, 516-524. doi:https://doi.org/10.1016/j.scitotenv.2018.07.443

Courtney, C. A., Pomeroy, R., & Brooks, S. H. (2019). Taking stock of the status of implementation of the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries: A country-level assessment framework. *Marine Policy, 100*, 361-370. doi:https://doi.org/10.1016/j.marpol.2018.12.005

Crastes, R., Beaumais, O., Arkoun, O., Laroutis, D., Mahieu, P.-A., Rulleau, B., . . . Gaillard, D. (2014). Erosive runoff events in the European Union: using discrete choice experiment to assess the benefits of integrated management policies when preferences are heterogeneous. *Ecological Economics, 102*, 105-112. doi:http://dx.doi.org/10.1016/j.ecolecon.2014.04.002

Craven, L. K. (2017). System Effects: A Hybrid Methodology for Exploring the Determinants of Food In/Security. *Annals of the American Association of Geographers, 107*(5), 1011-1027. doi:https://doi.org/10.1080/24694452.2017.1309965

Csaki, C., & Jambor, A. (2016). Ten Years of EU Membership: How Agricultural Performance Differs in the New Member States. *EuroChoices, 15*(2), 35-41. doi:https://doi.org/10.1111/1746-692X.12107

Csoba, J. (2017). A kertkultúra és a háztartásgazdaság szerepe a vidéki szegények társadalmi integrációjában – 25 éves a Szociális Földprogram. [The role of horticulture and the household economy in the rural poor's social integration – The Social Land Program is 25 years old]. **Tér és Társadalom, 31**(3), 85. doi:https://doi.org/10.17649/TET.31.3.2858

Çuhadar, S. G. (2017). Sosyal Politika ile Klientalizm İlişkisi; Gıda Bankacılığı Üzerinden Bir Değerlendirme. [The Relationship Between Social Policy and Clientelism; An Evalution Through Food Banking]. *Calisma ve Toplum, 2*(53), 681. Retrieved from http://www.calismatoplum.org/english_index.htm

Curnow, J. (2018). Delivering a World Leading Food and Farming Sector. *EuroChoices, 17*(2), 12-18. doi:https://doi.org/10.1111/1746-692X.12198

Cyrek, M., & Fura, B. (2019). Employment for Sustainable Development: Sectoral Efficiencies in EU Countries. *Social Indicators Research, 143*(1), 277-318. doi:http://dx.doi.org/10.1007/s11205-018-1970-8

Czubak, W., & Bajan, B. (2016). The impact of RDP 2007–2013 on integration of Polish agricultural producers based on the action "Agricultural Producer Groups". [Wpływ prow 2007-2013 na procesy integracyjne polskich producentÓw rolnych na przykŁadzie działania „grupy producentÓw rolnych"]. *Journal of Agribusiness and Rural Development, 41*(3). doi:https://doi.org/10.17306/JARD.2016.55

Czyzewski, B., Przekota, G., & Poczta-Wajda, A. (2017). The incidence of agricultural policy on the land market in Poland: Two-dimensional and multilevel analysis. *Land Use Policy, 63*, 174-185. doi:https://doi.org/10.1016/j.landusepol.2017.01.016

D'Amico, P., Armani, A., Gianfaldoni, D., & Guidi, A. (2016). New provisions for the labelling of fishery and aquaculture products: Difficulties in the implementation of Regulation (EU) n. 1379/2013. *Marine Policy, 71*, 147-156. doi:https://doi.org/10.1016/j.marpol.2016.05.026

Da-Rocha, J. M., Garcia-Cutrin, J., & Gutierrez, M. J. (2018). Mitigating unwanted catches in the southern Iberian hake stock fisheries: Improving fishing technology vs market control policies. *Scientia Marina, 82*, 63-74. doi:https://doi.org/10.3989/scimar.04739.25A

Da-Rocha, J. M., Guillen, J., & Prellezo, R. (2019). (Blue) Growth accounting in small-scale European Union fleets. *Marine Policy, 100*, 200-206. doi:https://doi.org/10.1016/j.marpol.2018.11.036

Da-Rocha, J. M., Prellezo, R., Sempere, J., & Antelo, L. T. (2017). A dynamic economic equilibrium model for the economic assessment of the fishery stock-rebuilding policies. *Marine Policy, 81*, 185-195. doi:https://doi.org/10.1016/j.marpol.2017.03.029

Daugbjerg, C. (2017). Responding to Non-Linear Internationalisation of Public Policy: The World Trade Organization and Reform of the CAP 1992-2013. *Journal of Common Market Studies, 55*(3), 486-501. doi:http://dx.doi.org/10.1111/jcms.12476

Davidova, S. (2014). Small and Semi-subsistence Farms in the EU: Significance and Development Paths. *EuroChoices, 13*(1), 5-9. doi:https://doi.org/10.1111/1746-692X.12043

de Raymond, A. B., & Bonnaud, L. (2014). Beyond the Public-Private Divide: GLOBALGAP as a Regulation Repository for Farmers. *International Journal of Sociology of Agriculture and Food, 21*(2), 227-246. Retrieved from https://www.isa-agrifood.com/ijsaf-v21-2-227-246

de Roest, K., Ferrari, P., & Knickel, K. (2018). Specialisation and economies of scale or diversification and economies of scope? Assessing different agricultural development pathways. *Journal of Rural Studies, 59*, 222-231. doi:https://doi.org/10.1016/j.jrurstud.2017.04.013

de Rooij, S., Ventura, F., Milone, P., & van der Ploeg, J. D. (2014). Sustaining Food Production through Multifunctionality: The Dynamics of Large Farms in Italy. *Sociologia Ruralis, 54*(3), 303-320. doi:http://dx.doi.org/10.1111/soru.12025

De Rosa, M., & Bartoli, L. (2017). Do farm advisory services improve adoption of rural development policies? An empirical analysis in GI areas. *Journal of Agricultural Education & Extension, 23*(5), 461-474. doi:https://doi.org/10.1080/1389224X.2017.1347099

De Vito, R., Portoghese, I., Pagano, A., Fratino, U., & Vurro, M. (2017). An index-based approach for the sustainability assessment of irrigation practice based on the water-energy-food nexus framework. *Advances in Water Resources, 110*, 423-436. doi:https://doi.org/10.1016/j.advwatres.2017.10.027

Dedeurwaerdere, T., Polard, A., & Melindi-Ghidi, P. (2015). The role of network bridging organisations in compensation payments for agri-environmental services under the EU Common Agricultural Policy. *Ecological Economics, 119*, 24-38. doi:https://doi.org/10.1016/j.ecolecon.2015.07.025

Delcour, L. (2016). Multiple external influences and domestic change in the contested neighborhood: the case of food safety. *Eurasian Geography and Economics, 57*(1), 43-65. doi:https://doi.org/10.1080/15387216.2016.1183220

Demartini, E., Gaviglio, A., & Bertoni, D. (2015). Integrating agricultural sustainability into policy planning: A geo-referenced framework based on Rough Set theory. *Environmental Science & Policy, 54*, 226-239. doi:https://doi.org/10.1016/j.envsci.2015.07.006

Demeulenaere, E. (2014). A political ontology of seeds: the transformative frictions of a farmers' movement in Europe. *FOCAAL, 69*, 45-64. doi:http://dx.doi.org/10.3167/fcl.2014.690104

Deppermann, A., Offermann, F., & Grethe, H. (2016). Redistributive effects of CAP liberalisation: From the sectoral level to the single farm. *Journal of policy modeling, 38*(1), 26. doi:https://doi.org/10.1016/j.jpolmod.2015.11.002

Devaney, L. (2016). Good governance? Perceptions of accountability, transparency and effectiveness in Irish food risk governance. *Food Policy, 62*, 1. doi:http://dx.doi.org/10.1016/j.foodpol.2016.04.003

Dimova, R., Gang, I. N., Gbakou, M. B. P., & Hoffman, D. (2014). The impact of food and economic crises on diet and nutrition. *Journal of development studies, 50*(12), 1687-1699. doi:http://dx.doi.org/10.1080/00220388.2014.957274

Dobbs, M. (2017). Genetically modified crops,agricultural sustainability and national opt-outs: Enclosure as the loophole? *Common Market Law Review, 54*(4), 1093-1122. Retrieved from http://kluwerlawonline.com/abstract.php?area=Journals&id=COLA2017090

Donnellan, T., & Hanrahan, K. (2017). Value Added and Employment Growth in EU Primary Agriculture and Food Processing. *EuroChoices, 16*(3), 4-9. doi:https://doi.org/10.1111/1746-692X.12174

Donoghue, C. O., & Hennessy, T. (2015). Policy and economic change in the agri-food sector in Ireland. *Economic and social*

review, 46(2), 315-337. Retrieved from https://www.esr.ie/article/view/344

Dowler, E., & Lambie-Mumford, H. (2015). Introduction: Hunger, Food and Social Policy in Austerity. *Social Policy and Society, 14*(3), 411-415. doi:http://dx.doi.org/10.1017/S1474746415000159

Dubeuf, J. P., & Sayadi, S. (2014). Multi-functionality issues for small ruminants: What changes are needed in territorial public policies and training? Report of two round tables on territorial issues and training for the development of goat farming. *Small Ruminant Research, 121*(1), 136-145. doi:https://doi.org/10.1016/j.smallrumres.2014.04.007

Duinen, R. V., Filatova, T., Geurts, P., & Veen, A. V. D. (2015). Empirical analysis of farmers' drought risk perception: objective factors, personal circumstances, and social influence. *Risk Analysis, 35*(4), 741-755. doi:http://dx.doi.org/10.1111/risa.12299

Dupraz, P., & Latruffe, L. (2015). Trends in family labour, hired labour and contract work on French field crop farms: the role of the common agricultural policy. *Food Policy, 51*, 104-118. doi:http://dx.doi.org/10.1016/j.foodpol.2015.01.003

Dworak, E., & Grzelak, M. M. (2015). Conditions for the development of Polish agriculture in the context of globalization and European integration. [Uwarunkowania Rozwoju Polskiego Rolnictwa W Warunkach Globalizacji I Integracji Europejskiej]. *Comparative economic research, 18*(2), 5-19. doi:http://dx.doi.org/10.1515/cer-2015-0009

Dwyer, J. (2014). Policy Integration for Sustainable Agricultural Landscapes: Taking Stock of UK Policy and Practice. *Landscape Research, 39*(2), 174-189. doi:https://doi.org/10.1080/01426397.2013.784245

Dwyer, J., Berriet-Solliec, M., Lataste, F. G., Short, C., Maréchal, A., & Hart, K. (2018). A Social-Ecological Systems Approach to Enhance Sustainable Farming and Forestry in the EU. *EuroChoices, 17*(3), 4-10. doi:https://doi.org/10.1111/1746-692X.12188

Eliasen, S. Q., & Bichel, N. (2016). Fishers sharing real-time information about "bad" fishing locations. A tool for quota optimisation under a regime of landing obligations. *Marine Policy, 64*, 16-23. doi:https://doi.org/10.1016/j.marpol.2015.11.007

Elvestad, C., & Kvalvik, I. (2015). Implementing the EU-IUU regulation: enhancing flag state performance through trade measures. *Ocean Development and International Law, 46*(3), 241-255. doi:http://dx.doi.org/10.1080/00908320.2015.1054745

Emelyanova, O., & Mihaylova, O. (2017). Agrarian processing industry as a guarantor of food security in the region. *Economic Annals-XXI, 168*(11-12), 24-27. doi:https://doi.org/10.21003/ea.V168-05

Engelhard, G. H., Thurstan, R. H., MacKenzie, B. R., Alleway, H. K., Bannister, R. C. A., Cardinale, M., . . . Lescrauwaet, A. K. (2016). ICES meets marine historical ecology: placing the history of fish and fisheries in current policy context. *Ices Journal of Marine Science, 73*(5), 1386-1403. doi:https://doi.org/10.1093/icesjms/fsv219

Epuran, G., Brătucu, G., Bărbulescu, O., Neacşu, N. A., & Madar, A. (2018). Food safety and sustainability. An exploratory approach at the level of the Romanian wine production companies. [Siguranța alimentară și sustenabilitatea – o abordare exploratorie la nivelul companiilor producătoare de vinuri din România]. *Amfiteatru Economic, 20*(47), 151-167. doi:https://doi.org/10.24818/EA/2018/47/151

Erjavec, E., Falkowski, J., & Juvančič, L. (2014). Structural Change and Agricultural Policy for SSFs: A View from the 2004 NMSs. *EuroChoices, 13*(1), 41-45. doi:https://doi.org/10.1111/1746-692X.12051

Essex, J. (2014). From the global food crisis to the age of austerity: the anxious geopolitics of global food security. *Geopolitics, 19*(2), 266-290. doi:http://dx.doi.org/10.1080/14650045.2014.896795

Evariste, E., Claquin, P., Robin, J. P., Auber, A., McQuatters-Gollop, A., & Dauvin, J. C. (2016). The Channel ecosystem, a cross-roads of anthropogenic pressures and scientific studies: Lessons learned from the European INTERREG IV projects (2009-2015). *Marine Policy, 63*, 158-165. doi:https://doi.org/10.1016/j.marpol.2015.10.012

Fagioli, F. F., Rocchi, L., Paolotti, L., Slowinski, R., & Boggia, A. (2017). From the farm to the agri-food system: A multiple criteria framework to evaluate extended multi-functional value. *Ecological Indicators,*

79, 91-102. doi:https://doi.org/10.1016/j.ecolind.2017.04.009

Falco, S. D., Adinolfi, F., Bozzola, M., & Capitanio, F. (2014). Crop insurance as a strategy for adapting to climate change. *Journal of Agricultural Economics, 65*(2), 485-504. doi:http://dx.doi.org/10.1111/1477-9552.12053

Fanelli, R. M. (2019). The (un)sustainability of the land use practices and agricultural production in EU countries. *International Journal of Environmental Studies, 76*(2), 273-294. doi:https://doi.org/10.1080/00207233.2018.1560761

Fauconnet, L., & Rochet, M. J. (2016). Fishing selectivity as an instrument to reach management objectives in an ecosystem approach to fisheries. *Marine Policy, 64*, 46-54. doi:https://doi.org/10.1016/j.marpol.2015.11.004

Fellmann, T., Witzke, P., Weiss, F., Van Doorslaer, B., Drabik, D., Huck, I., . . . Leip, A. (2018). Major challenges of integrating agriculture into climate change mitigation policy frameworks. *Mitigation and Adaptation Strategies for Global Change, 23*(3), 451-468. doi:https://doi.org/10.1007/s11027-017-9743-2

Feng, S., Patton, M., Binfield, J., & Davis, J. (2014). Uneven natural hedge effects in the wheat sector and implications for risk management tools. *EuroChoices, 13*(3), 19-25. doi:https://doi.org/10.1111/1746-692X.12067

Fernandez-Getino, A. P., Alonso-Prados, J. L., & Santin-Montanya, M. I. (2018). Challenges and prospects in connectivity analysis in agricultural systems: Actions to implement policies on land management and carbon storage at EU level. *Land Use Policy, 71*, 146-159. doi:https://doi.org/10.1016/j.landusepol.2017.11.035

Fernández, S. G., Kubus, R., & Pérez-Iñigo, J. M. (2018). Innovation ecosystems in the European Union: Towards a theoretical framework for their structural advancement assessment. *Croatian Yearbook of European Law & Policy, 14*, 181. doi:http://dx.doi.org/10.3935/cyelp.14.2018.307

Feyereisen, M., & Mélard, F. (2014). From fair milk to fair enterprise: the consequences of an unexpected bricolage. *Outlook on agriculture, 43*(3), 207-212. doi:http://dx.doi.org/10.5367/oa.2014.0176

Fezzi, C., Bateman, I., Askew, T., Munday, P., Pascual, U., Sen, A., & Harwood, A. (2014). Valuing provisioning ecosystem services in agriculture: the impact of climate change on food production in the United Kingdom. *Environmental and Resource Economics, 57*(2), 197-214. doi:http://dx.doi.org/10.1007/s10640-013-9663-x

Fielke, S. J., & Wilson, G. A. (2017). Multifunctional intervention and market rationality in agricultural governance: a comparative study of England and South Australia. *GeoJournal, 82*(5), 1067-1083. doi:https://doi.org/10.1007/s10708-016-9729-8

Filippini, R., Marraccini, E., Houdart, M., Bonari, E., & Lardon, S. (2016). Food production for the city: hybridization of farmers' strategies between alternative and conventional food chains. *Agroecology and Sustainable Food Systems, 40*(10), 1058-1084. doi:https://doi.org/10.1080/21683565.2016.1223258

Fontana, A., Carmenado, I. D., Villanueva-Penedo, J., Ulloa-Salazar, J., & Santander-Peralta, D. (2018). Strategy for the Sustainability of a Food Production System for the Prosperity of Low-Income Populations in an Emerging Country: Twenty Years of Experience of the Peruvian Poultry Association. *Sustainability, 10*(11). doi:https://doi.org/10.3390/su10114035

Foški, M., Đurić, N., Tič, K., & Čekada, M. T. (2018). Comparative analysis of land cover and land use models in selected countries. *Geografski Vestnik, 90*(1), 97-114. doi:https://doi.org/10.3986/GV90106

Franks, J. R. (2016). An Application of Boundary Organisation Theory to Develop Landscape-scale Conservation in Formal Agri-environment Schemes. *Sociologia Ruralis, 56*(1), 48-73. doi:http://dx.doi.org/10.1111/soru.12059

Fraser, E. D. G., Legwegoh, A., & Kc, K. (2015). Food stocks and grain reserves: evaluating whether storing food creates resilient food systems. *Journal of Environmental Studies and Sciences, 5*(3), 445-458. doi:https://doi.org/10.1007/s13412-015-0276-2

Fraser, I., & Balcombe, K. (2018). Wrapped in the Flag: Food Choice and Country of Origin Labelling. *EuroChoices, 17*(3), 37-42. doi:https://doi.org/10.1111/1746-692X.12189

Fraser, R. (2018). Compensation Payments and Animal Disease: Incentivising Farmers Both to Undertake Costly On-farm Biosecurity

and to Comply with Disease Reporting Requirements. *Environmental and Resource Economics, 70*(3), 617-629. doi:http://dx.doi.org/10.1007/s10640-016-0102-7

Frazão Santos, C., Domingos, T., Ferreira, M. A., Orbach, M., & Andrade, F. (2014). How sustainable is sustainable marine spatial planning? Part I-Linking the concepts. *Marine Policy, 49*, 59-65. doi:https://doi.org/10.1016/j.marpol.2014.04.004

Freeman, M. C., Groom, B., Panopoulou, E., & Pantelidis, T. (2015). Declining discount rates and the Fisher Effect: Inflated past, discounted future? *Journal of environmental economics and management, 73*, 32. doi:https://doi.org/10.1016/j.jeem.2015.06.003

Friess, B., & Grémaud-Colombier, M. (2019). Policy outlook: Recent evolutions of maritime spatial planning in the European Union. *Marine Policy*. doi:https://doi.org/10.1016/j.marpol.2019.01.017

Fuchs, D. (2017). Windows of opportunity for whom? Commissioners, access, and the balance of interest in European environmental governance. *Social Sciences, 6*(3). doi:https://doi.org/10.3390/socsci6030073

Gadanakis, Y., Bennett, R., Park, J., & Areal, F. J. (2015). Evaluating the sustainable intensification of arable farms. *Journal of environmental management, 150*, 288-298. doi:http://dx.doi.org/10.1016/j.jenvman.2014.10.005

Gagliardi, D., Niglia, F., & Battistella, C. (2014). Evaluation and design of innovation policies in the agro-food sector: An application of multilevel self-regulating agents. *Technological Forecasting and Social Change, 85*, 40-57. doi:https://doi.org/10.1016/j.techfore.2013.10.015

Galan-Martin, A., Pozo, C., Guillen-Gosalbez, G., Vallejo, A. A., & Esteller, L. J. (2015). Multi-stage linear programming model for optimizing cropping plan decisions under the new Common Agricultural Policy. *Land Use Policy, 48*, 515-524. doi:https://doi.org/10.1016/j.landusepol.2015.06.022

Gambino, M., Accadia, P., Melià, P., Rossetto, M., Bitetto, I., Spedicato, M. T., & Lembo, G. (2015). Multi-criteria decision-making for fisheries management: a case study of Mediterranean demersal fisheries. *Marine Policy, 53*, 83-93. doi:http://dx.doi.org/10.1016/j.marpol.2014.11.006

Gandolfi, C., Sali, G., Facchi, A., Tediosi, A., Bulgheroni, C., Rienzner, M., & Weber, E. (2014). Integrated modelling for agricultural policies and water resources planning coordination. *Biosystems Engineering, 128*, 100-112. doi:https://doi.org/10.1016/j.biosystemseng.2014.06.006

Gansbauer, A., Bechtold, U., & Wilfing, H. (2016). SoFISHticated policy - social perspectives on the fish conflict in the Northeast Atlantic. *Marine Policy, 66*, 93-103. doi:https://doi.org/10.1016/j.marpol.2016.01.014

Garcia-Duran, P., Casanova, M., & Eliasson, L. J. (2019). International institutions and domestic policy: assessing the influence of multilateral pressure on the European Union's agricultural policy. *Journal of European Integration, 41*(2), 131-146. doi:https://doi.org/10.1080/07036337.2018.1553963

Garcia-Duran, P., Kienzle, B., & Millet, M. (2014). Revisiting european influence: The case of agricultural trade negotiations. *Journal of World Trade, 48*(5), 1057-1076. Retrieved from http://www.kluwerlawonline.com/abstract.php?area=Journals&id=TRAD2014037

García-Enríquez, J., Arteche, J., & Murillas-Maza, A. (2017). Testing for substitutability in the mackerel market: a new method using fractional cointegration. *Applied Economics, 49*(39), 3912-3926. doi:http://dx.doi.org/10.1080/00036846.2016.1273490

Garcia-Herrero, I., Hoehn, D., Margallo, M., Laso, J., Bala, A., Batlle-Bayer, L., . . . Aldaco, R. (2018). On the estimation of potential food waste reduction to support sustainable production and consumption policies. *Food Policy, 80*, 24-38. doi:https://doi.org/10.1016/j.foodpol.2018.08.007

Gardebroek, C., Reimer, J. J., & Baller, L. (2017). The Impact of Biofuel Policies on Crop Acreages in Germany and France. *Journal of Agricultural Economics, 68*(3), 839-860. doi:http://dx.doi.org/10.1111/1477-9552.12218

Gardi, C., Panagos, P., Liedekerke, M. V., Bosco, C., & Brogniez, D. D. (2015). Land take and food security: assessment of land take on the agricultural production in Europe. *Journal of Environmental Planning and Management, 58*(5), 898-912. doi:http://dx.doi.org/10.1080/09640568.2014.899490

Garza-Gil, M. D., Amigo-Dobano, L., & Suris-Regueiro, J. C. (2017). Institutions and

governance in the European Common Fisheries Policy: An empirical study of Spanish fishers attitudes toward greater participation. *Marine Policy, 79*, 33-39. doi:https://doi.org/10.1016/j.marpol.2017.02.004

Garza-Gil, M. D., & Varela-Lafuente, M. M. (2015). The preferences of the Spanish fishermen and their contribution on reform of the European Common Fisheries Policy. *Ocean & Coastal Management, 116*, 291-299. doi:https://doi.org/10.1016/j.ocecoaman.2015.07.031

Gephart, J. A., Deutsch, L., Pace, M. L., Troell, M., & Seekell, D. A. (2017). Shocks to fish production: Identification, trends, and consequences. *Global Environmental Change, 42*, 24. doi:https://doi.org/10.1016/j.gloenvcha.2016.11.003

Ghisellini, P., Setti, M., & Ulgiati, S. (2016). Energy and land use in worldwide agriculture: an application of life cycle energy and cluster analysis. *Environment, Development and Sustainability, 18*(3), 799-837. doi:https://doi.org/10.1007/s10668-015-9678-2

Giannakis, E., & Bruggeman, A. (2015). The highly variable economic performance of European agriculture. *Land Use Policy, 45*, 26-35. doi:https://doi.org/10.1016/j.landusepol.2014.12.009

Glumac, R., Franic, R., & Udovc, A. (2017). Stakeholders' expectations from the agri-environmental programme in Slovenia and Croatia. *Journal of Environmental Planning and Management, 60*(1), 67-91. doi:http://dx.doi.org/10.1080/09640568.2016.1140633

Golas, Z. (2014). Profitability of agricultural work in the EU countries. [Dochodowosc pracy w rolnictwie krajów Unii Europejskiej]. *Wies i rolnictwo, 164*, 7-23. Retrieved from http://kwartalnik.irwirpan.waw.pl/54/profitability-of-agricultural-work-in-the-eu-countries

Gonçlaves, A., Morganti, E., & Blanquart, C. (2014). Supplying cities by short food supply chains: a challenge of reconciling public policy with actors' preferences. [Alimenter les villes par les circuits courts : le défi de la conciliation des politiques publiques et des logiques d'acteurs]. *Géocarrefour, 89*(4), 247-259. doi:https://doi.org/10.4000/geocarrefour.9581

Goryńska-Goldmann, E. (2017). Building competitive advantage through product innovations based on raw material modifications. *Journal of Agribusiness and Rural Development, 46*(4), 755. doi:https://doi.org/10.17306/J.JARD.2017.00341

Goti-Aralucea, L. (2019). Assessing the social and economic impact of small scale fisheries management measures in a marine protected area with limited data. *Marine Policy, 101*, 246-256. doi:https://doi.org/10.1016/j.marpol.2017.10.039

Grainger, M. J., Aramyan, L., Logatcheva, K., Piras, S., Righi, S., Setti, M., . . . Stewart, G. B. (2018). The use of systems models to identify food waste drivers. *Global Food Security, 16*, 1-8. doi:https://doi.org/10.1016/j.gfs.2017.12.005

Grasseni, C. (2014). Food Activism in Italy as an Anthropology of Direct Democracy. *Anthropological Journal of European Cultures, 23*(1), 77-98. doi:https://doi.org/10.3167/ajec.2014.230105

Groesbeck, A. S., Rowell, K., Lepofsky, D., & Salomon, A. K. (2014). Ancient Clam Gardens Increased Shellfish Production: Adaptive Strategies from the Past Can Inform Food Security Today. *Plos One, 9*(3). doi:https://doi.org/10.1371/journal.pone.0091235

Guastella, G., Moro, D., Sckokai, P., & Veneziani, M. (2018). The Capitalisation of CAP Payments into Land Rental Prices: A Panel Sample Selection Approach. *Journal of Agricultural Economics, 69*(3), 688-704. doi:http://dx.doi.org/10.1111/1477-9552.12258

Gulay Cetinkaya, C. (2018). Revealing major terrestrial- and marine species-based provisioning ecosystem services provided by the socio-ecological production landscapes and seascapes of Lefke Region in North Cyprus. *Environment, Development and Sustainability, 20*(1), 197-221. doi:http://dx.doi.org/10.1007/s10668-016-9877-5

Haby, M. M., Chapman, E., Clark, R., & Galvão, L. A. C. (2016). Agriculture, food, and nutrition interventions that facilitate sustainable food production and impact health: an overview of systematic reviews. [Intervenciones agropecuarias, alimentarias y nutricionales que favorecen la producción sostenible de alimentos e inciden en la salud: síntesis de revisiones sistemáticas]. *Revista Panamericana de*

Salud Pública, 40(1), 48. Retrieved from https://www.scielosp.org/article/rpsp/2016.v40n1/48-56/en/

Hagedorn, K. (2014). Post-socialist farmers' cooperatives in Central and Eastern Europe. *Annales de l'économie publique, sociale et coopérative, 85*(4), 555-577. doi:http://dx.doi.org/10.1111/apce.12051

Haller, A.-P. (2014). New directions for agricultural policies in the European Union's emerging states. *Economics, management and financial markets, 9*(4), 456-461. Retrieved from https://ssrn.com/abstract=3002295

Hammouda, M., Wery, J., Darbin, T., & Belhouchette, H. (2018). Agricultural Activity concept for simulating strategic agricultural production decisions: Case study of weed resistance to herbicide treatments in South-West France. *Computers and Electronics in Agriculture, 155*, 167-179. doi:https://doi.org/10.1016/j.compag.2018.09.036

Harchaoui, S., & Chatzimpiros, P. (2018). Can Agriculture Balance Its Energy Consumption and Continue to Produce Food? A Framework for Assessing Energy Neutrality Applied to French Agriculture. *Sustainability, 10*(12). doi:https://doi.org/10.3390/su10124624

Harmanny, K. S., & Malek, Z. (2019). Adaptations in irrigated agriculture in the Mediterranean region: an overview and spatial analysis of implemented strategies. *Regional Environmental Change, 19*(5), 1401-1416. doi:https://doi.org/10.1007/s10113-019-01494-8

Hart, A. K., McMichael, P., Milder, J. C., & Scherr, S. J. (2016). Multi-functional landscapes from the grassroots? The role of rural producer movements. *Agriculture and Human Values, 33*(2), 305-322. doi:http://dx.doi.org/10.1007/s10460-015-9611-1

Hart, J., Miljkovic, D., & Shaik, S. (2015). The impact of trade openness on technical efficiency in the agricultural sector of the European Union. *Applied Economics, 47*(12), 1230-1247. doi:http://dx.doi.org/10.1080/00036846.2014.993134

Hatchard, J. L., & Gray, T. S. (2014). From RACs to Advisory Councils: Lessons from North Sea discourse for the 2014 reform of the European Common Fisheries Policy. *Marine Policy, 47*, 87-93. doi:https://doi.org/10.1016/j.marpol.2014.02.015

Haugen, A. S., Bremer, S., & Kaiser, M. (2017). Weaknesses in the ethical framework of aquaculture related standards. *Marine Policy, 75*, 11-18. doi:https://doi.org/10.1016/j.marpol.2016.10.011

Havinga, T., & Verbruggen, P. (2017). Understanding Complex Governance Relationships in Food Safety Regulation: The RIT Model as a Theoretical Lens. *Annals of the American Academy of Political and Social Science, 670*(1), 58-77. doi:http://dx.doi.org/10.1177/0002716216688872

Hazuda, M., Gotra, V., & Hazuda, L. (2017). Advancing the convergence and integration of rural border areas. *Economic Annals-XXI, 162*(11-12), 18-21. doi:https://doi.org/10.21003/ea.V162-04

He, J. (2017). The EU illegal, unreported, and unregulated fishing regulation based on trade and Market-Related measures: Unilateralism or a model law? *Journal of International Wildlife Law and Policy, 20*(2), 168-197. doi:https://doi.org/10.1080/13880292.2017.1346351

Hebinck, A., Galli, F., Arcuri, S., Carroll, B., O'Connor, D., & Oostindie, H. (2018). Capturing change in European food assistance practices: a transformative social innovation perspective. *Local Environment, 23*(4), 398-413. doi:http://dx.doi.org/10.1080/13549839.2017.1423046

Hebinck, A., & Page, D. (2017). Processes of Participation in the Development of Urban Food Strategies: A Comparative Assessment of Exeter and Eindhoven. *Sustainability, 9*(6). doi:https://doi.org/10.3390/su9060931

Hecht, J., Moakes, S., & Offermann, F. (2016). Redistribution of Direct Payments to Permanent Grasslands: Intended and Unintended Impacts. *EuroChoices, 15*(3), 25-32. doi:https://doi.org/10.1111/1746-692X.12099

Heise, H., Schwarze, S., & Theuvsen, L. (2018). Economic effects of participation in animal welfare programmes: does it pay off for farmers? *Animal Welfare, 27*(2), 167-179. doi:https://doi.org/10.7120/09627286.27.2.167

Hermann, D., Sauthoff, S., & Musshoff, O. (2017). Ex-ante evaluation of policy measures to enhance carbon sequestration in agricultural soils. *Ecological Economics,*

140, 241-250. doi:https://doi.org/10.1016/j.ecolecon.2017.05.018

Hernández Cáceres, D. (2017). Las entidades asociativas prioritarias como instrumento de integración de empresas agroalimentarias. Dificultades y oportunidades de su reconocimiento. [Associative priority entities as an instrument for the integration of agrifood companies. Difficulties and opportunities of its recognition]. *REVESCO : Revista de Estudios Cooperativos, 126*, 198-211. doi:http://dx.doi.org/10.5209/REVE.59766

Herrera-Reyes, A. T., Carmenado, I. D., & Martinez-Almela, J. (2018). Project-Based Governance Framework for an Agri-Food Cooperative. *Sustainability, 10*(6). doi:https://doi.org/10.3390/su10061881

Hien, H. T., Franke, C., Piorr, A., Lange, A., & Zasada, I. (2014). Target groups of rural development policies: development of a survey-based farm typology for analysing self-perception statements of farmers. *Outlook on agriculture, 43*(2), 75-84. doi:https://doi.org/10.5367/oa.2014.0165

Hinchliffe, S., & Ward, K. J. (2014). Geographies of folded life: How immunity reframes biosecurity. *Geoforum, 53*, 136-144. doi:https://doi.org/10.1016/j.geoforum.2014.03.002

Hochedez, C. (2016). Les réseaux d'agriculteurs biologiques : Des incubateurs d'innovation dans les campagnes périurbaines suédoises. [Organic farmers' networks and their role as innovation incubator in Swedish peri-urban countrysides]. Annales de Géographie(712), 615. doi:https://doi.org/10.3917/ag.712.0615

Höhler, J., & Kühl, R. (2014). Position and performance of farmer cooperatives in the food supply chain of the eu-27. *Annals of Public and Cooperative Economics, 85*(4), 579-595. doi:https://doi.org/10.1111/apce.12052

Holma, M., Lindroos, M., Romakkaniemi, A., & Oinonen, S. (2019). Comparing economic and biological management objectives in the commercial Baltic salmon fisheries. *Marine Policy, 100*, 207-214. doi:https://doi.org/10.1016/j.marpol.2018.11.011

Homyn, I. (2017). Регулювання розвитку аграрного сектору: фінансовий аспект. [Regulation of development of the agricultural sector: the financial aspect Регулирование развития аграрного сектора: финансовый аспект]. *Finansi Ukraini, 3*, 86-95. Retrieved from http://nbuv.gov.ua/UJRN/Fu_2017_3_8

Hubbard, C., Mishev, P., Ivanova, N., & Luca, L. (2014). Semi-subsistence Farming in Romania and Bulgaria: A Survival Strategy? *EuroChoices, 13*(1), 46-51. doi:https://doi.org/10.1111/1746-692X.12052

Inghelbrecht, L., Dessein, J., & Van Huylenbroeck, G. (2014). The non-GM crop regime in the EU: How do Industries deal with this wicked problem? *NJAS - Wageningen Journal of Life Sciences, 70*, 103-112. doi:https://doi.org/10.1016/j.njas.2014.02.002

Ingram, J., Dwyer, J., Gaskell, P., Mills, J., & Wolf, P. D. (2018). Reconceptualising translation in agricultural innovation: A co-translation approach to bring research knowledge and practice closer together. *Land Use Policy, 70*, 38-51. doi:https://doi.org/10.1016/j.landusepol.2017.10.013

Ingram, J., Mills, J., Dibari, C., Ferrise, R., Ghaley, B. B., Hansen, J. G., . . . Sánchez, B. (2016). Communicating soil carbon science to farmers: Incorporating credibility, salience and legitimacy. *Journal of Rural Studies, 48*, 115. doi:https://doi.org/10.1016/j.jrurstud.2016.10.005

Ingram, J., Mills, J., Frelih-Larsen, A., Davis, M., Merante, P., Ringrose, S., . . . Karaczun, Z. (2014). Manageing Soil Organic Carbon: A Farm Perspective. *EuroChoices, 13*(2), 12-19. doi:https://doi.org/10.1111/1746-692X.12057

Jarrige, F., & Perrin, C. (2017). L'agriparc : une innovation pour l'agriculture des territoires urbains ?: RERU RERU. [Innovations for agriculture in urban areas ? The example of an agriparc]. **Revue d'Économie Régionale et Urbaine**(3), 537. Retrieved from https://www.revues.armand-colin.com/eco-sc-politique/revue-deconomie-regionale-urbaine/revue-deconomie-regionale-urbaine-ndeg-32017/lagriparc-innovation-lagriculture-sterritoires-urbains

Jones, P., Lensink, J., Mancini, M. C., & Tranter, R. (2017). Designing an Institutional Network for Improving Farm Animal Welfare in the EU. *Journal of Common Market Studies, 55*(5), 1081-1093. doi:http://dx.doi.org/10.1111/jcms.12547

Joseph, S., Lavoie, N., & Caswell, J. (2014). Implementing cool: comparative welfare

effects of different labeling schemes. *Food Policy, 44*, 14-25. doi:http://dx.doi.org/10.1016/j.foodpol.2013.10.008

Juárez, P., Trentini, F., & Becerra, L. (2018). Transformative Social Innovation for Food Sovereignty: The Disruptive Alternative. *International Journal of Sociology of Agriculture and Food, 24*(3), 318. Retrieved from https://www.isa-agrifood.com/ijsaf-v24-3-318

Juerges, N., Hagemann, N., & Bartke, S. (2018). A tool to analyse instruments for soil governance: the REEL-framework. *Journal of Environmental Policy & Planning, 20*(5), 617-631. doi:http://dx.doi.org/10.1080/1523908X.2018.1474731

Juhola, S., Klein, N., Käyhkö, J., & Neset, T.-S. S. (2017). Climate change transformations in Nordic agriculture? *Journal of Rural Studies, 51*, 28. doi:https://doi.org/10.1016/j.jrurstud.2017.01.013

Kalaitzandonakes, N., Kaufman, J., & Miller, D. (2014). Potential economic impacts of zero thresholds for unapproved GMOs: the EU case. *Food Policy, 45*, 146-157. doi:http://dx.doi.org/10.1016/j.foodpol.2013.06.013

Kalfagianni, A., & Kuik, O. (2017). Seeking optimality in climate change agri-food policies: stakeholder perspectives from Western Europe. *Climate Policy, 17*(sup1), 72. doi:http://dx.doi.org/10.1080/14693062.2016.1244508

Karabulut, A. A., Udias, A., & Vigiak, O. (2019). Assessing the policy scenarios for the Ecosystem Water Food Energy (EWFE) nexus in the Mediterranean region. *Ecosystem Services, 35*, 231-240. doi:https://doi.org/10.1016/j.ecoser.2018.12.013

Keating, M., & Wilson, A. (2014). Regions with regionalism? The rescaling of interest groups in six European states. *European journal of political research, 53*(4), 840-857. doi:http://dx.doi.org/10.1111/1475-6765.12053

Keller, R., Keune, H., & Maynard, S. (2018). Where do IPBES delegates in Europe see challenges, needs, gaps and opportunities in policy uptake of "Nature's contributions to people"? *Innovation, 31*(sup1), 116. doi:http://dx.doi.org/10.1080/13511610.2017.1361814

Keller, R., & Vance, C. (2017). Linked to Landscape: Assessing Urbanization in Germany through Landscape and Economic Factors. *Professional Geographer, 69*(3), 424-437. doi:http://dx.doi.org/10.1080/00330124.2016.1266946

Khan, S. S., Timotijevic, L., Newton, R., Coutinho, D., Llerena, J. L., Ortega, S., . . . Hadwiger, K. (2016). The framing of innovation among European research funding actors: Assessing the potential for 'responsible research and innovation' in the food and health domain. *Food Policy, 62*, 78. doi:http://dx.doi.org/10.1016/j.foodpol.2016.04.004

Kirchner, M., Schmidt, J., Kindermann, G., Kulmer, V., Mitter, H., Prettenthaler, F., . . . Schmid, E. (2015). Ecosystem services and economic development in Austrian agricultural landscapes - The impact of policy and climate change scenarios on trade-offs and synergies. *Ecological Economics, 109*, 161-174. doi:https://doi.org/10.1016/j.ecolecon.2014.11.005

Kirezieva, K., Jacxsens, L., Hagelaar, G. J. L. F., Boekel, M. A. J. S. V., Uyttendaele, M., & Luning, P. A. (2015). Exploring the influence of context on food safety management: case studies of leafy greens production in Europe. *Food Policy, 51*, 158-170. doi:http://dx.doi.org/10.1016/j.foodpol.2015.01.005

Klimek, B., & Hansen, H. O. (2017). Food industry structure in Norway and Denmark since the 1990s: Path dependency and institutional trajectories in Nordic food markets. *Food Policy, 69*, 110-122. doi:https://doi.org/10.1016/j.foodpol.2017.03.009

Kneafsey, M., Owen, L., Bos, E., Broughton, K., & Lennartsson, M. (2017). Capacity building for food justice in England: the contribution of charity-led community food initiatives. *Local Environment, 22*(5), 621-634. doi:https://doi.org/10.1080/13549839.2016.1245717

Knickel, K., & Maréchal, A. (2018). Stimulating the social and environmental benefits of agriculture and forestry: An EU-based comparative analysis. *Land Use Policy, 73*, 320-330. doi:https://doi.org/10.1016/j.landusepol.2017.12.064

Knickel, K., Redman, M., Darnhofer, I., Ashkenazy, A., Calvão Chebach, T., Šūmane, S., . . . Rogge, E. (2018). Between aspirations and reality: Making farming, food systems and rural areas more resilient, sustainable and equitable. *Journal of Rural Studies, 59*, 197-210. doi:https://doi.org/10.1016/j.jrurstud.2017.04.012

Knierim, A., Boenning, K., Caggiano, M., Cristóvão, A., Dirimanova, V., Koehnen, T., . . . Prager, K. (2015). The AKIS concept and its relevance in selected EU member states. *Outlook on agriculture, 44*(1), 29-36. doi:http://dx.doi.org/10.5367/oa.2015.0194

Knierim, A., Labarthe, P., Laurent, C., Prager, K., Kania, J., Madureira, L., & Ndah, T. H. (2017). Pluralism of agricultural advisory service providers – Facts and insights from Europe. *Journal of Rural Studies, 55*, 45-58. doi:https://doi.org/10.1016/j.jrurstud.2017.07.018

Kolev, G., Matthes, J., Egger, P., Erhardt, K., Sieksmeier, N., Willmann, G., & Raza, W. (2016). TTIP - Problems and Opportunitie. [TTIP - Probleme und Chancen]. *Wirtschaftsdienst, 96*(3), 159-171. doi:https://doi.org/10.1007/s10273-016-1952-x

Kopoteva, I., & Nikula, J. (2014). From social innovation to innovation systems: LEADER in European and Russian rural areas. [Ot sotsial'nykh innovatsii k innovatsionnym sistemam. Leader na evropeiskikh i rossiiskikh sel'skikh territoriiakh]. *Mir Rossii, 23*(4), 95-123.

Kotyza, P., & Tomšík, K. (2014). Effects of public support on producer groups establishment in the Czech Republic and Slovakia. *Agris On-line Papers in Economics and Informatics, 6*(2), 37-47. Retrieved from https://online.agris.cz/archive/2014/2/5

Krause, G., Brugere, C., Diedrich, A., Ebeling, M. W., Ferse, S. C. A., Mikkelsen, E., . . . Troell, M. (2015). A revolution without people? Closing the people-policy gap in aquaculture development. *Aquaculture, 447*, 44-55. doi:https://doi.org/10.1016/j.aquaculture.2015.02.009

Kropp, C. (2018). Urban Food Movements and Their Transformative Capacities. *International Journal of Sociology of Agriculture and Food, 24*(3), 413. Retrieved from https://www.isa-agrifood.com/ijsaf-v24-413-430

Kuokkanen, A., Mikkila, M., Kuisma, M., Kahiluoto, H., & Linnanen, L. (2017). The need for policy to address the food system lock-in: A case study of the Finnish context. *Journal of Cleaner Production, 140*, 933-944. doi:https://doi.org/10.1016/j.jclepro.2016.06.171

Lagares, E. C., & Ordaz, F. G. (2014). Fisheries structural policy in the European Union: A critical analysis of a subsidised sector. *Ocean & Coastal Management, 102*, 200-211. doi:https://doi.org/10.1016/j.ocecoaman.2014.10.001

Lamine, C., Bui, S., & Ollivier, G. (2015). Pour une approche systémique et pragmatique de la transition écologique des systèmes agri-alimentaires/Towards a systemic and pragmatic approach of ecological transitions within agrifood systems/Para una aproximación sistémica y pragmática de la transición ecológica de los sistemas agro-alimentarios. *Cahiers de Recherche Sociologique*(58), 95. doi:https://doi.org/10.7202/1036208ar

Läpple, D., & Hennessy, T. (2015a). Assessing the Impact of Financial Incentives in Extension Programmes: Evidence From Ireland. *Journal of Agricultural Economics, 66*(3), 781-795. doi:http://dx.doi.org/10.1111/1477-9552.12108

Läpple, D., & Hennessy, T. (2015b). Exploring the Role of Incentives in Agricultural Extension Programs. *Applied Economic Perspectives and Policy, 37*(3), 403-417. doi:https://doi.org/10.1093/aepp/ppu037

Läpple, D., Renwick, A., & Thorne, F. (2015). Measuring and understanding the drivers of agricultural innovation: evidence from Ireland. *Food Policy, 51*, 1-8. doi:http://dx.doi.org/10.1016/j.foodpol.2014.11.003

Le Floc'h, P., Murillas, A., Aranda, M., Daurès, F., Fitzpatrick, M., Guyader, O., . . . Marchal, P. (2015). The regional management of fisheries in European Western Waters. *Marine Policy, 51*, 375-384. doi:https://doi.org/10.1016/j.marpol.2014.09.022

Leadbitter, D., & Benguerel, R. (2014). Sustainable tuna - can the marketplace improve fishery management? *Business Strategy and the Environment, 23*(6), 417-432. doi:http://dx.doi.org/10.1002/bse.1794

Lembo, G., Jokumsen, A., Spedicato, M. T., Facchini, M. T., & Bitetto, I. (2018). Assessing stakeholder's experience and sensitivity on key issues for the economic growth of organic aquaculture production. *Marine Policy, 87*, 84-93. doi:https://doi.org/10.1016/j.marpol.2017.10.005

Liesivaara, P., & Myyrä, S. (2015). Feasibility of an Area-Yield Insurance Scheme in the EU: Evidence from Finland. *EuroChoices, 14*(3), 28-33. doi:https://doi.org/10.1111/1746-692X.12096

Little, D. C., Young, J. A., Zhang, W. B., Newton, R. W., Al Mamun, A., & Murray, F. J. (2018). Sustainable intensification of aquaculture value chains between Asia and Europe: A framework for understanding impacts and challenges. *Aquaculture, 493*, 338-354. doi:https://doi.org/10.1016/j.aquaculture.2017.12.033

Lopes, A. S., Ferreira, J. G., Vale, C., & Johansen, J. (2017). The mass balance of production and consumption: Supporting policy-makers for aquatic food security. *Estuarine Coastal and Shelf Science, 188*, 212-223. doi:https://doi.org/10.1016/j.ecss.2017.02.022

Lord, N., Spencer, J., Albanese, J., & Flores Elizondo, C. (2017). In pursuit of food system integrity: the situational prevention of food fraud enterprise. *European Journal on Criminal Policy and Research, 23*(4), 483-501. doi:http://dx.doi.org/10.1007/s10610-017-9352-3

Madau, F. A., Furesi, R., & Pulina, P. (2014). An Analysis of Sustainability Policies in European Agriculture in the Long Term: Methods and Materials Using the FEEM Indicators. *Agroecology and Sustainable Food Systems, 38*(4), 485-501. doi:https://doi.org/10.1080/21683565.2013.841608

Mahon, N., Crute, I., Di Bonito, M., Simmons, E. A., & Islam, M. M. (2018). Towards a broad-based and holistic framework of Sustainable Intensification indicators. *Land Use Policy, 77*, 576-597. doi:https://doi.org/10.1016/j.landusepol.2018.06.009

Mahy, L., Dupeux, B., Van Huylenbroeck, G., & Buysse, J. (2015). Simulating farm level response to crop diversification policy. *Land Use Policy, 45*, 36-42. doi:https://doi.org/10.1016/j.landusepol.2015.01.003

Majer, S., Wurster, S., Moosmann, D., Ladu, L., Sumfleth, B., & Thrän, D. (2018). Gaps and research demand for sustainability certification and standardisation in a sustainable bio-based economy in the EU. *Sustainability (Switzerland), 10*(7). doi:https://doi.org/10.3390/su10072455

Maltseva, V. A., & Chupina, D. A. (2019). Barriers in the EU-US agricultural trade within TTIP agenda. *World Economy and International Relations, 63*(2), 36-45. doi:https://doi.org/10.20542/0131-2227-2019-63-2-36-45

Malvarosa, L., Murillas, A., Lehuta, S., Nielsen, J. R., Macher, C., Goti, L., . . . Thøgersen, T. (2019). Sustainability Impact Assessment (SIA) in fisheries: Implementation in EU fishing regions. *Marine Policy, 101*, 63-79. doi:https://doi.org/10.1016/j.marpol.2018.11.039

Mandolesi, S., Nicholas, P., Naspetti, S., & Zanoli, R. (2015). Identifying viewpoints on innovation in low-input and organic dairy supply chains: A Q-methodological study. *Food Policy, 54*, 25-34. doi:https://doi.org/10.1016/j.foodpol.2015.04.008

Mangi, S. C., Kenny, A., Readdy, L., Posen, P., Ribeiro-Santos, A., Neat, F. C., & Burns, F. (2016). The economic implications of changing regulations for deep sea fishing under the European Common Fisheries Policy: UK case study. *Science of the Total Environment, 562*, 260-269. doi:https://doi.org/10.1016/j.scitotenv.2016.03.218

Markard, J., Wirth, S., & Truffer, B. (2016). Institutional dynamics and technology legitimacy - A framework and a case study on biogas technology. *Research policy, 45*(1), 330. doi:https://doi.org/10.1016/j.respol.2015.10.009

Marsden, T., Moragues-Faus, A., & Sonnino, R. (2019). Reproducing vulnerabilities in agrifood systems: Tracing the links between governance, financialization, and vulnerability in Europe post 2007–2008. *Journal of Agrarian Change, 19*(1), 82-100. doi:http://dx.doi.org/10.1111/joac.12267

Martin, D. S., Orive, M., Martinez, E., Inarra, B., Ramos, S., Gonzalez, N., . . . Zufia, J. (2017). Decision Making Supporting Tool Combining AHP Method with GIS for Implementing Food Waste Valorisation Strategies. *Waste and Biomass Valorization, 8*(5), 1555-1567. doi:https://doi.org/10.1007/s12649-017-9976-z

Martin, M., & Danielsson, L. (2016). Environmental Implications of Dynamic Policies on Food Consumption and Waste Handling in the European Union. *Sustainability, 8*(3). doi:https://doi.org/10.3390/su8030282

Martinho, V. J. P. D. (2017). Efficiency, total factor productivity and returns to scale in a sustainable perspective: An analysis in the European Union at farm and regional level. *Land Use Policy, 68*, 232-245. doi:https://doi.org/10.1016/j.landusepol.2017.07.040

Marty, P. (2014). From School Catering to the Integration of Agriculture into a Territorial

Project: Towards the Urban Area Becoming a Normative Actor in Agricultural Issues. [De la restauration scolaire à l'intégration de l'agriculture dans le projet de territoire : vers une ville acteur normatif de la question agricole ?]. *Géocarrefour, 89*(1-2), 135-143. Retrieved from https://journals.openedition.org/geocarrefour/9459

Maye, D., & Duncan, J. (2017). Understanding Sustainable Food System Transitions: Practice, Assessment and Governance. *Sociologia Ruralis, 57*(3), 267-273. doi:http://dx.doi.org/10.1111/soru.12177

Mazé, A., Aït-Aïssa, M., Mayer, S., & Verjux, N. (2016). Third-Party Certifications and the Role of Auditing Policies in Sustainability. *Organization & Environment, 29*(3), 308-331. doi:http://dx.doi.org/10.1177/1086026615628034

McAdam, R., Quinn, B., McKitterick, L., Dunn, A., & Patterson, D. (2015). Case study: development of an integrated policy and support programme micro rural food enterprises in an EU peripheral region. *International journal of entrepreneurship and innovation, 16*(2), 145-150. doi:https://doi.org/10.5367/ijei.2015.0184

McClatchey, W., Reedy, D., Savo, V., Verde, A., & Rodríguez, J. F. (2014). The long-term investment strategy: orchardists observing and reacting to change no access. *Journal of ethnobiology, 34*(3), 335-358. doi:https://doi.org/10.2993/0278-0771-34.3.335

McKelvey, M., & Ljungberg, D. (2017). How public policy can stimulate the capabilities of firms to innovate in a traditional industry through academic engagement: the case of the Swedish food industry. *R & D Management, 47*(4), 534-544. doi:https://doi.org/10.1111/radm.12224

Menditto, A., Anniballi, F., Auricchio, B., De Medici, D. D., & Stacchini, P. (2017). Regulation (EU) 2017/625 and the 'Union agri-food chain legislation': A new comprehensive approach in line with the 'One Health' Paradigm? *European Food and Feed Law Review, 12*(5), 406-412. Retrieved from https://effl.lexxion.eu/article/EFFL/2017/5/5

Meyer, R. (2017). Bioeconomy Strategies: Contexts, Visions, Guiding Implementation Principles and Resulting Debates. *Sustainability, 9*(6). doi:https://doi.org/10.3390/su9061031

Mickiewicz, B., & Lisiak, S. (2017). Polish organic farming on the background of the European Union in light of new regulations. [Polskie rolnictwo ekologiczne na tle unii europejskiej w Świetle nowych regulacji prawnych]. *Journal of Agribusiness and Rural Development, 43*(1). doi:https://doi.org/10.17306/J.JARD.2017.00267

Mili, S. (2016). Value chain dynamics of agri-food exports from southern mediterranean to the European union: End-market perspective. *International Journal on Food System Dynamics, 7*(4), 311-327. doi:https://doi.org/10.18461/ijfsd.v7i4.743

Mili, S., Judez, L., & De Andres, R. (2017). Investigating the impacts of EU CAP reform 2014-20 and developments in sustainable olive farming systems. *New Medit, 16*(3), 2-10. Retrieved from https://newmedit.iamb.it/2017/12/08/investigating-the-impacts-of-eu-cap-reform-2014-20-and-developments-in-sustainable-olive-farming-systems/

Miller, A. M. M., Bush, S. R., & Mol, A. P. J. (2014). Power Europe: EU and the illegal, unreported and unregulated tuna fisheries regulation in the West and Central Pacific Ocean. *Marine Policy, 45*, 138-145. doi:https://doi.org/10.1016/j.marpol.2013.12.009

Mohr, M., & Schlich, M. (2016). Socio-demographic basic factors of German customers as predictors for sustainable consumerism regarding foodstuffs and meat products. *International Journal of Consumer Studies, 40*(2), 158-167. doi:http://dx.doi.org/10.1111/ijcs.12239

Monteleone, M., Cammerino, A. R. B., & Libutti, A. (2018). Agricultural "greening" and cropland diversification trends: Potential contribution of agroenergy crops in Capitanata (South Italy). *Land Use Policy, 70*, 591-600. doi:https://doi.org/10.1016/j.landusepol.2017.10.038

Moragues-Faus, A., & Carroll, B. (2018). Reshaping urban political ecologies: an analysis of policy trajectories to deliver food security. *Food Security, 10*(6), 1337-1351. doi:https://doi.org/10.1007/s12571-018-0855-7

Moragues-Faus, A., Sonnino, R., & Marsden, T. (2017). Exploring European food system vulnerabilities: Towards integrated food security governance. *Environmental Science and Policy, 75*, 184-215. doi:https://doi.org/10.1016/j.envsci.2017.05.015

Morkūnas, M., Volkov, A., Bilan, Y., & Raišienė, A. G. (2018). The role of government in forming agricultural policy: Economic resilience measuring index exploited. *Administratie si Management Public, 2018*(31), 111-131. Retrieved from http://www.ramp.ase.ro/en/_data/files/articole/2018/31-08.pdf

Morris, C., Kirwan, J., & Lally, R. (2014). Less Meat Initiatives: An Initial Exploration of a Diet-focused Social Innovation in Transitions to a More Sustainable Regime of Meat Provisioning. *International Journal of Sociology of Agriculture and Food, 21*(2), 189-208. Retrieved from https://www.isa-agrifood.com/ijsaf-v21-2-189-208

Morrissey, K. (2014). Using secondary data to examine economic trends in a subset of sectors in the English marine economy: 2003-2011. *Marine Policy, 50*(PA), 135-141. doi:https://doi.org/10.1016/j.marpol.2014.05.018

Moruzzi, R., & Sirieix, L. (2015). Paradoxes of sustainable food and consumer coping strategies: a comparative study in France and Italy. *International Journal of Consumer Studies, 39*(5), 525-534. doi:https://doi.org/10.1111/ijcs.12228

Moschitz, H., & Home, R. (2014). The challenges of innovation for sustainable agriculture and rural development: integrating local actions into European policies with the reflective learning methodology. *Action research, 12*(4), 392-409. doi:http://dx.doi.org/10.1177/1476750314539356

Mouysset, L. (2014). Agricultural public policy: green or sustainable? *Ecological Economics, 102*, 15-23. doi:http://dx.doi.org/10.1016/j.ecolecon.2014.03.004

Mrówczynska-Kaminska, A. (2014). Selected interdependence intermodal in the agri-food sector in the European Union. [Wybrane współzaleznosci miedzygaleziowe w sektorze rolno-zywnosciowym w krajach Unii Europejskiej]. *Journal of Agribusiness and Rural Development, 2*(32), 99-110. Retrieved from https://doaj.org/article/bc6f3e05e6594f0ebec11ef32976d04f

Mulazzani, L., & Malorgio, G. (2014). The external and commercial dimensions of the EU fisheries policy: An institutional approach applied to the whitefish case. *Marine Policy, 46*, 123-131. doi: https://doi.org/10.1016/j.marpol.2014.01.011

Mylona, K., Maragkoudakis, P., Miko, L., Bock, A. K., Wollgast, J., Caldeira, S., & Ulberth, F. (2018). Viewpoint: Future of food safety and nutrition - Seeking win-wins, coping with trade-offs. *Food Policy, 74*, 143-146. doi: https://doi.org/10.1016/j.foodpol.2017.12.002

Naert, F. (2019). The European Union, fisheries and 'due regard' in the EEZ: Some reflections. *International Journal of Marine and Coastal Law, 34*(1), 89-96. doi: https://doi.org/10.1163/15718085-23341043

Naiki, Y. (2014). The dynamics of private food safety standards: a case study on the regulatory diffusion of GLOBALG.A.P. *International and comparative law quarterly, 63*(1), 137-166. doi:http://dx.doi.org/10.1017/S0020589313000389

Naspetti, S., Mandolesi, S., Buysse, J., Latvala, T., Nicholas, P., Padel, S., . . . Zanoli, R. (2017). Determinants of the acceptance of sustainable production strategies among dairy farmers: Development and testing of a modified technology acceptance model. *Sustainability (Switzerland), 9*(10). doi: https://doi.org/10.3390/su9101805

Nemes, G., & Augustyn, A. M. (2017). Towards inclusive innovation in the european context - the innovation capacity of alternative networks for sustainable agriculture. *Innovation and Development, 7*(1), 133-152. doi: https://doi.org/10.1080/2157930X.2017.1281221

Neuwirth, R. J. (2014). 'Novel food' for thought' on law and policymaking in the global creative economy. *European journal of law and economics, 37*(1), 13-50. doi:http://dx.doi.org/10.1007/s10657-013-9415-y

Niva, M., Mäkelä, J., Kahma, N., & Kjærnes, U. (2014). Eating sustainably? Practices and background factors of ecological food consumption in four Nordic countries. *Journal of consumer policy, 37*(4), 465-484. doi:http://dx.doi.org/10.1007/s10603-014-9270-4

Nocella, G., Romano, D., & Stefani, G. (2014). Consumers' attitudes, trust and willingness to pay for food information. *International Journal of Consumer Studies, 38*(2), 153-165. doi:http://dx.doi.org/10.1111/ijcs.12080

Nunes, J. M. R., Bonito, A., Loures, L., Gama, J., Lopez-Pineiro, A., Pena, D., & Albarran, A. (2017). Effects of the European Union

Agricultural and Environmental Policies in the Sustainability of Most Common Mediterranean Soils. *Sustainability, 9*(8). doi: https://doi.org/10.3390/su9081404

O'Rourke, E., Charbonneau, M., & Poinsot, Y. (2016). High nature value mountain farming systems in Europe: Case studies from the Atlantic Pyrenees, France and the Kerry Uplands, Ireland. *Journal of Rural Studies, 46*, 47-59. doi: https://doi.org/10.1016/j.jrurstud.2016.05.010

O'Keeffe, P. (2017). Contestability in the Australian wheat export industry. *The Journal of Australian Political Economy*(79), 65-86. Retrieved from http://docs.wixstatic.com/ugd/b629ee_626330fba1324de8abb8b24dac160b14.pdf

Olper, A., Curzi, D., & Raimondi, V. (2017). Imported Intermediate Inputs and Firms' Productivity Growth: Evidence from the Food Industry. *Journal of Agricultural Economics, 68*(1), 280-300. doi:http://dx.doi.org/10.1111/1477-9552.12164

Olper, A., Pacca, L., & Curzi, D. (2014). Trade, import competition and productivity growth in the food industry. *Food Policy, 49*(P1), 71-83. doi: https://doi.org/10.1016/j.foodpol.2014.06.004

Olsson, E. G. A. (2018). Urban food systems as vehicles for sustainability transitions. *Bulletin of Geography. Socio-economic Series, 40*(40), 133-144. doi:http://dx.doi.org/10.2478/bog-2018-0019

Pappa, I. C., Iliopoulos, C., & Massouras, T. (2018). What determines the acceptance and use of electronic traceability systems in agri-food supply chains? *Journal of Rural Studies, 58*, 123. doi:https://doi.org/10.1016/j.jrurstud.2018.01.001

Pattara, C., Russo, C., Antrodicchia, V., & Cichelli, A. (2017). Carbon footprint as an instrument for enhancing food quality: overview of the wine, olive oil and cereals sectors. *Journal of the Science of Food and Agriculture, 97*(2), 396-410. doi: https://doi.org/10.1002/jsfa.7911

Pearsall, D. (2016). GM Crop Coexistence in Practice: Delivering Real Choices for Farmers and Consumers. *EuroChoices, 15*(1), 12-16. doi: https://doi.org/10.1111/1746-692X.12113

Pellicer-Sifres, V., Belda-Miquel, S., López-Fogués, A., & Boni Aristizábal, A. (2017). Grassroots Social Innovation for Human Development: An Analysis of Alternative Food Networks in the City of Valencia (Spain). *Journal of Human Development and Capabilities, 18*(2), 258-274. doi:http://dx.doi.org/10.1080/19452829.2016.1270916

Pentz, B., & Klenk, N. (2017). The 'responsiveness gap' in RFMOs: The critical role of decision-making policies in the fisheries management response to climate change. *Ocean & Coastal Management, 145*, 44-51. doi: https://doi.org/10.1016/j.ocecoaman.2017.05.007

Perrone, C. (2016). Grounds for future gendered Urban agendas: Policy patterns and practice implications. *Town Planning Review, 87*(5), 589-606. doi: https://doi.org/10.3828/tpr.2016.36

Petetin, L. (2014). Frankenburgers, risks and approval. *European Journal of Risk Regulation, 5*(2), 168-186. doi:https://doi.org/10.1017/S1867299X00003585

Petetin, L. (2017). The Precautionary Principle and Non-scientific Factors in the Regulation of Biotech Foods. *European Journal of Risk Regulation : EJRR, 8*(1), 106-111. doi:http://dx.doi.org/10.1017/err.2016.18

Pfeiffer, S., Ritter, T., & Oestreicher, E. (2015). Food Insecurity in German households: Qualitative and Quantitative Data on Coping, Poverty Consumerism and Alimentary Participation. *Social Policy and Society, 14*(3), 483-495. doi:http://dx.doi.org/10.1017/S147474641500010X

Piñeiro-Antelo, M. D., Felicidades-Garcia, J., & Lois-Gonzalez, R. C. (2019). Fisheries Policy for Sustainable Development: Coastal Models and Limitations Derived from Participation and Power Organisation in Atlantic FLAGs in Spain and Portugal. *Sociologia Ruralis, 59*(1), 44-65. doi: https://doi.org/10.1111/soru.12228

Pinna, S. (2017). Alternative farming and collective goals: Towards a powerful relationships for future food policies. *Land Use Policy, 61*, 339-352. doi: https://doi.org/10.1016/j.landusepol.2016.11.034

Ploeg, J. D. V. d., Rooij, S. D., Ventura, F., & Milone, P. (2014). Sustaining food production through multifunctionality: the dynamics of large farms in Italy. *Sociologia Ruralis, 54*(3), 303-320. doi:http://dx.doi.org/10.1111/soru.12025

Poláková, J. (2018). Sustainability-risk-resilience: How does the case of the good agricultural and environmental conditions measure up? *Sustainability (Switzerland), 10*(5). doi: https://doi.org/10.3390/su10051614

Pollex, J. (2017). Regulating Consumption for Sustainability? Why the European Union Chooses Information Instruments to Foster Sustainable Consumption. *European Policy Analysis, 3*(1), 185-204. Retrieved from https://onlinelibrary.wiley.com/doi/abs/10.1002/epa2.1005

Pop, Ș. Z., Dracea, R., & Vlădulescu, C. (2018). Comparative Study of Certification Schemes for Food Safety Management Systems in the European Union Context. [Studiu comparativ al schemelor de certificare ale sistemelor de management al siguranței alimentului]. *Amfiteatru Economic, 20*(47), 9-29. Retrieved from https://search.proquest.com/docview/2002003183?accountid=9883

Prosperi, P., Kirwan, J., Maye, D., Bartolini, F., Vergamini, D., & Brunori, G. (2019). Adaptation strategies of small-scale fisheries within changing market and regulatory conditions in the EU. *Marine Policy, 100*, 316-323. doi: https://doi.org/10.1016/j.marpol.2018.12.006

Radovanovic, M., & Lior, N. (2017). Sustainable economic-environmental planning in Southeast Europe - beyond-GDP and climate change emphases. *Sustainable Development, 25*(6), 580-594. doi:http://dx.doi.org/10.1002/sd.1679

Radzymińska, M., & Jakubowska, D. (2018). Local Food Systems, Short Supply Chains and Perception of Local Food by Consumers: A Review and Quantitative Research. *Journal of Agribusiness and Rural Development, 50*(4), 435. doi:http://dx.doi.org/10.17306/J.JARD.2018.00426

Ramcilovic-Suominen, S., & Pulzl, H. (2018). Sustainable development - A 'selling point' of the emerging EU bioeconomy policy framework? *Journal of Cleaner Production, 172*, 4170-4180. doi: https://doi.org/10.1016/j.jclepro.2016.12.157

Remeikiene, R., Rozsa, Z., Gaspareniene, L., & Pěnčík, J. (2018). Assessment of the Impact of the International Trade in Agricultural Products on the EU Economic Growth. *E+M Ekonomie a Management, 21*(4), 33-47. doi:http://dx.doi.org/10.15240/tul/001/2018-4-003

Ringbom, H., & Joas, M. (2018). Concluding article: The changing regulatory landscape of the Baltic Sea – An analysis. *Marine Policy, 98*, 317-324. doi: https://doi.org/10.1016/j.marpol.2018.09.029

Rodríguez-Entrena, M., & Salazar-Ordóñez, M. (2015). Assessing the Potential Effects of the European Union Multilevel Approach to the Coexistence Policy. *European Review, 23*(4), 489-500. doi: https://doi.org/10.1017/S1062798715000332

Rodriguez-Ortega, T., Olaizola, A. M., & Bernues, A. (2018). A novel management-based system of payments for ecosystem services for targeted agri-environmental policy. *Ecosystem Services, 34*, 74-84. doi: https://doi.org/10.1016/j.ecoser.2018.09.007

Rodriguez-Ortega, T., Oteros-Rozas, E., Ripoll-Bosch, R., Tichit, M., Martin-Lopez, B., & Bernues, A. (2014). Applying the ecosystem services framework to pasture-based livestock farming systems in Europe. *Animal, 8*(8), 1361-1372. doi: https://doi.org/10.1017/S1751731114000421

Rose, D. C., Sutherland, W. J., Barnes, A. P., Borthwick, F., Ffoulkes, C., Hall, C., . . . Dicks, L. V. (2019). Integrated farm management for sustainable agriculture: Lessons for knowledge exchange and policy. *Land Use Policy, 81*, 834-842. doi: https://doi.org/10.1016/j.landusepol.2018.11.001

Rouget, N., Lescureux, F., Letniowska-Swiat, S., Schmitt, G., Heude, J., & Pfirsch, T. (2016). Innover pour nourrir la ville : Comment un intermédiaire de la grande distribution renouvelle la pratique des circuits courts (O'Tera dans le Nord-Pas-de-Calais). [Innovations in ways to provide food for towns : How newcomers in the supermarket sector are innovating in short food supply chain practices ? (O'Tera in Nord-Pas-de-Calais, Northern France)]. *Annales de Géographie*(712), 642. Retrieved from https://www.revues.armand-colin.com/geographie/annales-geographie/annales-geographie-ndeg-712-62016/innover-nourrir-ville-comment-intermediaire-grande-distribution-renouvelle-pratique

Rovinskaya, T. L. (2015). Greens in Europe: Incremental growth. *World Economy and International Relations, 59*(12), 58-71. Retrieved from https://www.imemo.ru/en/jour/meimo/index.php?page_id=685&id=7110&jid=7101&jj=49

Rozema, J. G., & Bond, A. J. (2015). Framing effectiveness in impact assessment: Discourse accommodation in controversial infrastructure development. *Environmental Impact Assessment Review, 50*, 66-73. doi: https://doi.org/10.1016/j.eiar.2014.08.001

Ruiu, M. L., Seddaiu, G., & Roggero, P. P. (2017). Developing adaptive responses to contextual changes for sustainable agricultural management: The role of social capital in the Arborea district (Sardinia, Italy). *Journal of Rural Studies, 49*, 162. doi:https://doi.org/10.1016/j.jrurstud.2016.11.017

Rybaczewska-Błazejowska, M., & Gierulski, W. (2018). Eco-efficiency evaluation of agricultural production in the EU-28. *Sustainability (Switzerland), 10*(12). doi: https://doi.org/10.3390/su10124544

Saetnan, E. R., & Kipling, R. P. (2016). Evaluating a European knowledge hub on climate change in agriculture: Are we building a better connected community? *Scientometrics, 109*(2), 1057-1074. doi: https://doi.org/10.1007/s11192-016-2064-5

Salvati, L., Kosmas, C., Kairis, O., Karavitis, C., Acikalin, S., Belgacem, A., . . . Taamallah, H. (2016). Assessing the effectiveness of sustainable land management policies for combating desertification: A data mining approach. *Journal of environmental management, 183*, 754. doi:https://doi.org/10.1016/j.jenvman.2016.09.017

Santeramo, F. G. (2015). Food security composite indices: implications for policy and practice. *Development in practice, 25*(4), 594-600. doi:http://dx.doi.org/10.1080/09614524.2015.1029439

Santos, J. L., Madureira, L., Ferreira, A. C., Espinosa, M., & Palma, S. G. Y. (2016). Building an empirically-based framework to value multiple public goods of agriculture at broad supranational scales. *Land Use Policy, 53*, 56-70. doi: https://doi.org/10.1016/j.landusepol.2015.12.001

Schanes, K., Dobernig, K., & Gozet, B. (2018). Food waste matters - A systematic review of household food waste practices and their policy implications. *Journal of Cleaner Production, 182*, 978-991. doi: https://doi.org/10.1016/j.jclepro.2018.02.030

Schebesta, H. (2018). Revision of the EU Green Public Procurement Criteria for Food Procurement and Catering Services – Certification Schemes as the Main Determinant for Public Sustainable Food Purchases? *European Journal of Risk Regulation : EJRR, 9*(2), 316-328. doi:http://dx.doi.org/10.1017/err.2018.24

Schebesta, H., Verdonk, T., Purnhagen, K. P., & Keirsbilck, B. (2018). Unfair Trading Practices in the Food Supply Chain: Regulating Right? *European Journal of Risk Regulation : EJRR, 9*(4), 690-700. doi:http://dx.doi.org/10.1017/err.2019.2

Schenkelaars, P., & Wesseler, J. (2016). Farm-level GM Coexistence Policies in the EU: Context, Concepts and Developments. *EuroChoices, 15*(1), 5-11. doi: https://doi.org/10.1111/1746-692X.12112

Schermer, M., Darnhofer, I., Daugstad, K., Gabillet, M., Lavorel, S., & Steinbacher, M. (2016). Institutional impacts on the resilience of mountain grasslands: An analysis based on three European case studies. *Land Use Policy, 52*, 382-391. doi: https://doi.org/10.1016/j.landusepol.2015.12.009

Schleyer, C., Gorg, C., Hauck, J., & Winkler, K. J. (2015). Opportunities and challenges for mainstreaming the ecosystem services concept in the multi-level policy-making within the EU. *Ecosystem Services, 16*, 174-181. doi: https://doi.org/10.1016/j.ecoser.2015.10.014

Schmidt, K., & Matthies, E. (2018). Where to start fighting the food waste problem? Identifying most promising entry points for intervention programs to reduce household food waste and overconsumption of food. *Resources Conservation and Recycling, 139*, 1-14. doi: https://doi.org/10.1016/j.resconrec.2018.07.023

Schmidt, N. M. (2019). Late bloomer? Agricultural policy integration and coordination patterns in climate policies. *Journal of European Public Policy*. doi: https://doi.org/10.1080/13501763.2019.1617334

Schneider, M., & Gill, B. (2016). Biotechnology versus agroecology: Entrenchments and surprise at a 2030 forecast scenario workshop. *Science and Public Policy, 43*(1), 74. doi:https://doi.org/10.1093/scipol/scv021

Schramek, J., Rutz, C., & Dwyer, J. (2014). More new wine in the same old bottles? The evolving nature of the CAP reform debate in Europe, and prospects for the future.

Sociologia Ruralis, 54(3), 266-284. doi:http://dx.doi.org/10.1111/soru.12033

Schulze, K., & Tosun, J. (2016). Rival regulatory regimes in international environmental politics: The case of biosafety. *Public Administration, 94*(1), 57-72. doi: https://doi.org/10.1111/padm.12176

Secondi, L., Principato, L., & Laureti, T. (2015). Household food waste behaviour in EU-27 countries: A multilevel analysis. *Food Policy, 56*, 25-40. doi: https://doi.org/10.1016/j.foodpol.2015.07.007

Segrelles Serrano, J. A. (2017). Agricultural subsidies and their repercussions on family farming in the latest Common Agricultural Policy reforms (2014-2020) in the European Union: changing everything so that everything remains the same? *Boletin De La Asociacion De Geografos Espanoles*(74), 161-183. doi: https://doi.org/10.21138/bage.2449

Seidel, K. (2019). The Challenges of Enlargement and GATT Trade Negotiations: Explaining the Resilience of the European Community's Common Agricultural Policy in the 1970s. *International History Review*. doi: https://doi.org/10.1080/07075332.2019.1567570

Serdy, A. (2017). Pacta tertiis and regional fisheries management mechanisms: The IUU fishing concept as an illegitimate short-cut to a legitimate goal. *Ocean Development and International Law, 48*(3-4), 345-364. doi: https://doi.org/10.1080/00908320.2017.1349525

Serrano, A., Guan, D., Duarte, R., & Paavola, J. (2016). Virtual Water Flows in the EU27: A Consumption-based Approach. *Journal of Industrial Ecology, 20*(3), 547-558. doi: https://doi.org/10.1111/jiec.12454

Simboli, A., Taddeo, R., & Morgante, A. (2015). The potential of industrial ecology in agri-food clusters (AFCs): a case study based on valorisation of auxiliary materials. *Ecological Economics, 111*, 65-75. doi:http://dx.doi.org/10.1016/j.ecolecon.2015.01.005

Simola, A. (2018). Government payments, market profits and structural change in agriculture. *Journal of Evolutionary Economics, 28*(4), 837-857. doi:http://dx.doi.org/10.1007/s00191-018-0583-3

Skogstad, G. (2017). Policy feedback and self-reinforcing and self-undermining processes in EU biofuels policy. *Journal of European Public Policy, 24*(1), 21-41. doi:http://dx.doi.org/10.1080/13501763.2015.1132752

Sköld, B., Baltruszewicz, M., Aall, C., Andersson, C., Herrmann, A., Amelung, D., . . . Sauerborn, R. (2018). Household preferences to reduce their greenhouse gas footprint: A comparative study from four European cities. *Sustainability (Switzerland), 10*(11). doi: https://doi.org/10.3390/su10114044

Skourtos, M., Damigos, D., Tsitakis, D., Kontogianni, A., Tourkolias, C., & Streftaris, N. (2015). In Search of Marine Ecosystem Services Values: The V-MESSES Database. *Journal of Environmental Assessment Policy and Management, 17*(4). doi: https://doi.org/10.1142/S1464333215500374

Slatmo, E., Fischer, K., & Roos, E. (2017). The Framing of Sustainability in Sustainability Assessment Frameworks for Agriculture. *Sociologia Ruralis, 57*(3), 378-395. doi: https://doi.org/10.1111/soru.12156

Smith, J., Andersson, G., Gourlay, R., Karner, S., Mikkelsen, B. E., Sonnino, R., & Barling, D. (2016). Balancing competing policy demands: the case of sustainable public sector food procurement. *Journal of Cleaner Production, 112*, 249-256. doi: https://doi.org/10.1016/j.jclepro.2015.07.065

Smith, J., Lang, T., Vorley, B., & Barling, D. (2016). Addressing Policy Challenges for More Sustainable Local-Global Food Chains: Policy Frameworks and Possible Food "Futures". *Sustainability, 8*(4). doi: https://doi.org/10.3390/su8040299

Snoeijs-Leijonmalm, P., Barnard, S., Elliott, M., Andrusaitis, A., Kononen, K., & Sirola, M. (2017). Towards better integration of environmental science in society: Lessons from BONUS, the joint Baltic Sea environmental research and development programme. *Environmental Science and Policy, 78*, 193-209. doi: https://doi.org/10.1016/j.envsci.2017.10.004

Söderström, S., & Kern, K. (2017). The Ecosystem Approach to Management in Marine Environmental Governance: Institutional interplay in the Baltic Sea Region. *Environmental Policy and Governance, 27*(6), 619-631. doi: https://doi.org/10.1002/eet.1775

Sonnino, R. (2016). The new geography of food security: exploring the potential of

urban food strategies. *Geographical Journal, 182*(2), 190-200. doi: https://doi.org/10.1111/geoj.12129

Spoerer, M. (2015). Agricultural protection and support in the European Economic Community, 1962-92: rent-seeking or welfare policy? *European Review of Economic History, 19*, 195-214. doi: https://doi.org/10.1093/ereh/hev001

Stehfest, S., & Henning, K. J. (2014). Legal structures of food safety in Europe: The federal institute for risk assessment's "EU food safety almanac". *European Food and Feed Law Review, 9*(2), 114-119. Retrieved from https://effl.lexxion.eu/article/EFFL/2014/2/277

Stenbæk, J., & Jensen, M. D. (2016). Evading the joint decision trap: The multiannual financial framework 2014-20. *European Political Science Review, 8*(4), 615-635. doi: https://doi.org/10.1017/S175577391500020X

Stewart-Knox, B. J., Markovina, J., Rankin, A., Bunting, B. P., Kuznesof, S., Fischer, A. R. H., . . . Frewer, L. J. (2016). Making personalised nutrition the easy choice: Creating policies to break down the barriers and reap the benefits. *Food Policy, 63*, 134-144. doi: https://doi.org/10.1016/j.foodpol.2016.08.001

Stohr, C., Lundholm, C., Crona, B., & Chabay, I. (2014). Stakeholder participation and sustainable fisheries: an integrative framework for assessing adaptive comanagement processes. *Ecology and Society, 19*(3). doi: https://doi.org/10.5751/ES-06638-190314

Stroß, S. (2017). Royal roads and dead ends. How institutional procedures influence the coherence of European Union policy formulation. *Journal of European Integration, 39*(3), 333-347. doi: https://doi.org/10.1080/07036337.2017.1281260

Stuiver, M., Soma, K., Koundouri, P., van den Burg, S., Gerritsen, A., Harkamp, T., . . . Mohlenberg, F. (2016). The Governance of Multi-Use Platforms at Sea for Energy Production and Aquaculture: Challenges for Policy Makers in European Seas. *Sustainability, 8*(4). doi: https://doi.org/10.3390/su8040333

Šumane, S., Kunda, I., Knickel, K., Strauss, A., Tisenkopfs, T., de los Rios, I., . . . Ashkenazy, A. (2018). Local and farmers' knowledge matters! How integrating informal and formal knowledge enhances sustainable and resilient agriculture. *Journal of Rural Studies, 59*, 232. doi:https://doi.org/10.1016/j.jrurstud.2017.01.020

Sundblad, E.-L., Grimvall, A., Gipperth, L., & Morf, A. (2014). Structuring social data for the marine strategy framework directive. *Marine Policy, 45*, 1-8. doi:http://dx.doi.org/10.1016/j.marpol.2013.11.004

Sutton, A. M., & Rudd, M. A. (2016). Crossing Science-Policy-Societal Boundaries to Reduce Scientific and Institutional Uncertainty in Small-Scale Fisheries. *Environmental Management, 58*(4), 565-584. doi: https://doi.org/10.1007/s00267-016-0737-8

Symes, D., Phillipson, J., & Salmi, P. (2015). Europe's coastal fisheries: instability and the impacts of fisheries policy. *Sociologia Ruralis, 55*(3), 245-257. doi:http://dx.doi.org/10.1111/soru.12096

Szamrowski, P., & Pawlewicz, A. (2014). The functioning and development of the organic food raw materials market under the new financial plan for 2014-2020. [Funkcjonowanie i rozwój rynku ekologicznych surowców zywnosciowych w nowej perspektywie finansowej w latach 2014-2020]. *Wies i rolnictwo, 164*, 175-188. Retrieved from http://kwartalnik.irwirpan.waw.pl/dir_upload/photo/c385cfbf2ef5188d4f92f4b110a9.pdf

Teijo, C. (2018). An analysis of the legal problems arising from the application of exclusivity clauses in the European Union´s dormant fisheries agreements. *Marine Policy, 95*, 174-179. doi: https://doi.org/10.1016/j.marpol.2018.03.007

Thiele, T. (2015). Save the ocean, protect the high seas. [Sauver l'océan, protéger la haute mer]. *Géoéconomie, 76*, 61-77. doi:http://dx.doi.org/10.3917/geoec.076.0061

Thow, A. M., Downs, S. M., Mayes, C., Trevena, H., Waqanivalu, T., & Cawley, J. (2018). Fiscal policy to improve diets and prevent noncommunicable diseases: from recommendations to action. [Politiques fiscales pour l'amélioration des habitudes alimentaires et la prévention des maladies non transmissibles: des recommandations aux actes Налогово-бюджетная политиа, направленная на улучшение рациона и профилатиу неинфекционных заболеваний: от реомендаций действию Una política fiscal para mejorar las dietas y prevenir enfermedades no contagiosas: de la recomendación a la acción]. *World*

Health Organization. Bulletin of the World Health Organization, 96(3), 201-210. doi:http://dx.doi.org/10.2471/BLT.17.195982

Tillie, P., Dillen, K., & Rodríguez-Cerezo, E. (2016). Perception of Coexistence Measures by Farmers in Five European Union Member States. *EuroChoices, 15*(1), 17-23. doi: https://doi.org/10.1111/1746-692X.12114

Timotijevic, L., Khan, S. S., Raats, M., & Braun, S. (2019). Research priority setting in food and health domain: European stakeholder beliefs about legitimacy criteria and processes. *Food Policy, 83*, 116-124. doi: https://doi.org/10.1016/j.foodpol.2018.12.005

Todt, O., & Lujan, J. L. (2017). Health Claims and Methodological Controversy in Nutrition Science. *Risk Analysis, 37*(5), 958-968. doi:http://dx.doi.org/10.1111/risa.12665

Todt, O., & Luján, J. L. (2017). The role of epistemic policies in regulatory science: scientific substantiation of health claims in the European Union. *Journal of Risk Research, 20*(4), 551-565. doi:http://dx.doi.org/10.1080/13669877.2015.1100661

Tudela-Marco, L., Garcia-Alvarez-Coque, J. M., & Martí-Selva, L. (2017). Do EU Member States Apply Food Standards Uniformly? A Look at Fruit and Vegetable Safety Notifications. *Journal of Common Market Studies, 55*(2), 387-405. doi: https://doi.org/10.1111/jcms.12503

Turpin, N., ten Berge, H., Grignani, C., Guzmán, G., Vanderlinden, K., Steinmann, H. H., . . . Baumgarten, A. (2017). An assessment of policies affecting Sustainable Soil Management in Europe and selected member states. *Land Use Policy, 66*, 241-249. doi: https://doi.org/10.1016/j.landusepol.2017.04.001

Tynkkynen, N. (2015). Baltic Sea environment, knowledge and the politics of scale. *Journal of environmental policy and planning, 17*(2), 201-216. doi:http://dx.doi.org/10.1080/1523908X.2014.936582

Uthes, S., Li, F., & Kelly, E. (2017). Does EU rural expenditure correspond to regional development needs? *Land Use Policy, 60*, 267-280. doi: https://doi.org/10.1016/j.landusepol.2016.10.016

van der Sluis, T., Pedroli, B., Kristensen, S. B. P., Lavinia Cosor, G., & Pavlis, E. (2016). Changing land use intensity in Europe – Recent processes in selected case studies. *Land Use Policy, 57*, 777-785. doi: https://doi.org/10.1016/j.landusepol.2014.12.005

van Dijk, D., Hendrix, E. M., Haijema, R., Groeneveld, R. A., & van Ierland, E. C. (2017). An Adjustment Restriction on Fish Quota: Resource Rents, Overcapacity and Recovery of Fish Stock. *Environmental and Resource Economics, 67*(2), 203-230. doi:http://dx.doi.org/10.1007/s10640-015-9983-0

van Hoof, L. (2015). Fisheries management, the ecosystem approach, regionalisation and the elephants in the room. *Marine Policy, 60*, 20-26. doi: https://doi.org/10.1016/j.marpol.2015.05.011

van Leeuwen, J., Raakjaer, J., van Hoof, L., van Tatenhove, J., Long, R., & Ounanian, K. (2014). Implementing the Marine Strategy Framework Directive: A policy perspective on regulatory, institutional and stakeholder impediments to effective implementation. *Marine Policy, 50*, 325-330. doi: https://doi.org/10.1016/j.marpol.2014.03.004

van Zanten, B. T., Verburg, P. H., Espinosa, M., Gomez-y-Paloma, S., Galimberti, G., Kantelhardt, J., . . . Viaggi, D. (2014). European agricultural landscapes, common agricultural policy and ecosystem services: a review. *Agronomy for Sustainable Development, 34*(2), 309-325. doi: https://doi.org/10.1007/s13593-013-0183-4

Vatsov, M. (2017). The EU's failed attempt to innovate with Regulation 1026/2012. *Marine Policy, 84*, 300-305. doi: https://doi.org/10.1016/j.marpol.2017.06.029

Verhees, F., Malak-Rawlikowska, A., Stalgiene, A., Kuipers, A., & Klopcic, M. (2018). Dairy farmers' business strategies in Central and Eastern Europe based on evidence from Lithuania, Poland and Slovenia. *Italian Journal of Animal Science, 17*(3), 755-766. doi: https://doi.org/10.1080/1828051X.2017.1422154

Vezzani, S. (2018). The International Regulatory Framework for the Use of GMOs and Products Thereof as Food Aid. *European Journal of Risk Regulation : EJRR, 9*(1), 120-136. doi:http://dx.doi.org/10.1017/err.2017.58

Villanueva, A. J., Targetti, S., Schaller, L., Arriaza, M., Kantelhardt, J., Rodriguez-Entrena, M., . . . Viaggi, D. (2015). Assessing the role of economic actors in the production of private and public goods in

three EU agricultural landscapes. *Journal of Environmental Planning and Management, 58*(12), 2113-2136. doi:http://dx.doi.org/10.1080/09640568.2014.1001022

Vocht, M. D., Cauberghe, V., Uyttendaele, M., & Sas, B. (2015). Affective and cognitive reactions towards emerging food safety risks in Europe. *Journal of Risk Research, 18*(1), 21-39. doi:http://dx.doi.org/10.1080/13669877.2013.879486

Volkov, A., & Melnikiene, R. (2017). CAP direct payments system's linkage with environmental sustainability indicators. *Public Policy and Administration, 16*(2), 231-244. doi: https://doi.org/10.13165/VPA-17-16-2-05

Weiss, E., & Bitkowska, A. (2014). Agriculture in the light of European Union policy. [Rolnictwo w Polsce w swietle zmian polityki Unii Europejskiej]. *Journal of Agribusiness and Rural Development, 2*(32), 203-212. Retrieved from https://doaj.org/article/df388222fa5e4c7ebf432b509fcaf8f7

Weltin, M., Zasada, I., Franke, C., Piorr, A., Raggi, M., & Viaggi, D. (2017). Analysing behavioural differences of farm households: An example of income diversification strategies based on European farm survey data. *Land Use Policy, 62*, 172-184. doi: https://doi.org/10.1016/j.landusepol.2016.11.041

Wenzel, B. (2018). Rational instrument or symbolic signal? Explaining coordination structures in the Directorate-General for Fisheries and Maritime Affairs of the European Commission. *Public Policy and Administration, 33*(2), 149-169. doi: https://doi.org/10.1177/0952076716683764

Westerink, J., Jongeneel, R., Polman, N., Prager, K., Franks, J., Dupraz, P., & Mettepenningen, E. (2017). Collaborative governance arrangements to deliver spatially coordinated agri-environmental management. *Land Use Policy, 69*, 176-192. doi: https://doi.org/10.1016/j.landusepol.2017.09.002

Westholm, A. (2018). Appropriate scale and level in marine spatial planning – Management perspectives in the Baltic Sea. *Marine Policy, 98*, 264-270. doi: https://doi.org/10.1016/j.marpol.2018.09.021

Wezel, A., Goris, M., Bruil, J., Félix, G. F., Peeters, A., Bàrberi, P., . . . Migliorini, P. (2018). Challenges and action points to amplify agroecology in Europe. *Sustainability (Switzerland), 10*(5). doi: https://doi.org/10.3390/su10051598

Winter, G. (2016). Cultivation restrictions for genetically modified plants: On variety of risk governance in European and international trade law. *European Journal of Risk Regulation, 7*(1), 120-142. doi:https://doi.org/10.1017/S1867299X00005444

Wockelberg, H. (2014). Political servants or independent experts? A comparative Study of bureaucratic role perceptions and the implementation of EU law in Denmark and Sweden. *Journal of European Integration, 36*(7), 731-747. doi:http://dx.doi.org/10.1080/07036337.2014.942733

Wolff, F., Schönherr, N., & Heyen, D. A. (2017). Effects and success factors of sustainable consumption policy instruments: a comparative assessment across Europe. *Journal of Environmental Policy & Planning, 19*(4), 457-472. doi:http://dx.doi.org/10.1080/1523908X.2016.1254035

Yasuda, J. K., & Ansell, C. (2015). Regulatory capitalism and its discontents: Bilateral interdependence and the adaptability of regulatory styles. *Regulation and Governance, 9*(2), 178-192. doi: https://doi.org/10.1111/rego.12058

Young, C. W., Russell, S. V., Robinson, C. A., & Chintakayala, P. K. (2018). Sustainable Retailing – Influencing Consumer Behaviour on Food Waste. *Business Strategy and the Environment, 27*(1), 1-15. doi: https://doi.org/10.1002/bse.1966

Young, M. A. (2016). International trade law compatibility of market-related measures to combat illegal, unreported and unregulated (IUU) fishing. *Marine Policy, 69*, 209-219. doi: https://doi.org/10.1016/j.marpol.2016.01.025

Zafeiriou, E., Mallidis, I., Galanopoulos, K., & Arabatzis, G. (2018). Greenhouse gas emissions and economic performance in EU agriculture: An empirical study in a non-linear framework. *Sustainability (Switzerland), 10*(11). doi: https://doi.org/10.3390/su10113837

Zappalaglio, A. (2019). The Debate Between the European Parliament and the Commission on the Definition of Protected Designation of Origin: Why the Parliament Is Right. *IIC International Review of Intellectual Property and Competition Law,*

50(5), 595-610. doi: https://doi.org/10.1007/s40319-019-00797-x

Zasada, I., Häfner, K., Schaller, L., Van Zanten, B. T., Lefebvre, M., Malak-Rawlikowska, A., . . . Viaggi, D. (2017). A conceptual model to integrate the regional context in landscape policy, management and contribution to rural development: Literature review and European case study evidence. *Geoforum, 82*, 1. doi:https://doi.org/10.1016/j.geoforum.2017.03.012

Zeug, W., Bezama, A., Moesenfechtel, U., Jahkel, A., & Thran, D. (2019). Stakeholders' Interests and Perceptions of Bioeconomy Monitoring Using a Sustainable Development Goal Framework. *Sustainability, 11*(6). doi: https://doi.org/10.3390/su11061511

Zhang, C., Fang, Y., Chen, X., & Congshan, T. (2019). Bibliometric analysis of trends in global sustainable livelihood research. *Sustainability (Switzerland), 11*(4). doi: https://doi.org/10.3390/su11041150

Zhang, D., & Tveterås, R. (2019). A fish out of water? Survival of seafood products from developing countries in the EU market. *Marine Policy, 103*, 50-58. doi: https://doi.org/10.1016/j.marpol.2019.02.030

Zimmermann, H. (2017). Balancing sustainability and commerce in international negotiation: the EU and its fisheries partnership agreements. *Journal of European Public Policy, 24*(1), 135-155. doi:http://dx.doi.org/10.1080/13501763.2016.1146324

Ziyadin, S., & Kabasheva, N. (2018). The basis for initiating the Eurasian integration of the agricultural sector. *Public Administration Issues, 2018*(5), 56-67. doi: https://doi.org/10.17323/1999-5431-2018-0-5-56-67

Zurek, M., Hebinck, A., Leip, A., Vervoort, J., Kuiper, M., Garrone, M., . . . Achterbosch, T. (2018). Assessing sustainable food and nutrition security of the EU food system-an integrated approach. *Sustainability (Switzerland), 10*(11). doi: https://doi.org/10.3390/su10114271

Annex 1. Protocol: Structured literature review

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- **Associated experts:** Dr Ana Moragues Faus, Dr Hannah Pitt, Dr Poppy Nichol, Dr Kirstie O'Neill (all Cardiff University)
- **Date:** 31 May 2019
- **Version:** Final

Introduction

Aims of the review

A structured literature review will form an integral part of the evidence review undertaken by SAPEA to inform the Scientific Opinion of the Group of Chief Scientific Advisors. It will address the main scoping question taken up by the Advisors, which is:

> From a scientific point of view, what are workable paths to deliver an inclusive, 'just' and timely transition to an EU sustainable food system, where possible delivering 'co-benefits' for health, the environment, and socio-economic aspects?

Scoping sub-questions

Stemming from the main scoping question (see above), the focus of the review is on how to achieve uptake, replication, implementation and impact of recommended actions to support the development of a sustainable food system in Europe. Specifically, the review addresses the published literature and evidence from the social sciences.

As a starting point, the scoping paper suggests three levels of work, specifically: EU/ global, EU member states, cities and regions. The Advisory Panel and the Working Group Chair have emphasised the importance of multi-level governance. Therefore, these three levels should not be seen in isolation from each other, but rather are interconnected. The review will place an emphasis on coordinated EU action across these levels. The Advisory Panel proposes that, for the purposes of analysing the published literature, recommendations are conceptualised into a broader, integrated, multi-actor and systemic approach. This incorporates the three interconnected pillars of sustainability (environment, social, economic) across every stage of the food system infrastructure, from production to consumption. The overall specification is that the review should cover published evidence examining the impact of integrated systems and policies but also dispersed and local solutions, from community level upwards i.e. a multi-governance level approach.

Background

The Group of Chief Scientific Advisors has identified the development of an EU sustainable food system as a high-priority topic, recognising the critical importance of the food system at the nexus of human health, climate change and environmental degradation. From preliminary investigations into this topic, the SAM unit found that there is already an established, large body of high-quality scientific evidence and advice that both describes the challenge and recommended actions that can be taken towards achieving an EU sustainable food system. The SAM unit also noted a 'social science deficit' in previous work, which this project is designed to redress. In the scoping paper[1] and draft specification of work[2], it is noted that there is a rich body of evidence supporting a number of recommendations that can be actioned at a variety of scales by citizens and leaders.

1 Scientific Advice Mechanism. Scoping paper: Towards an EU Sustainable Food System. 13 Jan 2019

2 Scientific Advice Mechanism. Towards an EU Sustainable Food System. DRAFT Specification of Work. Jan 2019

From a review of these major reports, a range of recommended actions to support the development of a sustainable food system was grouped and summarised by the SAM unit as follows:

- promote **sustainable intensification**: increasing yields and efficiency, while decreasing environmental burden (on biodiversity, soils, water and air)
- reduce **food loss and waste**, while encourageing reuse and recycling of unavoidable food waste
- stimulate **dietary changes** towards healthier, less resource-intensive and more plant-based diets
- improve the **resilience and robustness** of the food system, in particular by diversification, to cope with shocks from geopolitical developments and to adapt to the effects of climate change
- increase the **accountability and stewardship** of producers and consumers on the environmental, economic, social and public health effects of the food system, among others through participatory policy development and monitoring, increased transparency, training/education and improved labelling to better inform consumer choices

The Advisory Panel has highlighted that certain terms (for example, "sustainable intensification") should be examined closely, hence the need to address the literature on definitions from the social sciences literature.

The SAM unit notes that **there remain gaps in scientific advice** on how best to ensure that the transformation to a sustainable food system occurs in a just (fair) manner and at the pace that is required. Scientific evidence is lacking with respect to the specific actions (at the various scales) that can facilitate the expansion, uptake, replication and implementation of recommendations made in the major published reports.

There is a significant evidence base in the social sciences and this review will summarise predominantly social sciences-based research evidence relating to the successful transition of policy advice into action (what works), with resulting impacts on food security, health, and the environment and local incomes and livelihoods.

Throughout the review process, advice will be sought from an expert Advisory Panel with a broad understanding of the food policy system (including which options are most possible to shift or reach change in) and change already underway, at EU and global, national, regional and local levels.

Proposed review structure

The structured literature review will be carried out in the landscape of policy and policy instruments, mainly focused on the EU level, but also on member states and localities (where relevant). How were these developed and implemented, what was their impact and what were the barriers or challenges? What works, in terms of what makes policy effective?

The questions to be explored are detailed below.

- Identifiable in or across the literature, what are the main institutions/organisations supporting/carrying the main relevant policy instruments?
- What are the main interest groups and lobbies involved (either in support of in opposition), and what is their respective power/influence? This would include political interest and lobbies, and from policy making bodies, but also from the broader food value chain.
- What are the incentives built into these policy instruments?
- How are shifts/transitions herein (potentially) achieved (in the terms of changing policies, politics, actors)? What/who initiates these shifts/transitions (e.g. following agenda-setting theory by Kingdon and others) and what determines successful delivery? How is resistance overcome? This will take account of the specificities of the EU system and any links to relevant global policies, identifying and assessing solutions for shifts/transitions that have already been developed and/or used in the EU context (e.g. energy transition).
- What is required to achieve a 'just' (fair) shift/transition? This refers to the likely 'winners' and 'losers' of a shift/transition towards an EU sustainable food system (taking account of the socio-economics of primary food producers and consumers, urban-rural divide, etc.)?
- What evidence exists with respect to the (potential) pace of change that might be achieved for a transition to an EU sustainable food system and what factors determine this?

Roles and responsibilities

Name	Organisation	Roles	Member of
Louise Edwards, Esther Dorado-Ladera	Academia Europaea, Cardiff University	Overall coordination of the systematic literature review on behalf of Academia Europaea and SAPEA; liaison with SAPEA and Working Group; protocol advice; critical commentary on review at all stages; support to the review team; searching and screening; editorial and referencing work	Review team
Alison Weightman, Delyth Morris, Nigel Morgan	SURE, Cardiff University Library	Overall management of the systematic literature review team at Cardiff University; research, screening, quality appraisal, data extraction, first draft synthesis and write-up, SAPEA Working Group meeting attendance, review revision and final reports to SAPEA	Review team
Kate Knowles	Cardiff University	Working alongside the methodologists (see above), quality appraisal, synthesis and write-up	Review team
Frederico Rocha	European Documentation Centre, Cardiff University	Research support to the review team on European policy instruments	Review team
Kelly Parsons	City University (London)	Critical commentary on review proposal, protocols and final reviews	Advisory Panel
Nicola Randall	Harper Adams University	Protocol advice; review of drafts	Advisory Panel
Eleanor Mackillop	Wales Centre for Public Policy	Critical commentary on review proposal, protocols and final reviews. Advising on data extraction and analysis. Advising on policy context for introduction/discussion sections	Advisory Panel
Roberta Sonnino	Environmental Policy and Planning, School of Geography, Cardiff University	Critical commentary on review proposal, protocols and final reviews	Advisory Panel
Terry Marsden	Sustainable Places Research Institute, Cardiff	Critical commentary on review proposal, protocols and final reviews	Advisory Panel
Peter Jackson	SAPEA Working Group chair	As above. Critically, ensuring uptake of the results of the review by the SAPEA Working Group	Advisory Panel

Timeline

Date (2019)	Milestone
week of 29 April	Initial protocol for literature reviews finalised with Advisory Panel and SAPEA
week of 6 May	Further development of the protocol, including search strategies and initial searches for literature reviews
17 May	Final draft of the protocol, including search strategies and initial results, is circulated to all attending the meeting in Cardiff, plus the SAPEA Working Group
21 May	Physical meeting in Cardiff to consider the final protocol and initial results, and to agree next steps
22 May	SAPEA Working Group holds its first meeting in London and considers the protocol, initial results and proposed next steps
week of 27 May	Review team proceeds with full literature searches
18 June	Progress report on the literature searches is circulated to the Advisory Group, Carina Keskitalo, SAM unit and the SAPEA Working Group
25 June	SAPEA Working Group meets and considers the progress of the literature searches
26 June	Synthesis and write-up of the narrative of review begins. Any additional searches required by the SAPEA Working Group are undertaken
30 July	Second physical meeting in Cardiff to review first draft of narrative review
End of August	Synthesis and write-up of the second draft of review is completed. Draft is sent to members of the Advisory Panel
17 September	SAPEA Working Group holds its final meeting in Amsterdam, and considers the Review 1 draft and reports on Reviews 2 and 3
31 October	Third draft of narrative of review is completed
April 2020	Evidence Review Report is published

Outline protocol for review on policy landscape

Questions

1. Identifiable in or across the literature, what are the main institutions/organisations supporting/carrying the main relevant policy instruments?
2. What are the main interest and lobbies involved (either in support of in opposition), and what is their respective power/influence? This would include political interest and lobbies, and from policy making bodies, but also from the broader food value chain.

3. What are the incentives built into these instruments (including tax, fiscal initiatives, voluntary agreements)?
4. How are shifts/transitions herein (potentially) achieved (in the terms of changing policies, politics, actors)? What/who initiates these shifts/transitions (e.g. following agenda setting theory by Kingdon and others) and what determines successful delivery? How is resistance dealt with? Here it is important to take account of the specificities of the EU system and any links to relevant global policies. Hence, it is useful to identify and assess solutions for shifts/transitions that have already been developed and/or used in the EU context (e.g. energy transition).
5. What is required to achieve a 'just' (fair) shift/transition? This refers to the likely 'winners' and 'losers' of a shift/transition towards an EU sustainable food system (taking account of the socio-economics of primary food producers and consumers, urban-rural divide, etc.)?
6. What evidence exists with respect to the (potential) pace of change that might be achieved for a transition to an EU sustainable food system and what factors determine this?

Adopting a systematic review methodology, this review will comprise a social science-based evaluation of the policy instruments landscape at EU level. How it has developed, what has been implemented, key influencing players and any identified barriers and enablers to success. Which policy instruments have continued and which not (and why)?

Literature sources

Languages:

- English and all other European languages

Dates:

- Initially 5 years (2014-2019), but seminal works will also be sought from earlier dates, based on input from the Working Group and Advisory Panel

Databases with good coverage of the social sciences:

- Applied Social Sciences Index and Abstracts (ASSIA)
- European Sources Online
- International Bibliography of the Social Sciences (IBSS)
- OECD iLibrary
- Scopus (limit to social sciences)
- Social Science Research Network (SSRN)
- Sociological Abstracts

- Web of Science [Social Science Citation Index]

Search strategy

The search was designed with precise searches to identify literature on the policies named in the specification of work. Additionally, a more general search has been included to identify evaluation studies of European policy initiatives with relevance to sustainable food. The search has been tested for its sensitivity (ability to pick up known relevant studies).

Search strategy	Hits in Scopus on 25 May 2019
((TITLE ("blue growth strategy" OR "common agricultural policy" OR "common fisheries policy" OR "common fishery policy" OR "common fisheries policy" OR "biodiversity strategy" OR "environmental action programme to 2020" OR "european development policy" OR "European consensus on development" OR "marine strategy framework directive" OR "water framework directive" OR "circular economy action plan" OR "European fund for strategic investments" OR "european structural and investment funds" OR "food safety policy" OR "rural development policy" OR "framework convention on climate change" OR "COP21" or "paris agreement" OR "kyoto protocol")) AND (TITLE (effect* OR evaluat* OR impact* OR outcome* OR implement* OR integrat* OR transform* OR incenti* OR assess* OR reform* OR improve* OR adapt*)) Limit to 2014-2019. Limit to Article or Review. Limit to Social Sciences.	111
(TITLE-ABS-KEY ("blue growth strategy" OR "common agricultural policy" OR "common fisheries policy" OR "common fishery policy" OR "common fisheries policy" OR "biodiversity strategy" OR "environmental action programme to 2020" OR "european development policy" OR "European consensus on development" OR "marine strategy framework directive" OR "water framework directive" OR "circular economy action plan" OR "European fund for strategic investments" OR "european structural and investment funds" OR "food safety policy" OR "rural development policy" OR "sustainable development goal*" OR "framework convention on climate change" OR "COP21" or "paris agreement" OR "kyoto protocol")) AND (TITLE-ABS-KEY (effect* OR evaluat* OR impact* OR outcome* OR implement* OR integrat* OR transform* OR incenti* OR assess* OR reform* OR improve* OR adapt*)) AND (TITLE-ABS-KEY (agricultur* OR "animal welfare" OR farm* OR food* OR fish* OR ecosystem* OR aquaculture* OR bioeconom* OR "bio-based" OR biobased OR agri-food* OR agro-food OR agroecology OR beverage* OR eat*)) AND (TITLE-ABS-KEY ("European union*" OR "member state*" OR "European commission" OR "mediterranean sea" OR "baltic sea" OR "black sea" OR "Adriatic sea" OR "Ionian sea" OR "north sea" OR "irish sea" OR EU)) Limit to 2014-2019. Limit to Article or Review. Limit to Social Sciences.	380
(TITLE-ABS-KEY (agricultur* OR "animal welfare" OR farm* OR food* OR fish* OR ecosystem* OR aquaculture* OR bioeconom* OR "bio-based" OR biobased OR agri-food* OR agro-food OR agroecology OR beverage* OR eat*)) AND (TITLE-ABS-KEY (policy OR policies OR strateg* OR framework* OR directive* or instrument* OR program* OR law* OR lobby* OR initiative*)) AND (TITLE-ABS-KEY (Europe* OR "member state*" OR mediterranean OR baltic OR "black sea" OR Adriatic OR Ionian OR "north sea" OR Austria* OR Belgi* OR Bulgaria* OR Croatia* OR Cyprus OR Cypriot* OR Czech* OR Denmark OR Danish OR Estonia* OR Finland OR Finnish OR France OR French OR German* OR Greece OR Greek* OR Hungar* OR Ireland OR Irish OR Ital* OR Latvia* OR Lithuania* OR Luxembourg OR Malta OR Maltese OR Netherlands OR Dutch OR Poland OR Polish OR Portugal OR Portuguese OR Romania* OR Slovakia* OR Slovenia* OR Spain OR Spanish OR Sweden OR Swedish OR UK OR United Kingdom OR Britain OR British OR England OR English OR Scotland OR Scottish OR Wales OR Welsh OR EU)) AND (TITLE-ABS-KEY (effect* OR evaluat* OR impact* OR outcome* OR implement* OR integrat* OR transform* OR incentiv* OR assess* OR reform* OR improve* OR adapt*)) Limit to 2014-2019. Limit to Article or Review. Limit to Social Sciences.	1253

This search will be adapted to other databases.

Inclusion and exclusion criteria

Population:

- EU countries

Coverage: the main relevant policy instruments, including:

- EU-Blue Growth Strategy
- EU-Common Agricultural Policy
- EU-Common Fisheries Policy
- EU-Conservation policies including:
  - The EU Biodiversity Strategy
  - The EU Environmental Action Programme to 2020
- The European Development Policy
- The European Consensus on Development
- The Marine Strategy Framework Directive
- The Water Framework Directive (WFD/'Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy')
- The Circular Economy Action Plan
- EU-European Fund for Strategic Investments (European EFSI)
- EU-European Structural and Investment Funds (European ESIF, European Regional Development Fund, European Social Fund, European Cohesion Fund, European Agricultural Fund for Rural Development, European Maritime and Fisheries Fund)
- EU-Food Safety Policy
- EU-Health Policy
- EU-Rural Development Policy
- UN Sustainable Development Goals (United Nations SDGs, specifically 1, 2, 3, 6, 7, 8, 9, 11, 12, 13 & 14)
- The UN COP21 Climate Change (United Nations Framework Convention on Climate Change, Paris Agreement, Kyoto Protocol)
- Relevant WHO Health policies including:
  - WHO Strategic plan for food safety
- Other clearly relevant policy instruments identified by the search will also be included, as agreed by consultation with the Advisory Group.

Types of study:

- All relevant published evidence from the peer-reviewed journal literature in the social sciences[3]

Study selection

Following completion of the search and deduplication in an EndNote database, records will be assessed for relevance using the inclusion criteria identified above. Following exclusion of clearly irrelevant records, all records will be assessed by two reviewers independently at both title/abstract and full text stages.

Papers will be selected for inclusion if they include empirical (research) evidence in relation to questions 1–6 (p.111).

Data extraction and synthesis

Historical and evaluative data will be extracted, incorporating a thematic analysis using NVivo software to identify the issues identified in the questions.

Bibliographic data from each included study will be provided, with a live link to the full document (where open access).

The coding framework will be developed, by two independent researchers (including one subject specialist), in keeping with the evidence identified, with the final framework agreed by discussion. As a minimum, publications will be tagged according to: (i) evidence relating to one or more of the review questions; (ii) individual instrument(s); (iii) generic policy area (eg fisheries); (iv) member state/EU wide; (v) theoretical perspective adopted (if applicable).

A narrative synthesis of findings in relation to each of the review questions will be written up by a researcher with expertise in the domain, and the review team. This will include an analysis of policy- or member state-specific findings as well as those more generalisable across the EU.

The analysis will comment on any identified gaps in EU policies that might be considered important in the transition to an EU sustainable food system (for example, missing EU policy on the protection of soils has already been identified in the literature by the SAM unit). It will also note any evidence relating to European public-private interface, private-private and NGO policy initiatives.

3 Example works to assist with protocol development: Bureau J-C, Swinnen J. (2018.) EU policies and global food security. *Global Food Security* 16: 106-115

Annex 2. Acknowledgements

Members of the Advisory Panel

- Professor Terry Marsden, Director, Sustainable Places Research Institute, Cardiff University
- Professor Roberta Sonnino, Director, Research Centre for Urban and Regional Food Systems, Cardiff University
- Dr Eleanor MacKillop, Wales Centre for Public Policy
- Dr Kelly Parsons, City University
- Professor Peter Jackson, SAPEA Working Group Chair

Associated experts

- Dr Ana Moragues Faus
- Dr Hannah Pitt
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Review team

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- Dr Alison Weightman, Director, Specialist Unit for Review of Evidence
- Delyth Morris, Cardiff University Library Services
- Nigel Morgan, Cardiff University Library Services
- Frederico Rocha, Cardiff University Library Services

Additional support and advice

- Professor Carina Keskitalo, Group of Chief Scientific Advisors
- Dr Gerjon Ikink, SAM unit, European Commission
- Dr Celine Tschirhart, SAPEA

- Staff at the Sustainable Places Research Institute, Cardiff University
- Staff at Cardiff University Library Services

SAPEA is part of the European Commission's Scientific Advice Mechanism, which provides independent, interdisciplinary, and evidence-based scientific advice on policy issues to the European Commission.

SAPEA has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 737432.

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