


## Article

# Unraveling the European Agricultural Policy Sustainable Development Trajectory

Yannis E. Doukas <sup>1,\*</sup>, Luca Salvati <sup>2,†</sup> and Ioannis Vardopoulos <sup>3,4,\*</sup> 

- <sup>1</sup> Department of Agricultural Development, Agri-Food and Natural Resources Management, School of Agricultural Development, Nutrition and Sustainability, National and Kapodistrian University of Athens (UoA), 34400 Psachna, Greece
- <sup>2</sup> Department of Methods and Models for Territory, Economics and Finance (MEMOTEF), Faculty of Economics, Sapienza University of Rome, Via del Castro Laurenziano 9, 00161 Rome, Italy
- <sup>3</sup> School of Environment, Geography and Applied Economics, Harokopio University (HUA), 17676 Kallithea, Greece
- <sup>4</sup> Department of Regional and Economic Development, School of Applied Economics and Social Sciences, Agricultural University of Athens (AUA), 33100 Amfissa, Greece
- \* Correspondence: jodoukas@agro.uoa.gr (Y.E.D.); ivardopoulos@post.com (I.V.)
- † These authors contributed equally to this work.

**Abstract:** Amidst growing concerns about the impact of agriculture on the environment, the Common Agricultural Policy (CAP) has been overhauled to prioritize sustainable rural development in European agriculture. Based on this line of thought, the present contribution delves into the details of the CAP's shift, focusing on the main environmental concerns faced in the policy-making framework. Grounded in a political science perspective, the current study looks at how environmental and climate change concerns were gradually elevated inside the CAP's policy-making framework and how they helped create the "green architecture" for European agriculture. Examining the process of policy change under the lens of historical institutionalism and neo-institutionalism within the multilevel governance framework of the European Union (EU), the key role played by the gradual introduction of measures aimed at promoting measurable environmental criteria and climatic targets is highlighted. For instance, measures aimed at preserving carbon-rich soils and enhancing water resources can have positive impacts on the environment. However, these measures were also recognized to increase the cost of production for the European farmers, who faced serious difficulties in adjusting to the new framework. Within this context, this research delves into the roles played by two additional fundamental entities: the consumer and environmental activism. Additionally, the study underscores the EU's commitment to addressing climate change and sustainable development challenges and how conditionality is being used to link funding to results. Upon analyzing the CAP's shift, the reflection of a more flexible and rational approach is argued to be embodied by the new policy architecture. By incorporating both CAP pillars, encouraging collaboration with compatible policies, and allowing for greater adaptability in response to the unique circumstances and objectives of each member state, the CAP is taking significant steps towards sustainability and climate action. These insights into the significance and implications of the CAP's shift towards sustainability offer valuable recommendations for future policy developments, emphasizing the need to balance environmental concerns with the needs of farmers and other stakeholders.

**Keywords:** sustainability; environmental impact; circular economy; climate targets; policy-making; policy change; stakeholder engagement; agriculture; common agricultural policy (CAP)



**Citation:** Doukas, Y.E.; Salvati, L.; Vardopoulos, I. Unraveling the European Agricultural Policy Sustainable Development Trajectory. *Land* **2023**, *12*, 1749. <https://doi.org/10.3390/land12091749>

Academic Editors: Kleomenis Kalogeropoulos, Andreas Tsatsaris, Nikolaos Stathopoulos, Demetrios E. Tsemelis, Nilanchal Patel and Xiao Huang

Received: 12 July 2023

Revised: 2 September 2023

Accepted: 7 September 2023

Published: 8 September 2023



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

The Common Agricultural Policy (CAP) in the European Union (EU) has had associated costs and benefits that are largely variable over time and country, and based on such differences, EU member states (MSs) have consolidated diverging agendas and expectations regarding it [1]. The CAP involves multiple actors, from bureaucrats to sectoral

interests' stakeholders, from governmental institutions to pressure groups, such as consumer and environmental activism, interested in agriculture [2]. In addition to economic benefits, the CAP integrates social and environmental aspects, promoting a resilient and sustainability-oriented agricultural structure throughout the EU [3]. This strategy preserves favorable environmental conditions that allow farmers to benefit from soil resources and maintain financial stability through continuous agro-food production [4], with broader implications (refer to [5]). Agricultural income not only supports farming households and communities in peri-urban and rural areas [6] but also contributes to society's overall gains from agricultural production [7]. In addition, agricultural activities are susceptible to climate change [8] while contributing to mitigation of global warming through greenhouse gas emissions reduction and carbon storage [9].

Especially during the last three decades, the CAP policy-making process has been evolving towards the creation of a sustainable and eco-friendly framework for European agriculture [10], promoting environmental consciousness at all levels of decision-making within the EU's complex multilevel governance framework [11,12]. However, despite the evident evolution of the CAP towards sustainability, there is a need to comprehensively examine the mechanisms driving this shift, especially considering the institutional characteristics of the CAP operation. Therefore, this study seeks to address the following research questions:

1. What are the key drivers of institutional shifts in the EU CAP, particularly in relation to environmental and climate change considerations?
2. How have these institutional shifts affected the sustainability and environmental impact of agricultural practices within the EU?

Framed within this context, our contribution delves into the theoretical underpinnings of policy change, specifically examining the concepts of neo-institutionalism and historical institutionalism to better understand the mechanisms driving this shift. These theoretical approaches emphasize the role of institutional factors in shaping policy outcomes and the importance of historical contexts in understanding policy development. Examining the process of policy change under the lens of historical institutionalism and neo-institutionalism, we discuss the role played by the gradual introduction of measures aimed at promoting measurable environmental criteria and climatic targets. Additionally, our study unravels the EU's commitment to climate change and sustainable development challenges, such as the Agreements on Agriculture (AoA) stated at the Uruguay Round (1986–1994) [13,14] and the UN-Paris Agreement in 2015 [12,15], and how conditionality is being used to link funding to results [16]. These insights into the significance and implications of the CAP's shift towards sustainability offer valuable recommendations for future policy developments, emphasizing the need to balance environmental concerns with the needs of farmers and other stakeholders in line with the international context in which European agriculture operates. Therefore, our study, based on an extended literature review, proposes a thorough analysis of the challenging long-term "greening" transformation of the CAP through an integrated methodology, using instruments from 'historical institutionalism' and 'neo-institutionalism' and, at the same time, taking into consideration the multilevel governance framework of the decision-making process within the EU.

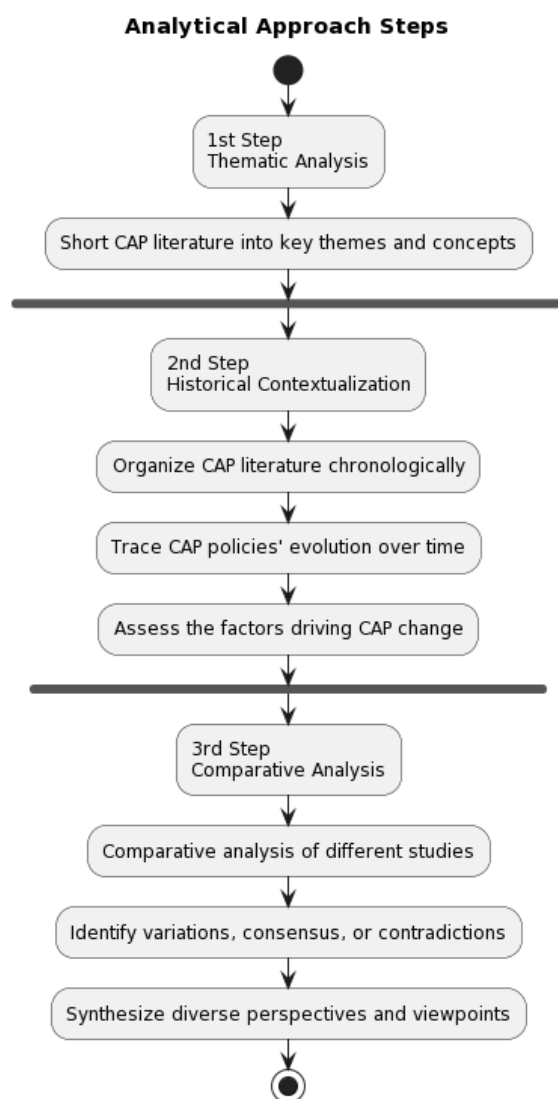
The above procedure seems to be the most appropriate to explain the delay in implementing environmentally effective reforms due to the institutional characteristics of CAP operation, as illustrated below. Moreover, for example, decisions on agricultural funding are now made not on an annual basis, as before 1992, but on a multi-year basis. During these multi-year periods, changes occur in the international environment, developments in the market for agricultural products, foreign trade, etc. These influence the decisions of the European Commission (EC) and the MSs as far as their choices for agricultural policy are concerned. In addition, different pressure groups, in different phases, dominate inside the EU, while the composition of the EC is also changing. These shifts often contribute to policy changes and drive wider CAP reforms [17].

This paper is structured into eight main sections, each working towards providing answers to the research questions and objectives. First, we delve into ‘historical institutionalism’ and ‘neo-institutionalism’ as a logical framework for interpreting policy change. Then, we proceed to unveil the forces of change by examining institutional shifts in public policy. Following this, we continue with exploring the dynamics and forces driving institutional changes within the EU CAP, with a particular focus on environmental considerations. Subsequently, we examine the CAP’s journey towards sustainability and its role in safeguarding agriculture in the face of climate change. We also analyze the competing goals in CAP implementation and emphasize the latent shift towards new environmental targets. We chart the course for a greener CAP while exploring new territories. Finally, in the conclusions section, we summarize key findings and insights.

## 2. Methodology

In this section, the methodological approach employed for synthesizing and analyzing the existing literature related to the CAP within the EU is elucidated. The chosen methodology ensures a systematic and comprehensive scholarly synthesis, encompassing the process of systematically gathering, analyzing, and summarizing existing knowledge, research, and academic literature on a particular topic. A range of sources, including peer-reviewed academic articles, reports from EU authorities, and other relevant publications, has been selected based on their significance and contribution to the understanding of CAP policy evolution, institutional shifts, environmental considerations, and their impacts. The analytical approach comprises three distinct steps. Firstly, a thematic analysis is conducted, dividing the literature into key themes and concepts related to CAP policy evolution, institutional shifts, and environmental concerns, allowing for the identification of common trends and recurring patterns in the literature. Secondly, historical contextualization is employed, organizing the literature chronologically to understand the historical aspects of CAP transformation, trace the evolution of CAP policies over time, and assess the factors driving these changes. Lastly, a comparative analysis of the different studies is undertaken to identify variations, consensus, or contradictions in the literature. This approach, visually represented in Figure 1, aids in synthesizing diverse perspectives and viewpoints, ultimately contributing to a more comprehensive understanding of the CAP’s evolution.

From a delimitation perspective, it should be noted that the quality and comprehensiveness of the available literature may vary, potentially introducing bias into the analysis. However, through the selection of a diverse range of sources and the application of rigorous analytical methods, an effort has been made to mitigate this potential bias and provide a robust synthesis of the existing literature.



**Figure 1.** Analytical Approach Steps: Flowchart illustrating the three key steps in the methodology for synthesizing and analyzing existing literature related to the CAP within the EU.

### 3. 'Historical Institutionalism' and 'Neo-Institutionalism' as a Logical Framework Interpreting Policy Change

During the latter half of the nineteenth century and the early portion of the twentieth century, social scientists created a body of literature focusing on organizations and their interconnections and concentrating research efforts on how bureaucratic structures of organizations as well as the organizational structure within societies fostered 'institutionalization' processes [18]. Until the 1950s, political science was concerned with the analysis of governmental structures (from local to state), mainly in the United States and the United Kingdom. This earlier approach, known as 'old institutionalism', focused on the formal structures and institutions constituting such political entities [19]. However, a behavioral movement that popularized new theories on how policies are formulated and altered, including behaviorism, positivism, and rational choice theory, emerged to complement it [20,21]. This led to a narrowed emphasis on institutions, which was progressively dropped in favor of a thorough evaluation of people as the main policy influencers instead of the institutions administering (and/or surrounding) them [22]. In 1977, Meyer and Rowan's work completely revised the 'institutionalism' approach [19], leading to a resurgence of the issue in the ensuing decade, with important contributions from various fields outside social science.

The ‘neo-institutionalism’ term was coined in 1983 by March and Olsen, distinguishing it from the ‘old institutionalism’ notion [23]. Neo-institutionalism focused on comparative examinations of the autonomous impact of institutions on political behavior and outcomes [24] as a means of expressing disagreement with the dominant ‘behaviorist’ mainstream [25]. Behaviorist viewpoints overestimate the role of institutions exerting a direct impact on politics, disregarding that political institutions are more than passive platforms for political conduct but also elements that may influence, at least in some ways, political behaviors [19]. Historical institutionalism scholars have emphasized the idea that every political action takes place within a given temporal context and that history influences decisions, actions, and occurrences in future times [26]. This perspective considers history not as a collection of specific events but as a factor determining policy change [18]. The terms ‘new institutionalism’ and ‘historical institutionalism’, addressing progressive changes to existing institutions or new and innovative policies and their connection to policy reforms [27], are both highlighted and discussed widely in this study.

Historical institutionalism faced the challenge of institutional change despite its emphasis on institutional constancy [28]. A specific body of work on path dependence provided a useful perspective for examining the persistence (or absence) of policy change. Path dependency refers to the fact that institutions, once established, tend to follow historically set, particular trajectories, making it costly to change the pre-existing regime [29]. Institutions become locked into and evolve along the trajectories that govern their dependency, encompassing unintended outcomes and inefficiencies [19]. As a consequence, even when the existing model is inadequate, key players tend to uphold it since it matches the needs of its founders. Altering policies is rather difficult due to institutions’ resilience [30]. Owing to the reinforcement of policy continuity by earlier decisions, public policies, and formal frameworks often turn out to be difficult to modify [28].

As strategic actors integrate into the institutional environment, their effects grow, and systemic factors increasingly constrain and delineate the strategic options available to them [31]. Therefore, institutional change may transpire within a particular setting whose breadth and attributes were influenced by earlier political and institutional decisions [32]. The idea of ‘point equilibrium’ was extensively studied in historical institutionalist analyses of institutional evolution [33]. Institutions tend to be in a state of equilibrium throughout the majority of their history, functioning based on the decisions made at the time of their establishment or the most recent circumstances.

The ‘point equilibrium’ emphasizes how crucial the institutional atmosphere is in influencing policy dynamics and the outcomes of future reforms [34]. Prolonged periods of institutional stability and adherence to historical patterns can lead to critical junctures, where pivotal decisions are made that can greatly impact the trajectory of a policy system or a policy strategy [35]. When opportunities for significant institutional transformations are both evident and practical, a critical juncture is characterized as a brief span of time whereby uncertainties regarding the prospects of an institution create the groundwork for policymakers to place the institution on an alternative development path [18]. However, a critical juncture point does not always happen at a moment when its effects may be seen retrospectively [36]. Thelen and Steinmo (1992) [24] contend that the critical juncture actually happens much sooner in the process, prior to its impacts becoming apparent. A ‘short-period’ time interval pertains to how briefly institutions may alter their direction before reverting to their prior dependencies. To deal with new issues, actors can select how an institution should evolve over time and what new policies should be put in place [37].

In their systematic approach to institutional transformation, Streeck and Thelen (2005) [38] added supplementary concepts to the conceptual framework of the historical institution. As per their research, policies that establish norms, allocate entitlements and obligations to players that are backed by norms, and enable third-party enforcement can also be thought of as institutions. Based on these premises, ‘institutional transformation’ can be considered a theory of policy change. Thus, policies may constitute rules for players other than policymakers, and, if required, they will be enforced by agents acting in the



interests of society, legitimizing institutions as policymakers. Streeck and Thelen (2005) [38] identified five categories of institutional change: displacement, layering, conversion, drift, and shock.

Displacement refers to the gradual modification of existing regulatory structures. This represents the most basic form of institutional change and occurs when pre-existing arrangements are contested (or ignored) in favor of new institutions and related behavioral paradigms. Layering involves actively supporting changes introduced to an established set of institutions by appending new regulations and/or institutions alongside or atop the older ones. Andreou (2018) [19] proposes that in highly partisan states, layering is a prevalent practice where new frameworks and/or laws are created to ‘control’ party supporters without directly affecting state institutions. This creates tensions between institutions and policies, potentially giving rise to conflicts and institutional change. Moreover, recent studies have shown that the COVID-19 pandemic [39] has created a shock to institutional structures, culminating in significant policy changes—and likely more—across the globe [39–42]. This unforeseen and abrupt disruption has compelled governments to enact new policies and regulations in order to address the health and economic repercussions of the pandemic [43].

Streeck and Thelen (2005) [38] highlighted the possibility of institutional drift, gradual deterioration, or atrophy of institutions due to the failure to adapt to shifting political and economic conditions. This drift can arise from gaps in regulations, and political sophistication is essential for effecting the needed changes. The neglect may or may not be intentional, but institutions may be diverted to new goals, functions, or purposes due to emerging environmental concerns, changes in the balance of power, or political struggles [44]. As a result, unexpected outcomes are to be expected, and change requires compromise, which may take time. Additionally, in contrast to the other four shift cycles, Streeck and Thelen (2005) [38] identified exhaustion as a process that causes failure, occurring when an institution’s normal activities degrade its external environment and available resources. It usually happens gradually rather than suddenly. When an institution experiences exhaustion, activities within the organization degrade its functioning, contrary to drift, where the formal integrity of an organization is retained despite becoming progressively dysfunctional.

Recent studies have emphasized the importance of institutional resilience, which refers to the intrinsic ability of institutions to adapt to changing circumstances and maintain their functions and goals [45,46]. Institutional resilience can be attained through proactive strategies, such as scenario planning and regular assessments of the institution’s performance [47,48]. Furthermore, institutional resilience can be strengthened through the establishment of flexible structures and decision-making processes that allow for quick adaptation to change [49,50]. Finally, studies have shown that successful institutional adaptation requires the involvement of multiple stakeholders, including policymakers, private actors, and civil society [51,52]. The engagement of diverse perspectives can augment the institution’s capacity to identify (and respond to) emerging challenges [53].

#### **4. Unveiling the Forces of Change: Examining Institutional Shifts in Public Policy**

Extensive research in public policy has thoroughly examined the significance of concepts and knowledge in systemic change [17,54,55]. Built on this, a significant part of the political debate is considered to be in a continuous process of societal advancement stage manifested through public policy. With the previous policy exerting the most significant cognitive influence and the current policy reacting to the effects of earlier initiatives, public policy functions as an educational endeavor or as a means of learning. Hall (1993) [56] refers to this mechanism as “the purposeful endeavor to adjust the goals or tactics of public policy in order to conform with old knowledge and new facts”, termed as ‘social learning’. The majority of those involved in this learning process are professionals in public policy who advise or serve the public sector from high-ranking positions at the intellectual subcultures of society and the bureaucracy nexus.

Three stages make up the process of changing public policy: the broad objectives that guide policy in a given area, the methods (or tools) employed to accomplish those objectives, and the real costs associated with those methods and instruments. Each stage is composed of an equal number of variables. Historical institutionalists contend that the creation of institutions and policies frequently leads to conflicts between groups with different spheres of influence because they understand that institutions reflect, organize, and reproduce uneven power relations. This conflict often culminates in changes in the institution or policy under consideration [19].

### **5. From Policy Reform to Environmental Stewardship: Examining the CAP's Journey towards Sustainability**

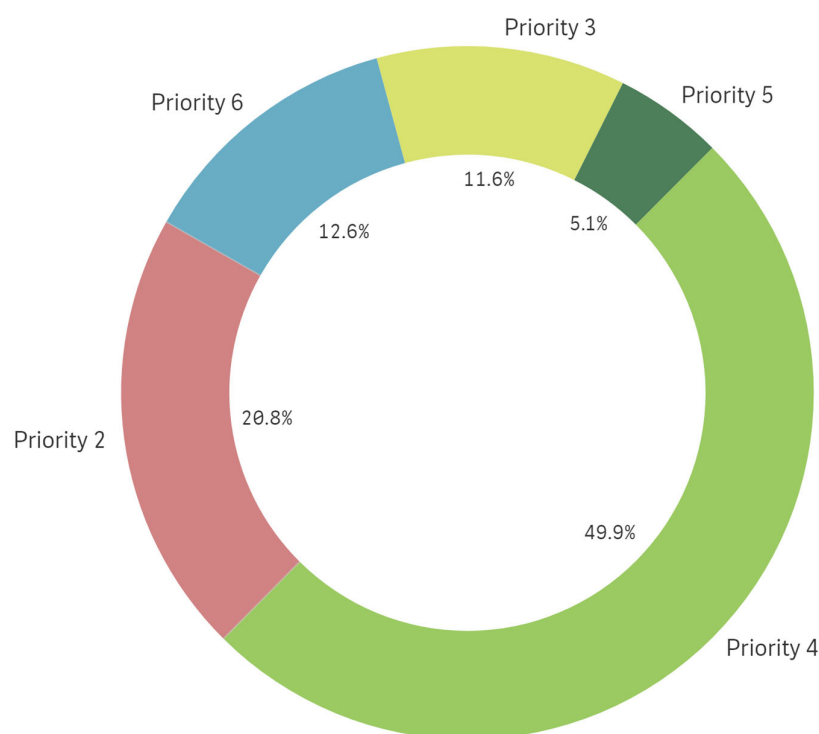
A supportive environment is required for agricultural operations in order to use natural resources, generate agro-food, and maintain farmers' financial stability. Agriculture yields benefits to the whole society, far beyond specific targets, such as sustaining farming households and communities in rural or peri-urban areas [57]. However, the primary sector has a two-fold impact on the environment. First, it directly impacts agricultural practices. Second, it contributes to climate change by releasing greenhouse gases into the atmosphere. To create a sustainable agricultural system throughout the EU, the CAP has integrated social, economic, and environmental concerns and was more recently committed to additional international agreements addressing climate change and sustainable development challenges (see also [58]). Building upon a more innovative, impactful, and comprehensive approach to tackle the issues of climate change and sustainable development, ambitious and forward-thinking frameworks for environmental-friendly actions were proposed. The original principles of the CAP did not prioritize environmental conservation, but this perception shifted as environmental issues became more politicized and pressing in the early 1970s [59]. During the 1980s, several policy guidelines were released that highlighted the significance of safeguarding the environment. These include the "Green Paper" on the future of the CAP, a 1988 Communication on "Environment and Agriculture", and the guidebook "The Future of Rural Society", among others. This stream of literature emphasized the immediacy of minimizing environmental degradation [60]. The Green Paper report acknowledged the importance of establishing institutionalized measures to mitigate and prevent environmental degradation caused by intensive farming practices [61]. Techniques that prioritize greenhouse gas emissions reduction, carbon storage, and maintenance/stabilization of food production have the potential to alleviate the repercussions of climate change [62].

In the late 1980s and the early 1990s, there was a surge in consumer and environmental activism that advocated for policy reform. This movement was prompted by several food-related scandals and the adverse ecological consequences of the agricultural practices supported by the CAP. Moreover, the EU intensified its international efforts to address environmental issues with global consequences [63], particularly after the United Nations (UN) Conference on the Environment and Development in 1992. These internal and external forces led to a major reform of the CAP in 1992, whereby environmental concerns became increasingly critical in the subsequent policy revisions. The 1992 agri-environmental measures were novel and reflected the initial notable attempt to back a new type of agriculture providing commodities and services that enhance the environment [64]. The notion of the 'second pillar' for rural development, initially introduced in Agenda 2000, continued to develop and expand this operational concept [64,65]. The Rural Development Pillar of the CAP was included in the Agenda 2000 reform package, which emphasized the importance of safe agri-food products and environmental outcomes. This reform package aimed at striking a balance between the need for environmental conservation and the provision of direct incentives to producers in order to adopt more environmentally friendly practices for the production of safe and healthy food.

Furthermore, the EU was required to change a number of domestic support policies in order to be compliant with the Green Box criteria and non- or minimally trade distorting

following the General Agreement on Tariffs and Trade (GATT), the AoA, and the current negotiations within the World Trade Organization (WTO) [13,66]. In light of the General Food Law (REGULATION (EC) No 178/2002 [67]) and traceability, which is defined as “the ability to trace and follow food, feed, and ingredients through all stages of production, processing, and distribution”, the CAP encouraged farmers to improve their agricultural practices, taking into consideration food safety and environmental issues [13,68].

In accordance to the CAP regulations, MSs were required to take adequate environmental safeguards while being granted flexibility in how they supported farmers alongside environmental measures [69]. When MSs failed to comply with regulations, their funding from pillar 1 (mainly the direct payments scheme) was reduced or revoked, and the unpaid amounts were redirected to their respective rural development programs [69,70]. Generally, the policy for rural development tries to integrate the local/territorial element, taking advantage of particular characteristics of lagging regions by financing measures of a structural nature [71] (Figure 2).



**Figure 2.** Distribution of rural development expenditure by priority area. Priority 2: Farm Viability and Competitiveness. Priority 3: Food Chain Organization and Risk Management. Priority 4: Restoring, Preserving, and Enhancing Ecosystems. Priority 5: Resource-efficient, Climate-resilient Economy. Priority 6: Social Inclusion and Economic Development. (Source: EC, Director-General for Agriculture and Rural Development).

Additionally, MSs were incentivized to allocate a portion of these funds for developing more environmentally friendly production techniques in the dairy and cattle industries and training farmers in ecologically friendly practices to assist forests with high ecological value and underserved areas (e.g., [72,73]) (see Tables 1 and 2). These measures were geared towards enhancing the efforts toward environmental preservation and climate action by requiring MSs to formulate complete national or regional programs that included environmental conservation, among other rural activities [74,75].

Moreover, other than environmental measures are included within the Rural Development Pillar, improving the competitiveness of agriculture and forestry, the quality of life of the residents in the countryside and diversifying the rural economy to meet the new challenges in a changing economic, social and climatic context within the EU and glob-



ally [17]. Lastly, special attention is given to actions to promote research and innovation, food safety, and the containment of populations in the European countryside. All of the above intend to formulate an effective and sustainable framework of operation for rural areas, contributing to its economic and social cohesion.

In the 2003 Mid-Term Review (MTR) of the CAP, cross-compliance became a mandatory requirement for all direct payments. The cross-compliance criteria were crafted to ensure that farmers meet environmental and other standards before becoming eligible for funding. The regulations for statutory management under Union law and the requirements for maintaining excellent agricultural and environmental conditions were included in the cross-compliance norms [76]. The MTR also introduced a ‘one farm payment’ system, which departs from relying on output while being related to compliance with environmental, food safety, and animal welfare criteria. The obligation to maintain all farms in excellent agricultural and environmental condition was preeminent to this operational perspective [77]. To promote the environment, quality, or animal welfare, direct payments were reduced for larger farms, freeing up more funds for programs that meet these goals [77,78].

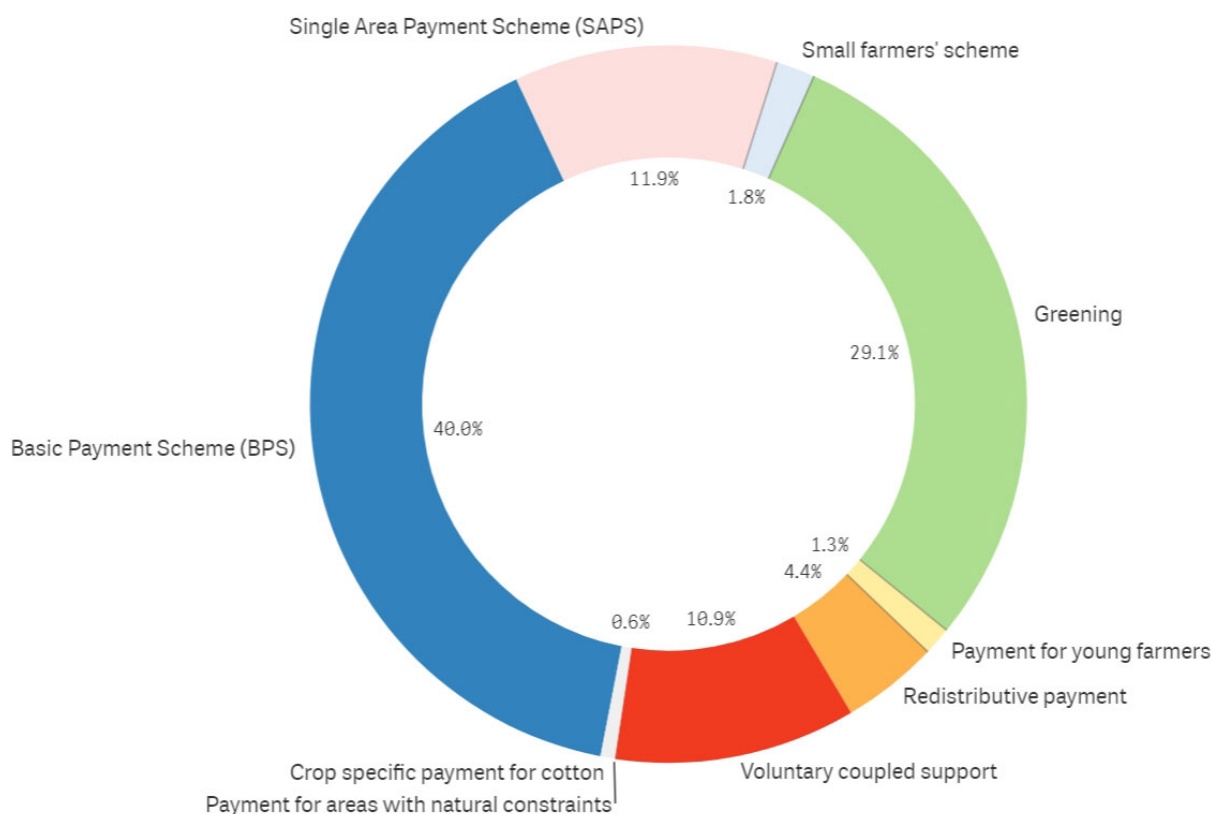
To maximize the use of natural resources, the CAP has urged farmers to adopt eco-friendly procedures for growing plants and rearing animals over the last two decades, incorporating new technology into their production processes. Farmers that satisfy three environmental criteria are eligible for the green direct payment, which makes up to 30% of the direct payment program budget under the CAP system (Figure 3).

**Table 1.** CAP expenditure and CAP reform path (by financial year). (Source: EC, Directorate-General for Agriculture and Rural Development).

Year	Export Refunds (€ bn)	Other Market Support (€ bn)	Coupled Direct Payments (€ bn)	Decoupled Direct Payments. Excl: (€ bn)	Greening (€ bn)	Total Rural Development. Excl: (€ bn)	Rural Development Environment/Climate (€ bn)	CAP as % EU GDP (%)
2006	2.22	5.27	18.072	12.488	0.00	11.02	0.00	0.48
2007	1.34	3.41	6.617	26.613	0.00	8.025	2.675	0.46
2008	0.91	3.18	6.087	28.06	0.00	7.53	2.51	0.44
2009	0.62	3.27	6.256	29.538	0.00	6.307	2.102	0.45
2010	0.37	3.54	5.811	30.559	0.00	8.212	2.737	0.47
2011	0.18	3.16	3.314	33.567	0.00	8.775	2.925	0.46
2012	0.15	3.20	3.183	34.412	0.00	9.397	3.132	0.47
2013	0.06	3.09	2.79	35.583	0.00	9.292	3.097	0.47
2014	0.00	2.43	2.683	35.781	0.00	7.35	3.15	0.44
2015	0.00	2.63	2.994	35.295	0.00	7.819	3.351	0.43
2016	0.00	3.07	4.46	22.324	10.803	8.064	3.456	0.42
2017	0.00	2.86	4.524	22.676	10.840	7.371	3.159	0.40
2018	0.00	2.61	4.679	22.439	10.840	8.316	3.564	0.39
2019	0.00	2.37	4.632	22.311	10.806	9.394	4.026	0.39
2020	0.002	2.59	4.692	22.262	10.858	9.676	4.146	0.38
2021	0.00	2.56	4.696	21.978	10.775	10.255	4.395	0.38
2022	0.00	2.953	4.695	21.834	10.763	10.670	4.573	0.36

**Table 2.** The integration of environmental concerns into the CAP through fundamental agri-environmental indicators (EU-28, 2017–2018) (Source: European Parliament Fact Sheets on the EU—The CAP).

	Share of UAA Classed as Natura 2000 Area Including Natural Grassland (%)	Share of Energy Used in Agroforestry of Total Energy Consumption (%)	Share of UAA Managed by Farms by Low Input Intensity (%)	Share of UAA under Organic Farming (%)	Share of Agriculture in Production of Renewable Energy (%)	Share of Forestry in Production of Renewable Energy (%)
	2018	2018	2017	2018	2018	2018
BE	7.1	2.4	63.0	6.6	18.8	36.3
BG	22.5	1.9	10.3	2.6	6.6	59.5
CZ	6.6	2.6	27.8	14.8	16.6	67.2
DK	4.0	4.3	42.7	9.8	7.1	42.9
DE	10.7	1.7	34.4	7.3	24.1	27.2
EE	5.8	4.3	29.2	20.6	0.3	94.5
EL	18.7	1.7	40.2	9.3	6.0	25.9
ES	16.6	3.0	27.0	9.3	9.8	29.0
FR	8.4	2.9	31.6	7.0	13.3	37.0
IE	3.6	2.0	31.1	2.6	2.6	18.6
IT	9.5	2.4	35.0	15.2	8.3	26.5
CY	6.3	2.7	61.4	4.6	5.9	11.8
HR	25.7	3.2	26.9	6.9	2.7	62.6
LV	6.4	4.5	28.4	14.5	6.0	85.8
LT	4.5	2.0	35.2	8.1	10.3	79.1
LU	21.1	0.6	30.6	4.4	11.5	52.2
HU	14.8	3.6	24.6	3.9	17.2	71.1
MT	8.1	0.9	38.2	0.4	4.8	0.0
NL	4.2	8.1	23.6	3.2	37.0	23.7
AT	11.8	2.0	21.0	24.1	5.4	47.0
PL	11.5	5.6	33.5	3.3	11.8	69.3
PT	17.8	2.4	30.6	5.9	5.2	41.8
RO	12.7	2.4	16.1	2.4	3.2	58.3
SI	23.5	1.5	35.5	10.0	1.9	51.8
SK	16.2	1.3	20.2	9.9	17.8	56.3
FI	1.1	2.7	37.5	13.1	2.7	74.1
SE	4.0	1.9	30.4	20.3	2.4	48.5
UK	2.6	1.0	32.3	2.6	11.3	26.9
EU-27	11.2	2.9	27.0	8.0	12.1	41.4
EU-28	10.9	2.7	27.2	7.5	12.1	40.3



**Figure 3.** Distribution of direct payment expenditure by scheme (Claim Year 2021). (Source: EC, Directorate-General for Agriculture and Rural Development).

Variating their crops, preserving permanent grassland, upholding biodiversity, and allocating 5% of their arable land to ecologically beneficial areas (Ecological Focus Areas) are the relevant intervention areas. In EU countries, the ratio of permanent grassland to agricultural land was decided by national or regional authorities, with a 5% leeway [79]. Advanced digital applications and innovations, such as Blockchain, Internet-of-Things, and Artificial Intelligence, and Immerse Reality, are expected to provide effective tools to the farmers in order to achieve the above goals [80]. As an illustration, “Smart Farming” applications for intelligent-edge computing will make it easier to deploy edge capacity linked to agricultural equipment, enabling the real-time collection of agricultural data, improved services for farmers, such as harvest prediction and farm management, and the improvement of the food supply chain [80].

Several studies have suggested that cross-compliance is an efficacious tool for promoting environmental and agricultural sustainability [81–84]. However, some scholars have argued that cross-compliance alone may not be sufficient to meet the environmental goals of the CAP [85], and a thorough combination with other policy instruments, such as agri-environmental measures and payments for ecosystem services, could be indispensable [81,85]. Additionally, recent research has shown that the efficacy of the CAP’s green direct payment scheme may vary depending on the farm characteristics and the local context [86], suggesting the need for more targeted and flexible policies. Therefore, policy-makers and scholars should delve deeper into evaluating the effectiveness of the CAP’s environmental policies and identifying ways to improve them. The integration of agri-environmental measures, payments for ecosystem services, and the use of targeted policies contingent upon the farm and local context seems to be promising strategies bolstering environmental sustainability while supporting agricultural production [87].

In the EU, regulations are in place to protect designated sections of permanent grassland, which cannot be transformed or cultivated by farmers [88,89]. However, certain farmers, such as those enrolled in the small farmer’s program, are exempt from the green-

ing regulations, and organic farmers are rewarded for their environmentally friendly practices [8,90]. Failure to comply with greening regulations can result in reduced direct payments [77,85,91]. The green direct payment system holds crucial significance in promoting eco-friendly environmental practices and alleviating the impact of climate change on agriculture [77,92]. The Cross-Compliance regime, although relatively lenient, provides a framework for regulation and control mechanisms [83,93,94]. The agricultural industry worldwide faces escalating pressure stemming from an expanding populace [95–97], urbanization [98–101], resource depletion [102–106], and climate change [107–109]. In the EU, the repercussions of climate change are detrimentally impacting agricultural production and environments [110,111]. European agriculture is at risk of extreme weather events, rising temperatures, changing rainfall patterns, river flooding, coastal flooding, droughts, and other impacts due to climate change [12,112]. While some regions may benefit from certain climatic changes [113,114], most of them will experience negative effects, exacerbating the existing environmental issues [107,108].

## 6. Safeguarding Agriculture in the Face of Climate Change: Exploring the Role of CAP

Studies have shown that climate change is anticipated to amplify the frequency of extreme weather events, such as droughts, floods, or extreme temperatures, with a potentially serious impact on agricultural production and the quality of food products [16,115]. The risks posed by climate change are particularly profound in the Mediterranean zone, where agricultural output is expected to be negatively impacted by water shortage and a sudden process of local warming [116,117]. Furthermore, these effects on agriculture will likely exacerbate existing environmental issues, such as land resource depletion and soil degradation, all while heightening the susceptibility of local regions [118–120]. Therefore, implementing measures to mitigate and counterbalance the impact of climate change, such as the green direct payment system, is of crucial importance in promoting sustainable agricultural practices and preserving the environment [121].

Additionally, research has highlighted the importance of establishing quantifiable standards for the Cross-Compliance regime, considering its comparatively lenient structure and limitations in oversight mechanisms [79]. Moreover, farmers who disregard greening regulations are penalized through reduced direct payments, indicating the importance of complying with these regulations. Finally, the exemptions granted to certain farmers, such as those enrolled in the small farmer's program and organic farmers, ought to be carefully evaluated for reasons of administration and proportionality [90].

Overall, protecting the environment and mitigating the impact of climate change emerge as imperative objectives for upholding sustainable agricultural production in the EU. The implementation of regulations, such as the green direct payment system and the Cross-Compliance regime, hold crucial significance in promoting good environmental practices ensuring compliance with environmental standards. To address the challenges facing agriculture from climate change and land resource depletion, it is therefore essential to implement sustainable production techniques and promote climate change and natural resource management. The CAP endeavors to attain these aspirations, casting European farmers in the role of primary environmental stewards, spending money, and engaging in producing within (economically disadvantaged) rural areas [122]. The new CAP framework for 2021–2027 champions a competitive and sustainable agricultural sector, supporting farmers' livelihoods and providing food to society while fostering vibrant rural communities. In this perspective, the European Green Deal (EGD), with a focus on agriculture and rural areas, is a crucial tool in achieving the Farm to Fork (F2F) and biodiversity objectives. The EGD represents a collection of policy initiatives strategically aimed at guiding the EU towards a greener trajectory, ultimately striving to attain climate neutrality by the year 2050. Its core mission revolves around reshaping the EU into an equitable and flourishing society equipped with a contemporary and competitive economy. By advocating for a comprehensive and cross-disciplinary strategy, the deal aligns various pertinent policy domains to contribute cohesively to the overarching climate-oriented goal. This compre-

hensive program encompasses a diverse array of actions spanning climate, environment, energy, transportation, industry, agriculture, and sustainable finance—all interconnected as they pursue the common objective of fostering sustainability (see [123–125]). Embedded within the EGD, the F2F strategy assumes a pivotal role, centering its attention squarely on the food system. Its central objective entails enhancing the sustainability of the EU's food system across its entire continuum—from production to consumption. This is accomplished through the promotion of healthful and sustainable dietary habits, curbing food wastage, enhancing food labeling standards, and endorsing ecologically conscious agricultural methods. The overarching aim of this strategy is to ensure the availability of secure, nourishing, and eco-friendly sustenance for all while concurrently mitigating the environmental footprint of the food industry (see [126,127]). However, further noting the holistic impact and salience of these initiatives lies beyond the scope of this present analysis.

The new CAP requires measurable environmental and climatic requirements to be met in the context of obtaining direct payments [128]. This involves implementing agricultural practices, such as the rotation of crops rather than diversification, safeguarding wetlands to uphold carbon-abundant soils, and managing water resources in a sustainable manner. Each MS is enjoined to formulate programs or incentives for farmers aimed at fostering judicious agricultural practices. The new CAP also includes an escalated allocation of resources from pillar 1 to pillar 2 for environmental and climatic policies, reflecting a 15% financial upgrade of environmental issues [80,129].

### **7. Competing Goals in CAP Implementation: Actors, Interests, and Bargaining**

Historical institutionalism and rational choice institutionalism represent two research methods used to elucidate the actions of MS governments and their impact on the EU institutions. Leading scholars in the field of historical institutionalism, such as Pierson (1996) [130] and Bulmer (2009) [131], have emphasized, on the one hand, the importance of scrutinizing political and policy-related maneuvers in the context of multi-tier government. To this effect, Bulmer introduced the concept of a 'governance regime' to analyze assorted subsystem policies within the EU. On the other hand, rational choice institutionalism finds its foundation in the realm of economics, revolving around the theory of rational behavior. This approach was mainly harnessed to delineate the goals of MS governments within the context of EU integration. According to this theory, governments willingly engage in (and cede power to) the EU because they believe it affords them several advantages. These benefits may include diminished transaction expenses, heightened efficacy of policy formulation, improved operational efficiency, and increased adherence to regulatory frameworks [132].

However, it is worth noting that while rational choice institutionalism furnishes a useful framework for dissecting the EU integration process, it has also been criticized for oversimplifying the intricate interplays between actors and institutions [133]. Moreover, recent developments, such as the Brexit referendum [134] and the rise of populist movements in Europe [135], including the surge of right-wing ethnonationalism and the emergence of authoritarianist governments—largely attributed to the austerity-driven economic strategies of the preceding decade across various European nations [136], as well as the ongoing migration predicament [137]—have cast a spotlight on the underlying assumptions of rational choice institutionalism. These events highlight the importance of examining the roles of emotions, identity, and culture in the realm of EU politics [138].

The implementation of the CAP engenders varying costs and benefits across different MSs, giving rise to competing goals and anticipations among actors involved in its development. These entities may comprise various stakeholders, such as government officials with specific agendas, committee bureaucrats, interest groups representing various industries, and groups advocating for agricultural issues, among others [17,139]. By leveraging future decisions regarding CAP reforms as a bargaining tool [139], the EC and the Council of Agriculture and Rural Development Ministers historically sought to champion European farmers' interests through a leveling act involving major international partners (such as

the UN and WTO members). However, these determinations have often disregarded the opinions of consumer and environmentalist factions, especially in regard to environmental issues [140].

Interestingly, a notable transformation in the annals of the CAP, especially in the late 1990s, should also be ascribed to a number of unwanted episodes, or better, incidents, including the advent of bovine spongiform encephalopathy [141], the detection of dioxin contamination in Belgian food products [142], and the spread of foot and mouth diseases [143]. These events engendered an elevated degree of awareness among consumers, propelling them to clamor for heightened vigilance over matters of food safety and quality. This change in consumer demand also brought to light apprehensions regarding the influence of the CAP on animal welfare and the environment, spurring the formulation of policies that address such issues [144]. The priority placed on food safety and quality has been significantly accentuated among EU residents, largely due to the demand from consumer groups. Consequently, these issues have been thrust to the forefront of the CAP agenda. While the CAP's position on these issues may vary, its political response has been to address them in policy reform efforts [140].

### 8. The Latent Shift toward New Environmental Targets

More recent studies have emphasized the importance of harmonizing CAP policies with the EU's climate and biodiversity aspirations [145,146] while accentuating the imperative to integrate environmental and climate objectives into the CAP to ensure its contribution to the EGD's objectives [147,148]. Academic research has also emphasized the necessity of dovetailing the CAP with the Sustainable Development Goals established by the UN [147]. Specifically, the pertinence of Goal 2, which aims at reducing hunger, attaining food security, enhancing nutrition, and fostering sustainable agriculture, is of critical significance from this perspective [149,150].

The CAP, at least in its original formulation established in 1962 and lasting until 1992, saw little opposition from pressure groups representing farmers' professional associations [64]. However, in the following years, the European agricultural model's detrimental environmental impacts diminished the influence of consumer and environmental advocacy movements [151]. These movements subsequently garnered greater sway within EU institutions, propelled by food-related scandals and escalating environmental effects [70].

Although politically justified, the economic philosophy behind cross-compliance, which involved the addition of new conditions to existing income support, remains unclear. The query emerges as to whether this constitutes a valuable policy tool. Several studies have intimated that direct payments were allocated in accordance with agricultural policy objectives rather than environmental objectives [152–154]. As a result, farmers who heavily rely on direct payments may not necessarily align with those who inflict substantial harm to the environment [155].

It is crucial to contemplate the decision-making process regarding the allocation of direct payment savings, particularly those stemming from farmers' non-compliance [156]. MSs could only withhold 25% of funds obtained through the implementation of cross-compliance (see [157]), thereby offering little incentive for states to establish a reliable control system. This deficiency in follow-through by the MSs indicates a discrepancy between political rhetoric and reality [13]. Consequently, new 'players', such as consumers and environmental movements, gained importance in the reform process, as well as the gradual wane of producer pressure organizations resulting from the contraction in rural populations. The decline in rural populations, both in terms of absolute numbers and as a share of the overall workforce in the EU [13,158], adds a pivotal contextual layer. This decline prompts an exploration into the underlying causes behind the dwindling appeal of agriculture as a viable livelihood, even in the presence of substantial funding. This necessitates a broader examination of the political economy driving the agrarian crisis, considering its far-reaching consequences and implications. Moreover, it is essential to recognize the role of disparities and social injustices in this landscape. While the shift in



dynamics has paved the way for new participants, such as consumers and environmental movements, to influence reform processes, the gradual decrease in rural populations has impacted producer pressure organizations. These organizations have historically played a significant role but have diminished in influence due to the changing demographic composition in rural areas. It is worth acknowledging that between 1960 and 1990, there was an overarching reduction of the active rural populace by 54.9% [17]. This shift occurred as the strain on rural incomes gradually compelled a significant portion of the workforce engaged in the primary sector to transition into the secondary and tertiary sectors of the economy, often necessitating a move from rural areas to urban centers [17]. Recent literature suggests that CAP's current system perpetuates socioeconomic disparities, particularly in peripheral (rural) areas while favoring large agricultural enterprises and consolidating land ownership [159]. This consolidation of land ownership contributes to the displacement of small-scale farmers and the exclusion of marginalized groups, thereby sustaining patterns of social injustice. Moreover, studies show that CAP has faltered to deliver on its environmental objectives despite earmarked budget allocations for these specific purposes [146], indicating the urgent need for a reform ensuring sustainable agricultural practices.

The Green Payment Scheme represents a critical juncture in the progression of the CAP in terms of both its configuration and implementation. With the inception of this scheme, the compliance of producers with environmental regulations became quantifiable, and explicit criteria were established for the allocation of direct payments. Furthermore, the most recent iteration of the CAP, covering the period from 2021 to 2027, places a greater emphasis on the targeted allocation of resources in order to align with the EU's climate goals. This change is propelled by the recognition of the severe and widespread impacts of climate change on agriculture, exerting its impact across the entirety of the food production continuum. The new framework of the CAP addresses these issues by implementing measures that laser-focus on climate action and sustainability within the realm of agriculture.

As set out earlier, the focus on cultivating green architecture within the CAP is clear, aiming to create a robust yet adaptable framework for 'greening' the policy. The CAP has been under scrutiny for a considerable period due to the detrimental effect it has on the environment. The escalation in agricultural production intensity and the depletion of land resources rank among the factors catalyzing this apprehension. Under the new CAP paradigm, rational decision-making is paramount within a structured framework of shared commitments and goals. The policy's diminished budget places considerable emphasis on conditionality, accentuating its significance. At the same time, the policy raises awareness of (and addresses) environmental and climate change-related issues through specific funding mechanisms. Realizing these goals requires the harmonious integration of both CAP pillars, coupled with cooperation with allied policies while providing flexibility based on national priorities [17]. As a result, the EU27's proportion of global emissions witnessed a decline from 16.8% in 1990 to 7.3% in 2021 [160,161].

In this perspective, the Green Payment Scheme represents a new system of incentives aimed at promoting environmentally friendly agricultural practices as well as rewarding farmers who have consistently upheld certain environmental standards. This is in line with the 'public money for public goods' principle, which advocates that public funding allocated to agriculture should be reciprocated through the provision of public goods, such as the protection of the environment and the preservation of biodiversity. The scheme is also strategically crafted to encourage farmers to take advantage of new technologies and management practices that curtail the environmental impact of agricultural production.

## 9. Charting the Course for a Greener Common Agricultural Policy

Ten main objectives for the years 2023 to 2027 shape the operating framework of the new CAP. These goals, which placed a focus on social, environmental, and economic issues, served as a guide for how EU countries built their CAP Strategic Plans. It is noteworthy that, along with the promotion of knowledge and innovation, the top goals for the upcoming

years include combating climate change, protecting the environment, and preserving landscapes and biodiversity, as the EU aims to be climate-neutral by 2050 [148,162,163].

Additionally, the new CAP builds on the previous policy framework, incorporating changes that reflect the EU's increasing emphasis on environmental quality, sustainable agronomic practices, and climate action [164]. Sustainable farming practices include precision agriculture, organic farming, agro-ecology, agro-forestry, and more stringent animal welfare standards [80]. By shifting the emphasis from compliance to performance (e.g., [165]), eco-schemes, for instance, are poised to remunerate farmers for improved environmental and climatic performance, such as managing and storing soil carbon and improving fertilizer management to improve water quality and reduce emissions [166,167]. The EC has recommended that climate action should secure a minimum of 40% of the total funding for the CAP from 2021 to 2027 [145]. Therefore, the F2F strategy [168] will bolster European farmers' efforts to combat climate change, protect the environment, and preserve biodiversity.

In line with this strategy, the EGD is centered on agriculture and rural areas, and the new CAP aims to be a crucial tool in achieving the F2F and biodiversity aspirations, as well as facilitating the transition to a climate-neutral, circular, and resilient economic paradigm. Employing an innovative approach, the policy's implementation hinges on the combination of mandatory and voluntary measures, which vary according to the country's environmental and agricultural exigencies. The flexibility of the policy enables MSs to tailor their implementation strategies, contingent upon their individual circumstances, while the obligatory nature of direct payments serves as an incentive compelling farmers to attain environmental and climate-related objectives.

In summary, the new CAP's framework alongside the Green Payment Scheme represents a significant shift towards a more sustainable and environmentally attuned approach to agriculture in the EU. The policy's focus on incentivizing environmentally friendly practices, combined with flexibility and conditionality, furnishes a scaffold for amalgamating environmental concerns into the broader agricultural sector. However, the success of the new framework will depend on its implementation and the extent to which MSs and farmers embrace the new spectrum of incentives and adapt to the policy's changing priorities [17].

## 10. Considering Research Scope and Charting New Territories

This work contributes to the study of sustainable development by specifically influencing the level and spatial direction of local and regional development in the field of the primary sector. The current study adopts a predominantly theoretical and descriptive approach rooted in the synthesis of existing literature. The theoretical underpinnings are illuminated, and a comprehensive overview of pertinent literature is presented, establishing the foundation for deeper insights into the subject matter.

The study highlights a few important figures and basic indicators derived from official records that aim to reflect the differentiated mechanisms of rural development and the intrinsic complexity of the quantitative information required to evaluate processes of (economic) growth. In this forward-looking perspective, the evolving nature of the field is underscored, along with the continued contributions that can shape its trajectory. This invites further scrutiny and empirical examination, potentially involving empirical methodologies and primary data collection.

The utilization of econometric modeling for these indicators can further capture the complexity of the study subject, thereby advocating for a multi-disciplinary research strategy that integrates socio-demographic and economic approaches. These approaches necessitate continually updated, spatially relevant, and comparable indicators that are capable of describing possible changes occurring over short time windows.

Official statistics and data at both country and supra-national scales (e.g., Eurostat, OECD, FAO, UN) should thus build up the quality of socioeconomic indicators reflecting rural development and agrarian change. This task is considered particularly urgent,

contributing to informing regional science, urban studies, and spatial planning in both advanced and emerging economies.

Concurrently, the development of a set of figures and indicators of exurban development based on official statistics data may eventually solidify the use of mixed econometric techniques and exploratory, multivariate approaches. These approaches can be applied to differentiated socioeconomic contexts and territorial conditions, aiming to disentangle the inherent complexity underlying rural development. Notably, future research avenues could encompass detailed case studies, cross-sectional analyses, and longitudinal assessments to provide empirical substantiation for the theoretical constructs discussed herein.

## 11. Conclusions

Despite the fact that environmental issues became more politicized and pressing in the early 1970s, only over the last three decades has there been a greater emphasis on policy change and adaptation to address the impact of economic activity and agricultural output on the environment and climate change. This change has been driven by internal and external factors as well as informal and formal changes in the institutional framework of the CAP and the power of the main groups of interest.

Among the factors that pushed the “greening” process are the growing awareness of the issue among consumers, environmentalists, and the public in the EU, along with the gradual decline of farmer’s power. Other evolutions include the recognition of agriculture’s vulnerability to climate change due to the direct impact of weather on farming activities and its contribution to greenhouse gas emissions. Moreover, the EU’s international commitments to climate change and sustainable development challenges, such as the AoA [13,14] and the 2015 UN Paris Agreement [12,15], played a significant role in gradually including “green” measures in several CAP reforms since 1992 [169,170].

Consequently, the new CAP (2023–2027) reflects a significant shift towards a more sustainable and environmentally friendly approach. The CAP’s new green architecture integrates environmental and climate criteria that are quantifiable. The inclusion of wetland preservation for carbon-rich soils, responsible management of water resources, and crop rotation in lieu of diversification is some of the measures taken to ensure sustainability. In addition, the CAP allocates at least 30% of funding for environmental and climate change activities under the second pillar, amounting to roughly 23 billion euros.

The new CAP resonates with a collective dedication to confronting climate change and the trials of sustainable development, constituting a pivotal stride toward their realization. It encourages collaboration with other similar policies, incorporates both CAP pillars, and amplifies malleability contingent upon national priorities. The new architecture stands as a robust yet supple framework designed to imbue the CAP with ecological hues and tackle the persistent environmental and climate change apprehensions that have endured over numerous years.

**Author Contributions:** All authors have contributed equally to this work. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Data Availability Statement:** No new data were created.

**Acknowledgments:** Thanks are due to Napoleon Maravegias, for the insightful and constructive comments from which the paper greatly improved.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Guth, M.; Smeđzik-Ambroży, K.; Czyżewski, B.; Stępień, S. The Economic Sustainability of Farms under Common Agricultural Policy in the European Union Countries. *Agriculture* **2020**, *10*, 34. [\[CrossRef\]](#)
- Cagliero, R.; Bellini, F.; Marcatto, F.; Novelli, S.; Monteleone, A.; Mazzocchi, G. Prioritising CAP Intervention Needs: An Improved Cumulative Voting Approach. *Sustainability* **2021**, *13*, 3997. [\[CrossRef\]](#)
- Smeđzik-Ambroży, K.; Guth, M.; Stępień, S.; Brelik, A. The Influence of the European Union's Common Agricultural Policy on the Socio-Economic Sustainability of Farms (the Case of Poland). *Sustainability* **2019**, *11*, 7173. [\[CrossRef\]](#)
- Volkov, A.; Balezantis, T.; Morkunas, M.; Streimikiene, D. Who Benefits from CAP? The Way the Direct Payments System Impacts Socioeconomic Sustainability of Small Farms. *Sustainability* **2019**, *11*, 2112. [\[CrossRef\]](#)
- Manola, M.; Koufadakis, S.X. The Gastronomy as an Art and Its Role in the Local Economic Development of a Tourism Destination: A Literature Review. *SPOUDAI J. Econ. Bus.* **2020**, *70*, 81–92.
- Kaldis, P. The Greek Fresh-Fruit Market in the Framework of the Common Agricultural Policy. Ph.D. Thesis, Coventry University, Coventry, UK, 2002.
- European Commission CAP Post-2020: Environmental Benefits and Simplification; European Commission: Brussels, Belgium, 2021.
- Doukas, Y.E. Η Πολιτική Οικονομία Της Μεταρρύθμισης Της Κοινής Αγροτικής Πολιτικής. Ph.D. Thesis, National and Kapodistrian University of Athens, Greece, 2010.
- Malhi, G.S.; Kaur, M.; Kaushik, P. Impact of Climate Change on Agriculture and Its Mitigation Strategies: A Review. *Sustainability* **2021**, *13*, 1318. [\[CrossRef\]](#)
- Kyriakopoulos, G.L.; Sebos, I.; Triantafyllou, E.; Stamopoulos, D.; Dimas, P. Benefits and Synergies in Addressing Climate Change via the Implementation of the Common Agricultural Policy in Greece. *Appl. Sci.* **2023**, *13*, 2216. [\[CrossRef\]](#)
- Melchior, I.C.; Newig, J. Governing Transitions towards Sustainable Agriculture—Taking Stock of an Emerging Field of Research. *Sustainability* **2021**, *13*, 528. [\[CrossRef\]](#)
- Doukas, Y.E.; Petides, P. The Common Agricultural Policy's Green Architecture and the United Nation's Development Goal for Climate Action: Policy Change and Adaptation. *Reg. Peripher.* **2021**, *11*, 107–128.
- Maravegias, N.; Doukas, Y.E. Traceability and the New CAP. In *A Resilient European Food Industry in a Challenging World*; European Political, Economic, and Security Issues; Agriculture Issues and Policies; Baourakis, G., Mattas, K., Zopounidis, C., van Dijk, G., Eds.; Nova Science Publishers: Hauppauge, NY, USA, 2011; pp. 245–253.
- Castellano-Álvarez, F.J.; Parejo-Moruno, F.M.; Rangel-Preciado, J.F.; Cruz-Hidalgo, E. Regulation of Agricultural Trade and Its Implications in the Reform of the CAP. The Continental Products Case Study. *Agriculture* **2021**, *11*, 633. [\[CrossRef\]](#)
- Vroljik, H.; Poppe, K. Cost of Extending the Farm Accountancy Data Network to the Farm Sustainability Data Network: Empirical Evidence. *Sustainability* **2021**, *13*, 8181. [\[CrossRef\]](#)
- Doukas, Y.E. The Common Agricultural Policy under the Pressure of the New Financial Framework (2021–2027): Nationalization and Adaptation. *Reg. Peripher.* **2019**, *8*, 133–142. [\[CrossRef\]](#)
- Doukas, Y.E.; Maravegias, N. *Ευρωπαϊκή Αγροτική Οικονομία και Πολιτική: Μετασχηματισμοί και Προκλήσεις Προσαρμογής*; Kritiki: Athens, Greece, 2021; ISBN 9789605863753.
- Hall, P.A.; Taylor, R.C.R. Political Science and the Three New Institutionalisms. *Polit. Stud.* **1996**, *44*, 936–957. [\[CrossRef\]](#)
- Andreou, G. *Η Νεοθεσμική Προσέγγιση της Πολιτικής*; Kritiki: Athens, Greece, 2018; ISBN 9789605862565.
- Ostrom, E. A Behavioral Approach to the Rational Choice Theory of Collective Action: Presidential Address, American Political Science Association, 1997. *Am. Polit. Sci. Rev.* **1998**, *92*, 1–22. [\[CrossRef\]](#)
- Strom, K. A Behavioral Theory of Competitive Political Parties. *Am. J. Pol. Sci.* **1990**, *34*, 565. [\[CrossRef\]](#)
- Tina Dacin, M.; Goodstein, J.; Richard Scott, W. Institutional Theory and Institutional Change: Introduction to the Special Research Forum. *Acad. Manag. J.* **2002**, *45*, 45–56. [\[CrossRef\]](#)
- March, J.G.; Olsen, J.P. The New Institutionalism: Organizational Factors in Political Life. *Am. Polit. Sci. Rev.* **1983**, *78*, 734–749. [\[CrossRef\]](#)
- Thelen, K.; Steinmo, S. Historical Institutionalism in Contemporary Politics. In *Structuring Politics: Historical Institutionalism in Comparative Analysis*; Steinmo, S., Thelen, K., Longstreth, F., Eds.; Cambridge University Press: Cambridge, MA, USA, 1992; pp. 1–32.
- Kraatz, M.S.; Zajac, E.J. Exploring the Limits of the New Institutionalism: The Causes and Consequences of Illegitimate Organizational Change. *Am. Sociol. Rev.* **1996**, *61*, 812. [\[CrossRef\]](#)
- Christiansen, T.; Verdun, A. Historical Institutionalism in the Study of European Integration. In *Oxford Research Encyclopedia of Politics*; Oxford University Press: Oxford, UK, 2020.
- Bennett, C.J.; Howlett, M. The Lessons of Learning: Reconciling Theories of Policy Learning and Policy Change. *Policy Sci.* **1992**, *25*, 275–294. [\[CrossRef\]](#)
- Pierson, P. Increasing Returns, Path Dependence, and the Study of Politics. *Am. Polit. Sci. Rev.* **2000**, *94*, 251–267. [\[CrossRef\]](#)
- Levi, M. A Model, a Method, and a Map: Rational Choice in Comparative and Historical Analysis. In *Comparative Politics: Rationality, Culture and Structure*; Lichbach, M., Zuckerman, A., Eds.; Cambridge University Press: Cambridge, MA, USA, 1997; pp. 19–41.
- Greener, I. Understanding NHS Reform: The Policy-Transfer, Social Learning, and Path-Dependency Perspectives. *Governance* **2002**, *15*, 161–183. [\[CrossRef\]](#)



31. Beckert, J. Agency, Entrepreneurs, and Institutional Change. The Role of Strategic Choice and Institutionalized Practices in Organizations. *Organ. Stud.* **1999**, *20*, 777–799. [CrossRef]
32. Clemens, E.S.; Cook, J.M. Politics and Institutionalism: Explaining Durability and Change. *Annu. Rev. Sociol.* **1999**, *25*, 441–466. [CrossRef]
33. Thelen, K. Historical Institutionalism in Comparative Politics. *Annu. Rev. Polit. Sci.* **1999**, *2*, 369–404. [CrossRef]
34. Romanelli, E.; Tushman, M.L. Organizational Transformation as Punctuated Equilibrium: An Empirical Test. *Acad. Manag. J.* **1994**, *37*, 1141–1166. [CrossRef]
35. Collier, R.; Collier, D. Critical Junctures and Historical Legacies. In *Shaping the Political Arena: Critical Junctures, the Labor Movement and Regime Dynamics in Latin America*; Princeton University Press: Princeton, NJ, USA, 1991; pp. 27–39.
36. Capoccia, G. Critical Junctures and Institutional Change. In *Advances in Comparative-Historical Analysis*; Cambridge University Press: Cambridge, UK, 2015; pp. 147–179.
37. Di Bartolomeo, G.; Saltari, E.; Semmler, W. The Effects of Political Short-Termism on Transitions Induced by Pollution Regulations. In *Dynamic Analysis in Complex Economic Environments*; Dynamic Modeling and Econometrics in Economics and Finance; Dawid, H., Arifovic, J., Eds.; Springer: Cham, Switzerland, 2021; Volume 26, pp. 109–122.
38. Streeck, W.; Thelen, K. Introduction: Institutional Change in Advanced Political Economies. In *Beyond Continuity: Institutional Change in Advanced Political Economies*; Streeck, W., Thelen, K., Eds.; Oxford University Press: Oxford, UK, 2005; pp. 1–39.
39. Alaimo, L.S.; Ciommi, M.; Vardopoulos, I.; Nosova, B.; Salvati, L. The Medium-Term Impact of the COVID-19 Pandemic on Population Dynamics: The Case of Italy. *Sustainability* **2022**, *14*, 13995. [CrossRef]
40. Trebesch, C.; Konradt, M.; Ordoñez, G.; Herrera, H. The Political Consequences of the Covid Pandemic: Lessons from Cross-Country Polling Data. VoxEU.org. 2020. Available online: <https://cepr.org/voxeu/columns/political-consequences-covid-pandemic-lessons-cross-country-polling-data> (accessed on 6 September 2023).
41. Bol, D.; Giani, M.; Blais, A.; Loewen, P.J. The Effect of COVID-19 Lockdowns on Political Support: Some Good News for Democracy? *Eur. J. Polit. Res.* **2021**, *60*, 497–505. [CrossRef]
42. Chantzaras, A.; Yfantopoulos, J. The Impact of COVID-19 Pandemic and Its Associations with Government Responses in Europe. *Reg. Peripher.* **2022**, *13*, 23–40. [CrossRef]
43. Katsikas, D. Health and Economic Responses to the COVID-19 Crisis in the EU. *Reg. Peripher.* **2022**, *13*, 9–21. [CrossRef]
44. Polishchuk, L. Misuse of Institutions: Lessons from Transition. In *Economies in Transition*; Palgrave Macmillan: London, UK, 2012; pp. 172–193.
45. Barasa, E.; Mbau, R.; Gilson, L. What Is Resilience and How Can It Be Nurtured? A Systematic Review of Empirical Literature on Organizational Resilience. *Int. J. Health Policy Manag.* **2018**, *7*, 491–503. [CrossRef]
46. Jung, K. Sources of Organizational Resilience for Sustainable Communities: An Institutional Collective Action Perspective. *Sustainability* **2017**, *9*, 1141. [CrossRef]
47. Lengnick-Hall, C.A.; Beck, T.E.; Lengnick-Hall, M.L. Developing a Capacity for Organizational Resilience through Strategic Human Resource Management. *Hum. Resour. Manag. Rev.* **2011**, *21*, 243–255. [CrossRef]
48. Kantabutra, S.; Ketprapakorn, N. Toward an Organizational Theory of Resilience: An Interim Struggle. *Sustainability* **2021**, *13*, 13137. [CrossRef]
49. Carmichael, D.G. Incorporating Resilience through Adaptability and Flexibility. *Civ. Eng. Environ. Syst.* **2015**, *32*, 31–43. [CrossRef]
50. Miceli, A.; Hagen, B.; Riccardi, M.P.; Sotti, F.; Settembre-Blundo, D. Thriving, Not Just Surviving in Changing Times: How Sustainability, Agility and Digitalization Intertwine with Organizational Resilience. *Sustainability* **2021**, *13*, 2052. [CrossRef]
51. Wamsler, C. Stakeholder Involvement in Strategic Adaptation Planning: Transdisciplinarity and Co-Production at Stake? *Environ. Sci. Policy* **2017**, *75*, 148–157. [CrossRef]
52. Rivera-Ferre, M.; Ortega-Cerdà, M.; Baumgärtner, J. Rethinking Study and Management of Agricultural Systems for Policy Design. *Sustainability* **2013**, *5*, 3858–3875. [CrossRef]
53. Holley, K.A. Interdisciplinary Strategies as Transformative Change in Higher Education. *Innov. High. Educ.* **2009**, *34*, 331–344. [CrossRef]
54. Pereira, L.M.; Drimie, S.; Maciejewski, K.; Tonissen, P.B.; Biggs, R. (Oonsie) Food System Transformation: Integrating a Political-Economy and Social-Ecological Approach to Regime Shifts. *Int. J. Environ. Res. Public Health* **2020**, *17*, 1313. [CrossRef]
55. Wolfram, M.; Frantzeskaki, N. Cities and Systemic Change for Sustainability: Prevailing Epistemologies and an Emerging Research Agenda. *Sustainability* **2016**, *8*, 144. [CrossRef]
56. Hall, P.A. Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain. *Comp. Polit.* **1993**, *25*, 275. [CrossRef]
57. Birkhaeuser, D.; Evenson, R.E.; Feder, G. The Economic Impact of Agricultural Extension: A Review. *Econ. Dev. Cult. Change* **1991**, *39*, 607–650. [CrossRef]
58. Vardopoulos, I.; Karytsas, S. An Exploratory Path Analysis of Climate Change Effects on Tourism. *Sustain. Dev. Cult. Tradit. J.* **2019**, 132–152. [CrossRef]
59. Islam, M. Sustainability through the Lens of Environmental Sociology: An Introduction. *Sustainability* **2017**, *9*, 474. [CrossRef]
60. Louloudis, L.; Beopoulos, N.; Vlachos, G. Policy for the Protection of the Rural Environment in Greece with a Horizon in 2010. In *Η Ελληνική Γεωργία προς το 2010*; Maravegiyas, N., Ed.; Papazisis: Athens, Greece, 1999.

61. Vardopoulos, I.; Falireas, S.; Konstantopoulos, I.; Kaliora, E.; Theodoropoulou, E. Sustainability Assessment of the Agri-Environmental Practices in Greece. Indicators' Comparative Study. *Int. J. Agric. Resour. Gov. Ecol.* **2018**, *14*, 368. [CrossRef]
62. European Court of Auditors *The Common Agricultural Policy and Climate Change: Ambitious or Inadequate?* Special Report 16/2021. 2021. Available online: [https://www.eca.europa.eu/Lists/ECADocuments/SR21\\_16/SR\\_CAP-and-Climate\\_EN.pdf](https://www.eca.europa.eu/Lists/ECADocuments/SR21_16/SR_CAP-and-Climate_EN.pdf) (accessed on 6 September 2023).
63. Carpenter, A. Introduction: The Role of the European Union as a Global Player in Environmental Governance. *J. Contemp. Eur. Res.* **2012**, *8*, 167–172. [CrossRef]
64. Maravegias, N. *Croissance Economique et Espace Rural. Agriculture et Agro-Industrie Dans Le Development Regional de La Grece*; Universite des Sciences Sociales de Grenoble, Faculte des Sciences Economiques: Grenoble, France, 1983.
65. Maravegias, N.; Doukas, Y.E.; Petides, P. The Political Economy of the Common Agricultural Policy's Green Architecture. *Sustain. Dev. Cult. Tradit. J.* **2023**, *1*, 73–84. [CrossRef]
66. Borsellino, V.; Schimmenti, E.; El Bilali, H. Agri-Food Markets towards Sustainable Patterns. *Sustainability* **2020**, *12*, 2193. [CrossRef]
67. Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 Laying down the General Principles and Requirements of Food Law, Establishing the European Food Safety Authority and Laying down Procedures in Matters of Food safety. *Official Journal L*, 1 February 2002.
68. Linares Quero, A.; Iragui Yoldi, U.; Gava, O.; Schwarz, G.; Povellato, A.; Astrain, C. Assessment of the Common Agricultural Policy 2014–2020 in Supporting Agroecological Transitions: A Comparative Study of 15 Cases across Europe. *Sustainability* **2022**, *14*, 9261. [CrossRef]
69. Louloudis, L.; Maravegias, N. Farmers and Agricultural Policy in Greece since the Accession to the European Union. *Sociol. Ruralis* **1997**, *37*, 270–286. [CrossRef]
70. Doukas, Y.E. Η Κοινή Αγροτική Πολιτική και ο Ελληνικός Αγροτικός Τομέας. In *Ελλάδα και Ευρωπαϊκή Ενοποίηση: Η Ιστορία μιας Πολυκύμαντης Σχέσης 1962–2018*; Maravegias, N., Sakellariopoulos, T., Eds.; Dionicos: Athens, Greece, 2018.
71. Karaveli, E.; Doukas, Y.E. Rural Development Policy: An Alternative Development Strategy for The Case of Greece. *Reg. Peripher.* **2012**, *1*, 21–36. [CrossRef]
72. Cecchini, M.; Zambon, I.; Pontrandolfi, A.; Turco, R.; Colantoni, A.; Mavrakis, A.; Salvati, L. Urban Sprawl and the 'Olive' Landscape: Sustainable Land Management for 'Crisis' Cities. *GeoJournal* **2019**, *84*, 237–255. [CrossRef]
73. Xeni, F.; Gavriel, I.; Tsangas, M.; Doula, M.K.; Zorpas, A.A. A Preliminary Assessment of Sustainable Agricultural Practices in Cyprus. In *Proceedings of the 7th International Conference on Sustainable Solid Waste Management, Heraklion, Greece, 26–29 June 2019*.
74. Tal, A. Making Conventional Agriculture Environmentally Friendly: Moving beyond the Glorification of Organic Agriculture and the Demonization of Conventional Agriculture. *Sustainability* **2018**, *10*, 1078. [CrossRef]
75. Leinonen, I. Achieving Environmentally Sustainable Livestock Production. *Sustainability* **2019**, *11*, 246. [CrossRef]
76. OECD. *Environmental Cross-Compliance in Agriculture*; OECD: Paris, France, 2010.
77. Cortignani, R.; Severini, S.; Dono, G. Complying with Greening Practices in the New CAP Direct Payments: An Application on Italian Specialized Arable Farms. *Land Use Policy* **2017**, *61*, 265–275. [CrossRef]
78. Maravegias, N.; Martinos, N. L'agriculture Grecque Face à l'union Économique et Monétaire de La Communauté Européenne. In *Agricultures Familiales et Politiques Agricoles en Méditerranée: Enjeux et Perspectives*; Abaab, A., Campagne, P., Elloumi, M., Fragata, A., Zagdouni, L., Eds.; CIHEAM: Montpellier, France, 1997; pp. 277–284.
79. Doukas, Y.E. Ο Αγροτικός Τομέας την Περίοδο 2014–2020. In *Οι Πολιτικές που Χρηματοδοτούνται από τον Κοινωνικό Προϋπολογισμό και η Ελληνική Οικονομία*; Mitsos, A., Ed.; Hellenic Foundation for European and Foreign Policy: Athens, Greece, 2014.
80. Doukas, Y.E.; Maravegias, N.; Chrysomallidis, C. Digitalization in the EU Agricultural Sector: Seeking a European Policy Response. In *Food Policy Modelling Responses to Current Issues*; Mattas, K., Baourakis, G., Zopounidis, C., Staboulis, C., Eds.; Springer: Cham, Switzerland, 2022; pp. 83–98.
81. Meyer, C.; Matzdorf, B.; Müller, K.; Schleyer, C. Cross Compliance as Payment for Public Goods? Understanding EU and US Agricultural Policies. *Ecol. Econ.* **2014**, *107*, 185–194. [CrossRef]
82. Bennett, H.; Osterburg, B.; Nitsch, H.; Kristensen, L.; Primdahl, J.; Verschuur, G. Strengths and Weaknesses of Crosscompliance in the CAP. *EuroChoices* **2006**, *5*, 50–57. [CrossRef]
83. Juntti, M. Implementing Cross Compliance for Agriculture in the EU: Relational Agency, Power and Action in Different Socio-Material Contexts. *Sociol. Ruralis* **2012**, *52*, 294–310. [CrossRef]
84. Ragazou, K.; Garefalakis, A.; Zafeiriou, E.; Passas, I. Agriculture 5.0: A New Strategic Management Mode for a Cut Cost and an Energy Efficient Agriculture Sector. *Energies* **2022**, *15*, 3113. [CrossRef]
85. Matthews, A. Greening Agricultural Payments in the EU's Common Agricultural Policy. *Bio-Based Appl. Econ.* **2013**, *2*, 1–27. [CrossRef]
86. Hristov, J.; Clough, Y.; Sahlin, U.; Smith, H.G.; Stjernman, M.; Olsson, O.; Sahrbacher, A.; Brady, M.V. Impacts of the EU's Common Agricultural Policy "Greening" Reform on Agricultural Development, Biodiversity, and Ecosystem Services. *Appl. Econ. Perspect. Policy* **2020**, *42*, 716–738. [CrossRef]



87. Johansson, R.C.; Kaplan, J.D. A Carrot-and-Stick Approach to Environmental Improvement: Marrying Agri-Environmental Payments and Water Quality Regulations. *Agric. Resour. Econ. Rev.* **2004**, *33*, 91–104. [[CrossRef](#)]
88. Nitsch, H.; Osterburg, B.; Roggendorf, W.; Laggner, B. Cross Compliance and the Protection of Grassland—Illustrative Analyses of Land Use Transitions between Permanent Grassland and Arable Land in German Regions. *Land Use Policy* **2012**, *29*, 440–448. [[CrossRef](#)]
89. Viira, A.; Kall, K.; Ariva, J.; Oper, L.; Jürgenson, E.; Maasikamäe, S.; Pöldaru, R. Restricting the Eligible Maintenance Practices of Permanent Grassland—A Realistic Way towards More Active Farming? *Agron. Res.* **2020**, *18*, 1556–1572. [[CrossRef](#)]
90. Rydén, R. Smallholders, Organic Farmers, and Agricultural Policy. *Scand. J. Hist.* **2007**, *32*, 63–85. [[CrossRef](#)]
91. Cimino, O.; Henke, R.; Vanni, F. The Effects of CAP Greening on Specialised Arable Farms in Italy. *New Medit* **2015**, *2*, 22–31.
92. Wu, J.; Babcock, B.A. Optimal Design of a Voluntary Green Payment Program under Asymmetric Information. *J. Agric. Resour. Econ.* **1995**, *20*, 316–327.
93. Nitsch, H.; Osterburg, B. Criteria for an Efficient Enforcement of Standards in Relation to Cross Compliance. In Proceedings of the European Association of Agricultural Economists (EAAE) 12th International Congress, Ghent, Belgium, 26–29 August 2008.
94. Webster, P.; Williams, N. Environmental Cross Compliance—Panacea or Placebo? In Proceedings of the The 13th International Farm Management Congress, Wageningen, The Netherlands, 7–12 July 2002.
95. Karim, A.H.M.Z. Impact of a Growing Population in Agricultural Resource Management: Exploring the Global Situation with a Micro-Level Example. *Asian Soc. Sci.* **2013**, *9*, 14. [[CrossRef](#)]
96. Bongaarts, J. Population Pressure and the Food Supply System in the Developing World. *Popul. Dev. Rev.* **1996**, *22*, 483. [[CrossRef](#)]
97. Balakuntala, M.V.; Ayad, M.; Voyles, R.M.; White, R.; Nawrocki, R.; Sundaram, S.; Priya, S.; Chiu, G.; Donkin, S.; Min, B.-C.; et al. Global Sustainability through Closed-Loop Precision Animal Agriculture. *Mech. Eng.* **2018**, *140*, S19–S23. [[CrossRef](#)]
98. Satterthwaite, D.; McGranahan, G.; Tacoli, C. Urbanization and Its Implications for Food and Farming. *Philos. Trans. R. Soc. B Biol. Sci.* **2010**, *365*, 2809–2820. [[CrossRef](#)] [[PubMed](#)]
99. Beckers, V.; Poelmans, L.; Van Rompaey, A.; Dendoncker, N. The Impact of Urbanization on Agricultural Dynamics: A Case Study in Belgium. *J. Land Use Sci.* **2020**, *15*, 626–643. [[CrossRef](#)]
100. Atta-ur-Rahman; Surjan, A.; Parvin, G.A.; Shaw, R. Impact of Urban Expansion on Farmlands. In *Urban Disasters and Resilience in Asia*; Shaw, R., Surjan, A., Rahman, A., Parvin, G., Eds.; Elsevier: Oxford, UK, 2016; pp. 91–112.
101. Masters, W.A.; Djurfeldt, A.A.; De Haan, C.; Hazell, P.; Jayne, T.; Jirström, M.; Reardon, T. Urbanization and Farm Size in Asia and Africa: Implications for Food Security and Agricultural Research. *Glob. Food Secur.* **2013**, *2*, 156–165. [[CrossRef](#)]
102. Turner, S.W.D.; Hejazi, M.; Calvin, K.; Kyle, P.; Kim, S. A Pathway of Global Food Supply Adaptation in a World with Increasingly Constrained Groundwater. *Sci. Total Environ.* **2019**, *673*, 165–176. [[CrossRef](#)]
103. Foley, J.A.; Ramankutty, N.; Brauman, K.A.; Cassidy, E.S.; Gerber, J.S.; Johnston, M.; Mueller, N.D.; O’Connell, C.; Ray, D.K.; West, P.C.; et al. Solutions for a Cultivated Planet. *Nature* **2011**, *478*, 337–342. [[CrossRef](#)]
104. Kahn, B.M.; LeZaks, D. Investing in Agriculture: Far-Reaching Challenge, Significant Opportunity: An Asset Management Perspective. *SSRN Electron. J.* **2009**. [[CrossRef](#)]
105. Hazell, P.; Wood, S. Drivers of Change in Global Agriculture. *Philos. Trans. R. Soc. B Biol. Sci.* **2008**, *363*, 495–515. [[CrossRef](#)]
106. Mancosu, N.; Snyder, R.; Kyriakakis, G.; Spano, D. Water Scarcity and Future Challenges for Food Production. *Water* **2015**, *7*, 975–992. [[CrossRef](#)]
107. Arora, N.K. Impact of Climate Change on Agriculture Production and Its Sustainable Solutions. *Environ. Sustain.* **2019**, *2*, 95–96. [[CrossRef](#)]
108. Baba, S.A.; Adamu, I.A. Implications of Climate Change on Agricultural Productivity: A Review. *J. Food Technol. Nutr. Sci.* **2021**, *365*, 1–5. [[CrossRef](#)]
109. Rai, R. Heat Stress in Crops: Driver of Climate Change Impacting Global Food Supply. In *Contemporary Environmental Issues and Challenges in Era of Climate Change*; Springer: Singapore, 2020; pp. 99–117.
110. Shrestha, S.; Himics, M.; Van Doorslaer, B.; Ciaian, P. Impacts of Climate Change on EU Agriculture. *Rev. Agric. Appl. Econ.* **2013**, *16*, 24–39. [[CrossRef](#)]
111. Olesen, J.E.E.; Trnka, M.; Kersebaum, K.C.C.; Skjelvåg, A.O.O.; Seguin, B.; Peltonen-Sainio, P.; Rossi, F.; Kozyra, J.; Micale, F. Impacts and Adaptation of European Crop Production Systems to Climate Change. *Eur. J. Agron.* **2011**, *34*, 96–112. [[CrossRef](#)]
112. Iglesias, A.; Garrote, L.; Quiroga, S.; Moneo, M. A Regional Comparison of the Effects of Climate Change on Agricultural Crops in Europe. *Clim. Change* **2012**, *112*, 29–46. [[CrossRef](#)]
113. Santos, J.A.; Fraga, H.; Malheiro, A.C.; Moutinho-Pereira, J.; Dinis, L.-T.; Correia, C.; Moriondo, M.; Leolini, L.; Dibari, C.; Costafreda-Aumedes, S.; et al. A Review of the Potential Climate Change Impacts and Adaptation Options for European Viticulture. *Appl. Sci.* **2020**, *10*, 3092. [[CrossRef](#)]
114. Maharjan, K.L.; Joshi, N.P. Effects of Climate Change on Regional Agriculture Production, Food Price and Food Insecurity. In *Climate Change, Agriculture and Rural Livelihoods in Developing Countries*; Springer: Tokyo, Japan, 2013; pp. 93–103.
115. Skendžić, S.; Zovko, M.; Živković, I.P.; Lešić, V.; Lemić, D. The Impact of Climate Change on Agricultural Insect Pests. *Insects* **2021**, *12*, 440. [[CrossRef](#)]
116. Fraga, H.; Moriondo, M.; Leolini, L.; Santos, J.A. Mediterranean Olive Orchards under Climate Change: A Review of Future Impacts and Adaptation Strategies. *Agronomy* **2020**, *11*, 56. [[CrossRef](#)]

117. del Pozo, A.; Brunel-Saldias, N.; Engler, A.; Ortega-Farias, S.; Acevedo-Opazo, C.; Lobos, G.A.; Jara-Rojas, R.; Molina-Montenegro, M.A. Climate Change Impacts and Adaptation Strategies of Agriculture in Mediterranean-Climate Regions (MCRs). *Sustainability* **2019**, *11*, 2769. [[CrossRef](#)]
118. Salvati, L.; Zitti, M. Territorial Disparities, Natural Resource Distribution, and Land Degradation: A Case Study in Southern Europe. *Geojournal* **2007**, *70*, 185–194. [[CrossRef](#)]
119. Salvati, L.; Gemmiti, R.; Perini, L. Land Degradation in Mediterranean Urban Areas: An Unexplored Link with Planning? *Area* **2012**, *44*, 317–325. [[CrossRef](#)]
120. Zambon, I.; Colantoni, A.; Carlucci, M.; Morrow, N.; Sateriano, A.; Salvati, L. Land Quality, Sustainable Development and Environmental Degradation in Agricultural Districts: A Computational Approach Based on Entropy Indexes. *Environ. Impact Assess. Rev.* **2017**, *64*, 37–46. [[CrossRef](#)]
121. Zambon, I.; Benedetti, A.; Ferrara, C.; Salvati, L. Soil Matters? A Multivariate Analysis of Socioeconomic Constraints to Urban Expansion in Mediterranean Europe. *Ecol. Econ.* **2018**, *146*, 173–183. [[CrossRef](#)]
122. Delfanti, L.; Colantoni, A.; Recanatesi, F.; Bencardino, M.; Sateriano, A.; Zambon, I.; Salvati, L. Solar Plants, Environmental Degradation and Local Socioeconomic Contexts: A Case Study in a Mediterranean Country. *Environ. Impact Assess. Rev.* **2016**, *61*, 88–93. [[CrossRef](#)]
123. Kakabouki, I.; Tataridas, A.; Mavroeidis, A.; Kousta, A.; Roussis, I.; Katsenios, N.; Efthimiadou, A.; Papastylianou, P. Introduction of Alternative Crops in the Mediterranean to Satisfy EU Green Deal Goals. A Review. *Agron. Sustain. Dev.* **2021**, *41*, 71. [[CrossRef](#)]
124. Tsangas, M.; Zorpas, A.A.; Jeguirim, M. Sustainable Renewable Energy Policies and Regulations, Recent Advances, and Challenges. In *Renewable Energy Production and Distribution*; Jeguirim, M., Ed.; Elsevier: Cambridge, MA, USA, 2022; pp. 449–465.
125. Loizia, P.; Voukkali, I.; Zorpas, A.A.; Navarro Pedreño, J.; Chatziparaskeva, G.; Inglezakis, V.J.; Vardopoulos, I.; Doula, M. Measuring the Level of Environmental Performance in Insular Areas, through Key Performed Indicators, in the Framework of Waste Strategy Development. *Sci. Total Environ.* **2021**, *753*, 141974. [[CrossRef](#)]
126. Kritikou, T.; Panagiotakos, D.; Abeliotis, K.; Lasaridi, K. Investigating the Determinants of Greek Households Food Waste Prevention Behaviour. *Sustainability* **2021**, *13*, 11451. [[CrossRef](#)]
127. Byrne, K.A.; Zabetakis, I. Farm to Fork: Balancing the Needs for Sustainable Food Production and Food for Health Promotion. *Sustainability* **2023**, *15*, 3396. [[CrossRef](#)]
128. Volkov, A.; Melnikienė, R. CAP Direct Payments System’s Linkage with Environmental Sustainability Indicators. *Public Policy Adm.* **2017**, *16*, 231–244. [[CrossRef](#)]
129. Bielik, P.; Turčeková, N.; Adamičková, I.; Belinská, S.; Bajusová, Z. Will Changes in the Common Agricultural Policy Bring a Respectful Approach to Environment in EU Countries? *Visegr. J. Bioecon. Sustain. Dev.* **2022**, *11*, 21–25. [[CrossRef](#)]
130. Pierson, P. The Path to European Integration. *Comp. Polit. Stud.* **1996**, *29*, 123–163. [[CrossRef](#)]
131. Bulmer, S. Politics in Time Meets the Politics of Time: Historical Institutionalism and the EU Timescape. *J. Eur. Public Policy* **2009**, *16*, 307–324. [[CrossRef](#)]
132. Moravcsik, A. Preferences and Power in the European Community: A Liberal Intergovernmentalist Approach. *JCMS J. Common Mark. Stud.* **1993**, *31*, 473–524. [[CrossRef](#)]
133. Schneider, G.; Ershova, A. Rational Choice Institutionalism and European Integration. In *Oxford Research Encyclopedia of Politics*; Oxford University Press: Oxford, UK, 2018.
134. Harrison, S. What Is Electoral Psychology?—Scope, Concepts, and Methodological Challenges for Studying Conscious and Subconscious Patterns of Electoral Behavior, Experience, and Ergonomics. *Societies* **2020**, *10*, 20. [[CrossRef](#)]
135. Yilmaz, I.; Morieson, N. A Systematic Literature Review of Populism, Religion and Emotions. *Religions* **2021**, *12*, 272. [[CrossRef](#)]
136. Baker, S.; Quinn, M.J. Populism, Austerity and Governance for Sustainable Development in Troubled Times: Introduction to Special Issue. *Sustainability* **2022**, *14*, 3271. [[CrossRef](#)]
137. Ciommi, M.; Egidi, G.; Vardopoulos, I.; Chelli, F.M.; Salvati, L. Toward a ‘Migrant Trap’? Local Development, Urban Sustainability, Sociodemographic Inequalities, and the Economic Decline in a Mediterranean Metropolis. *Soc. Sci.* **2022**, *12*, 26. [[CrossRef](#)]
138. Manners, I. Political Psychology of European Integration: The (Re)Production of Identity and Difference in the Brexit Debate. *Polit. Psychol.* **2018**, *39*, 1213–1232. [[CrossRef](#)]
139. Maravegias, N. Agriculture Méditerranéenne et Politique Agricole Commune: L’expérience de La Grèce. In *Choix Technologiques, Risques et Sécurité Dans les Agricultures Méditerranéennes*; Bedrani, S., Campagne, P., Eds.; CIHEAM: Montpellier, France, 1991; pp. 159–165.
140. Swinnen, J.F.M. *A Fischler Reform of the Common Agricultural Policy?* Centre for European Policy Studies: Brussels, Belgium, 2001.
141. Mizik, T. Agri-Food Trade Competitiveness: A Review of the Literature. *Sustainability* **2021**, *13*, 11235. [[CrossRef](#)]
142. Kaczorowska, J.; Prandota, A.; Rejman, K.; Halicka, E.; Tul-Krzyszczuk, A. Certification Labels in Shaping Perception of Food Quality—Insights from Polish and Belgian Urban Consumers. *Sustainability* **2021**, *13*, 702. [[CrossRef](#)]
143. Woldemariyam, F.T.; De Vleeschauwer, A.; Hundessa, N.; Muluneh, A.; Gizaw, D.; Tinel, S.; De Clercq, K.; Lefebvre, D.; Paeshuyse, J. Risk Factor Assessment, Sero-Prevalence, and Genotyping of the Virus That Causes Foot-and-Mouth Disease on Commercial Farms in Ethiopia from October 2018 to February 2020. *Agriculture* **2021**, *12*, 49. [[CrossRef](#)]
144. Buller, H.; Blokhuis, H.; Jensen, P.; Keeling, L. Towards Farm Animal Welfare and Sustainability. *Animals* **2018**, *8*, 81. [[CrossRef](#)] [[PubMed](#)]

145. Pe'er, G.; Bonn, A.; Bruelheide, H.; Dieker, P.; Eisenhauer, N.; Feindt, P.H.; Hagedorn, G.; Hansjürgens, B.; Herzon, I.; Lomba, A.; et al. Action Needed for the EU Common Agricultural Policy to Address Sustainability Challenges. *People Nat.* **2020**, *2*, 305–316. [CrossRef] [PubMed]
146. Dupraz, P.; Guyomard, H. Environment and Climate in the Common Agricultural Policy. *EuroChoices* **2019**, *18*, 18–25. [CrossRef]
147. Cuadros-Casanova, I.; Cristiano, A.; Biancolini, D.; Cimatti, M.; Sessa, A.A.; Mendez Angarita, V.Y.; Dragonetti, C.; Pacifici, M.; Rondinini, C.; Di Marco, M. Opportunities and Challenges for Common Agricultural Policy Reform to Support the European Green Deal. *Conserv. Biol.* **2023**, *37*, e14052. [CrossRef]
148. Pe'er, G.; Zinngrebe, Y.; Moreira, F.; Sirami, C.; Schindler, S.; Müller, R.; Bontzorlos, V.; Clough, D.; Bezák, P.; Bonn, A.; et al. A Greener Path for the EU Common Agricultural Policy. *Science* **2019**, *365*, 449–451. [CrossRef] [PubMed]
149. Matthews, A. The New CAP Must Be Linked More Closely to the UN Sustainable Development Goals. *Agric. Food Econ.* **2020**, *8*, 19. [CrossRef]
150. Swaminathan, M.S.; Kesavan, P.C. Science for Sustainable Agriculture to Achieve UN SDG Goal 2. *Curr. Sci.* **2018**, *114*, 1585. [CrossRef]
151. Recanatesi, F.; Clemente, M.; Grigoriadis, E.; Ranalli, F.; Zitti, M.; Salvati, L. A Fifty-Year Sustainability Assessment of Italian Agro-Forest Districts. *Sustainability* **2015**, *8*, 32. [CrossRef]
152. Sadłowski, A.; Wrzaszcz, W.; Smedzik-Ambroży, K.; Matras-Bolibok, A.; Budzyńska, A.; Angowski, M.; Mann, S. Direct Payments and Sustainable Agricultural Development—The Example of Poland. *Sustainability* **2021**, *13*, 13090. [CrossRef]
153. Volkov, A.; Balezentis, T.; Morkunas, M.; Streimikiene, D. In a Search for Equity: Do Direct Payments under the Common Agricultural Policy Induce Convergence in the European Union? *Sustainability* **2019**, *11*, 3462. [CrossRef]
154. Morkunas, M.; Labukas, P. The Evaluation of Negative Factors of Direct Payments under Common Agricultural Policy from a Viewpoint of Sustainability of Rural Regions of the New EU Member States: Evidence from Lithuania. *Agriculture* **2020**, *10*, 228. [CrossRef]
155. Brown, C.; Kovács, E.; Herzon, I.; Villamayor-Tomas, S.; Albizua, A.; Galanaki, A.; Grammatikopoulou, I.; McCracken, D.; Olsson, J.A.; Zinngrebe, Y. Simplistic Understandings of Farmer Motivations Could Undermine the Environmental Potential of the Common Agricultural Policy. *Land Use Policy* **2021**, *101*, 105136. [CrossRef]
156. Sadłowski, A.; Beluhova-Uzunova, R.; Popp, J.; Atanasov, D.; Ivanova, B.; Shishkova, M.; Hristov, K. Direct Payments Distribution between Farmers in Selected New EU Member States. *Agris Online Pap. Econ. Inform.* **2022**, *14*, 97–107. [CrossRef]
157. Regulation (EU) No 1306/2013 Regulation (EU) No 1306/2013 of the European Parliament and of the Council on the Financing, Management and Monitoring of the Common Agricultural Policy and Repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000. 2013. Available online: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32013R1306> (accessed on 6 September 2023).
158. Brady, M.; Hristov, J.; Höjgård, S.; Jansson, T.; Johansson, H.; Larsson, C.; Nordin, I.; Rabinowicz, E. *Impacts of Direct Payments—Lessons for CAP Post-2020 from a Quantitative Analysis*; Rapport/AgriFood Economics Centre: Lund, Sweden, 2017.
159. Milczarek-Andrzejewska, D.; Zawalińska, K.; Czarnecki, A. Land-Use Conflicts and the Common Agricultural Policy: Evidence from Poland. *Land Use Policy* **2018**, *73*, 423–433. [CrossRef]
160. Crippa, M.; Guizzardi, D.; Banja, M.; Solazzo, E.; Muntean, M.; Schaaf, E.; Pagani, F.; Monforti-Ferrario, F.; Olivier, J.; Quadrelli, R.; et al. CO<sub>2</sub> Emissions of All World Countries. In *JRC Science for Policy Report*; European Commission: Brussels, Belgium, 2022.
161. Vardopoulos, I.; Konstantinou, Z. Study of the Possible Links between CO<sub>2</sub> Emissions and Employment Status. *Sustain. Dev. Cult. Tradit. J.* **2017**, *1*, 100–112. [CrossRef]
162. Dokić, D.; Matkovski, B.; Jeremić, M.; Đurić, I. Land Productivity and Agri-Environmental Indicators: A Case Study of Western Balkans. *Land* **2022**, *11*, 2216. [CrossRef]
163. Platis, D.P.; Papoui, E.; Bantis, F.; Katsiotis, A.; Koukounaras, A.; Mamolos, A.P.; Mattas, K. Underutilized Vegetable Crops in the Mediterranean Region: A Literature Review of Their Requirements and the Ecosystem Services Provided. *Sustainability* **2023**, *15*, 4921. [CrossRef]
164. Matthews, A. The CAP in the 2021–2027 MFF Negotiations. *Intereconomics* **2018**, *53*, 306–311. [CrossRef]
165. Kosmas, C.; Karamesouti, M.; Kounalaki, K.; Detsis, V.; Vassiliou, P.; Salvati, L. Land Degradation and Long-Term Changes in Agro-Pastoral Systems: An Empirical Analysis of Ecological Resilience in Asteroussia–Crete (Greece). *CATENA* **2016**, *147*, 196–204. [CrossRef]
166. Arata, L.; Sckokai, P. The Impact of Agri-Environmental Schemes on Farm Performance in Five E.U. Member States: A DID-Matching Approach. *Land Econ.* **2016**, *92*, 167–186. [CrossRef]
167. Zafeiriou, E.; Azam, M.; Garefalakis, A. Exploring Environmental—Economic Performance Linkages in EU Agriculture: Evidence from a Panel Cointegration Framework. *Manag. Environ. Qual. An Int. J.* **2023**, *34*, 469–491. [CrossRef]
168. European Commission Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A Farm to Fork Strategy for a Fair, Healthy and Environmentally-Friendly Food System. COM(2020)381 Fina. 2020. Available online: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52020DC0381> (accessed on 6 September 2023).

169. Garske, B.; Heyl, K.; Ekardt, F.; Weber, L.; Gradzka, W. Challenges of Food Waste Governance: An Assessment of European Legislation on Food Waste and Recommendations for Improvement by Economic Instruments. *Land* **2020**, *9*, 231. [[CrossRef](#)]
170. Tataridas, A.; Kanatas, P.; Chatzigeorgiou, A.; Zannopoulos, S.; Travlos, I. Sustainable Crop and Weed Management in the Era of the EU Green Deal: A Survival Guide. *Agronomy* **2022**, *12*, 589. [[CrossRef](#)]

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.