

## Empirical Paper

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# Can the war in Ukraine thwart the green agricultural transformation in the EU? Political economy considerations regarding the case of Germany

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**Abstract:** The war in Ukraine threatens global food security. At the same time, the European Union (EU) plans to advance the green transformation of its agro-food sector, which implies lower agricultural output. Relying on the political economy literature, this study examines if the war can thwart the greening ambitions for EU's agro-food sector. For this, it explores to what extent the war represents an external event that is large enough to change policy preferences and reviews the positions of major political actors who shape agricultural policy on the EU level and in member states regarding the case of Germany, where the ambition for the green transformation of the economy is particularly strong. It is shown that, for the time being, the war does not impede EU's greening aspirations. Instead, the major political actors play for time, hoping to forward the green transformation after the end of the war.

**Keywords:** agriculture, European integration, Germany, political economy, Ukraine

**JEL Classification:** D72, Q18, Q38

*“Not even the most imposing dictate of power ... can never effect anything in contradiction to the economic laws.”*  
(Eugen von Böhm-Bawerk, 1914/2010, p. 54)

## 1 Introduction

Shortly after the outbreak of the war in Ukraine, Germany's Chancellor Olaf Scholz called in a speech to the German Bundestag for a turning point (Zeitenwende) in many areas of public policy. In fact, the war subjects hitherto held convictions and pursued policies to a reality check. This holds especially for the envisaged green transformation of the economy in the European Union (EU) as laid down in its Green Deal and has become obvious through the energy crises with its soaring energy prices. One sector that is also to be subjected to the green transformation but has received much less attention in the public debate is the agro-food industry. It has been included into the EU's Green Deal via the Farm to Fork (F2F) and Biodiversity Strategy. Since Russia and Ukraine are two major agricultural producers, the acts of the war that inhibit agricultural production and deliveries have far-reaching effects on global food security [Glauber and Laborde, 2022]. Yet, as will be shown in more detail, the implementation of the Green Deal in agriculture implies lower agricultural output, which in turn would further aggravate global food security.

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Against this background, this article discusses to what extent the war in Ukraine can thwart the greening plans for the agro-food sector of the EU with a special focus on Germany. In the field of agricultural policy, there are shared competence between the EU and its member states. The latter have discretion on how to implement the goals set at the EU level. This implies a look at the situation at the level of the member states. While the EU views itself as a global trendsetter on environmental and climate policy [Cleppe and Weiss, 2020], Germany is the member country where the determination of its governments and of the publicized opinion to take a lead in advancing the green transformation has been particularly strong. This holds not only for the current federal traffic light coalition government with its strong green coalition partner but also for the previous Christian-liberal grand coalition governments under Chancellor Angela Merkel [Wolffsohn, 2021]. The efforts in this country to include agriculture into the greening endeavors date back even further to the first red–green federal coalition government at the turn of the millennium, which under the slogan “Agrarwende” (agricultural transition) called for more organic and hence extensive agricultural production. As the largest and economically most powerful EU member country, Germany is considered an agenda-setter in the EU. Hence, policy developments in this country have in principle the potential to trigger and advance policy changes on the EU level [Gavas and Koch, 2021; Gorin, 2022].

While there are a number of studies that point to the threat the war in Ukraine poses for global security and suggest policy responses [e.g. Abbay et al., 2022; Cramon-Taubadel, 2022; Glauben et al., 2022; Glauber and Laborde, 2022], they do not examine to what degree the relevant political actors have the incentive for far-reaching policy adjustments. This article tries to fill this gap by concentrating on the political economy conditions for a possible revision of the green plans for EU’s agriculture with a special focus on Germany. Theoretically, it draws upon the political economy literature and conceptually on the optimal reform context framework developed and applied by Pokrivcak et al. [2006] and Swinnen [2010, 2015a] to analyze the political economy of reforms of the Common Agricultural Policy (CAP) of the EU. Following this approach, policy changes require an external change that is large enough to move policy preferences of key political actors in member states and on the EU level in a pro-reform direction. A number of studies show how changes in external factors have induced changes in agricultural policy in the past [e.g. Olper, 1998; Josling, 2008]. War and political and economic turmoil are particularly strong external events that can considerably weaken entrenched vested interest and provide a “window of opportunity” for change to be seized by policy entrepreneurs [Williamson and Haggard, 1994; Grant, 2008]. According to Olson [1965, 1982, 1993] and Holcombe [2018], concentrated interest groups play a key role in shaping policies. Therefore, in order to explore the forces that influence policy-making on the national level in more detail, the optimal reform context framework is complemented by insights of Olson’s theory of interest groups and Holcombe’s [2018] political capitalism approach, which explains why typically an elite consisting of policy-makers and economic interest groups cooperate for their mutual benefit at the expense of the masses, as well as by the rational ignorant voter theorem of Downs [1957] and Caplan [2007], and the role of ideology [North, 1988].

Accordingly, the study examines if the economic pressure caused by the war in Ukraine is large enough to change policy preferences so that the green transformation of EU’s agriculture might be revised. For this, it reviews the positions of major political actors on the EU and national levels regarding the case of Germany that influence agricultural policy decisions. Empirically, it draws on qualitative data gathered from media reports and web sources of political institutions, parties, and relevant interest groups complemented by insights from other empirical studies on the topic and anecdotal evidence. Given the constraints on source availability, not the least due to the limited transparency of political processes as well as fast-changing realities, the conclusions drawn in this study are necessarily tentative.

The remainder of the article is organized as follows: First, in order to evaluate the significance of the external change, Section 2 illustrates the importance of Ukraine and Russia in world agricultural markets, and Section 3 explains how the policies of the desired green transformation of agriculture in the EU and Germany conflict with global food security. Then, Section 4 examines the positions and the influence of

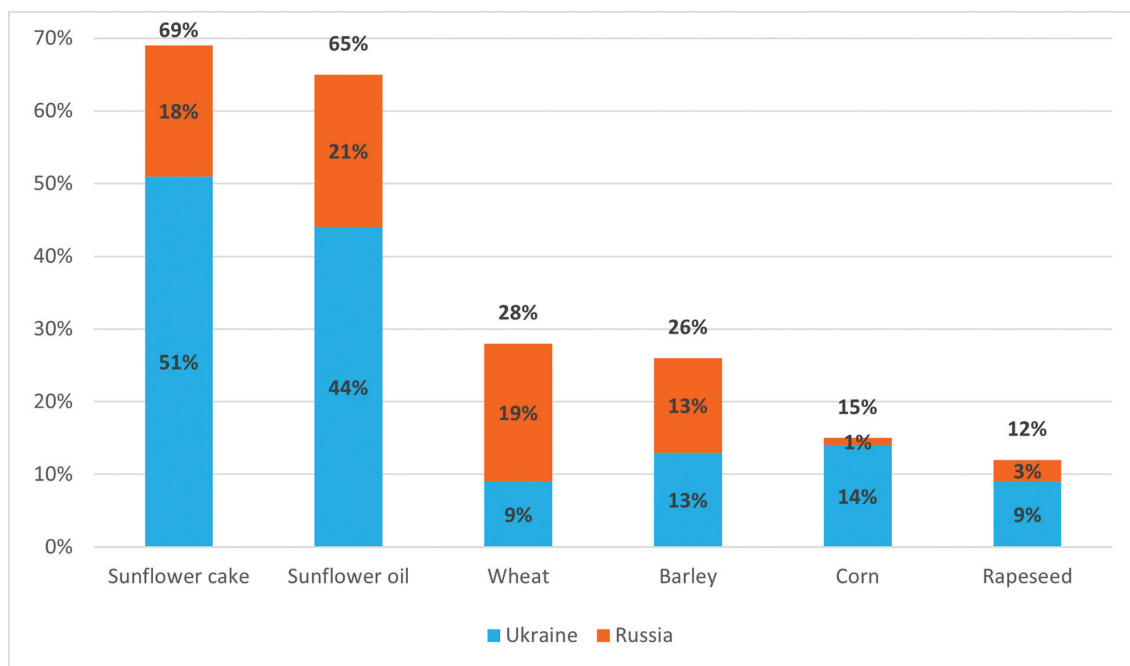
major political actors on the EU level and in Germany on rethinking the current policy course in view of the challenges caused by the war. Section 5 draws conclusion.

## 2 The importance of Ukraine and Russia for global food security

Ukraine and Russia have successfully transformed their agro-food sectors since the collapse of the Soviet Union. As a result, the region turned from one of the world's largest net importers of grain in the 1970s and 1980s into a major exporter. Today, the two countries are among the largest agricultural producers, especially of crops. As Figure 1 shows, in 2020, 69% of sunflower cake, 65% of sunflower oil, 28% of wheat, and 15% of corn traded worldwide came from Ukraine and Russia. Ukraine dominates in particular the world market for sunflower cake and oil, while Russia became the largest exporter of wheat in 2020, ahead of the EU, the USA, Canada, and Ukraine [Statista, 2022b]. Russia is also a major exporter of fertilizers [FAO, 2022a] and energy (oil and gas), all of which are major inputs for the transportation, production, and processing of food [Abay et al., 2022].

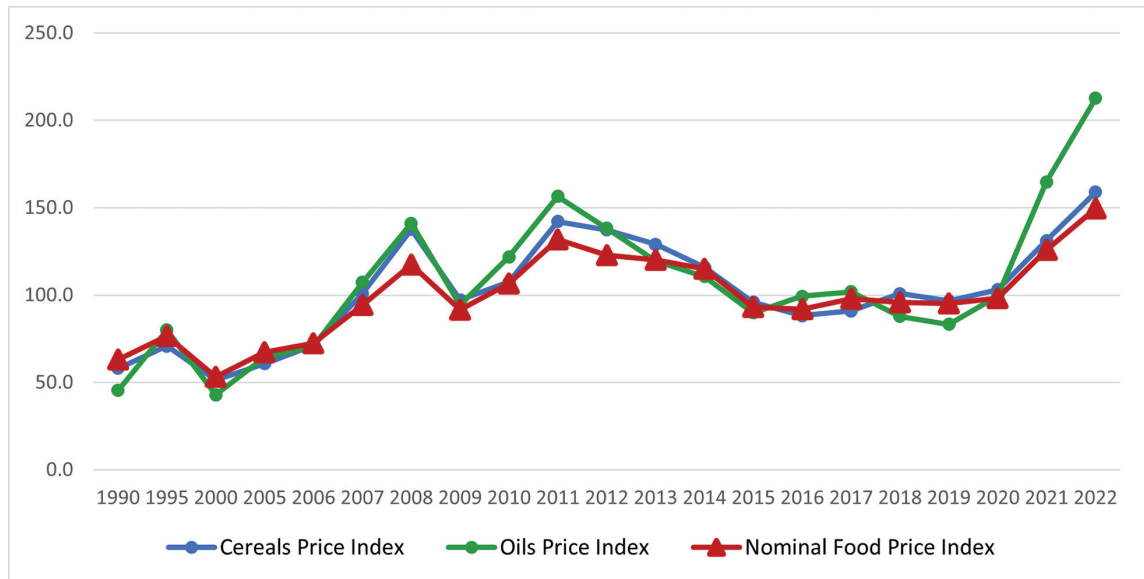
The Food and Agriculture Organization of the United Nations (FAO) [2022a] points out that export supply in world agricultural markets is often concentrated on a few countries. For example, the top ten wheat exporters alone account for 95% of supply. This makes these markets vulnerable to shocks and fluctuations. Not surprisingly, the war in Ukraine was reflected in rising food prices. As Figures 2 and 3 show, prices for basic foodstuffs, as measured by the FAO Food Price Index (FFPI), have been increasing even before the war since 2020, mainly due to poor harvests in Latin America, Southeast Asia, and Europe in 2021, coronavirus disease (COVID-19) induced supply disruptions, high prices for key energy-intensive inputs such as fertilizer, and rising demand for food in Asia [Headey and Hirvonen, 2022]. But the war added to this upward trend and led to an all-time high in March 2022, with 159.7. Despite slight reductions in the successive months, the FFPI remained high. In September 2022, it averaged 136.3 points, which is still 7.2 points (5.5%) above its value in the corresponding month last year [FAO, 2022b].

Most affected by the price increases are global cereals and vegetable oil markets. Wheat prices surged in March 2022 because quantities available for export have become scarcer, while the 2022/23 harvests were

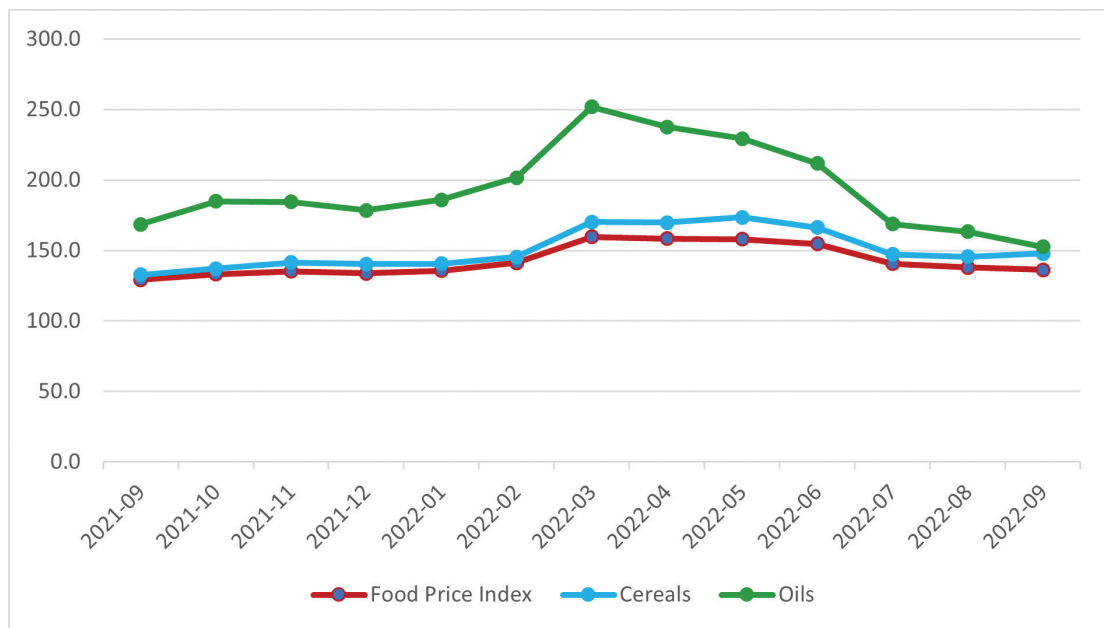


**Figure 1.** Share of Russia and Ukraine in the global exports of selected agricultural products in 2020 (in%).

Source: Statista [2022a].



**Figure 2.** FAO Annual Nominal Food Price Indices (2014-2016 = 100).  
Source: FAO [2022b].



**Figure 3.** FAO Monthly Nominal Food Price Indices (2014-2016 = 100).  
Source: FAO [2022b].

still not known. Additional factors fueling global supply concerns were the export disruptions in Ukraine, resulting from port closures and limited production possibilities, uncertainties regarding Russian export capacity, and export restrictions adopted by a number of countries, among them Argentina (soybean oil), India (wheat) and Kazakhstan (wheat) [Laborde, 2022].

Afterward, international prices of cereals fell, partly in reaction to the July 2022 Ukraine Safe Passage Agreement to unblock Ukraine's main Black Sea ports and the increased availability of grain from the new harvests in the northern hemisphere. Nevertheless, the FAO Cereal Price Index remained high and averaged 147.8 points in September 2022, which is 14.9 points (11.2%) above its September 2021 value, mainly due to growing uncertainty about the Safe Passage Agreement beyond November 2022 and concerns about lesser

harvests in Argentina and the USA due to dryer conditions and higher internal demand for wheat in the EU [FAO, 2022a].

This reduced supply on global agricultural markets and higher food prices become a problem mainly for low-income countries, where the bulk of income is spent on food, rather than for the developed economies of the EU. According to Eurostat [2020], in the EU in 2019, on average, 13.0% of total consumption expenditure was spent on food. Yet, there are differences among member states, with Romania and Lithuania spending the highest share of total household consumption expenditure on food (26%, resp. 20%), while the share was lowest with <10% in Ireland (8.6%), Luxembourg (8.9%), and Austria (9.7%). In Germany and Poland, the respective shares were 11% and 16%. By contrast, developing countries spend approximately between 30% and 55% of their income on food [Meyimdjui and Combes, 2021, p. 7].

In fact, it is precisely countries from this category that are specifically dependent on food imports from the countries involved in the war. This concerns in particular countries in the Middle East and North Africa (the so called MENA region) and South Asia. Eritrea, for example, sourced in 2021 the entirety of its wheat imports from the two countries at war [FAO, 2022a, p. 7, 11]. According to Glauber and Laborde [2022], Ukraine alone delivered 27% of its corn, 46% of its barley, and 49% of its wheat export to this region.

Before the invasion, the world food situation had deteriorated primarily due to the COVID-19 interventions. This was reflected in the increase in the number of undernourished persons worldwide between 2019 and 2021 by 161 million, representing nearly 10% of the global population [FAO et al., 2021 p. 36]. The fall-out of two major agricultural players due to Russia's invasion of Ukraine aggravates this situation. Therefore, the International Food Policy Research Institute (IFPRI) concludes that “there is an eminent need to rebuild global inventories” [Glauber and Laborde, 2022].

In a free market environment, this would relatively easily happen in the medium and the long term as the higher prices incentivize other players to fill the gaps by ramping up their production. EU countries are obvious candidates to do so given their very good natural conditions for agriculture [OECD, 2022]. However, if they really can expand agro-food production depends on the whole incentive structure they are exposed to. This is essentially shaped by EU's CAP.

### 3 EU's green agricultural policy and global food security

The EU's CAP has been becoming increasingly green which creates more and more restrictions for farmers that hamper a free-market-driven adjustment of agricultural production.

The first greening efforts of the CAP can be traced to the so-called Fischler reform of 2003. It linked the decoupled direct payments to farmers to the respect of certain conditions, set at EU and national levels and coined as “cross compliance”, in the areas of environmental protection, animal welfare, food safety, and the maintenance of all agricultural land in good agricultural and environmental condition (GAEC). It was also around that time when the demand for an “Agrarwende” (agricultural transition) appeared in the public debate in Germany. It was launched by the then ruling federal red–green coalition government (1998–2005) under Chancellor Gerhard Schröder in response to the so-called mad cow disease (Bovine spongiform encephalopathy = BSE) scandal of 2000. The smaller coalition partner, the Greens, together with lobby groups from the environmental movement and through a broad-based media coverage succeeded in popularizing the narrative that the main cause of the food scandal was globalized conventional agriculture with its allegedly industrialized production methods [Künast, 2001]. Therefore, they called for a rapid expansion of organic farming as well as regional processing and marketing structures. These demands have already been part of the 1998 coalition agreement of the red–green federal government. But the BSE scandal opened a window of opportunity to put these demands into practice as it had weakened the dominance of the traditional German farmers' union (Deutscher Bauernverband = DBV) in influencing agricultural policy-making in favor of environmental groups. The most visible sign for this shift was the replacement of the Minister of Agriculture, Karl-Heinz Funke, from the Social Democratic Party (SPD) by Renate Künast from the Green Party who renamed the ministry into the Ministry of Consumer Protection, Food and Agriculture [Kropp and Wagner, 2005].

The growing public debate on climate change further boosted the greening of EU's CAP [Swinnen, 2015b]. Especially ruminants (cows and sheep) are held to have a large negative impact on climate due to methane emissions from enteric fermentation and decomposition of manure under anaerobic conditions [Takle and Hofstrand, 2008], which often occur on dairy farms, beef feedlots, and pig and poultry farms. From this follows the call for reducing livestock production. In the 2014-2020 reform, the greening of agriculture has become the explicit primary focus of EU's CAP<sup>1</sup> and has remained so in the new CAP period 2023-2027. The latter has been directly linked to EU's Green Deal through the F2F Strategy [EUR-Lex, 2020a] and the Biodiversity Strategy for 2030 [EUR-Lex, 2020b] of May 2020 to accelerate the transformation of the agro-food system in the name of climate neutrality [European Commission, 2021b, 2022a]. These documents fix the following quantitative environmental and climate targets, which the member states are held to fulfil:

- Reducing the use of pesticides and herbicides by 50%
- Reducing nutrient losses by at least 50%, which necessitates the reduction of the use of fertilizers by at least 20% by 2030
- Cutting the overall EU sales of antimicrobials for farmed animals and in aquaculture by 50%
- Increasing total EU farmland under organic farming to 25%
- Enhancing EU's biodiversity by legally protecting a minimum of 30% of the EU's land areas and 30% of the EU sea area and putting 10% of EU land and 10% of EU sea under strictly protected areas by 2030
- Setting aside at least 4% of crop land
- Spending at least 25% of member states' direct payments budget on additional "voluntary" ecological actions (the so-called eco-schemes)

A novelty of the new CAP is that it requires from the member states the submission of national plans on how they intend to achieve these goals to the EU Commission for approval. Thereby they are urged to "aim higher" than in the previous CAP period [European Commission, 2021b, p. 3].

Remarkably, in Germany, already the previous federal grand coalition government under Chancellor Angela Merkel from the Christian Democratic Union (CDU) was pushing forward the "Agrarwende." In September 2019, the CDU-led Agricultural Ministry and the SPD-led Environmental Ministry worked out the "Agricultural Package 2019" that was passed in June 2021. Its centerpiece is the Insect Protection Act and Plant Protection Application Ordinance, which stipulate additional significant restrictions on the use of pesticides and the phase-out of glyphosate by the end of 2023. Moreover, an additional 8,000 hectares of farmland shall be declared as national natural heritage sites and excluded from farming [BMUV, 2021].

The new German traffic light coalition federal government that assumed power in December 2021 appointed with Cem Özdemir the second Green Minister for Agriculture. Not surprisingly, its ministry intends to intensify the greening efforts in agriculture. It raised the target for organic farming from 20% to 30% of all farmland by 2030 and wants to spend about 24% of the money from the European Agricultural Fund for Rural Development to promote the conversion of arable land into permanent grassland [BMEL, 2022a].

Admittedly, the EU is not the only region pursuing a green transformation of the economy. Following the 2015 Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC), political leaders in other parts of the world have also promised new green deals to mitigate emissions and increase sustainability [Booth and Stagnaro, 2022; OECD, 2022]. For example, in the United States, in 2020, President Joe Biden has put forward a plan for a "clean energy revolution" and program for "environmental justice," under which the US promises to achieve carbon neutrality by 2050.<sup>2</sup> Similar commitments have been made by Chinese President Xi Jinping in September and the United Kingdom in November 2020, as well as by Canada in the Canadian Net-Zero Emissions Accountability Act of June 29, 2021. However, despite widespread agreement on a global scale that something should be done to tackle environmental challenges economy-wide including agriculture, differences across countries come into play when looking at the ambition and the types of policy. The EU appears particularly determined to push ahead with the green

<sup>1</sup> For more detail on the CAP 2014–2020 see European Commission [2021a] and Federal Ministry of Food and Agriculture [2020].

<sup>2</sup> The Biden Plan for a Clean Energy Revolution and Environmental Justice is accessible at <https://joebiden.com/climate-plan/#>.



transformation. Especially after major gains for Green Parties in Western and Northern European member countries in the 2019 elections to the European Parliament, European Commission President Ursula von der Leyen has promised to transform Europe into a global champion in the fight against climate change [Cleppe and Weiss, 2020, p. 125].

As to the transition of agriculture, according to a survey of the OECD [2022] that covers all 34 OECD countries and 20 emerging economies, only 16 of the 54 countries have extra plans for this sector. Among them are the United States that launched, in August 2022, the Partnerships for Climate-Smart Commodities and the Organic Transition Initiative<sup>3</sup> to provide financial support for climate-friendly agricultural production, Canada with the November 2021 Guelph Statement<sup>4</sup> setting out the direction for the next Canadian agricultural policy framework, due in April 2023, and the United Kingdom, Australia, New Zealand, South Korea, and China [OECD, 2022]. Yet, although the plans in these economies for making agriculture more sustainable embrace government interventions and the expenditure of substantial financial resources, in contrast to the EU and its largest member country Germany, they are cautious to mandate bans and specific shares of input use and farmland under organic farming. Instead, they favor an innovation-led, technology-neutral approach and so prioritize innovations to increase energy efficiency, improve carbon capture and sequestration, and advance precision farming and bioeconomy technologies, including genetic engineering, to mitigate negative external effects on the environment through increased productivity [OECD, 2022, chapter 2].

In fact, the problem with the greening plans of the EU and the German government is that they have a negative impact on productivity and land consumption. The yields of organic agriculture are estimated to be at least 19%–25% lower than those of conventional agriculture. This is mainly due to the more difficult nutrient management, resulting from the prohibition of synthetic fertilizers and the greater susceptibility to pest outbreaks and plant diseases stemming from the ban of chemical pesticides and genetically modified organism (GMOs) in organic agriculture [Meemken and Qaim, 2018, p. 44]. As Cramon-Taubadel [2022] argues, both reducing pesticide use by 50% in eight years and converting 25% of EU's farmland from conventional to organic production will reduce average yields on that area by at least one-third. Maintaining current production and consumption levels under these conditions would require 40% more land than is required for conventional agriculture [Treu et al., 2017, p. 127], and the full transition to organic agriculture by 2050 would require 84% of the global land surface [Maurer, 2021]. By contrast, if biological-technical progress continues as it has been so since the end of World War II, still more food could be produced on less land and with less pesticides [Klümper and Qaim, 2014].

Given these negative effects of the greening of agriculture on crop yields and the threat of global food security due to Russia's invasion of Ukraine, a rethinking of the course of agricultural policy in the EU and its member states is warranted.

## 4 Preferences of major political actors

Since agricultural policy in the EU is communitarized any policy adjustments demanded by member states must find approval by the major EU institutions.

### 4.1 EU institutions

The crucial EU institutions shaping agricultural policy are the European Commission, the Council of the EU that in policy areas where the EU has exclusive or shared competence with the member states negotiates and adopts legislative acts together with the European Parliament, and the European Council, composed of the heads of state and governments of member countries [Swinnen, 2015b, p. 434].

<sup>3</sup> For more details see the homepages of the programs: <https://www.farmers.gov/organic-transition-initiative> and <https://www.usda.gov/media/press-releases/2022/09/22/historic-investment-partnerships-climate-smart-commodities-and>

<sup>4</sup> The Guelph Statement is accessible at <https://agriculture.canada.ca/en/department/initiatives/meetings-ministers/guelph-statement>.

The war did urge these institutions to react. On March 24, 2022, the Commission and the Parliament agreed on a resolution to suspend some provisions of the F2F Strategy [European Commission, 2022b, 2022c; European Parliament, 2022] for one year. This was confirmed on July 27, 2022 by the Commission in the Regulation (EU) 2022/1317 [EUR-Lex, 2022]. It exceptionally allows member states to relax the standards of Good Agricultural and Environmental Condition of Land (GAEC) Nos. 7 and 8 for food production in 2023. This permits them to suspend mandatory crop rotation and the obligation to set aside four percent of arable land for that year in order to enable farmers to grow more grain (except for corn, soybeans, and short-rotation plantations). At the same time, the EU Commission steps up financial support for EU farmers by € 500 million to compensate for higher input costs and the closure of export markets. The member states can complement this support up to 200% with national funds [European Commission, 2022d]. The EU Commission expects that these measures will put additional 1.5 million hectares arable land across the EU under cultivation for cereal production [Devuyst, 2022].

It is important to note that the July 2022 regulation is a recommendation. The member states *can*, but are not obliged to implement it. It is thus obvious that the EU institutions did not fundamentally question the Green Deal for agriculture. Instead, the suspension for just one year indicates that EU officials perceive the war as an external event of only temporary nature that requires merely a short-term interruption, but not a complete overhaul of the EU's greening ambition for agriculture.

Admittedly, the July 2022 resolution is, as any decision on the EU level, a compromise between different vested interests. Devuyst [2022] reports that members of the Agriculture Committee (AGRI) of the European Parliament had pushed for the suspension of the F2F Strategy, while the Environment Committee (ENVI) urged “the EU executive to keep pursuing their green ambitions despite the impact of the war in Ukraine.” They and environmental groups argued that any hold on implementing the F2F Strategy would lead to more pesticide and fertilizer use on farmland and would ultimately accelerate the collapse of the ecosystem [ibid].

As to the political groups in the EU Parliament, the Greens, the Left and Renew Europe insisted that the war in Ukraine should not be used as an excuse to push back from the greening goals for EU's agriculture [Fortuna, 2022]. Most outspoken against the green transition of agriculture were the right-wing groups in the European Parliament Identity & Democracy, European Conservatives, and the Reformists. They have been opposing the greening agenda of agriculture from the outset, arguing it destroys farmers' livelihood and threatens EU food security. Therefore, they demanded the suspension of all initiatives that negatively affect food production. The center-right Europe People's Party and center-left Progressive Alliance of Socialists and Democrats (S&D) advocated a compromise. They called to reconsider at least some targets and the timetable of the greening agenda of agriculture for food security while not questioning the overall goal of the green transformation of agro-food production [Farm Europe, 2022]. Moreover, a number of member countries were quick to demand the suspension of the F2F initiative, namely, Italy, Croatia, the Czech Republic, Slovakia, and France [Foote, 2022; Fortuna, 2022; Fortuna et al., 2022].

The EU Commission has also been internally divided on how to react to increased global food insecurity. This clash became evident between Agriculture Commissioner Janusz Wojciechowski from Poland (member of the ruling Polish Law and Justice Party (PIS = Prawo i Sprawiedliwość), formerly a member of the Polish Farmers' Party) and social democratic Vice President of the EU Commission and Climate Commissioner Frans Timmermans from the Netherlands. While Wojciechowski quickly demanded the suspension of the F2F Strategy, Timmermans advocated sticking to EU's green ambitions even in difficult times. Trade Commissioner Valdis Dombrovskis summarized the position of the Commission as follows: “Short term emergency measures are important, but they do not replace the importance of refocusing agricultural food sector toward sustainability” [cited in Devuyst, 2022].

## 4.2 The German government

The response of the German government largely follows the proposals of the EU Commission. On August 8, 2022, the Minister of Agriculture Cem Özdemir announced that Germany would also relax provisions of the F2F Strategy exceptionally once only for 2023. On September 16, 2022, the corresponding regulation



(“GAP-Ausnahmen-Verordnung”) was passed [Bundesrat, 2022]. It suspends rules on crop rotation (GAEC 7) and the mandatory set-aside of farmland (GAEC 8). However, exemptions from crop rotation are only allowed to grow cereals (excluding corn), sunflowers, and legumes (except soybeans). Areas that were already reported as fallow farmland in 2021 and 2022 and areas that contain landscape elements such as hedges are not allowed to be reused for farming [BMEL, 2022b].

For the green-led Ministry of Agriculture, it was very difficult to permit these concessions. Holding not only the Ministry of Agriculture, but also the Ministry of Environment and the Ministry of Economy and Climate Protection as well as the Ministry of Foreign Affairs and the ministries for family, seniors, women and youth, the Green Party had optimal political conditions to advance their central goal of the green transformation of the entire economy [Iser, 2022]. The war appears for them as an unexpected spoiler of these plans. Shortly after the outbreak of the war, the spokeswoman of the Greens for agricultural policy and former Minister of Agriculture, Renate Künast, underlined that the Green Deal is now more important than ever and suggested the reduction of the acreage used for feed grain production and a cutback of the number of livestock [Topagrar, 2022a]. Similarly on March 2, 2022, Agricultural Minister Cem Özdemir held that food supply in the EU was not threatened and warned that “every one that demands a reversal of the green transformation of the agro-food sector is on the wrong track. Sustainable food production requires the resolute combat of ecological crises” [BMEL, 2022c]. This position was confirmed on April 6, 2022 by the Green Minister of the Economy, Robert Habeck, in his so-called Easter package (Osterpaket) and in the May 2022 Immediate Program for Climate Protection [Klimaschutz-Sofortprogramm, 2022].<sup>5</sup>

Table 1 summarizes the positions of other German parties represented in the first chamber of the German parliament, the Deutsche Bundestag. It shows that the further a party is situated on the left side of

**Table 1.** Positions of German political parties on agricultural transition in view of the war in Ukraine

Party	Position
SPD	The war must not be used as an excuse to stop and repeal the green agro-food transformation No genetic engineering, more organic farming, transformation of livestock farming, implementation of the nitrate directive, and use of renewable energies in agriculture Urgent need to implement the agro-food transformation
The Greens	No threat to food supply in the EU Green Deal is more important than ever Scaling down of feed and livestock production
Liberal Party (FDP)	Suspension of the set aside obligation of 4% of acreage (if necessary for >1 year); some party members demand suspending the entire F2F Strategy Absolute priority of food security in times of war and inflation Demand of a detailed assessment of the impact of Green Deal measures
CDU/CSU	Repeal of the obligation to set aside 4% of acreage Allowance to plant all crops on ecological focus areas Temporary permission of the use of pesticides on ecological focus areas
The Left (Die Linke)	Against any deviation from the F2F Strategy Sharp reduction of the number of livestock in order to replace animal feed production by crop production for human consumption Reduction of import dependency of developing countries by establishing regional economic cycles
Alternative for Germany (AFD)	For the unrestricted cultivation of set-aside land and ecological focus areas No restrictions on the use of fertilizers on ecological areas Temporary government support of the use of organic fertilizers and nitrogen-fixing plants

Source: Own depiction based on party statements published in Deutscher Bundestag [2022b, 2022c], SPD Fraktion im Bundestag [2022a, 2022b], and Topagrar [2022a, 2022b, 2022c].

AFD, CDU, Christian Democratic Union; CSU, Christian Social Union; EU, European Union; SPD, Social Democratic Party.

<sup>5</sup> The Klimaschutz-Sofortprogramm can be retrieved online from <https://www.klimareporter.de/images/dokumente/2022/05/220404-klimaschutz-sofortprogramm-2022-entwurf.pdf>.

the political landscape, the less it wants to depart from the green transformation. The center-right parties Christian Democratic Union (CDU)/Christian Social Union (CSU) and the liberal party FDP do not question the Green Deal in general and hence also endorse environmental concerns of the new CAP, but they much more firmly emphasize the need to safeguard food security. Only the Alternative for Germany (Alternative für Deutschland = AfD) unequivocally rejects the Green Deal and advocates an even more free-market-oriented agricultural policy course than the FDP.<sup>6</sup>

The concession of two one-off exemptions as manifested in the regulation of September 16, 2022 can be explained by the majority situation in the Bundestag. The three left-wing parties, SPD, Greens, and the Left, have 363 seats and thus no majority compared to the parties on right political spectrum CDU/CSU, FDP, and AfD. They hold together 368 of 736 seats. Even if the five independent members of parliament are added to the left-wing bloc, the situation would be a political stalemate. Without the FDP, the social democrats and Greens would have altogether 324 seats and hence no majority to govern. In addition, in the second chamber of the German parliament – the Bundesrat, which represents the interests of the federal states (Länder) – the CDU has blocking potential for legislative proposals that are subject to their approval [Bergmann and Rusche, 2022]. Therefore, the Greens had to make some compromises in the implementation of their agenda.

### 4.3 Interest groups

According to Olson [1965, 1982, 1993] and Holcombe [2018], small organized groups with concentrated interests are the main determinants of what government policies prevail because they can better solve the free-rider problem, where some enjoy the targeted benefits of lobbying without paying. At the same time, the coercive nature of the state allows politicians to concentrate benefits for special interest groups, while dispersing the costs among the masses. Since the latter barely notice these costs, policy-makers hardly have to fear that the mass of other voters will sanction them by withdrawing their votes.

Interest groups that try to influence agricultural policy decision in Germany and on the EU level do not only involve traditional farmers' associations but also environmental associations and anti-globalization activists, which have been increasingly vocal in agri-food policy debates [Herzfeld, 2021].

#### 4.3.1 Farmers' associations

Table 2 shows the positions of major farmers' interest groups in Germany. The largest and hitherto most influential lobby group for farmers is the German Farmers' Association (DBV). According to its own information, it represents approximately 90% of Germany's 266,000 agricultural enterprises [Deutscher Bauernverband, 2020]. Traditionally, it has close ties with the CDU/CSU and, at the EU level, with the European People's Party (EPP) [Patel, 2010].

Relatively quickly after the outbreak of war, the DBV called for rethinking the current agricultural policy strategy. In particular, it demanded the suspension of the obligation to set aside land, of the restrictions on the use of pesticides, and of import tariffs on various types of nitrogen fertilizers [Hemmerling, 2022]. Referring to an analysis of the departmental research institute of the Federal government, the von Thünen-Institut [Röder et al., 2021], the president of the farmers' association, Joachim Rukwied, pointed out that the planned restrictions on the use of pesticides alone will incur a loss of 3.5–5 million hectares of arable land in Germany, which cannot be compensated by more organic farming, because consumers are not willing to pay higher prices for organic foodstuff. Yet officially, the DBV does not demand the complete repeal of the Green Deal for agriculture, but less utopian targets, less bureaucracy, and more money for the eco schemes

<sup>6</sup> See e.g. the petition of the AfD "Fighting global hunger free of ideology" [Deutscher Bundestag, 2022a] as well as the debates in parliament documented in Deutscher Bundestag [2022b, 2022c].

**Table 2.** Positions of major farmers' interest groups

Association	Position
DBV (German Farmers' Association)	Rethinking of agricultural policy Departure from the extensification of EU agriculture Suspension of the set-aside requirement and restrictions on the use of pesticides Zero import tariffs on all types of nitrogen fertilizer In principle acceptance of the green transformation, but less rigorous requirements: less bureaucracy more money for eco schemes inclusion of food security as an explicit goal of equal importance in the Green Deals
DBB (German Farmers' Union)	Partly similar positions as the DBV The main task of agriculture is and remains the production of food; the "green architecture" is of secondary importance Against isolated German actions that harm competitiveness of German agriculture
LsV (The countryside connects)	Harsh criticism of the green ambitions of the EU and the German Federal Government → initiator of farmer protests since 2019 Advocates regional agriculture
BDM (Association of German Dairy Farmers)	"Do not abuse the war in Ukraine for selfish economic interests" Maintaining the course of greening EU's agricultural policy → less intensification → less surplus production → higher farm-gate prices
BÖLW (Federation of Organic Food Producers)	No compromises on the F2F Strategy Expansion of organic farming now more than ever as it reduces dependence on nitrogen fertilizers from fossil raw materials

*Sources:* Own depiction based on AgrarBündnis [2022], ABL [2022], Bund Ökologische Lebensmittelwirtschaft [2022a, 2022b, 2022c], Bundesverband Deutscher Milchviehhalter [2022], Deutscher Bauernbund [2022a, 2022b, 2022c], Deutscher Bauernverband [2019, 2022], Gierse-Westermeier [2022], Hemmerling [2022], Land schafft Verbindung [2020], and Topagrar [2022d].

ABL, Arbeitsgemeinschaft bäuerlicher Landwirtschaft; BDM, Bundesverband Deutscher Milchviehhalter e.V.; BÖLW, Bund Ökologische Lebensmittelwirtschaft; DBB, Deutscher Bauernbund e.V.; DBV, Deutscher Bauernverband; EU, European Union; F2F, farm to fork; LsV, Land schafft Verbindung.

in the new CAP. In addition, they urge to include food security as an explicit goal of equal importance into in the agricultural part of the Green Deal.

As Patel [2010, p. 168] underscored in his historical review of the German farmers' association, its primary goal is, as for any association, to get as many targeted benefits as possible to secure income for its members. Concerns of environmental, animal, and landscape protection provide further justifications for receiving direct payments and simultaneously raise the legitimacy of their actions as these aspects are considered very popular in the public opinion. Therefore, it is not in the interest of the DBV to question fundamentally the Green Deal. At the same time, however, it has to make sure that the costs of greening via higher input prices, bureaucracy costs, and yield losses do not exceed the revenues. This might explain the relatively nuanced stance of the DBV on the green agenda for agriculture.

Two other smaller farmers' association voice more pronounced criticism of the greening ambitions in agriculture. For the German Farmers' Union Deutscher Bauernbund e.V. (DBB), food security is the absolute priority, and hence, the green architecture is of secondary importance. It, therefore, warned the German government not to fully implement the EU decisions on suspending GAEC 7 and 8 of the new CAP. The DBB represents the interests of larger family farms in Eastern Germany, which were established following the restitution of former collective farms (called Wiedereinrichter in German).

Even more outspoken against the green plans for agriculture is the group "Land schafft Verbindung (LsV)" (The countryside connects). This new farmers' interest group was founded in 2019 in response to ever stricter greening regulations for agriculture in the German government's agricultural package of 2019 [Land schafft Verbindung, 2022]. While not denying environmental and animal welfare concerns, the group rejects one-sided bans for farmers and calls for balancing ecological, economic, and social aspects in

agricultural policy. It also criticizes the DBV for not advocating strongly enough farmers' interests and thus giving environmental groups too much influence on agricultural policy [Altenbockum, 2019]. The group argues that the strict regulations of production processes not only undermine private property rights but also increase production costs and threaten competitiveness. Therefore, in 2020, this interest group called to stop the Green Deal [Land schafft Verbindung, 2020]. LsV expressed its concern about the green course of agricultural policy by organizing tractor demonstrations in various German cities since 2019 following the announcement of the "Agricultural Package." Like other farmers' lobbies, it is not pro-free market but advocates stronger support for regional-oriented agriculture, for example, through labeling regional and imported products. However, the group is not very large. In 2021, it had approximately 34,000 members [Selhorst and Deter, 2022]. Furthermore, toward the end of 2019, the movement had split over internal power struggles into two groups, "Land schafft Verbindung – das Original" and "Land schafft Verbindung – Deutschland," and so has lost attention and overall influence. Nevertheless, both groups continued to organize protests in 2022 against the EU's restrictive plant protection policy and in solidarity to farmer protests in the Netherlands<sup>7</sup> [Agrarheute, 2022a].

A completely different view holds the Association of German Dairy Farmers (Bundesverband Deutscher Milchviehhalter e.V. – BDM). It split off from the DBV in 1998 and represents about 16,000 dairy farmers [Gierse-Westermeier, 2022]. This lobby group warned to use the war in Ukraine as a pretext to change the course of the current CAP. The explicit goal of this group is to secure high farm-gate prices for its members. Therefore, it supports any measures that are conducive to this objective. This holds, according to their view, for the new CAP as it "aims to somewhat reduce the pressure of intensification and competition in agricultural production." According to Gregory King's law, a smaller supply that meets a constant price-inelastic demand leads to over-proportional price increases. Therefore, the BDM rejects a repeal of the new, greener CAP [Bundesverband Deutscher Milchviehhalter, 2022].

Hardly surprising, organic farming associations, such as those united in the Federation of Organic Food Producers (Bund Ökologische Lebensmittelwirtschaft = BÖLW) and in the Agricultural Alliance (AgrarBündnis), vigorously opposed any relaxation of the greening plans for agriculture. In their view, more organic farming is needed now more than ever to reduce dependence on nitrogen fertilizers from fossil fuels and to strengthen the resilience of the food system.

#### 4.3.2 Actors from the environmental and development movement

This is also the prevailing view of interest groups engaged in environmental protection and development aid. Even before the war, they often criticized the Green Deal decisions of EU and the greening measures for agriculture undertaken by the German government as not going far enough [see e.g. Foodwatch, 2020; Germanwatch, 2021]. Now in view of the war in Ukraine, they warn of a further intensification of agriculture in Europe and abandoning ecological constraints. Table 3 summarizes the positions of selected groups from the environmental and development aid movements. As can be seen, the stances often overlap. Typical demands are the cut of the number of livestock and lower consumption of livestock products, the halt of biofuel production, more support for organic farming as this allegedly reduces the dependence of energy-intensive inputs, and overcoming import-dependence of developing countries.

The influence of environmental groups on public policy both on the EU level and in Germany has become quite considerable [Altenbockum, 2019]. Indications are, for example, the EU-wide ban of genetic engineering in crop production, the ban of egg production in cages, and the strict constraints of the use of pesticides. Particularly influential in Germany are the German Federation for the Environment and Nature

<sup>7</sup> In the Netherlands, farmers have been protesting since 2019 and intensively so since June 2022 against planned measures to reduce nitrogen emissions by an average of 50 % by 2030. To realize those planned cuts, thousands of farmers will be required to significantly reduce livestock numbers and the size of their farming operations. If they cannot meet these targets, they may be forced to close their operations altogether. Following the government's own calculations, these requirements could lead to the shutdown of 30% of livestock farmers [Gijs, 2022]. The protests have led to the resignation of the Dutch Minister of Agriculture Henk Staghouwer (Christian Union) on September 5, 2022 [Agrarheute, 2022b].

**Table 3.** Positions of selected environmental and development aid groups

Partei	Position
DUH	No reversal of the “Agrarwende” Reduction of the number of livestock (threat of legal action against new “mega livestock farms”) Repeal of the mandatory blending of fuel from biomass (“No food for the fuel tank”) Stop of the waste of food products
BUND (Bund für Umwelt und Naturschutz Deutschland)	Replacement of nitrogen fertilizers by organic fertilizers Reduction of the consumption of livestock products Reduction of the number of livestock Expansion of organic farming and extension of green agricultural policy
Germanwatch	Against intensification of agriculture in Europe and softening of ecological restrictions constraints Reduction of the number of livestock by 10-20% until 2024 Financial support and debt relief for developing countries
Brot für die Welt (Development Organization of the Evangelic Church in Germany)	Against the expansion of agricultural production in the EU and free trade Strengthening of food security in the countries of the Global South Support of ecological methods of farming in the Global South in order to reduce import dependence of pesticides and fertilizers

Sources: Own depiction based on BUND [2022b], Brot für die Welt [2022a, 2022b], Deutscher Bundestag [2022d], Deutsche Umwelthilfe [2022a], and Germanwatch [2022a, 2022b].

DUH, Deutsche Umwelthilfe; EU, European Union.

Conservation (BUND) and the Deutsche Umwelthilfe (German Environmental Aid). The BUND is the largest environmental association in Germany. In 2021, it had over 675,000 members, which is more than double the size of the members in 2011 (BUND, 2022a) and also double the size of the members of the German Farmers’s association (DBV). The BUND is officially recognized by the government as an environmental organization under the Federal Nature Conservation Act (Bundesnaturschutzgesetz). This means that it must be consulted whenever interventions are planned into the natural environment. In addition, it has the right to initiate legal proceedings.

This right also holds the Deutsche Umwelthilfe (DUH), which understands itself as a consumer protection association [Deutsche Umwelthilfe, 2022a]. It makes extensive use of this right. According to the group’s annual report, fees from issuing legal warnings for alleged violations of consumer and environmental protection regulations, labeled as revenues from ecological market monitoring (Erträge ökologische Marktüberwachung), account for nearly 25% of the association’s income [Deutsche Umwelthilfe, 2022b]. The magazine “Capital” considers the DUH as one of the most effective lobbying organizations in Germany. It successfully fought for the introduction of the diesel soot filter, the establishment of environmental zones, and the deposit on cans [Fahrion, 2018].

Another indication of the influence of the green lobby on policy-making is the revolving door between the government and environmental interest groups. For example, the new green Minister of Agriculture, Cem Özdemir appointed two state secretaries from these organizations: The first state secretary, Silvia Bender, held leading posts in the German Federation for the Environment and Nature Conservation (BUND) and in the organic farming organization “Bioland Baden-Württemberg”<sup>8</sup> and the second state secretary, Ophelia Nick, has been active in the organic farming movement.<sup>9</sup> The same holds for the ministries for the economy and climate as well as for economic cooperation and development: the Minister for the Economy, Robert Habeck from the Green Party, employed as state secretary Patrick Graichen and as parliamentary

<sup>8</sup> On her career and background see [https://de.wikipedia.org/wiki/Silvia\\_Bender](https://de.wikipedia.org/wiki/Silvia_Bender); see also Stephan [2019].

<sup>9</sup> She was active in the association Arbeitsgemeinschaft bäuerliche Landwirtschaft (ABL) in Nordrhein-Westfalen and in two non-profit private limited companies (gGmbH) that advocate organic farming and the Agrarwende (Lebendige Landwirtschaft gGmbH and Interessengemeinschaft Talhof gGmbH, see [https://de.wikipedia.org/wiki/Ophelia\\_Nick](https://de.wikipedia.org/wiki/Ophelia_Nick)).



state secretary Michael Kellner, who is Graichen's brother-in-law. Both were leading figures in the think tank "Agora Energiewende" that lobbies for the energy transition. Likewise, Jochen Flasbarth, the state secretary in the Ministry for economic cooperation and development, which is led by the social democratic minister Svenja Schulze, has a past as board member in "Agora Energiewende" as well as in the environmental organization "Naturschutzbund Deutschland e. V." (NABU) [Gallina, 2022].

The independent German journalist Frank Lübberding summarized and explained on Twitter the political economy situation concerning the green transformation with regard to the energy sector as follows: "The energy transition is no idealism, but a multi-billion market. It has long become big business, on which the economic future of entire networks depends. From environmental associations to pseudo-non-governmental organization (NGOs) to industry, from science to the media to politics."<sup>10</sup> As studies on the German energy transition show, the rents in the green transition are, indeed, considerable [Ehler, 2019; Pritzl, 2020].

Baumol et al. [2007] have argued that whenever a strong enmeshment of political and economic interests has emerged, all have too much to lose from any profound changes of the current policy direction and try to resist it. Holcombe [2018, 2019] points out that the resistance is in particular fierce whenever occurs what Tullock [1975] calls the "transitional gains trap." The transitional gain is the above-normal profit created by a specific government favor. This gain is only temporary because later on, the flow of benefits to recipients becomes capitalized into the prices of the asset that the recipients are required to own to receive the gain. Yet, when asset prices have risen, they only receive normal rates of return. It becomes a trap "because a reversal of the policies that created the transitional gains would produce transitional losses to those who were its intended beneficiaries" [Holcombe, 2019, p. 128]. A typical example is agricultural subsidies, which are capitalized into the value of farmland and raise its price. So, after the transitional gain created by subsidies, owners of farmland just earn a normal return on their asset. "If the subsidies were abolished, the profitability of farming the land would fall, leading to a transitional loss following the decline in the value" [ibid.].

#### 4.4 Rational ignorance of voters and ideology

Resisting profound policy adjustments is facilitated by the rational ignorance of voters [Downs, 1957; Caplan, 2007]. Rational ignorance occurs whenever the cost of educating oneself on an issue exceeds the potential benefit that the knowledge would provide. With regard to global food security and greening, voters would have to explore the impact of agriculture on the environment and climate, the differences between and the effects of conventional and organic farming, what really drives inflation, and the many knock-on and side effects of political interventions into both agricultural production and economic processes. However, this endeavor exceeds by far the benefit from voting because one's individual vote has little effect on policy. Moreover, voters are usually offered complex baskets of policies that are difficult to understand and whose total effects are unpredictable, and their choices are limited by the alternatives offered to them by the political elite [Holcombe, 2018, p. 72f]. Therefore, it is rational for most voters to remain rationally ignorant of political issues. They, then, either abstain from voting or vote following emotions, appeals to their prejudices, simple slogans, narratives, or ideologies [Caplan, 2007]. Slogans such as saving the planet from disaster, overfertilization, large-scale livestock farming, agricultural factories, organic farming is per se better and healthier than conventional farming, or assertions about the evil impact of the market economic system or about the responsibility of Russia's President Putin for all the current problems are in particular suitable to ensure popular support. This is facilitated by the fact that in Germany, only 1.5% of the working population is engaged in agriculture, so the vast majority lacks practical experience and knowledge of agricultural production processes. This likely results in the desire for an idyllic picture-book

<sup>10</sup> German translation of the original text in German on Twitter: <https://twitter.com/luebberding/status/1567095909560860673>, accessed 20 September 2022.

version of agriculture, which fails to realize that agriculture has always been a persistent struggle to capture something edible from nature [Cramon-Taubadel, 2022].

It is overlooked that – as explained in Section 3 – organic farming has severe disadvantages, that it was the so-called green revolution of the 1960s/70s with breakthroughs in biological-technical progress that enabled significant increases in food production on less land [Evenson and Gollin, 2003], and that countries with a free market economy protect the environment better than those with a command economy as Yale University’s Environmental Performance Index (EPI) demonstrates [Environmental Performance Index, 2022]. The failure to recognize these insights can be attributed to ideology and what Hayek [1944/2006] called “economophobia.”

Keynes [1936], Hayek [2008]) or North [1988] consider ideologies crucial drivers of political and institutional change. Maurer [2021] points to ecologism as the worldview that seems to have a noticeable impact on shaping both public opinion and policy on the EU level, and in particular in Germany nowadays [similarly Sinn, 2020; Tichy, 2021]. An indication for this is the 2011 decision of the German Bundestag to phase out nuclear power following the Fukushima nuclear accident and accelerate the energy transition, which was supported by 86% of all deputies. Other examples are the support of biofuel production, the 2016 sustainability strategy with the aim to expand organic farming from 6% to 20% of total arable land [Deutsche Bundesregierung, 2016], which found support by the German Academy of Science Leopoldina [Nationale Akademie der Wissenschaften Leopoldina et al., 2020] or the support of electromobility. Specific features of ecologism are, according to Maurer [2021], that it values symbolic actions and “correct” lifestyle higher than the real outcome of a policy measure and bets on bans of certain technologies regardless of their ability to mitigate environmental problems and irrespective of the economic and social costs. Examples of technologies that are dogmatically rejected are nuclear power, conventional agriculture, genetic engineering, and the combustion engine. Hayekian “economophobia” is more than missing knowledge not received in school or university. It is rather the unwillingness “to listen to economic considerations ... and ... to bow to economic necessities ... [and] to recognise ... any conflict with other aims which might impede the fulfilment of their own desires” [Hayek 1944/2006, p. 208f].

## 5 Conclusion

The war in Ukraine involves two major agricultural producers and threatens food security, in particular of low-income countries. This requires policy action that makes global agriculture more and not less productive. From a classical liberal perspective, free markets, both domestically and internationally, are key to maintaining global food security. Higher prices and the lure of profit incentivize entrepreneurs in other parts of the world with favorable farming conditions to step in. However, the latest reforms of EU’s CAP and the agricultural stipulations of EU’s Green Deal actually provide disincentives to increase agricultural production in EU member countries.

The suspension of some of the greening measures allowed by the EU and only reluctantly adopted by the government of its largest and economically most powerful member state, Germany, do not indicate a thwarting of the current course of agricultural policy toward intensified greening any time soon. Instead, the major political actors play for time, hoping to push ahead with the green transformation after a hopefully quick end to the war. As has been shown, the optimal reform context for a profound rethinking of the greening ambitions for EU’s agriculture is not given. The major EU institutions do not fundamentally question the Green Deal for agriculture. The war has induced them to deviate from the greening path only temporarily, while the long-run commitment to forward the green transformation has remained unchanged. Largely, the same can be observed on the level of major member countries, as the case of Germany illustrates. In this one of the most ambitious member state with respect to greening the economy, none of the political parties both in the current German red–yellow–green traffic light coalition government nor in the opposition, with exception of the AfD, question the green transformation. At the same time, the formerly powerful German farmers’ association (DBV) has lost influence in shaping agricultural policy and the public opinion to environmental and development organizations. While the DBV cautions against the one-sided emphasis of environmental concerns to the detriment of food security for a growing global

population, environmental and development groups lobby against the further intensification of European agriculture and lifting ecological restrictions.

As Holcombe explained in his political capitalism approach, the system of mutual benefits created by collusions of the political and economic elite are quite stable because the mass that would benefit from other arrangements face much higher organization costs than elites compared to the individual benefits of organizing. Therefore, even if the mass of the voters was not rationally ignorant on the complex interrelation between global food security and environmental concerns and would prefer a different policy, it has actually hardly any chance to influence the policy design for their benefit. In this situation, a rethinking of the current agricultural policy toward a more market-oriented policy that ensures both global food security and the sustainability of the agro-food sector, as advocated also by the Organization for Economic Co-operation and Development (OECD) [2022], could be brought about only by two conceivable forces: first, by economic reality that leaves no other choice [Olson, 1982], and second, through “the power of ideas” [Holcombe, 2018, p. 269ff.].

As to economic reality, the Austrian economist Eugen von Böhm-Bawerk [1914/2010, p. 54] observed: “Not even the most imposing dictate of power ... can never effect anything in contradiction to the economic laws”. A case in point for such a situation is the crisis in Sri Lanka of 2022, which also illustrates the devastating effects of an ideology-driven transformation of the agro-food sector. In its ambition to convert the country’s agriculture completely into organic farming over a period of 10 years, the government of the then President Gotabaya Rajapaksa imposed in 2021 a nationwide ban on the import and use of chemical fertilizers and pesticides. This resulted in a massive drop in yields and turned the country from an exporter of rice and tea into an importer. This was accompanied by sharp price increases and massive protests that caused the president to resign and flee the country in July 2022 [Nordhaus and Shah, 2022].

There are growing signs that economic realities are becoming more and more unpleasant and actually could make the external pressure stronger in EU countries. Such signs are, for example, the energy crises and rising inflation. The latter is becoming apparent in the very sectors that are subjected to a profound green transition. As of September 2022, the general inflation rate in Germany was 10% compared to the previous year, but for energy, it stood at 44% and for food products 19% [Tagesspiegel, 2022]. The continuation of a policy that increases scarcity and hence prices would be self-destructing for political decision-makers in the long run. At the same time, it is important to engage in a battle of ideas and economic education to raise awareness that it is impossible to achieve widespread prosperity and human well-being with a clean environment without economic freedom and a market economy. Where markets do not emerge spontaneously, because property rights are difficult to establish and enforcement is impracticable due to insurmountable transaction costs, the second-best choice is to take artificial government measures to bring the price mechanism into play as it has been done in the case of emissions trading rather than to resort to government orders and decrees under the pretense of knowledge what is best for all [Dolan, 2014]. Hence, also with regard to environmental concerns, it is essential to return to what the then US presidential candidate Bill Clinton stated in 1992 in his Earth Day speech “I believe it is time for a new era in environmental protection, which uses the market to help us get our environment back on track – to recognize that Adam Smith’s invisible hand can have a green thumb” [C-Span, 1992].

## References

- Abay, K., Breisinger, C., Glauber, J., Kurdi, S., Laborde, D., Siddig, K. (2022), The Russia-Ukraine crisis: implications for global and regional food security and potential policy responses, IFPRI MENA Working Paper 39, International Food Policy Research Institute, Washington, DC, retrieved from <https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/135913/filename/136124.pdf> [10th September 2022].
- AgrarBündnis, (2022), Wir über uns, retrieved from <https://agrarbueundnis.de/ueber-uns/wir-ueber-uns> [15th July 2022].
- Agrarheute, (31 August 2022a), Bauernproteste in ganz Deutschland, retrieved from <https://www.agrarheute.com/politik/bauernproteste-ganz-deutschland-597363> [5th September 2022].
- Agrarheute, (6 September 2022b), Niederlande: EU-Nitratrüchtlinie zwingt Agrarminister zum Rücktritt, retrieved from <https://www.agrarheute.com/politik/niederlande-eu-nitratruechtlinie-zwingt-agrarminister-ruecktritt-597559> [20th September 2022].

- Altenbockum, J. von. (26 November 2019), Bauernproteste: Sieg der Agrarmoral, FAZ, retrieved from <https://www.faz.net/aktuell/politik/inland/bauern-proteste-in-berlin-agrarwende-schafft-harte-fronten-16505290.html> [25th June 2022].
- Arbeitsgemeinschaft bäuerlicher Landwirtschaft (ABL), (13 April 2022), Frieden säen, Krieg beenden – Hunger, Biodiversitäts- und Klimakrise solidarisch beenden, retrieved from <https://www.abl-ev.de/apendix/news/details/frieden-saeen-krieg-beenden-hunger-biodiversitaets-und-klimakrise-solidarisch-beenden> [5th June 2022].
- Baumol, W.J., Litan, R.E., Schramm, C.J. (2007), *Good capitalism, bad capitalism, and the economics of growth and prosperity*, Yale University Press, New Haven, Conn.
- Bergmann, K., Rusche, C. (22 March 2022), *Verhandlungspositionen im Bundesrat: Eine politökonomische Analyse*, NRW School of Governance, published at [regierungsforschung.de](https://regierungsforschung.de), retrieved from [https://regierungsforschung.de/wp-content/uploads/2022/03/22032022\\_regierungsforschung.de\\_Bergmann-Rusche\\_Bundesrat.pdf](https://regierungsforschung.de/wp-content/uploads/2022/03/22032022_regierungsforschung.de_Bergmann-Rusche_Bundesrat.pdf) [30th August 2022].
- BMEL– Bundesministerium für Ernährung und Landwirtschaft, (2022a), GAP Strategieplan: Kurzüberblick, retrieved from [https://www.bmel.de/SharedDocs/Downloads/DE/\\_Landwirtschaft/EU-Agrarpolitik-Foerderung/gap-strategieplan-kurzueberblick.pdf?\\_\\_blob=publicationFile&v=3](https://www.bmel.de/SharedDocs/Downloads/DE/_Landwirtschaft/EU-Agrarpolitik-Foerderung/gap-strategieplan-kurzueberblick.pdf?__blob=publicationFile&v=3) [25th July 2022].
- BMEL– Bundesministerium für Ernährung und Landwirtschaft, (16 September 2022b), Özdemir: Pragmatischer Kompromiss für die Landwirtschaft, kein Zurück beim Artenschutz, Pressemitteilung Nr. 124/2022, retrieved from <https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2022/124-bundesrat-gloe.html> [10th October 2022].
- BMEL– Bundesministerium für Ernährung und Landwirtschaft, (2 March 2022c), Özdemir: Versorgung in der EU ist nicht gefährdet, Pressemitteilung Nr. 23/2022 retrieved from <https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2022/23-oezdemir-informeller-agrarrrat-ukraine.html> [10th October 2022].
- BMUV – Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit, Verbraucherschutz, (25 June 2021), Insektenschutzpaket beschlossen: Weniger Pestizide und mehr Lebensraum für Insekten, retrieved from <https://www.bmu.de/pressemitteilung/insektenschutzpaket-beschlossen-weniger-pestizide-und-mehr-lebensraum-fuer-insekten>, <https://www.agrarheute.com/tag/insektenschutzgesetz> [10th August 2022].
- Böhm Bawerk, E. (1914/2010), *Control or Economic Law*. Translation by John Richard Mez, Auburn, Ala.: Ludwig von Mises Institute.
- Booth, P., Stagnaro, C. (2022), *Carbon Conundrum: how to save climate change policy from government failure*, Institute of Economic Affairs, London, retrieved from <https://iea.org.uk/wp-content/uploads/2022/08/Carbon-Conundrum-Interactive.pdf> [10th March 2023].
- Brot für die Welt, (11 July 2022a), Struktureller Hunger durch Landverknappung, retrieved from <https://www.brot-fuer-die-welt.de/blog/2022-struktureller-hunger-durch-landverknappung/> [8th September 2022].
- Brot für die Welt, (2022b), Jetzt nach Alternativen für Weizen suchen, retrieved from <https://www.brot-fuer-die-welt.de/blog/2022-noch-ist-zeit-sich-nach-alternativen-nahrungsang/> [8th September 2022].
- Bund Ökologische Lebensmittelwirtschaft, (2022a), Pressemitteilung 18.01.2022: “Es gibt nichts Gutes, außer man tut es!": Agrarwende jetzt! retrieved from <https://www.boelw.de/news/es-gibt-nichts-gutes-ausser-man-tut-es-agrarwende-jetzt/> [30th July 2022].
- Bund Ökologische Lebensmittelwirtschaft, (2022b), Pressemitteilung 26.07.2022: BÖLW: Bio ist die Antwort auf globale Krisen. Verbrauchertreue ungebrochen. Politik muss beim 30% Öko-Landbau Ziel von der Bremse gehen, retrieved from <https://www.boelw.de/news/boelw-bio-ist-die-antwort-auf-globale-krisen-verbrauchertreue-ungebrochen-politik-muss-beim-30-oeko-landbau-ziel-von-der-bremse-gehen/> [30th July 2022].
- Bund Ökologische Lebensmittelwirtschaft, (29 March 2022c), GAP-Strategieplan verbessern, 30% Öko-Landbau bis 2030 ermöglichen, retrieved from <https://www.boelw.de/news/gap-strategieplan-verbessern-30-oekolandbau-bis-2030-ermoeneglichen/> [30th July 2022].
- BUND, (2022a), Wir über uns, retrieved from <https://www.bund.net/ueber-uns/> [8th September 2022].
- BUND, (2022b), Alle BUND-Positionen zum russischen Angriffskrieg gegen die Ukraine, retrieved from <https://www.bund.net/energie-wende/energie-sparen/sofortmassnahmen-energiesouveraenitaet/> [8th September 2022].
- Bundesrat, (31 August 2022), Verordnung zur Durchführung der im Rahmen der Gemeinsamen Agrarpolitik geltenden Ausnahmeregelungen hinsichtlich der Anwendung der Standards für den guten landwirtschaftlichen und ökologischen Zustand (GLÖZ-Standards) 7 und 8 für das Antragsjahr 2023 (GAP-Ausnahmen-Verordnung – GAPAusnV), Drucksache 420/22, retrieved from [https://www.bundesrat.de/SharedDocs/drucksachen/2022/0401-0500/420-22.pdf?\\_\\_blob=publicationFile&v=1](https://www.bundesrat.de/SharedDocs/drucksachen/2022/0401-0500/420-22.pdf?__blob=publicationFile&v=1) [10th October 2022].
- Bundesverband Deutscher Milchviehhalter, (2022), Ukraine-Krieg nicht für egoistische Wirtschaftsinteressen missbrauchen! retrieved from <https://www.bdm-verband.de/pressemitteilungen/ukraine-krieg-nicht-fuer-egoistische-wirtschaftsinteressen-missbrauchen/> [30th July 2022].
- Caplan, B. (2007), *The myth of the rational voter*, Princeton University Press, Princeton.
- Clepepe, P., Weiss, K. (2020), European Union: a market environmentalist vision for Europe, in: C. Barnard, K. Weiss, (Eds), *Green market revolution: how market environmentalism can protect nature and save the world*, Austrian Economics Center and the British Conservation Alliance, London, pp. 27–32, retrieved from <https://static1.squarespace.com/static/5ecd7897dd7fe070a70c8c27/t/5ef91fabbcd92c70db6d634d/1593384890378/Green+Market+Revolution.pdf> [22nd May 2023].

- Cramon-Taubadel, S. (15 March 2022), Russia's invasion of Ukraine – implications for grain markets and food security, Agrardebatten, retrieved from <https://agrardebatten.de/agrarzukunft/russias-invasion-of-ukraine-implications-for-grain-markets-and-food-security/> [22nd June 2022].
- C-Span, (22 April 1992), Clinton campaign speech, retrieved from <https://www.c-span.org/video/?25724-1/clinton-campaign-speech> [17th May 2022].
- Deutsche Bundesregierung, (2016), Deutsche Nachhaltigkeitsstrategie, Neuauflage 2016, Berlin, retrieved from <https://www.bundesregierung.de/resource/blob/975292/730844/3d30c6c2875a9a08d364620ab7916af6/deutsche-nachhaltigkeitsstrategie-neuauflage-2016-download-bpa-data.pdf> [10th April 2022].
- Deutsche Umwelthilfe, (2022a), Agrarwende: Die Agrarlobby darf die Ukraine-Krise nicht für eine Agrarwende rückwärts ausnutzen! retrieved from <https://www.duh.de/agrarwende/> [10th May 2022].
- Deutsche Umwelthilfe, (2022b), Transparenz: Finanzen und Personalstruktur, retrieved from <https://www.duh.de/ueberuns/transparenz/#c66608> [13th May 2022].
- Deutscher Bauernbund, (2022a), Unsere Standpunkte, retrieved from <https://bauernbund.de/standpunkte-termine/> [22nd June 2022].
- Deutscher Bauernbund, (2022b), Pressemitteilung vom 04.03.2022: Ernährungssicherheit und Energieversorgung haben oberste Priorität. Bauernbund fordert Neuausrichtung in der Agrarpolitik, retrieved from <file:///C:/Users/jwandel/Downloads/2022.03.04-Ernaehrungssicherheit.pdf> [22nd June 2022].
- Deutscher Bauernbund, (26 July 2022c), Bauernbund Sachsenanhalt, Pressemitteilung vom retrieved from [file:///C:/Users/jwandel/Downloads/2022\\_07\\_26\\_AussetzungAgrarreform.pdf](file:///C:/Users/jwandel/Downloads/2022_07_26_AussetzungAgrarreform.pdf) [20th August 2022].
- Deutscher Bauernverband, (2019), Klimastrategie 2.0., 2. Auflage, retrieved from [https://www.bauernverband.de/fileadmin/user\\_upload/dbv/positionen/Klimastrategie\\_2.0\\_2.\\_Auflage\\_Januar\\_2019.pdf](https://www.bauernverband.de/fileadmin/user_upload/dbv/positionen/Klimastrategie_2.0_2._Auflage_Januar_2019.pdf) [20th August 2022].
- Deutscher Bauernverband, (2020), Der Verband, retrieved from: [www.bauernverband.de/der-verband](http://www.bauernverband.de/der-verband) [17th October 2022]
- Deutscher Bauernverband, (1 April 2022), Stellungnahme des Deutschen Bauernverbandes zum Entwurf des Nationalen GAP-Strategieplans 2023-2027 an die Generaldirektion Landwirtschaft und ländliche Entwicklung der EU-Kommission, Berlin, retrieved from [https://www.bauernverband.de/fileadmin/user\\_upload/dbv/pressemitteilungen/2022/KW\\_01\\_bis\\_KW\\_20/KW\\_14/DBV-Stellungnahme\\_zum\\_Entwurf\\_des\\_Nationalen\\_GAP-Strategieplans\\_2023-2027\\_01.04.2022.pdf](https://www.bauernverband.de/fileadmin/user_upload/dbv/pressemitteilungen/2022/KW_01_bis_KW_20/KW_14/DBV-Stellungnahme_zum_Entwurf_des_Nationalen_GAP-Strategieplans_2023-2027_01.04.2022.pdf) [20th August 2022].
- Deutscher Bundestag, (6 April 2022a), Antrag der AfD: Welthunger ideologiefrei bekämpfen – Stilllegungsflächen und ökologische Vorrangflächen für Nahrungs- und Futtermittelproduktion freigeben. Drucksache 20/1346, retrieved from <https://dserver.bundestag.de/btd/20/013/2001346.pdf> [12th June 2022].
- Deutscher Bundestag, (2022b), Dokumente, 1. Lesung: Hitzige Debatte über Agrarreform und Folgen des Ukraine-Krieges, retrieved from <https://www.bundestag.de/dokumente/textarchiv/2022/kw14-de-ukraine-886584> [13th June 2022].
- Deutscher Bundestag, (2022c), Kontroverse über Pflicht zur Stilllegung von Agrarflächen, retrieved from <https://www.bundestag.de/dokumente/textarchiv/2022/kw20-pa-ernaehrung-versorgung-bevoelkerung-892442> [13th June 2022].
- Deutscher Bundestag, (13 May 2022d), Stellungnahme von Brot für die Welt zum Antrag der Fraktion der CDU/CSU "Der Ukraine jetzt und in Zukunft helfen, Nahrungsmittelversorgung in der Welt sicherstellen sowie europäische und deutsche Landwirtschaft krisenfest gestalten" (BT-Drs. 20/1336), retrieved from <https://www.bundestag.de/resource/blob/897868/76e25ba2a928144722b5c666f722032b/04-Stellungnahme-Brot-fuer-die-Welt-data.pdf> [13th June 2022].
- Devuyst, P. (1 April 2022), EU launches food security plan with €500 million in crisis aid for farmers, S&P Global, Agribusiness Research & Analysis, retrieved from <https://ihsmarkit.com/research-analysis/eu-launches-food-security-plan-in-crisis-aid-for-farmers.html> [18th May 2022].
- Dolan, E. (2014), The Austrian paradigm in environmental economics: theory and practice, *The Quarterly Journal of Austrian Economics*, Vol. 17, No. 2, pp. 197–215.
- Downs, A. (1957), *An economic theory of democracy*, Harper and Row, New York.
- Ehler, T. (2019), Deutsche Energiewende als "Rent-Seeking Paradise"? in: *Energiewirtschaftliche Tagesfragen*, Vol. 69, No. 4, pp. 43–45.
- Environmental Performance Index, (2022), 2022 EPI results, retrieved from <https://epi.yale.edu/epi-results/2022/component/epi> [15th October 2022].
- EUR-Lex, (20 May 2020a), A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system, Brussels, EUR-Lex – 52020DC0381 – EN -, retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0381> [5th June 2022].
- EUR-Lex, (20 May 2020b), EU Biodiversity Strategy for 2030, Brussels, EUR-Lex – 52020DC0380 – EN – retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380> [5th June 2022].
- EUR-Lex, (2022), Commission Implementing Regulation (EU) 2022/1317 of 27 July 2022 providing for derogations from Regulation (EU) 2021/2115 of the European Parliament and of the Council as regards the application of the standards for good agricultural and environmental conditions of land (GAEC standards) 7 and 8 for claim year 2023, Document 32022R1317, retrieved from [https://eur-lex.europa.eu/eli/reg\\_impl/2022/1317/oj](https://eur-lex.europa.eu/eli/reg_impl/2022/1317/oj) [10th August 2022].
- European Commission, (2021a), Report from the Commission to the European Parliament and the Council on the implementation of the common monitoring and evaluation framework including an assessment of the performance of the



- common agricultural policy 2014-2020, Brussels, retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0815&from=EN> [10th May 2022].
- European Commission, (2021b), A greener and fairer CAP, Factsheet, retrieved from file:///C:/Users/jwand/Downloads/factsheet-newcap-environment-fairness\_en\_0.pdf [5th June 2022].
- European Commission, (2022a), The new common agricultural policy: 2023-27, Brussels, retrieved from [https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/new-cap-2023-27\\_en](https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/new-cap-2023-27_en) [5th June 2022].
- European Commission, (2022b), Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions safeguarding food security and reinforcing the resilience of food systems, COM/2022/133 final, retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2022:133:FIN> [10th May 2022].
- European Commission, (2022c), Ensuring global food supply and food security, retrieved from [https://agriculture.ec.europa.eu/common-agricultural-policy/agri-food-supply-chain/contingency-plan\\_en](https://agriculture.ec.europa.eu/common-agricultural-policy/agri-food-supply-chain/contingency-plan_en) [5th June 2022].
- European Commission, (March 2022d), Safeguarding food security and supporting EU farmers and consumers, retrieved from file:///C:/Users/jwand/Downloads/safeguarding-food-security-supporting-eu-farmers-consumers-war-ukraine\_0.pdf [5th June 2022].
- European Parliament, (2022), Resolution of 24 March 2022 on the need for an urgent EU action plan to ensure food security inside and outside the EU in light of the Russian invasion of Ukraine, retrieved from [https://www.europarl.europa.eu/doceo/document/TA-9-2022-0099\\_EN.html](https://www.europarl.europa.eu/doceo/document/TA-9-2022-0099_EN.html) [12nd June 2022].
- Eurostat, (2020), How much are households spending on food? retrieved from <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20201228-1> [25th October 2022].
- Evenson, R.E., Gollin, D. (2003), Assessing the impact of the green revolution, 1960–2000, *Science*, Vol. 300, No. 5620, pp. 758–762.
- Fahrion, G. (23 November 2018), Das fragwürdige Geschäftsmodell der Umwelthilfe, *Capital*, retrieved from <https://www.capital.de/wirtschaft-politik/das-fragwuerdige-geschaeftsmodell-der-umwelthilfe> [23rd August 2022].
- FAO, (2022a), Impact of the Ukraine-Russia conflict on global food security and related matters under the mandate of the Food and Agriculture Organization of the United Nations (FAO), CL 170/6, retrieved from <https://www.fao.org/3/nj164en/nj164en.pdf> [30th September 2022].
- FAO, (2022b), World Food Situation, FAO Food Price Index, retrieved from <https://www.fao.org/worldfoodsituation/foodpricesindex/en/> [30th September 2022].
- FAO, IFAD, UNICEF, WFP, WHO, (2021), The State of Food Security and Nutrition in the World 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all. Rome, FAO, doi:10.4060/cb4474en, retrieved from <https://www.fao.org/3/cb4474en/cb4474en.pdf#page=36> [20th September 2022].
- Farm Europe, (11 April 2022), The Farm to fork: in need of a new political consensus, retrieved from <https://www.farm-europe.eu/news/the-farm-to-fork-in-need-of-a-new-political-consensus/> [12th June 2022].
- Federal Ministry of Food and Agriculture, (2020), EU Common Agricultural Policy 2014 to 2020, retrieved from [https://www.bmel.de/SharedDocs/Downloads/EN/Publications/eu-agrarpolitik.pdf?\\_\\_blob=publicationFile&v=8](https://www.bmel.de/SharedDocs/Downloads/EN/Publications/eu-agrarpolitik.pdf?__blob=publicationFile&v=8) [30th May 2022].
- Foodwatch, (27 August 2020), Empfehlungen der “Borchert-Kommission” zur Nutztierhaltung: Die wichtigsten Fragen & Antworten, retrieved from <https://www.foodwatch.org/de/informieren/tierhaltung/empfehlungen-der-borchert-kommission-zur-nutztierhaltung-die-wichtigsten-fragen-antworten/> [14th August 2022].
- Foot, N. (7 June 2022), Czech Presidency: ‘Let’s forget about the Farm to Fork strategy for a few months’, Euractiv, retrieved from <https://www.euractiv.com/section/agriculture-food/news/czech-presidency-lets-forget-about-the-farm-to-fork-strategy-for-a-few-months/> [23rd August 2022].
- Fortuna, G. (22 March 2022), EU executive split on ‘suspending’ Green deal goals in farming due to food security fears. Euractiv, retrieved from <https://www.euractiv.com/section/agriculture-food/news/eu-executive-split-on-suspending-green-deal-goals-in-farming-due-to-food-security-fears/> [20th August 2022].
- Fortuna, G., Koreň, M., Foot, N. (14 March 2022), Italy, Slovakia call to rethink CAP in light of Ukraine war, Euractiv, retrieved from <https://www.euractiv.com/section/agriculture-food/news/italy-slovakia-call-for-rethinking-cap-in-light-of-ukraine-war/> [20th August 2022].
- Gallina, M. (11 February 2022), Regierende “Regierungsorganisationen”: Clan- und Lobbyklüngel sind in den Bundesministerien an der Tagesordnung, Tichys Einblick, retrieved from <https://www.tichyseinblick.de/daily-es-sentials/ngos-clan-und-lobbykluegel-bundesministerien-tagesordnung/> [17th September 2022].
- Gavas, M., Koch, S. (9 September 2021), Germany’s role in EU development policy: from broker to agenda-setter, Center for Global Development, retrieved from <https://www.cgdev.org/blog/germanys-role-eu-development-policy-broker-agenda-setter> [10th March 2023].
- Germanwatch, (24 September 2021), Die Zukunft der Landwirtschaft: Was sagen die Parteien? Blogpost, retrieved from <https://www.germanwatch.org/de/20852> [24th August 2022].
- Germanwatch, (10 March 2022a), Drohende Nahrungsmittelkrise durch Krieg: Getreide für Ernährung der Menschen einsetzen – Tierzahlen zügig reduzieren, Pressemitteilung, retrieved from <https://www.germanwatch.org/de/85087> [24th August 2022].

- Germanwatch, (4 July 2022b), EU-Agrarpolitik: Deutschland muss Strategie auf Klimaschutz und Ernährungssicherheit ausrichten, retrieved from <https://www.germanwatch.org/de/87147> [24th August 2022].
- Gierse-Westermeier, K. (21 March 2022), Lobbyismus: Offene Fragen beim BDM, *Topagrar*, retrieved from <https://www.topagrar.com/rind/news/offene-fragen-beim-bdm-13055735.html> [24th August 2022].
- Gijs, C. (27 July 2022), Blazing hay and manure roadblocks: what to know as Dutch farm protests get messy, *Politico*, retrieved from <https://www.politico.eu/article/dutch-farmer-protest-manure-roadblock-agriculture-what-to-know/> [30th August 2022].
- Glauben, T., Svanidze, M., Götz, L., Prehn, S., Jamali, J.T., Duric, I., Kuhn, L. (2022), The war in Ukraine exposes supply tensions on global agricultural markets: openness to global trade is needed to cope with the crisis, *IAMO Policy Brief No. 44*, retrieved from [https://www.iamo.de/fileadmin/documents/IAMOPolicyBrief44\\_en.pdf](https://www.iamo.de/fileadmin/documents/IAMOPolicyBrief44_en.pdf) [25th July 2022].
- Glauber, J., Laborde, D. (27 July 2022), The Russia-Ukraine grain agreement: what is at stake? *IFPRI Blog*, retrieved from <https://www.ifpri.org/blog/russia-ukraine-grain-agreement-what-stake> [10th August 2022].
- Gorin, C. (17 February 2022), Germany in the EU after Merkel: a view from France, European Policy Centre, Brussel, retrieved from <https://www.epc.eu/en/publications/Germany-in-the-EU-after-Merkel-A-view-from-France~45e688> [10th March 2023].
- Grant, W. (2008), Implications for future reforms, in: J. Swinnen (Ed.), *The perfect storm: the political economy of the Fischler reforms of the common agricultural policy*, Centre for European Policy Studies, Brussels, pp. 167–178.
- Hayek, F.A. (1944/2006), *The road to serfdom*, Routledge, London, New York.
- Hayek, F.A. (2008), *The constitution of liberty*, Routledge, Reprint. London, New York.
- Headey, D.D., Hirvonen, K. (2022), A food crisis was brewing even before the Ukraine war – but taking these three steps could help the most vulnerable. *IFPRI Blog Post*, retrieved from <https://www.ifpri.org/blog/food-crisis-was-brewing-even-ukraine-war-%E2%80%93-taking-these-three-steps-could-help-most-vulnerable> [14th October 2022].
- Hemmerling, U. (September 2022), Ernte, Energielücke und Politik im Krisenmodus, Deutscher Bauernverband, Standpunkt, retrieved from [https://www.bauernverband.de/fileadmin/user\\_upload/dbv/dbk/2022/dbk\\_9\\_2022/Standpunkt\\_9\\_2022\\_STGS\\_Hemmerling.pdf](https://www.bauernverband.de/fileadmin/user_upload/dbv/dbk/2022/dbk_9_2022/Standpunkt_9_2022_STGS_Hemmerling.pdf) [14th October 2022].
- Herzfeld, T. (22 January 2021), *Landwirtschaft als umkämpftes Feld – Interessengruppen in der deutschen Agrarpolitik*, Bundeszentrale für politische Bildung, Landwirtschaft in Deutschland, retrieved from <https://www.bpb.de/themen/umwelt/landwirtschaft/325915/landwirtschaft-als-umkaempftes-feld-interessengruppen-in-der-deutschen-agrarpolitik/> [12th June 2022].
- Holcombe, R.G. (2018), *Political capitalism: how economic and political power is made and maintained*. Cambridge University Press, Cambridge.
- Holcombe, R.G. (2019), Transitional gains and rent extraction, *Public Choice*, Vol. 181, No. 1-2, pp. 127–139.
- Iser, J. C. (2022), Eine “Hausfreundschaft” für die Agrarwende, *Zeit Online*, 18.01.2022, retrieved from [https://www.zeit.de/wirtschaft/2022-01/landwirtschaft-cem-oezdemir-steffi-lemke-agrarwende?utm\\_referrer=https%3A%2F%2Fwww.google.de%2F](https://www.zeit.de/wirtschaft/2022-01/landwirtschaft-cem-oezdemir-steffi-lemke-agrarwende?utm_referrer=https%3A%2F%2Fwww.google.de%2F) [accessed 22nd May 2023].
- Josling, T. (2008), External influences on CAP reforms: an historical perspective, in: J. Swinnen (Ed.), *The perfect storm: the political economy of the Fischler reforms of the common agricultural policy*, Centre for European Policy Studies Publications, Brussels, pp. 57–75.
- Keynes, J.M. (1936), *The general theory of employment, interest and money*, Macmillan, London. Reprinted in *Collected Writings*, Vol. VII, St. Martin’s Press, New York, 1973.
- Klümper, W., Qaim, M. (2014), A meta-analysis of the impacts of genetically modified crops, *PLOS ONE*, Vol. 9, No. 11, retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0111629> [1st September 2022].
- Kropp, C., Wagner, J. (2005), Agrarwende: Über den institutionellen Umgang mit den Folgeproblemen der Folgenreflexion im Agrarbereich, *Soziale Welt*, Vol. 56, No. 2/3: Theorie und Empirie reflexiver Modernisierung, pp. 159–182.
- Künast, R. (February 2001), Eine neue Verbraucherschutz- und Landwirtschaftspolitik, *Wirtschaftsdienst*, Vol. 81, No. 2, pp. 71–73, retrieved from <https://www.wirtschaftsdienst.eu/pdf-download/jahr/2001/heft/2/beitrag/agrarpolitische-konsequenzen-aus-der-bse-krise.html> [30th July 2022].
- Laborde, D. (2022), Food & fertilizer export restrictions tracker, retrieved from <https://public.tableau.com/app/profile/laborde6680/viz/ExportRestrictionsTracker/FoodExportRestrictionsTracker> [10th June 2022].
- Land schafft Verbindung, (2020), Pressemitteilung, 4 May 2020: “Der Green Deal muss gestoppt werden!” fordert LsV, retrieved from <https://drive.google.com/file/d/1XfAZKUdN27TdLsLJQhyYRtFytDHTzmix/view> [13th September 2022].
- Land schafft Verbindung, (2022), Wer wir sind, retrieved from <https://landschaftverbindung.org/wir-sind-wer/> [13th September 2022].
- Maurer, R. (2021), Die Misere des Ökologismus, *The European*, München, 15, (März 2021), retrieved from <https://www.theeuropean.de/rainer-maurer/der-oekologismus-ist-laengst-nicht-mehr-auf-die-gruene-klientel-beschaenkt/> [12th May 2022].
- Meemken, E.-M., Qaim, M. (2018), Organic agriculture, food security, and the environment, *Annual Review of Resource Economics*, Vol. 10, pp. 39–63.

- Meyimdjui, M., Combes, J.-L. (2021), Food price shocks and household consumption in developing countries: the role of fiscal policy, *IMF Working Paper*, WP/21/12, retrieved from file:///C:/Users/jwand/Downloads/wpia2021012-print-pdf.pdf [15th October 2022].
- Nationale Akademie der Wissenschaften Leopoldina, Deutsche Akademie der Technikwissenschaften, Union der deutschen Akademien der Wissenschaften (2020), *Stellungnahme: Biodiversität und Management von Agrarlandschaften. Umfassendes Handeln ist jetzt wichtig*, Halle (Saale), retrieved from <https://www.leopoldina.org/publikationen/detail-ansicht/publication/biodiversitaet-und-management-von-agrarlandschaften-2020/> [27th October 2022].
- Nordhaus, T., Shah, S. (5 March 2022), In Sri Lanka, organic farming went catastrophically wrong, *Foreign Policy*, retrieved from <https://foreignpolicy.com/2022/03/05/sri-lanka-organic-farming-crisis/> [27th October 2022].
- North, D.C. (1988), Ideology and Political/Economic Institutions, *Cato Journal*, Vol. 8, No. 1, pp. 15–28, retrieved from <https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/1988/5/cj8n1-2.pdf> [25th October 2020].
- OECD, (2022), *Agricultural policy monitoring and evaluation 2022: reforming agricultural policies for climate change mitigation*, OECD Publishing, Paris.
- Olper, A. (1998), Political economy determinants of agricultural protection levels in EU member states: an empirical investigation, *European Review of Agricultural Economics*, Vol. 25, No. 4, pp. 463–487.
- Olson, M. (1965), *The logic of collective action: public goods and the theory of groups*, Harvard University Press, Cambridge, MA.
- Olson, M. (1982), *The rise and decline of nations: economic growth, stagflation, and social rigidities*, Yale University Press, New Haven, London.
- Olson, M. (1993), Dictatorship, democracy and development, *American Political Science Review*, Vol. 87, No. 3, pp. 567–576.
- Patel, K.K. (2010), Der Deutsche Bauernverband 1945 bis 1990, Institut für Zeitgeschichte, München, Vierteljahreshefte für Zeitgeschichte, Vol. 58, No. 2, pp. 161–179.
- Pokrivcak, J., Crombez, C., Swinnen, J. (2006), The status quo bias and reform of the common agricultural policy: impact of voting rules, the European Commission, and external changes, *European Review of Agricultural Economics*, Vol. 33, No. 4, pp. 562–590.
- Pritzl, R. (8 Dezember 2020), Warum ist die Klimapolitik in Deutschland so unbefriedigend? Einige politökonomische und psychologische Aspekte des Politikerverhaltens, *Wirtschaftliche Freiheit*, retrieved from <http://wirtschaftlichefreiheit.de/wordpress/?p=28217> [25th March 2022].
- Röder, N., Dehler, M., Jungmann, S., Laggner, B., Nitsch, H., Offermann, F., Reiter, K., Roggendorf, W., Theilen, G., de Witte, T., Wüstemann, F. (Oktober 2021), Ausgestaltung der Ökoregelungen in Deutschland – Stellungnahmen für das BMEL Band 1 – Abschätzung potenzieller ökologischer und ökonomischer Effekte auf Basis der Erstentwürfe, *Thünen Working Paper 180*, Johann Heinrich von Thünen-Institut Braunschweig/Deutschland, retrieved from [https://www.thuenen.de/media/publikationen/thuenen-workingpaper/ThuenenWorkingPaper\\_180\\_Band\\_1.pdf](https://www.thuenen.de/media/publikationen/thuenen-workingpaper/ThuenenWorkingPaper_180_Band_1.pdf) [25th March 2022].
- Selhorst, C., Deter, A. (22 August 2022), Land schafft Verbindung (LsV), Topagrar, retrieved from <https://www.topagrar.com/themen/land-schafft-verbinding-lsv-12624314.html> [20th September 2022].
- Sinn, H.-W. (2020), *Der Corona-Schock. Wie die Wirtschaft überlebt*, Verlag Herder, Freiburg i.Br.
- SPD Fraktion im Bundestag, (9 March 2022a), Ukraine-Krieg nicht als Vorwand nutzen, um in der Agrarpolitik die Zeit zurückzudrehen, retrieved from <https://www.spdfraktion.de/presse/statements/ukraine-krieg-nicht-vorwand-nutzen-um-agrarpolitik-zeit-zurueckzudrehen> [20th July 2022].
- SPD Fraktion im Bundestag, (31 May 2022b), Transformation der Landwirtschaft umsetzen, Pressemitteilung Nr. 139, retrieved from <https://www.spdfraktion.de/presse/pressemitteilungen/transformation-landwirtschaft-umsetzen> [20th July 2022].
- Statista, (2022a), Statistiken zu den Folgen des Ukraine-Krieges für die Lebensmittelversorgung, retrieved from <https://de.statista.com/themen/9508/der-ukraine-krieg-und-die-lebensmittelversorgung/#dossierKeyfigures> [20th October 2022].
- Statista, (2022b), Marktanteil der führenden Exportländer von Weizenprodukten weltweit bis 2020/2021, retrieved from <https://de.statista.com/statistik/daten/studie/1293852/umfrage/groesste-weizenexporteure-weltweit-marktanteil/> [20th October 2022].
- Stephan, R. (25 Noveber 2019), Zu viel Lobbynähe? Nur keine Skrupel! *Bauernzeitung*, retrieved from <https://www.bauernzeitung.de/meinungen/zu-viel-lobbynaehe-nur-keine-skrupel/> [20th October 2022].
- Swinnen, J. (2010), The political economy of the most radical reform of the common agricultural policy, *German Journal of Agricultural Economics*, Vol. 59, Supplement: perspectives on International Agricultural Policy – In Honor of the Retirement of Professor Stefan Tangermann, pp. 37–48.
- Swinnen, J. (2015a), An imperfect storm in the political economy of the common agricultural policy, in: J. Swinnen (Ed.), *The political economy of the 2014-2020 common agricultural policy. An imperfect storm*, Centre for European Policy Studies, Brussels; Rowman and Littlefield International, London, pp. 443–484.
- Swinnen, J. (2015b), The political economy of the 2014-2020 common agricultural policy: introduction and key conclusions, in: J. Swinnen, (Ed.), *The political economy of the 2014-2020 common agricultural policy. An imperfect storm*, Centre for European Policy Studies, Brussels; Rowman and Littlefield International, London, pp. 1–30.
- Tagesspiegel, (13 October 2022), Inflationsmonitor, retrieved from <https://interaktiv.tagesspiegel.de/lab/inflation-monitor-wie-stark-steigen-die-preise/> [accessed 20 October 2022].

- Takle, E., Hofstrand, D. (2008), Global warming – agriculture's impact on greenhouse gas emissions, *Ag Decision Maker*, Vol. 12, No. 6, (April 2008), pp. 1-3.
- Tichy, R. (2021), Lysseno oder Apollo. Die ideologisch-planwirtschaftliche Technologiepolitik der Kanzlerin, in: Plickert, P. (Ed), *Merkel: Die kritische Bilanz von 16 Jahren Kanzlerschaft. München*, FinanzBuch Verlag, 1. komplett überarb. u. erw. Ausgabe, pp. 175–188.
- Topagrar, (2 March 2022a), Ukraine: Künast: "Der Green Deal ist heute wichtiger denn je", retrieved from <https://www.topagrar.com/management-und-politik/news/kuenast-der-green-deal-ist-heute-wichtiger-denn-je-12865895.html> [12th May 2022].
- Topagrar, (1 March 2022b), Ukraine-Krieg: FDP Abgeordnete wollen Stilllegung in Europa aussetzen, retrieved from <https://www.topagrar.com/management-und-politik/news/ukraine-krieg-fdp-abgeordnete-wollen-stilllegung-in-europa-aussetzen-12864633.html> [12th May 2022].
- Topagrar, (6 August 2022c), Özdemir für Ausnahmen bei GAP-Stilllegung und Fruchtwechsel in 2023, retrieved from <https://www.topagrar.com/management-und-politik/news/oezdemir-fuer-ausnahmen-bei-gap-stilllegung-und-frucht-wechsel-in-2023-13165536.html> [4th September 2022].
- Topagrar, (28 February 2022d), Zeitenwende: Bauernverband fordert Agrarpolitik wegen Ukraine-Krieg zu überdenken, retrieved from <https://www.topagrar.com/management-und-politik/news/bauernverband-fordert-agrarpolitik-wegen-ukraine-krieg-zu-ueberdenken-12863491.html> [12th May 2022].
- Treu, H., Nordborg, M., Cederberg, C., Heuer, T., Claupein, E., Hoffmann, H., Berndes, G. (2017), Carbon footprints and land use of conventional and organic diets in Germany, *Journal of Cleaner Production*, Vol. 161, pp. 127–142, (10 September 2017).
- Tullock, G. (1975), The transitional gains trap, *Bell Journal of Economics*, Vol. 6, No. 2, pp. 671–678.
- Williamson, J., Haggard, S. (1994), The political conditions for economic reform, in: J. Williamson, (Ed.), *The political economy of reform*, Institute for International Economics, Washington, DC, pp. 527–596.
- Wolffsohn, M. (2021), Populus und Pöbel. Angela Merkel und die Populisten – kein Nachruf, in: P. Plickert, (Ed.), *Merkel: Die kritische Bilanz von 16 Jahren Kanzlerschaft. München*, FinanzBuch Verlag, 1. komplett überarb. u. erw. Ausgabe, S. 201–211.