

# The Effects of the 2019 European Commission's Green Transition on Transportation, Housing, and Food for Ordinary Citizens

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## Abstract

Between the end of 2019 and the beginning of 2020, the European Commission, led by Ursula von der Leyen, along with other European institutions, approved the "European Green Deal" (EGD), an ambitious and idealistic project aimed at making Europe the first continent to achieve zero climate impact and transitioning all EU countries towards a sustainable economy. The EGD encompasses various aspects of human life, including industries, transportation, lifestyle, agriculture, and more. This study aims to explore how the EGD will impact the lives and well-being of citizens in three specific sectors: mobility, food, and housing. Citizens are being asked to undertake the following changes: 1) replace their internal combustion engine cars with non-polluting vehicles; 2) retrofit their homes to improve energy efficiency and eliminate emissions; 3) adapt to a new food paradigm resulting from a comprehensive overhaul of the agro-food sector. Using an unbiased and analytical approach, this paper examines the nature of the EGD and assesses its perceived usefulness among the European populace, who bear the costly burden of the green transition, as not all EGD projects receive financial support from public institutions. Additionally, the study explores whether these changes benefit ordinary people or, conversely, lead to their significant impoverishment. The findings suggest that the EGD was a political decision driven by a convoluted political ideology and influenced by powerful entities seeking global control. This paper concludes that the opinions and expectations of ordinary citizens have been wholly disregarded, and their lives and well-being are expected to deteriorate. To address these issues, this qualitative research paper analyzes and interprets internal documents from the European Commission and the European Parliament, interviews with prominent politicians

and scientists conducted across various media platforms, and recent articles published by Western newspapers.

**Keywords:** European Commission, European Green Deal, Green Transition, Political Ideology

### **Introduction**

This section explores the distinctive characteristics of the EGD and its political implications. It takes into account past failures of EU institutions and examines how they might have been influenced by powerful groups seeking global control.

In December 2019, the European Commission unveiled the European Green Deal (EGD), an intricate vision aimed at transforming Europe into a pioneering continent free from climate impact by 2050. This message delineates the fundamental strategies and actions necessary to realize this ambitious objective. Acknowledging the peril of climate variation and ecological deterioration as imminent dangers, the EGD aspires to metamorphose the European Union into an ingenious, competitive, and proficient economy. The primary aims encompass preserving the Earth's temperature below a 1.5°C threshold, attaining complete elimination of greenhouse gas emissions by 2050, fostering cleaner methods of electricity generation, reducing greenhouse gas emissions by 55% relative to 1990 levels, curtailing pesticide utilization by 50% and fertilizer application by 20% before 2030, planting an additional three billion trees throughout the European Union by 2030, investing in eco-friendly technologies, advocating for renewable energy sources, rehabilitating ecosystems, expanding protected areas, bolstering sustainable food production and fueling innovation in this sector, formulating low-impact merchandise, endorsing energy-efficient construction, introducing pristine and cost-efficient means of transportation, and striving for 25% of European Union agriculture to be organic by 2030 (Misculin, 2020).

This research paper focuses on three crucial areas of the European Green Deal, specifically:

- A) Transportation: This entails the acquisition of new vehicles intended to replace those currently reliant on fossil fuels such as gasoline and diesel.
- B) Housing: The objective is to enhance the energy efficiency of both private and public buildings. This is going to be achieved through interventions aimed at reducing energy consumption and transitioning from conventional energy sources to sustainable, green alternatives.
- C) Food: The food sector is expected to undergo a significant transformation, introducing new and innovative types of cuisine, many of which are entirely unfamiliar in traditional European culinary practices.

Concerns exist regarding the potential challenges that may arise during the complete implementation of this ambitious and politically driven project, considering the EU's track record of previous shortcomings in accomplishing its initiatives, despite their initial presentation with great enthusiasm as problem-solving endeavors. 1) An illustrative case in point is the issue of migration regulation, which has consistently faced failures. Even in the present day, a viable solution to this problem remains elusive, as the interests of individual member states have consistently taken precedence (Indelicato, 2023). The September 2019 Malta agreement, which aimed to distribute migrants among all EU countries, has never been effectively enforced. The burden of the escalating immigration crisis continues to rest primarily on Mediterranean countries alone. In 2022, close to 90,000 migrants arrived on Italian shores, yet only thirty-eight were relocated to France, seventy-four to Germany, and a mere five to Luxembourg (Canepa, 2022). 2) After the eruption of hostilities between Russia and Ukraine, the European Union (EU) implemented rigorous sanctions against Russia.

Nevertheless, European countries have faced challenges in reaching a consensus on the pricing of gas imports from Russia, and this issue has persisted for a considerable period of time (Romano, 2022). Each country has predominantly focused on protecting its individual interests. Even when some semblance of agreement has been reached, it has proven ineffective in producing favorable outcomes for European citizens, instead underscoring a substantial rift among European countries (Alonso, 2023). 3) The Global Gateway initiative, which sought to involve the younger generation in the field of politics, ultimately did not achieve its desired outcomes. The endeavor consumed a total budget of 387,000 euro and spanned from October 19 until December 15, 2022 (Mosca, 2023). 4) Since 2011, the European Union has been making efforts to not only establish consistent rules for determining the taxable income of companies located within the EU and the branches of companies from non-EU countries operating within the EU but also to promote legislative convergence among its member states. The objective is to eliminate any tax-related imbalances that hinder equitable competition within the EU market (Caggiano, 2020). 5) On June 14, 1985, the Schengen Agreement was established, which eliminated border checks between EU countries and introduced the concept of free movement for citizens of the participating nations. Nevertheless, this essential freedom has often faced limitations or suspensions by individual EU member states on several occasions due to diverse reasons such as terrorism apprehensions, pandemics, unregulated immigration, and national security concerns (Bianchini, 2020).

In recent times, the credibility of European institutions has suffered significant harm due to the “Qatargate” controversy. Numerous politicians have come under investigation, and substantial amounts of money have been found in their residences. These individuals are being accused of accepting bribes and sumptuous presents from affluent officials hailing from Qatar and other nations outside of Europe. The criminal inquiry, which commenced on December 9, 2022, under the supervision of the Belgian judiciary, has uncovered instances of corruption within European institutions, where certain individuals have acted in favor of non-European Union states (Lombardi, 2022). A growing proportion of European citizens have witnessed a decline in confidence towards the present ruling class of the European Union, to the extent that the term “euro-bureaucrats” has been coined to describe EU leaders. Despite their extended tenure in power, these leaders have been deemed negligent in safeguarding the interests of EU citizens, prioritizing their own concerns instead. Between December 2022 and January 2023, during the Christmas holidays, EU leaders introduced a retrospective wage indexation policy to boost their own salaries. Each politician experienced a monthly increase of more than two thousand euro, while regular citizens grappled with inflation reaching double digits, and countries like Germany encountered an economic downturn (Galici, 2023). Despite frequently lecturing European citizens on enhancing environmental well-being, both the President of the European Commission and the President of the European Council exhibit a poor example through their own behavior. The former utilized a private plane on seventy-two occasions within a single month, incurring a cost of two and a half million euro and emitting twenty tons of CO<sub>2</sub>. Similarly, the latter chose to use a private jet for a short thirty-one-mile trip from Vienna to Bratislava, resulting in an emission of around two tons of CO<sub>2</sub> (Innocenti, 2023). The European Green Deal originates from a decision made by the current political majority, a coalition composed of the European People’s Party (EPP) and the European Socialists Party (PES), which support President Ursula von der Leyen. European laws inherently carry a political connotation, making them prone to instability and subject to continuous changes over time. The EGD, upon its approval, has undergone multiple reviews

due to the emergence of geopolitical and socio-economic circumstances that the EU carefully considers. Additionally, the European Parliament is scheduled to undergo renewal through elections between 6 and 7 June 2024. Recent polls suggest that political parties opposing the European Green Deal and asserting that it undermines the economic foundations of each member state are expected to come out as the winners (Napolitano, 2023). Our aspiration is that the forthcoming European Commission, to be constituted following the European elections in June 2024, will effectively confront concerns related to pollution, global warming, and climate change through a blend of pragmatism and intellectual integrity. These critical issues, impacting not solely Western Europe but all nations worldwide, demand a more earnest and proficient approach, free from ideological biases and decisions swayed by partisan interests.

Numerous individuals claim that the influential Bilderberg organization has wielded significant sway over the European Union's choices concerning safeguarding the environment. Frequently characterized as a privately operated neoliberal intellectual consortium, this group partakes in dialogues on worldwide matters, and some even refer to it as a "clandestine governance" entity purportedly molding the political and economic priorities of the Western sphere. The attendees of the Bilderberg Group comprise national leaders, finance ministers, influential media professionals, European Union politicians, as well as notable personalities from the realms of European and Anglo-American high-level finance (Luminari, 2020).

In Lisbon, Portugal, on May 21, 2023, the 69<sup>th</sup> exclusive gathering of the Bilderberg Club was held, characterized by its closed-door format. Reportedly, a wide range of topics was deliberated upon, including the energy transition. It is not uncommon for representatives of the European Union, including the Commission, to be present at such meetings. Their involvement typically entails active participation in discussions, exchanging insights, and engaging in conversations alongside other attendees. However, the specific extent of their participation and the level of disclosure regarding the deliberations are not publicly revealed. These meetings are typically conducted with a sense of confidentiality, and participants generally exercise discretion in terms of divulging details or outcomes of the discussions (Vivaldelli, 2023). The presence of influential figures within the Bilderberg group holds significance, as some of them are recognized as backers of the global network known as #A22. This network consists of young Europeans who employ acts of civil disobedience to promote more robust governmental measures in addressing the climate and ecological crisis. The connection between these financial supporters and the #A22 network suggests a potential alignment of interests and endorsement of grassroots movements striving for environmental transformation. Within this international network, several organizations play a role, including "Just Stop Oil" in the UK, "Letzte Generation" in Germany, "Dernière Rénovation" in France, and "Ultima Generazione" in Italy. These organizations have actively escalated their actions in Europe, engaging in various acts of vandalism and other illegal activities to protest against the energy and industrial policies of Member States and the European Commission. Notably, they have garnered substantial media attention, enabling them to exert significant influence on public opinion, particularly among the younger generation. From this standpoint, it is alleged that influential figures within the realm of green finance strategically employ these youth organizations as a means to instill fear within the populace. The propagated narrative suggests that without drastic and costly transformations, the world is believed to be on the brink of an impending catastrophe. This approach is perceived as advantageous for high finance and multinational corporations, which have the potential to amass significant wealth

through the green transition. Moreover, resources are utilized to disseminate alarm regarding climate change, drawing connections to human activities through studies funded with specific objectives, while discrediting scientists who hold differing perspectives. Climate catastrophism is regarded as a tool for psychological and political pressure, with the aim of expediting the implementation of green initiatives in all aspects of human life (Romiti, 2023).

This paper is structured into the following sections

- 1) The section on Research Aims and Questions elucidates the purpose of this paper through three research questions.
- 2) The Methodology section elaborates on the analytical approach employed in this paper
- 3) The Literature Review section examines various books that discuss climate change and global warming, exploring different viewpoints and assessing the green transition towards electric cars, innovative food sources, and sustainable real estate development.
- 4) The purpose of the Results and Discussion section is to uncover the true essence of the European Green Deal within three specific sectors: Transportation, Housing, and Food. It takes into account the current conditions of the European economy and the political decisions of the Central European Bank (ECB). The section investigates the costs that ordinary citizens are likely to bear as a result of implementing the EGD and explores whether it will ultimately benefit or impoverish them.
- 5) In the Conclusion section, the researchers present their viewpoint, acknowledging the potential for various political forces to assume control within the European political institutions (Parliament, Commission, and Council) subsequent to the 2024 elections.

### **Research Aims and Questions**

Although the European Green Deal has been extensively examined in its foundational aspects, one crucial element has received inadequate investigation: its consequences on the general population. It is essential to critically assess whether the policies and measures implemented under the EGD genuinely prioritize the well-being and interests of ordinary citizens or if they primarily serve the financial interests of influential entities in the green finance sector. This perspective calls for a thorough examination of the potential impacts on citizens, including any potential economic burdens or disparities that may arise from the implementation of the EGD.

The primary objectives of this paper are to address the following research questions concerning new EU directives on transportation, housing, and food

- 1) Can European citizens afford the purchase and maintenance of all-electric vehicles (EVs), assuming the absence of financial incentives from European national governments?
- 2) Can European citizens, on their own, afford the retrofitting of their private homes to comply with EU directives?
- 3) To what extent are European citizens receptive to laboratory-grown food, considering its divergence from their culinary traditions?

## Methodology

This paper employs a qualitative research approach, entailing the observation and interpretation of

- 1) The original formulation of the European Green Deal (EGD) as documented by the European Commission and the European Parliament, supplemented by interviews conducted with prominent politicians and scientists featured on various media platforms.
- 2) Geo-political events post-2019 that compelled EU institutions to adopt a revised approach towards the goals of the EGD.
- 3) Contemporary newspaper articles from Italy spanning the period from 2019 to 2023

The books referenced in the Literature Review section offer readers the opportunity to deepen their understanding of the specific realms covered by the EGD—transportation, housing, and food. Encompassing all-electric vehicles, energy-saving buildings, and novel foods, these areas serve as the focal points of the present research paper.

## Literary Review

This section aims to explore works that delve into three specific sectors of the European Green Deal (EGD): transportation, housing, and food, which serve as the central themes of this paper.

The extensive scientific literature addressing climate change and global warming, encompassing their causes and potential solutions, can be broadly categorized into three groups.

The first group of scientists posits that human activities are solely responsible for environmental issues on Earth, often referred to as “global anthropic warming”.

The second one argues that climate change is a natural occurrence inherent to the planet’s evolutionary processes and cannot be solely attributed to human influence.

The third group remains uncertain and unable to provide a definitive answer due to the lack of conclusive scientific evidence demonstrating the anthropic nature of climate change and global warming.

In addition to scientific perspectives, the examination of climate change extends to non-scientists who approach the subject from political and geopolitical standpoints. Notably, Gianfranco Saro is a relevant figure in this context. In his book, *“Auto elettrica Guida Completa”* (Electric Car, a Complete Guide), Saro (2023) provides comprehensive knowledge about electric cars and unveils their intricacies, aiming to assist ordinary EU citizens in addressing their questions and doubts. The author raises several important questions

- 1) Are electric cars cost-effective?
- 2) Are they safe?
- 3) Are they suitable for both individuals and large families?
- 4) Which models can be trusted?
- 5) How does one choose the right electric car?
- 6) Do governments offer special incentives for purchasing electric cars?
- 7) Why are they more expensive compared to gasoline and diesel cars?
- 8) Which new models are currently undergoing testing but not yet available on the market?
- 9) Is it true that owning an electric car leads to significant cost savings?
- 10) What are the maintenance costs and insurance expenses associated with electric cars?

*“Carne artificiale? No, grazie!”* (Artificial meat? No, Thank you) by Gilles Luneau (2021), is a groundbreaking investigation into the influence of interest groups in the realm of lab-grown food. This includes meat, eggs, dairy products, and fish produced in laboratories, potentially shaping the future of our global food supply. It raises questions about whether the consumption of food produced without any connection to traditional farming methods, completely detached from nature, is the path forward. One might wonder if there are vested interests behind the gradual and inevitable food’s “chemicalization”. The concept of “cellular” agriculture, which involves producing food, particularly animal-based products, from cell cultures grown in labs or synthetic proteins derived from plant substitutes, is presented as a solution to addressing world hunger and mitigating climate change. However, the truth may be different, and numerous contradictions persist. The source of the substantial research funds in this field is an important aspect to consider. The book delves into this inquiry, investigating the origins of these funds and shedding light on the financial support provided by green finance and the connections between artificial production start-ups and their financiers. The term “meat” itself is often misused when referring to laboratory-grown products since they do not originate from deceased animals. Rather, they are substitutes created using vegetable proteins. Furthermore, it goes beyond plant-based alternatives as it encompasses substances artificially produced through genetic modifications. It is worth noting that plant-based meat is an ultra-processed food, lacking authenticity and deviating from the sustainability it claims to promote. Additionally, the book raises important questions about the nutritional value and ethical implications associated with laboratory-produced meat.

*“Un Insetto nel Piatto”* (An Insect on a Plate) by Giulia Maffei and Giulia Tacchini, published in 2016, provides a foresight into the decisions made by the European Commission in 2019 regarding sustainable food. The book explores the topic of insects as a concentrated source of proteins and unsaturated fats, having few rivals in this regard. For instance, 100 grams of crickets contain nearly the same amount of protein as a slice of veal. When cooked and seasoned correctly, insects can be quite tasty. Additionally, they are a resource that is abundantly available and has a minimal ecological footprint. Insects are considered an affordable and environmentally sustainable option, serving as a significant protein source for some and an exciting frontier of taste for others. Scientists regard them as the food of the future. Currently, caterpillars, ants, and grasshoppers are beginning to gain attention, albeit often as curiosities, even in European supermarkets. The book aims to discuss this intriguing subject by adopting the perspectives of a historian, anthropologist, nutritionist, breeder, food critic, cook, and communicator. Each of these characters provides unique insights into edible insects, and the book is dedicated to them. Their diverse expertise is required to comprehend entomophagy, the practice of consuming insects as food for humans. It is a term that combines the Greek words “*entomon*” (meaning “insect”) and “*phagein*” (meaning “to eat”). Throughout history and in various cultures around the world, insects have been an important food source and protein-rich dietary component for many communities. Entomophagy has gained attention in recent years due to its potential as a sustainable and environmentally friendly alternative to conventional livestock farming. Insects can be a nutritious food source, high in protein, healthy fats, vitamins, and minerals. They are also highly abundant and require fewer resources such as water, land, and feed compared to traditional livestock.

*“Edilizia 0.0.per Abitare il Futuro”* (The Future of Real Estate Development) by Massimiliano Caruso (2022), explores the future of the real estate sector. The book emphasizes the need for a profound transformation and innovation in response to the European Green Deal and

its goals for sustainability. Both public and private buildings must undergo comprehensive renovations to align with EGD objectives. The integration of digitization, big data management, and artificial intelligence is driving a transformative shift in industrial and commercial activities, necessitating the replacement of existing business and marketing models. Technologies like 3D printing, robotics, and nanotechnology are poised to revolutionize manufacturing processes. Concurrently, we are confronted with the challenges of climate change and pandemics. The construction sector and the entire real estate industry cannot remain indifferent to these circumstances. Only companies and professionals who embrace these changes, adopt sustainable practices, and prioritize resilience will not only survive but also become the new leaders in a rapidly transforming market. With a straightforward and informative style, this book delves into the core of these changes, providing an innovative contribution to thinking, designing, constructing, and managing the future of living spaces.

Salvatore Di Bartolo is the author of *“Overgreen. L'altra faccia della rivoluzione verde”* (Overgreen. The other side of the Green Revolution), a book published in 2023. The battle against climate change and environmental degradation stands as one of humanity's most significant challenges in the twenty-first century. Keeping this in mind, the European Commission has taken on the formidable task of aiming to decrease greenhouse gas emissions by 55% by 2030, with the ultimate objective of achieving climate neutrality by 2050. Undoubtedly, this goal is both noble and ambitious. However, pursuing complete environmental sustainability comes with a price tag. What are the potential costs and socio-economic consequences? Numerous unanswered questions continue to revolve around the green revolution. The stakes are incredibly high as it involves the economy and the future of an increasingly depleted Europe, which is currently facing an enduring identity crisis and value erosion. There is even a risk of the fundamental pillars of Western culture tragically crumbling under the vehement rhetoric of the proponents of the new prevailing ideology, often referred to as the “opium of the people” or the authentic civil religion, which now boasts more followers than any other religion in the Western world: ideological ecology.

### **Results and Discussion**

The European Commission unveiled the European Green Deal on December 11, 2019, and later received approval from the European Parliament on January 15, 2020, through a majority vote.

As part of the European Green Deal, the EU Commission has also introduced a sustainable finance strategy and a Sustainable Europe Investment Plan. These initiatives aim to ensure that the financial system supports businesses' sustainability transition. The Investment Plan allocates at least one thousand million euro of public and private investments over the next ten years, with the goal of mobilizing one trillion euro for sustainable investment through the EU budget and the European Bank for Investments (Neri, 2020). Additional resources come from the NRRP - National Recovery and Resilience Plan – originally planned due to the pandemic crisis. There are €723.8 billion (in loans of €385.8 billion and grants of €338 billion) for EU countries to invest, create jobs, and build a green and digital future (Euronews, 2022). However, a significant and serious conflict took place on February 24, 2022, when Russia initiated an invasion of Ukraine, sparking an ongoing and brutal conflict. Initially, the incursion had the objective of protecting the Russian-speaking community in Donetsk and Luhansk, eliminating any Nazi influence within the Ukrainian government, and subsequently enabling



the conduct of fresh elections. The projected timeline for this endeavor was initially set at a mere couple of weeks (Gaiani, 2022). This context does not pertain to an analysis of the causes behind the war or the determination of potential violations of international law. From its inception, the EU has made a political commitment to stand by Ukraine, exemplified by the acceptance of millions of refugees and the provision of military aid to the invaded nation. Instead of opting for neutrality like several other nations, the EU could have assumed a mediating role between the conflicting parties to pursue a peaceful resolution. However, that was not the chosen path. The EU has actively taken part in the war and consistently underscores, in different international forums, that the sole feasible resolution to end the conflict relies on the Ukrainian armed forces achieving a military victory. The EU cautions that a potential Russian triumph would result in catastrophic consequences for Western nations (Zanellato, 2023). The EU's political determination has been criticized as illogical and lacking a strong basis, even drawing disapproval from experienced and knowledgeable military generals. The initial anticipation was that the continued supply of Western weaponry and the imposition of economic sanctions on Russia would swiftly result in Russia's economic and military downfall within a few weeks. However, the actuality has proven to be different. The war is estimated to persist for years, incurring significant costs and producing minimal results, akin to previous conflicts such as Vietnam, Iraq, and Afghanistan (Marescotti, 2023). As illustrated in Table 1, the European Union has opted to allocate billions of euro to provide Ukraine with an increasing quantity of substitute weapons, resulting in a reallocation of funds from the European Green Deal initiative due to resource constraints.

Table 1

*EU Financial Investment Plan for the European Green Deal (Sustainable Europe Investment Plan) and Military Support to Ukraine.*

Financial Plan Content	Financial Plan Support (euro)
2019: EGD original investment	One thousand million <sup>1</sup>
2020: EGD additional sources	723.8 billion <sup>2</sup>
Since 2022: Military support for Ukraine	2240 billion <sup>3</sup>

<sup>1</sup> Source of information: Neri, 2020 January 17.

<sup>2</sup> Source of Information: Euronews Next, 2022 February 9.

<sup>3</sup> Source of Information: Canella, 2023 April 26.

The original allocation of one trillion euro is no longer accessible, as the entirety of the EU's financial reserves is currently focused on providing military weaponry to Kyiv. A comprehensive analysis conducted by the Stockholm International Peace Research Institute (SIPRI) revealed that the military assistance provided to Ukraine in 2022 resulted in costs amounting to around 2240 billion euro, exceeding the allocation for the European Green Deal

(Canella, 2023). Due to excessive spending on armaments, the EU is currently experiencing a shortage of resources for the European Green Deal and its domestic economy. As a result, the overall welfare of European citizens has considerably deteriorated, and all Member States now find themselves functioning within a *de facto* wartime economy. The current circumstances have led to a notable spike in the prices of basic food items and raw materials, witnessing an astonishing 600% surge since February 24, 2022. Additionally, the economy is struggling with double-digit inflation rates, which have become a pervasive issue of concern (Grazzini, 2022). Funds originally allocated for the Recovery and Resilience Plan have also been redirected to fulfill Ukraine's weaponry requirements. The European Parliament has endorsed the Commission's proposal to bolster armament manufacturing for Ukraine. At present, Ukraine's military consumes approximately 3,000 bullets per day, while the entire EU collectively produces only 300,000 bullets annually. On May 3, 2023, the European Parliament overwhelmingly passed the Act in Support of Ammunition Production (ASAP) with 446 votes in favor, 67 against, and 112 abstentions. This initiative authorizes the allocation of one billion euro per month to expedite ammunition production by European companies, specifically for shipment to Ukraine (Bianchi, 2023). Within a period of two years, public funds designated for the implementation of the European Green Deal have been depleted. If the European Commission intends to proceed with its initial plan, it appears that the entire burden of the costs associated with the green transition will fall upon ordinary citizens. However, considering the current fragility of the European economy, it seems implausible that they can afford to sustain such a massive investment. After carefully considering the present economic and political conditions within the EU, it is now appropriate to delve into the three sectors of the EGD that are relevant to this research paper.

### **Transportation: Shifting Towards Electric Vehicles**

The European Commission has made a decision to prohibit the sale of all vehicles powered by internal combustion engines starting in 2035, allowing only vehicles with zero emissions to be sold. Nevertheless, the EGD has consistently overlooked alternative environmentally friendly energy sources for automobiles and placed exclusive emphasis on electricity. This decision prompts inquiries as to why the European Union has not authorized additional methods beyond electric vehicles (EVs) to attain the objective of achieving "net zero" emissions. It remains unclear why no proposals have been made for non-polluting car models, such as those powered by hydrogen or solar energy. In reality, the research has not yet advanced enough to achieve a fully zero environmental impact in the production of all-electric cars (Villa, 2023).

From a scientific perspective, it is crucial to consider not just the exhaust pipe emissions of a car but also the environmental consequences stemming from electricity production (Robustelli, 2023). EVs are widely recognized for their substantially reduced emissions during operation, in contrast to traditional petrol or diesel cars. However, a comprehensive evaluation of the entire life cycle of an electric car reveals certain environmental considerations. For instance, the production of EVs necessitates high-capacity batteries composed of rare minerals, which can lead to pollution during the extraction phase. Moreover, aspects such as deforestation, transportation, and waste management also contribute to the overall environmental ramifications associated with electric car manufacturing. Among the numerous challenges faced by electric vehicles, one prominent issue is the availability of lithium in nature. Although lithium is found in substantial deposits, like oil, it is a finite resource that will eventually be depleted. With the ever-increasing

demand for lithium, at least eighteen more mines, similar in size and capacity to Australia's largest Pilangoora mine, are projected to be opened by 2040. The process of establishing a lithium mining site, conveying the material to the battery chemistry factory, and then further transporting it to the car assembly plant significantly contributes to the electric car's carbon footprint. This aspect should not be underestimated when considering the environmental impact of electric vehicles (Agizza, 2023). Electric cars give rise to significant concerns that the EGD fails to address. Due to their inherent characteristics, they operate in a smooth and quiet manner, unlike combustion engines. However, this feature comes with the drawback of lacking the natural vibrations experienced in traditional engines, which aid passengers in perceiving the vehicle's motion. Additionally, electric cars are equipped with an ever-growing number of large screens, bombarding passengers with overwhelming information. These factors contribute to a higher incidence of motion sickness, commonly known as car sickness, which manifests through symptoms such as nausea, sweating, paleness, dizziness, headaches, and vomiting (Emond, 2023). EVs are designed with safety features to ensure their compatibility with water. The high-voltage system, comprising the electric motor and battery pack, is engineered to maintain electrical insulation from the vehicle's chassis, thereby reducing the risk of electrical discharges. However, if an electric vehicle becomes partially or fully submerged, especially in cases of severe flooding, there is a valid concern regarding potential leakage of battery fluid or damage to the electrical components of the high-voltage system. Such situations could result in short circuits and subsequent fires once the vehicle is no longer submerged (Baldini, 2023). Following severe storms in the Emilia Romagna region of Italy, all-electric cars were parked and isolated in outdoor areas for a minimum period of fifteen days. As a precautionary measure, a minimum distance of five meters was maintained between each vehicle to minimize the potential risk of spontaneous combustion. This action was taken in response to previous incidents where certain vehicles caught fire at a dealership (Redazione, 2023). Ensuring safety remains a paramount concern, prompting the need for further investigation into electric cars. European citizens were deeply alarmed when news broke of an electric vehicle catching fire during a routine journey in the streets of Naples, Italy. The occupants of the car, who are currently being treated at Caldarelli Hospital's intensive care unit, sustained severe burns and are now in critical conditions, fighting for their lives. This tragic incident occurred on June 14, 2023, and a thorough investigation is underway to determine the causes of the fire. Possible factors being examined include battery overheating, electrical malfunctions, spontaneous combustion of the vehicle, or other contributing elements that may have led to this devastating fire (Popoli, 2023). The shift towards electric cars has been extensively debated from numerous angles, yet one aspect that has received limited scrutiny thus far is the insurance costs related to electric vehicles. At present, car manufacturers do not provide third parties with access to battery diagnostic data. Consequently, repairers, insurers, and experts are unable to accurately determine the extent of damage to the battery or verify if repair operations, following potential accidents, have effectively restored all damaged cells. This lack of comprehensive information presents challenges in accurately assessing repair costs and evaluating the overall insurance risks associated with electric vehicles. The restricted availability of battery diagnostic data frequently compels insurance companies to opt for replacing the entire battery, even in cases of minor damage. Alternatively, they may choose to declare the vehicle a total loss if the cost of battery replacement, which can represent a substantial portion, often up to 50% of the electric car's total value, is deemed uneconomical. This circumstance arises due to the absence of precise information regarding the extent of battery damage and the inability to

accurately evaluate repair options. As a result, insurers take cautious measures to mitigate potential risks and ensure adequate coverage. In certain European countries, a paradoxical scenario has emerged, wherein battery packs with scratches, which may still contain undamaged cells, are being accumulated in landfills. Likewise, electric vehicles with minimal mileage are being prematurely discarded. This situation contradicts the aspirations of sustainability that have guided the transition towards electric vehicles. Such wasteful practices are incongruous with the objective of promoting a more environmentally friendly transportation system. It emphasizes the necessity for improved strategies and policies to ensure the appropriate management, repair, and recycling of electric vehicle components, aligning with the principles of sustainability (Marino, 2023). A recent study (Burnham et al., 2021) suggests that a worldwide transition to electric vehicles, including cars, buses, trucks, and vans, by 2030 would only lead to a minimal temperature reduction of 0.0001 degrees. Nevertheless, the study highlights that the expenses incurred by the general population would be excessively high. The rapid transition to electric cars has encountered vehement criticism from ministers in various European countries, who assert that it poses a substantial threat to vital sectors of their economies. In Italy, for example, a contentious political dispute has arisen between the government and the European Commission regarding the implementation of the European Green Deal. The sports car industry is particularly vulnerable, and the idea of niche manufacturers like Ferrari, Lamborghini, and Maserati fully transitioning to electric vehicles by 2035 appears implausible (Carrer, 2021). Currently, China holds a dominant position in both the manufacturing and sales of lithium batteries and electric vehicles, positioning itself as a frontrunner in the future of mobility. This situation poses risks to the industrial performance of the European automotive sector. Chinese customs data reveals a significant surge in the export of lithium batteries, which witnessed a year-on-year increase of 66.9% in the first quarter of 2023. Similarly, exports of electric cars experienced a remarkable growth rate of 122.3%. The proportion of electric cars in the overall automotive market has risen from approximately 4% in 2020 to 14% in 2022, with projections indicating a further increase to 18% in 2023 (Console, 2023). The ascent of China's electric car industry raises legitimate concerns regarding its potential dominance in the European market. In response, a coalition comprising eight EU countries, namely the Czech Republic, Italy, Germany, Poland, Hungary, Romania, Slovakia, Portugal, and Austria, has joined forces to address this issue. This alliance is currently involved in a conflict with European institutions, as their objective is to safeguard jobs and businesses and maintain independence from China, which holds a significant advantage in terms of electric mobility but also exhibits higher pollution levels compared to Europe. This situation underscores the intricate balance between economic competition, environmental considerations, and the imperative of job security within the EU. Several European ministers have openly voiced criticism regarding what they perceive as a paradox within the European Union, whereby decisions are imposed from above onto individual member countries, potentially putting their economies at risk. This critique raises concerns regarding the centralized decision-making process and its implications for the economic welfare of member states. It emphasizes the necessity for a balanced approach that considers each country's diverse economic circumstances and priorities within the EU (Dama, 2023).

The automotive sector in Europe has also witnessed protests from industry players against EU decisions. They argue that numerous changes are being demanded within an exceptionally short timeframe. It is worth noting that no other non-EU country has mandated a complete transition to zero emissions within just twelve years. To achieve a successful ecological

transition, there must be a harmonious synergy between major industries and political actors. The automotive sector plays a crucial role in the European economy. However, if the objective is to phase out internal combustion engine vehicles, substantial public incentives are required to make electric cars financially accessible for European citizens. This would involve creating an environment where electric vehicles become affordable and viable options for the general population (Bonora, 2023). Regrettably, recent experiences encountered by numerous European citizens indicate that the incentives offered to encourage electric vehicle purchases are inadequate and insufficient. This situation arises from the fact that the European Green Deal has not received its original 2019 budget allocation due to the European Union's decision to allocate billions of euro towards the procurement of advanced weaponry for the Ukrainian military forces (Longhin, 2023). As a result, the funds that were initially intended to support environmental initiatives, such as promoting electric vehicles, have been diverted to other priorities, leading to a lack of necessary financial support for encouraging sustainable transportation choices. This diversion has created challenges in achieving the desired goals of transitioning towards greener and more environmentally friendly transportation options for the citizens of Europe.

Another factor that needs to be considered, apart from the high initial purchase price, is the repair costs associated with an electric car, which are significantly higher compared to traditional petrol or diesel cars. Estimations suggest that repairs for new-generation electric cars could amount to up to 46% more than those for internal combustion engine cars. The major cost components in a repair include spare parts, labor, consumables (such as paints and related materials), and additional expenses (licenses, training courses, calibrations, and programming). These combined factors contribute to making electric cars prohibitively expensive for the majority of European citizens (Ferro, 2023). All the aforementioned reasons (including the high purchase cost, difficulty in locating charging stations, inflated maintenance prices, soaring insurance costs, safety concerns, and lack of government incentives) have contributed to electric cars not being favored by European citizens. Despite a promising start in the European car market in 2023, the transition to electric vehicles has not gained significant momentum. In January 2023, over 910,000 new cars were sold and registered across Europe, but merely 13,000 of them were all-electric (Angotti, 2023).

The European car industry has long been at the forefront of global technological advancements in the field of combustion engines and automobile manufacturing. Iconic brands originating from countries such as Italy, Germany, and France have cultivated a rich heritage spanning over a century, highlighting the wealth of expertise and accumulated knowledge. Nonetheless, there are apprehensions that, driven by political motivations and policy directives, the industry's technological leadership could be relinquished within a relatively brief timeframe. This raises concerns about the potential adoption of non-European technologies that may rely on raw materials that Europe does not possess in abundant quantities. EGD also appears to ignore the economic consequences for individual European countries' automotive sectors. The rapid shift from combustion engine vehicles to full-scale electric production within a tight timeframe raises concerns among labor unions about the potential loss of over 75,000 employment opportunities in each EU nation, without counting the thousands of jobs associated with related industries (Duni, 2022). European car manufacturers would have preferred the zero emissions target to be delayed until 2040, as it would provide ample time for engineers to explore alternative technologies, such as hydrogen, and assess their suitability alongside electricity.

One might question why the EU has taken such a radical step by focusing solely on passenger cars, without addressing the detrimental emissions from maritime transport. It is well acknowledged that cargo ships play a significant role in CO<sub>2</sub> emissions, relying heavily on high-sulfur fossil fuels that release substantial amounts of sulfur dioxide (SO<sub>x</sub>), nitrogen dioxide (NO<sub>x</sub>), and CO<sub>2</sub>. These emissions not only contribute to the greenhouse effect but also have adverse effects on climate change (Società, 2023). In addition to their contribution to climate change, these emissions from maritime transport also have detrimental effects on the greenhouse effect. Moreover, they give rise to other forms of pollution that inflict significant harm on marine ecosystems and compromise the quality of water. To provide some perspective, the emissions produced by a mere fifteen cargo ships are enough to pollute as much as the entire global car fleet (Guadagnino, 2023). Critics argue that the European Union lacks a holistic vision, effective strategies, and a practical approach to safeguarding the heritage of the European car industry, particularly regarding its prioritization of electric vehicles for the future. Italian Deputy Prime Minister Matteo Salvini has expressed concerns about potential external influences, speculating that financial incentives from China may have influenced the decision-making process of the European Commission. Salvini has publicly alluded to corruption and drawn parallels to past cases like “Qatargate”, as mentioned earlier. These statements reflect a sense of skepticism regarding the underlying motivations behind specific policy decisions and a call for transparency in the decision-making process (Ciriaco, 2023).

### **Housing: Enhancing Private Houses Efficiency through Retrofitting**

The retrofitting of private houses refers to upgrading or improving existing residential properties to enhance their energy efficiency, sustainability, and overall performance.



Figure 1: Illustration of a private building in Italy, showcasing its condition before and after undergoing retrofitting in accordance with the EGD EU Directive 2018/844 (Source: <https://www.ssorgey.top/products.aspx?cname=cappotto+termico+condominio+prima+e+dopo&cid=56>)

It involves implementing various measures such as insulation, energy-efficient windows and doors, renewable energy systems, and smart technologies. Retrofitting private houses aims

to reduce energy consumption, lower carbon emissions, improve indoor comfort, and ultimately contribute to a more sustainable and environmentally friendly housing sector. EGD incorporates a precise provision known as the EU Directive 2018/844 EPBD (Energy Performance of Buildings Directive), which pertains to the promotion of environmentally sustainable buildings. The directive outlines the following requirements

- A) From 2028 onward, all newly constructed buildings must achieve zero emissions.
- B) By 2030, private residences must undergo renovations to reach a minimum energy rating of class E, followed by further upgrades to class D by 2033.
- C) Non-residential and public buildings face accelerated timelines, with the aim of reaching class E by 2027 and class D by 2030.

The EU Directive mandates Member States to establish suitable financial and tax measures to assist citizens in covering the costs associated with retrofitting their homes. However, regrettably, no incentives are currently anticipated due to the challenging economic situation that the EU has been experiencing since the outbreak of the conflict between Russia and Ukraine. Unless this directive is withdrawn or significantly revised, it will be challenging to achieve the objectives of the EGD in this sector. The EU directive does include certain exceptions where renovation interventions are not required. These exceptions encompass properties such as monuments, buildings of significant historical and architectural value, churches, and other places of worship. Additionally, second homes that are utilized for less than four months annually and have a total area below 50 square meters are also excluded from these renovation requirements (Meloni, 2021). The energy class confirms the amount of energy consumed by the house being evaluated. This determination is made through a survey conducted by a technician, who assesses the heating requirements of the home in relation to its thermal insulation level. The technician is responsible for determining the overall non-renewable energy performance index of the building by calculating its energy consumption based on surveys conducted during an inspection. Specifically, energy consumption is measured in kilowatt hours per square meter. The energy class assigned to the building will be determined based on this non-renewable global energy performance index, which is calibrated according to the primary energy demand required for providing hot water for sanitation and domestic heating purposes. Authorized technicians, responsible for issuing the Energy Performance Certificate, must physically access the building in order to conduct their assessment. Various elements, including walls, roofs, floors, insulation systems, doors, windows, fixtures, and wall boundaries, will influence the final result. Technicians in charge will analyze the floor plan, assess the condition of the systems, evaluate the thickness and orientation of the walls, review the thermal insulation techniques employed, and assess the quality of the fixtures. Upon completing their examination, they will estimate the energy consumption and determine the energy class in which the property being appraised falls (Baranello, 2022).

A study conducted on the characteristics of buildings in major European cities such as Paris, Berlin, Amsterdam, Madrid, Lisbon, Rome, Brussels, and Copenhagen revealed that over 70% of them fail to meet the energy performance criteria outlined in EU Directive 2018/844. Unless the EU institutions or national governments of respective states allocate substantial funding to support the expenses associated with the energy transition of buildings, it will be challenging to attain the objectives established by the EGD in this sector. This is due to the fact that ordinary citizens may not have the financial means to afford the high costs involved in renovating their properties. Such circumstances would have detrimental effects on the real

estate market, ultimately impacting the economies of individual states. The devaluation of properties would occur, leading to the impoverishment of homeowners as a result (Cavestri, 2023).

It is estimated that renovating a suburban apartment with an average size of around 100 square meters in a Southern European city (which typically experiences a less severe climate compared to Northern regions) to meet the energy category E requirements of EU Directive 2018/844 EPBD would cost approximately 45,000 euro (Colli, 2023). In order to improve the energy efficiency of their homes, European citizens from all member states will need to have access to a minimum of twelve billion euro annually over the next ten years, totaling 120 billion euro. Furthermore, failing to meet the deadlines specified by the directive, such as achieving energy class “E” by January 1, 2030, class “D” by January 1, 2033, and class “C” by 2050, can result in significant fines as outlined in the Directive on the energy efficiency of buildings.

EU data indicates that buildings are responsible for over a third of emissions, with 75% of them in Europe lacking sufficient energy efficiency. Therefore, prioritizing their efficiency is deemed vital in achieving the objectives of the European Green Deal. However, renovations come at a cost that not all citizens can afford, resulting in a classist undertone in the envisioned ecological transition. Those who possess the financial capacity are encouraged to participate, while those who lack economic resources must seek alternative solutions, and could end up incurring debts with banking institutions (Giubilei, 2023). The provisions outlined in the directive lack sufficient flexibility for Member States to tailor them to their specific national context, evaluate their feasibility and economic requirements, and assess the financial capabilities of building owners for renovations. The European Commission has faced numerous criticisms for making decisions that disregard the unique needs of each member state and fail to adequately consider the foreseeable side effects that directly impact the lives and well-being of numerous individuals. If the EGD prioritizes environmental sustainability, without providing a reasonable implementation timeframe, it jeopardizes society’s well-being. The EU directive 2018/844 EPBD, following a familiar pattern of ideologies, poses the risk of not only causing economic challenges for numerous families but also potentially being ineffective. The substantial reduction in the consumption of polluting energy, which is the objective of the EGD, cannot be achieved solely by optimizing heat sources within a household (Ocone, 2023). In the current historical period, where inflation is reaching double digits and food prices are skyrocketing, burdening citizens with additional costs related to their homes is not conducive to protecting their well-being. Houses are assets that already face significant taxation across European countries. Moreover, the decisions made by the European Central Bank (ECB), such as raising interest rates on a monthly basis, further contribute to the increased cost of borrowing money. This situation adversely affects families who have taken out mortgages to purchase homes. Criticism has been directed towards Christine Lagarde, the president of the European Central Bank, by the banking union. It highlights that the ECB’s efforts to combat inflation have not yielded the desired outcomes, as prices have not decreased. The swift escalation in the cost of borrowing money has resulted in higher interest rates on loans and mortgages, thereby placing households and businesses in a precarious position (Astorri, 2023). The ECB persists in raising interest rates, seemingly unconcerned about the repercussions it has on the real and micro-economic world. The surging inflation impacting all EU states has already eroded 693 billion euro from the wealth of European families. In 2022, they experienced a decrease in their purchasing power by 100 billion euro, equating to at least 3,800 euro per family on an annual basis. On May 4, 2023,



ECB decided to increase the three reference interest rates by 25 basis points. As a result, the interest rates on the primary refinancing operations, the marginal lending facility, and the deposit facility were raised to 3.75%, 4%, and 3.25%, respectively, starting from May 10, 2023. This measure has significantly impacted on EU countries' GDP, leading to a notable weakening. Entrepreneurs are facing growing challenges in accessing credit, while limited liquidity is contributing to uncertainty in consumer spending (Malaspina, 2023). When political decisions are made solely based on the highest systems (as in the case of the European Commission) or on macroeconomic data (European Central Bank), without considering the potential consequences on the financial situations of ordinary citizens, there is a risk of jeopardizing the social fabric of entire nations and the well-being of individual citizens.

Renovating buildings that meet the criteria outlined in the 2018/844 EPBD directive requires truly staggering expenses. A recently refurbished six-floor building in Amsterdam, spanning 13,000 square meters and housing the offices of a major investment company, serves as a prime example of sustainable design, aligned with the objectives of the 2018/844 EPBD directive. It boasts a steel structure and prefabricated honeycomb concrete slabs, cleverly assembled without fixed connections, allowing the parts to be disassembled and reused throughout the building's life cycle. While this showcases commendable sustainability practices, the cost of these renovations exceeded 350 million euro, a sum only accessible to large financial corporations, far beyond the means of ordinary European citizens (Repubblica, 2023).

### **Innovating Sustainability: The Future of European Food**

One of the fundamental pillars of the EGD is the "Farm to Fork" (F2F) European directive. Its primary objective is to steer the transition towards a food system that is fair, healthy, and environmentally friendly. The F2F directive highlights that the existing food system significantly threatens the planet, and encompasses several key objectives, which are as follows

- 1) Accelerate the shift towards an environmentally friendly food system that safeguards biodiversity and contributes to mitigating climate change. This involves aiming to reduce the use of chemical and hazardous pesticides by 50% by the year 2030.
- 2) Embrace alternative methods for food production that can adequately meet the needs of the global population, which is projected to reach 9.7 billion by 2050 and almost 11 billion by 2100.
- 3) Decrease methane emissions from livestock, leading to a reduction in the production and consumption of animal-based meat products.
- 4) Develop a unified and comprehensive food policy applicable to all European Union member states (Garuti, 2021).

F2F, in line with the conclusions of the Intergovernmental Panel on Climate Change's (IPCC) sixth assessment report, emphasizes the need to align the emissions of harmful gases from the agricultural sector with those of the industrial sector. Currently, the agricultural sector contributes to over 10% of all greenhouse gas emissions across the EU. Consequently, there is a pressing need to reduce the size and scale of cattle, pig, and chicken farms, as they significantly contribute to these emissions. By addressing these issues, F2F aims to tackle the environmental impact of the agricultural industry and work towards a more sustainable future (EU Parliament, 2023). Greenhouse gases are atmospheric gases that function similarly

to the glass walls of a greenhouse. They absorb solar energy and the heat radiated from the Earth's surface, trapping it in the atmosphere and preventing it from escaping into space. This process is the primary cause of the greenhouse effect, which helps maintain the Earth's temperature at a level that sustains life. Without this natural phenomenon, the Earth would be much colder, making it difficult for life as we know it to survive. While greenhouse gases like carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) do occur naturally in the atmosphere, human activities have significantly increased their concentrations, leading to an enhanced greenhouse effect. The burning of fossil fuels (coal, oil, and natural gas) for energy, deforestation, industrial processes, agriculture, and other human-related activities release vast quantities of greenhouse gases into the atmosphere. The scientific conclusions reached by the IPCC, a United Nations body composed of members appointed by national environment ministries, are fiercely debated by renowned scientists, including Nobel Laureate Professor Ivar Giaever, Professor Guus Berkhout, Professor Fritz Vahrenholt, and Professor Alberto Prestininzi. They argue that the damage caused to the environment is not of an anthropic nature (Di Terlizzi, Graziato 2022). Livestock farmers reject the accusation of being polluters of the planet, arguing that the methane (CH<sub>4</sub>) produced by farm animals is different from industrial emissions because the CH<sub>4</sub> released is swiftly reabsorbed by plants. Within approximately ten years, atmospheric methane decomposes into water (H<sub>2</sub>O) and carbon dioxide (CO<sub>2</sub>). The latter molecule is then reabsorbed by plants, which subsequently serve as feed for the cattle. This stands as the primary distinction from emissions arising from industrial activities, which accumulate in the atmosphere and persist there for up to 1000 years. Workers in the agricultural sector cite measurements of the Global Warming Potential (GWP) to support their arguments, highlighting the relatively short duration of methane's presence in the atmosphere (Capasso, 2023). As per the F2F directive, livestock farms are required to be reduced due to their contribution to pollution caused by animal husbandry assets. However, the agricultural associations of Italy, Spain, and the Netherlands, the countries with the largest number of livestock farms, have opposed these measures and also rejected the offered compensation of 3,000 euro per cow to be slaughtered as part of the reduction plan. In Italy alone, it is estimated that approximately 200,000 cows will need to be eliminated within the next three years to mitigate methane emissions. In the Netherlands, the situation is more complex, as it will be necessary to reduce the breeding of cows, pigs, and chickens by almost a third. This measure is aimed at addressing the environmental pollution caused by animal manure, which generates excessive emissions (Walton, 2022). Indeed, all the actions, including the elimination of cows in Italy and the reduction of livestock breeding in the Netherlands, are undertaken in the name of respecting biodiversity and aligning with the climate objectives set by the EGD. Critics of the F2F directive argue that it poses a risk of desertification in the livestock business, which is a crucial and primary productive sector in Europe. They view this initiative as being driven by ideology and fear that it could result in the loss of millions of jobs and a significant reduction in meat production. Moreover, opponents of the directive claim that these measures could potentially benefit competitors from non-EU countries, which do not face the same strict constraints and regulations. The concern raised is that the F2F directive's stringent measures could place European livestock farmers at a competitive disadvantage, leading to a shift in production to regions with more lenient regulations. This could potentially impact the livelihoods of those involved in the livestock industry and create economic challenges for European countries (Cappellini, 2023). In the Netherlands, protests against the European Green Deal and its imposed green transition have escalated in recent months. The newly formed party, *Boer*

*Burger Beweging* - Movement of Farmers and Citizens - gained significant support in the last general elections. Its primary goal is to oppose the ecological transition mandated by the EU, at least in its current form. The EGD's ambitious targets require Dutch citizens to reduce greenhouse gas emissions by 70 to 95% by the year 2030, and the agricultural sector is a primary target for these reductions. The calls for emission reductions have made the agricultural sector a central focus of the debate and criticism. The situation reflects the complexities and challenges faced in implementing sustainability measures while balancing the interests of various stakeholders. The protests and political shifts highlight the significance of finding balanced solutions to address environmental concerns while taking into account the economic and social implications for different sectors in Europe. The stringent parameters set by the European Green Deal could potentially lead thousands of companies to close their doors in order to comply with the required environmental standards. The offered subsidy of 24 billion euro is perceived by many as an insult to those who have devoted their entire lives to the agricultural sector. The proposed subsidy amount is seen as inadequate and insufficient, considering the significant impact and challenges faced by these businesses in transitioning to more sustainable practices. For many, the agricultural sector has been a lifelong commitment, and the prospect of having to adapt or close down due to the new regulations is a matter of great concern and frustration (Muratore, 2023). Despite its relatively small territorial size, the Netherlands holds a remarkable position as the world's second-largest agricultural exporter, surpassed only by the United States. However, the country's strategic advantage could be at risk if it is compelled to adhere to the rules of the green transition outlined by the F2F directive. The implementation of strict environmental regulations may potentially impact the Netherlands' agricultural sector and disrupt its competitive edge in the global market (Magni, 2023). The EU is indeed aware that a reduced number of livestock in the agricultural sector would lead to a decline in the production of animal-derived meat. As part of its broader sustainability objectives, the EU is exploring the possibility of replacing traditional meat with synthetic alternatives. The development and promotion of synthetic or lab-grown meat, are being considered as potential solutions to reduce the environmental impact of traditional livestock farming. Synthetic meat is produced by cultivating animal cells in a lab rather than raising and slaughtering animals. This process has the potential to use fewer resources, emit fewer greenhouse gases, and reduce the need for extensive agricultural land. By embracing synthetic meat as a viable alternative, the EU aims to address environmental concerns related to animal agriculture while continuing to provide consumers with protein sources. However, the adoption and acceptance of synthetic meat on a large scale remain subject to various factors, including technological advancements, consumer preferences, and regulatory considerations. The EU's interest in exploring sustainable and innovative solutions reflects its commitment to achieving climate and environmental objectives while supporting food security and safety.

The philosophy underpinning the F2F directive centers around two core principles: ensuring affordable food prices for all and addressing world hunger. To achieve these goals, the directive aims to promote the production and consumption of artificial food, even if it is not part of the culinary traditions of Western Europe. Artificial meat is being presented as the food of the future that could play a crucial role in preserving the ecosystem. The focus on developing artificial food and exploring new technologies in the food sector aligns with the broader aims of the F2F directive, which seeks to create a more sustainable and resilient food system that can meet the needs of a growing global population while minimizing its environmental footprint. Indeed, biotech companies and agribusiness giants are actively

working on refining technologies to create a variety of synthetic foods, including dairy products, meats, fish, and eggs. These advancements are aimed at offering edible alternatives produced through synthetic means rather than relying solely on animal-based production. Traditionally, meat has primarily been sourced from animals, but the need for more sustainable and eco-friendly solutions has become evident. However, as with any emerging technology, careful consideration of safety, ethical, and regulatory aspects will be essential for their successful integration into the global food supply (Segantini, 2022). Farmers, consumer protection associations, politicians from individual European states, and specialized doctors in the field of nutrition have expressed skepticism about these new food technologies. One of the core principles of the F2F directive is to prioritize the protection of the final consumer by ensuring access to healthy and safe food. Given the novelty of synthetic foods and lab-grown meat, it is natural and legitimate to investigate and thoroughly assess their safety, nutritional value, and potential long-term effects on human health. Ultimately, the success and acceptance of synthetic foods will depend on factors such as robust scientific evidence, transparent communication, and the ability to demonstrate clear benefits, both in terms of sustainability and public health, while respecting consumer choice and preferences. Synthetic food, particularly lab-grown meat, refers to the process of cultivating meat from stem cells extracted from live animals or fresh meat in a laboratory setting using bioreactors. Only a small number of cells are needed to produce large quantities of meat, which offers significant advantages in terms of resource conservation and reduced pollution compared to traditional intensive farming methods. The potential benefits of lab-grown meat include

- 1) **Resource efficiency:** The production of synthetic meat requires fewer resources such as water and land compared to traditional animal farming, making it a more sustainable option for food production.
- 2) **Reduced pollution:** By avoiding the need for large-scale animal farming, lab-grown meat can significantly reduce the environmental impact associated with intensive livestock production, including greenhouse gas emissions and water pollution.
- 3) **Animal welfare:** As lab-grown meat does not involve the raising and slaughtering of animals, it may address concerns about animal welfare and ethical considerations related to meat consumption.
- 4) **Food security:** The ability to produce meat in controlled environments could potentially contribute to global food security by providing a more efficient and reliable food source.

While there are promising advantages to synthetic food, further research, and careful evaluation are necessary to ensure the safety, nutritional value, and long-term implications of these food products. Transparency, regulatory oversight, and public engagement are essential in the development and acceptance of lab-grown meat and other synthetic food options (Garancini, 2023). The term “synthetic meat” is often used colloquially to refer to lab-grown meat, but world-renowned scientists, such as Roberto Defez - researcher at the Institute of Biosciences and Bioresources, a branch of the National Research Council of Italy - and Maria Caramelli - General Director of the Institute Experimental Zoo Prophylactic for Abruzzo and Molise, Italy - emphasize that the more accurate and scientifically appropriate term is “cultured meat”. This term precisely reflects the process of producing meat by cultivating animal cells in a lab setting, rather than synthesizing it through chemical processes and reactions. The term “cultured” refers to the controlled and precisely cultivated nature of

the production process, which involves growing real animal cells in bioreactors to create meat that is molecularly identical to conventionally sourced meat (Riggi, 2023).



Figure 2: Illustration of a novel food product promoted by the European Union (Source: [https://twitter.com/EU\\_Commission/status/1558014404855209986](https://twitter.com/EU_Commission/status/1558014404855209986))

In the European Union, synthetic food falls under the category of “novel foods”. To be cleared through customs and approved for consumption, novel foods require authorization from the European Food Safety Authority (EFSA). EFSA’s role is to ensure that these products meet strict safety standards before being introduced to the market. However, the vast majority of farmers and European citizens fear that EFSA may soon approve synthetic (or cultivated) meat for consumption because other foods, falling within the “novel food” category, have already been launched in the EU food market, including dried yellow worms, migratory locusts, domestic crickets, dried yellow larvae, and various edible insects. These products are promoted as highly nutritious and healthy foods due to their content of good fats, proteins, vitamins, fibers, and minerals, supporting the transition to a healthy and sustainable diet (Benignetti, 2022). However, they deviate significantly from European culinary traditions - which the EGD aims to preserve - and are also considered hazardous to human health; in fact, it has been proven that consuming insects or foods made with insect flours can cause allergic reactions, with symptoms ranging from hives to severe anaphylactic shock. A survey titled “Insect Food and Consumers”, carried out by the University of Bergamo (Italy) between October 2021 and September 2022, revealed that merely 9% of the interviewees showed a “highly inclined” attitude towards consuming insect food, while 21% expressed an “average inclination”. In contrast, the vast majority of 70% stated that they were not inclined at all to try such foods. These results demonstrate that so-called “novel foods”, like insect-based products, are not well-appreciated by most European people because they do not align with their traditional culinary practices (Pucci, 2023). Nevertheless, the EU has authorized their sale in its internal market, disregarding one of the cardinal principles of EGD which is to take into due consideration the culinary traditions of the single European states that are part of the EU (Vivaldelli, 2023). Currently, synthetic (or cultivated) meat is being produced in the USA, Israel, and Singapore. More than a hundred companies are actively involved in its development, with significant financial backing from notable individuals and lobbying efforts targeting the EFSA and European institutions are already underway (Amorosi, 2023). According to McKinsey & Company, a prominent global management consulting firm, the synthetic meat industry is projected to grow significantly in the coming years. It is estimated

that by 2030, Europe alone will have a synthetic meat market worth \$25 billion, and globally, the market is expected to reach \$140 billion. This forecast reflects the growing interest and potential economic opportunities surrounding the development and adoption of synthetic meat as a sustainable and innovative food source (Brennan et al., 2021). A similar analysis could indeed be conducted on the fish sector, as it has also faced significant limitations and scrutiny from the European Commission through the “Nature Restoration Law”, which aims to restore marine ecosystems and enhance biodiversity. This European law mandates the complete abolition of bottom trawling by 2030 and a reduction of up to 30 percent of fishing areas, to be implemented between 2024 and 2027. Due to the extensive criticism and contentious nature surrounding the law, it has encountered obstacles and faced opposition from different political forces within the European Parliament (Tagliaferri, 2023). As a result, it is likely to be the subject of further study and analysis in future research, examining its impact, implications, and potential challenges for the fishing industry and marine conservation efforts.

### **Conclusion**

At the present time, it is impossible to predict the future of the EGD and its implementation, considering that since its approval by the European Commission in 2019, various events of economic, geopolitical, and social significance have occurred within the EU countries. Furthermore, many other events are expected to unfold in 2024, such as the renewal of the European Parliament, the election of the new President of the European Commission, and the selection of its members. These ongoing and forthcoming events could indeed have a substantial impact on the course and outcome of the European Green Deal. As it stands, the future of the EGD remains uncertain, and it is plausible that the plan could undergo significant modifications or, in the worst-case scenario, be completely abandoned due to these unfolding events. Poland, as one of the EU member states, has filed an appeal with the Court of Justice of the EU (CJEU), challenging the provision related to land use and forestry regulation (Lulucf). Poland claims that the “Lulucf” was adopted on an incorrect legal basis, potentially infringing upon the competencies of member states and interfering with forest management practices. Depending on the outcome of the appeal and the subsequent legal proceedings, there might be considerable implications for the overall implementation and direction of the EGD. The resolution of this legal dispute will play a significant role in determining the future of the European Green Deal (Giuliani, 2023). Franz Timmermans, the influential figure often seen as the mastermind with Machiavellian traits and the key driving force behind the EGD, surprisingly stepped down from his position as Vice President and Commissioner for the Green Transition of the European Commission, a whole year before his term was due to end. Notably, no replacement has been appointed, possibly due to the upcoming European political elections. This decision could be perceived as a strategic move, possibly indicating a political inclination to cut off or not fully implement the EGD at this stage, and instead, leaving the responsibility of making decisions on this matter to the new Commission that will be appointed after the June 2024 elections (Brambilla, 2023)

In the last 15 months, the debate on EGD has changed dramatically. There is no longer any discussion about the causes of climate change, nor about the usefulness of the proposals contained therein, about its feasibility and usefulness for European citizens, but an increasingly vehement clash has ignited between the various political groups opposing each other within the European Parliament. On one hand, there are the left-wing political forces who passionately embrace the environmentalist principles advocated by Greta Thunberg

(who has emerged as a prominent leader in environmental defense). They express alarming and catastrophic concerns about the potential impending doom of our planet and accuse their political opponents of climate denialism (Serra, 2023). On the other hand, conservative and right-wing forces accuse the top management of the European Commission of holding extremist positions on environmental issues, contrary to scientific rationality - as many scientists do not agree with the theses stating that climate change and global warming are of anthropic origin - and driven solely by a blind ideology. These political forces express concern that the European Commission's approach, characterized by imposing a frenetic pace without providing sufficient structural support, will lead to the downfall of various sectors within the European industry. Furthermore, they assert that the ultimate beneficiaries of such policies will be non-EU countries rather than the EU itself, and the interests of European citizens will not be adequately protected from the expansionist ambitions of multinationals, particularly those involved in the synthetic food industry and the renovation of buildings located within EU countries to enhance energy efficiency (Paragone, 2023). The intense and passionate political clash surrounding the EGD is expected to persist until the next European general elections, which are scheduled for June 2024. Political parties and candidates will continue to express their differing views on the deal, and its fate may ultimately be influenced by the election results and the subsequent actions taken by the newly elected representatives in the European Parliament. Since its presentation, the EGD has exhibited significant gaps in both method and merit.

1) **METHOD.** It is essential to emphasize that the EGD was formulated and implemented by the European Commission without prior dialogue with citizens, entrepreneurs, and labor unions from each European country. Moreover, sectors with significant implications for millions of European citizens, such as housing, food, and transportation, were addressed without taking into account the varying circumstances among the individual European countries.

2) **MERIT.** Climate change, pollution, and global warming are issues that have a global impact, affecting the entire planet. It is not logical for these challenges to be solely addressed by a geographically limited minority such as Europe, which bears a relatively small responsibility for these problems.

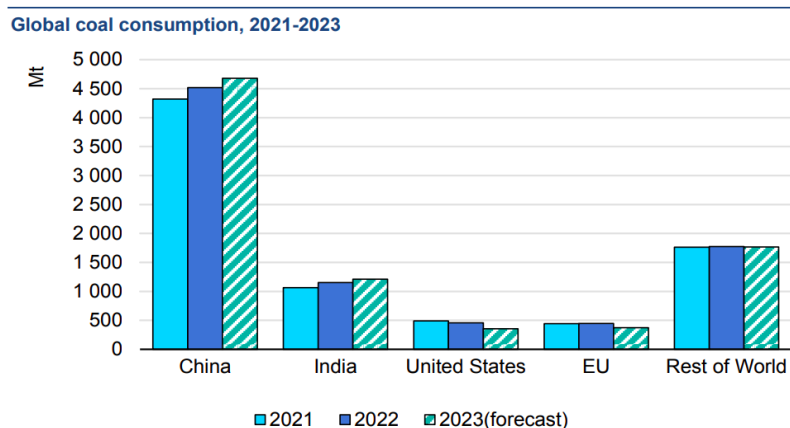


Figure 3: Illustration of global coal consumption on a worldwide scale (Source: <https://thecoalhub.com/report-presentation/global-coal-demand-set-to-remain-at-record-levels-in-2023>)

As depicted in the provided graphs, the EU is not the largest contributor to global pollution. Therefore, even if the EGD were fully implemented, it would not be sufficient to comprehensively tackle the world's environmental issues (Cipolla, 2022). Instead, the EU should prioritize strengthening its relationships with the rest of the world to ensure the inclusion of all nations in the green transition. Collaborative efforts involving all countries, regardless of their individual contributions to the problem, are essential to effectively address climate change. Moving forward independently and presenting ambitious yet unattainable projects may not yield the desired global results.

### Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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