

EUROPE:BEYOND

A Magazine of the Institute for a Greater Europe

EU and Green Energy: At the World's Stage



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Viola Parma, Magazine Design Lead

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Thank you so much for your support of our newest endeavour at the Institute for a Greater Europe!

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magazine@institutegreatereurope.com

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Note from the IGE Chair

Philippe Lefevre

Dear Reader,

This edition of Europe:Beyond is a very special one, as both targeted on Green Energy and also being one of the last under our current leadership of the Institute for a Greater Europe! As a way to bring together articles and thinking from people all over Europe and beyond, it holds a special place at the IGE, and I would like to thank both the current Director Dyuti, and the former Director and founder of the magazine Jack Lashendock for all their amazing work.

Green Energy not only has the capacity but is the requirement for a successful and thriving future for all of the society. Moving beyond fossil fuels to new ways to power our industry and society will be necessary if we want to build a healthy environment for future generations. Furthermore as you will read, Green Energy thrives in the interplay with other policy areas, from industrial development, labour and work, and security and defence. It truly underpins all of our efforts to improve humanity in the coming years.

Moving onto the role of Europe:Beyond and the IGE, we have tried our best to cultivate thinking about the role of Europe in the world and the way in which we can prioritise and push for integration on global policy issues. It has been the work of hundreds of people across almost 7 years, and we could not be prouder.

As for my part, I want to thank all the team who kept the work of Europe:Beyond going, and to Dyuti and the editorial team who put their time and dedication to keeping the publication alive!

Yours,

Philippe Lefevre



Note from the Magazine

Magazine Staff

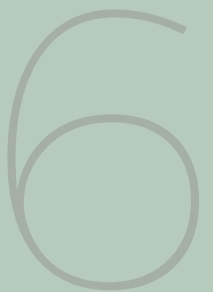
Working as an editor for the Institute of Greater Europe magazine has been an incredibly rewarding experience. Collaborating with talented writers and academics allowed me to help shape and present captivating stories for the various issues we published, all the while uncovering unique perspectives and insights from our contributors first hand. I'm grateful for the supportive team and the growth I experienced at IGE. Thank you for this memorable opportunity. - Amishi

The Institute for a Greater Europe magazine is an interactive platform that fosters space for diverse voices and perspectives. The commitment of the Institute and its values are carried through the process of planning, contemplating, and creating each issue. Being part of a smooth-running editorial team coated with academic integrity and kindness for perspectives has been a delight. - Tejvir

It has been a pleasure for me to be part of the Institute for the past year and a half. What made me participate at first was the mission of the Institute to generate great ideas for the better and brighter future of Europe. I am glad I had the chance to work on that mission with young and inspiring people. As a part of the Magazine team as a Communications and Outreach officer, I am thankful to everyone involved for the shared experience, good cooperation, and coordination of tasks, and I am going to miss our online calls from different places in the world. Keep being inspired and inspiring. - Vanja

Working for the Europe:Beyond Magazine as Magazine Design Lead gave me the opportunity to express my ideas creatively in an always supportive team. It was an honour for me to format and enhance the articles of all the contributors. Not only was I able to read all the submissions before publication, I was able to actively contribute to making them stand out and be designed in the best possible way. It did not feel like volunteer work, but like a hobby you are looking forward to executing. - Viola

Working for the Europe: Beyond magazine and the Institute for Greater Europe in my capacity as a magazine supporting editor and then taking the role of director has been an enriching experience. I was thankful to have got an amazing team that knows what it takes to make a difference. Each day as we wake up, new challenges and new things hover over the horizon, and just like that life goes on, my time at IGE and IGE as a whole has ended, and we all, and me specifically will take these experiences and move forward to continue building a future that stands close to our values and goals, a future where things are better. IGE has been truly remarkable, and I will cherish it - Dyuti





Updates from the Institute

Doina Portas (Vice President People)

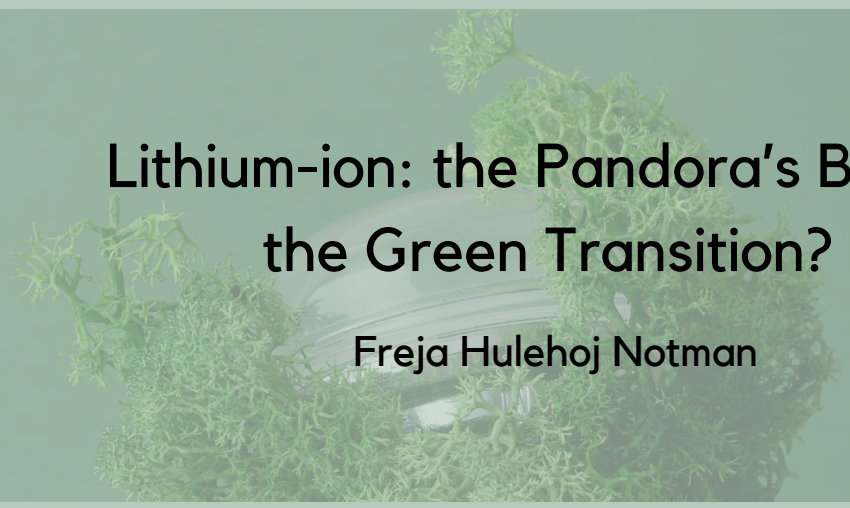
In the past few months, the Institute for Greater Europe has encountered several challenges. Due to a multitude of administrative and financial issues, it became harder to run this organisation. On April 5th, Sam Crooks resigned as the acting President. Due to the difficulty of finding someone to act as a new President, the decision to dissolve the Institute was taken shortly after. Thus, this is the last issue of the magazine published.

There are several steps that are being taken in this process and the first one of them is the Annual General Meeting (AGM) that will happen on 03.08.2024 at 3pm CEST. All the information regarding the AGM has been sent to each member of the Institute through email by Philippe Lefevre, the Co-Founder of the IGE and Chair of the Advisory Board. The registration link for the event can also be found there.

The main points of the AGM will consist of reviewing financial statements from January - August of this year and discussing the agreement between Europinion and IGE regarding the possible emergence of the organisation into a new one - The Europinion Research Institute.

Nevertheless, the Institute of Greater Europe has been an organisation that ran for six years building a considerable alumni network. Thus, an 'IGE Alumni Group' on WhatsApp has been created in order to keep in touch. The link for it can also be found on the email with the information for the AGM.

Be sure to check your email constantly in order to keep up with the latest updates!



Lithium-ion: the Pandora's Box of the Green Transition?

Freja Hulehoj Notman

Let's begin with a riddle for the 21st century: What connects the addition of two Chilean flamingo species on the endangered list and the surge of electric cars entering the European market? The answer: lithium-ion batteries.

Lithium-ion and the EV Market

Lithium-ion batteries (LIBs) are touted as pivotal to the global green transition. Beyond powering phones and laptops, their primary contribution lies in powering electric vehicles (EVs). With an estimated quarter of greenhouse gas emissions (GHG) emitted by transport, moving towards clean and sustainable power is crucial for mitigating the effects of climate change. These rechargeable batteries, which emit no greenhouse gases during use, are expected to reduce our reliance on fossil fuels. Additionally, LIBs can store large amounts of energy from renewable sources like solar and wind, promising a more stable and reliable green energy grid. All of this sounds sublime, perfect even! However, there are significant consequences associated with lithium-ion mining and production.

The Dark Side of LIBs

Despite their perceived advantages, lithium batteries have significant downsides. The mining of lithium leads to habitat destruction, water pollution, and significant carbon emissions. The production of an average EV car in Europe generates 70% more carbon than its diesel equivalent. Proponents argue that EVs offset these emissions over time through reduced operational emissions, but this benefit depends on the vehicle's extended use. Moreover, concerns have been raised about the extensive water usage and waste generated in the production process.

In the Lithium Triangle of South America—encompassing Argentina, Bolivia, and Chile—mining operations are expanding rapidly, often at the expense of indigenous communities. The extraction process involves extensive water usage, depleting local water resources essential for agriculture and daily needs (Ahmad, 2020). Environmental degradation from mining activities disrupts traditional livelihoods and cultural practices. Often, these projects proceed with minimal consultation and

inadequate compensation for affected communities, violating their rights and leading to displacement (Grossman et al., 2023). A water spill from a lithium mine in Chile led to the contamination of the local wildlife's water source, poisoning two flamingo species indigenous to the area. As Francis Mandoca, head of Chile's Atacama Indigenous Council, states, "These lithium mines are ruining one zone to satisfy the demands of another" (Mining Technology, 2023).

Negative externalities of lithium production are notoriously difficult to estimate, particularly when the effects are felt in distant regions. The vast majority of lithium is sourced from the Global South, raising critical questions about the externalization of these costs. What will be the true impact of Europe's increased reliance on lithium on these regions?

Additionally, improper disposal of lithium batteries poses additional environmental risks due to their toxic materials. Safety hazards include potential overheating, fires, and explosions if batteries are damaged or improperly handled. Recycling lithium batteries is challenging and not yet widespread, leading to concerns about long-term sustainability. Currently, only 2% of lithium batteries are recycled, despite significant investments in recycling technology (Mining Technology, 2023).

The EU's Regulatory Response

The surge in lithium battery demand can be traced back to China's 2015 'Five-Year Plan', which planned significant increases in national lithium extraction projects.

This move aimed to position China as a global technology leader (Finamore, 2020). Since then, lithium production has ramped up worldwide, expanding significantly annually, and is still expected to increase by 20% per annum for the foreseeable decades (Azevedo et al., 2022). Despite this growth, global demand exceeds current supply by 40 times, indicating a substantial supply gap in the market.

The EU is aware of the socio-environmental effects of lithium-ion batteries. The EU Battery Regulation of 2024 aims to enforce stringent standards throughout the lifecycle of batteries, from sourcing raw materials to recycling. The regulation seeks to reduce the environmental footprint of battery production with measures like mandatory due diligence on supply chains, higher recycling targets, and stricter carbon footprint limits. However, these regulations might also increase production costs and complexity for manufacturers. Industry critics argue that the success of these technological solutions depends on the development of new business and supply chain models within the LIB production industry (Malinauskate et al., 2021).

Critics of a more ethical inclination argue that the regulation does not go far enough in addressing the socio-environmental impacts of lithium mining or in promoting the development of alternative, less damaging battery technologies. The regulation's recycling targets, though ambitious, are seen as insufficient to significantly reduce the need for new lithium extraction.

European ENGOs advocate for more comprehensive measures, such as mandatory impact assessments for all mining projects, greater support for sustainable battery alternatives, and stronger international collaboration to ensure ethical practices in the global supply chain. Moreover, the regulation lacks a mention of indigenous land rights, one of the more contentious points of lithium mining. The EU may argue that such regulation on other states' mining procedures would be an overstep, and they may be right. But does their continued support of such a damaging industry make them complicit?

Geopolitical Pressures and Strategic Autonomy

The EU's goal is to have 10 million EVs sold in Europe by 2030, a crucial milestone for fulfilling its commitments under the Paris Climate Agreement. To achieve its Net-Zero goals, national governments are investing heavily in the transport sector, focusing on replacing passenger vehicles with cleaner, battery-run engines (Ritoe, 2021).

Currently, over 90% of global lithium is mined in Australia, Chile, Argentina, and China. With demand for EVs increasing significantly in the EU, the bloc is keen to secure its own supply of lithium and contest China's domination over lithium processing and battery production. While the EU claims it can become self-sufficient in battery cell production by 2026, only 10% of the EU's lithium demand is expected to be mined in Europe by the same time frame (Leonard et al., 2021).

This dependency on imports creates a serious vulnerability for the EU.

China's aggressive subsidies for its EV industry have positioned it as a dominant player in the global battery market, threatening the market share and technological leadership of European firms. The EU perceives this dominance as a strategic risk, potentially leading to dependency on Chinese battery technology and supply chains, which could undermine the EU's economic sovereignty and resilience. This new form of energy geopolitics may force national governments and the EU to revise current energy security policies to meet future market conditions (Altiparmak, 2022).

Interdependence in lithium supply has reduced conflict over resources due to the economic benefits of cooperation within a neoliberal capitalist system. However, finite and geographically concentrated lithium reserves may lead to future shortages, prompting states to seek independent control over supplies, potentially leading to inter-state conflicts similar to those over oil. Currently, the dominance of petrol and diesel cars and the absence of immediate lithium scarcity have prevented lithium geopolitics from becoming a central national security issue. The EU has identified lithium as crucial for future industrial policy, yet the global political landscape remains uncertain, with national interests leaning away from collaboration in the lithium market.

The Illusion of Green Technology

The EU's heavy investment in its battery market reflects a combination of geopolitical competition with China, regional political commitments to environmental sustainability, and a broader strategy to enhance economic security and strategic autonomy. However, the rush towards a lithium-powered future risks exacerbating environmental and social harms. The reliance on green tech alone may not be the remedy for climate change that it is often portrayed to be.

The EU's aggressive push towards LIBs reveals an over-reliance on technological solutions to environmental problems, a phenomenon known as "technological solutionism." This concept suggests that society often places undue faith in technology to solve complex social and environmental issues, ignoring the underlying systemic problems. While lithium batteries offer significant improvements to a world running on oil and gas, their production and disposal pose significant environmental challenges. Moreover, replacing your perfectly good car with an EV, despite all your good intentions, might actually cause more carbon emissions.

An alternative perspective is the concept of economic degrowth, which argues that perpetual economic growth is incompatible with environmental sustainability. Proponents advocate for reducing consumption and shifting towards more sustainable and equitable ways of living. Degrowth theorists emphasize the need for systemic changes that go beyond technological

fixes, advocating for a more holistic approach to sustainability that includes social, economic, and environmental dimensions.

Reflections

The EU must carefully balance its investment in lithium batteries with a commitment to addressing the environmental and social costs of lithium extraction. As we race towards a future powered by lithium, we must ensure that this pursuit does not exacerbate the very problems we seek to solve. A more holistic approach, incorporating economic degrowth and sustainable alternatives, may provide a more viable path to true environmental sustainability. While lithium batteries play a crucial role in the green transition, they are not the ultimate solution to global warming that the EU might hope. Instead of relying solely on technological solutions, the EU—and the world—should consider more sustainable and equitable approaches. Only by addressing the root causes of environmental degradation can we hope to achieve lasting and meaningful progress.



About the Author

Freja Hulehøj Notman (she/her) is a multilingual graduate, raised between the UK, Sweden and Australia. She studied European Studies at Maastricht University, following a minor in Globalisation & Development. She is particularly passionate about degrowth economics and clean energy transitions, and has worked at various regional climate organizations.

A lover of language learning, she is currently living in Taipei, studying Mandarin at the National Taiwan Normal University. She will begin her Masters in Political Science at Leiden University in the fall.





Dialogues

What effects will renewable energy development in the EU have on energy security?

The impact of renewable energy development in the EU on energy security is **multifaceted**. The REPowerEU plan aims to diversify energy sources while addressing short-term challenges. Long-term potential lies in reducing reliance on fossil fuel imports. The shift towards renewable energy **aligns with climate goals**, reducing greenhouse gas emissions and promoting sustainability. Strategic diversification efforts are crucial amidst economic complexity.

-Ankit Kumar



Towards green energy in and beyond the EU: Finding a truly universal approach?

- An opinion piece

Viola Parma & Jonas P. Simorangkir

The examination of green energy within the European Union (EU) necessitates delving into two critical questions: first, the strategies for its implementation, and second, the rationale behind prioritizing green energy as a part of a universal approach to a green economy. It is imperative to recognize the pressing nature of the challenges at hand, understanding that *their ramifications extend universally and thus require a collective, global approach* for effective resolution. The article's scope may not offer definitive satisfactory answers, but it endeavors to elucidate the elementary queries underlying all other nuances.

To move on to the first elementary question: how are "we" supposed to address this? The European centerpiece of green transition is the "Fit for 55" package, setting the main course for the success of European climate neutrality with more than a dozen directives and regulations. While separate packages on green energy have been passed, the key focuses of Fit for 55 are enhancing renewable energy and energy efficiency, reforming energy taxation,

and intensifying emission reductions (Consilium Europa, 2021). It is a milestone in the history of the EU to initiate this feat. The environmental competence of Article 192 (1) Treaty on the Functioning of the European Union (TFEU) empowers the EU to take measures to achieve set objectives, therefore allowing the Commission to de facto impose sanctions. Article 194 (2) of the TFEU, however, safeguards the Member States' sovereignty in this regard: The European energy policy cannot affect the exploitation of energy resources, members' choices between different energy sources, as well as the general structure of its energy supply.

When it comes to the mentioned "we", one has to take a look at the Member States. Regulation (EU) 2018/1999 on the Governance of the Energy Union provides a framework for planning, as well as monitoring climate and energy policies. It established National Energy and Climate Plans (NECPs) on which Fit for 55 relies. One of many academic projects, "Ariadne" by the German Federal Ministry of Education and Research raises concerns about the soft governance approach

potentially jeopardizing goal attainment (Knodt, Müller, Ringel, Schlacke, 2021).

Energy competence, applying Article 194 (2) lies with the Member States, not with the EU: Soft governance, without strong sanctions for non-compliance, may result in uneven implementation across Member States, influenced by differing policy priorities such as energy security, a topic ever-present since the Russian aggression towards Ukraine. Member States must continue to work on solutions to ensure that goals are met, as the EU cannot otherwise fulfill its commitment to combat climate change. This proves difficult for the EU as a joint actor: While some countries cannot rely on renewable energy, with the sun shining erratically, windless weather, and heat waves that trigger drops in river levels, favorable weather conditions elsewhere lead to overproduction. As a result, the cost of electricity has fallen below zero in a number of European countries. The EU, while on the right track, has its difficulties in finding its joint response in regard to green energy and currently rather follows its motto to be "united in diversity". But the EU does not, cannot, and should not stand alone. The European Union Global Strategy (2016) makes a poignant point: "Through our energy diplomacy, we will strengthen relations worldwide with reliable energy-producing and transit countries and support the establishment of infrastructure to allow diversified sources to reach European markets." (p. 22). The EU Green Deal as a whole proves to be a part of the EU's geopolitics.

Considering the widespread systemic changes occurring in the energy sector and as the Union's energy diplomacy capabilities are not boundless, it is essential to prioritize certain countries of interest to effectively expand its diplomatic efforts (Pastukhova et al., 2020). The United States and China, as polar opposites on global geopolitics, play a significant role here, given their immense influence on global energy markets and regulatory frameworks. The stakes are high by the fact that both are with aspirations within the EU, aiming to capitalize on the bloc's ill-conceived energy strategy. Just examples of how far this influence goes: among the Chinese investors which capitalized on the sovereign debt crisis in Europe in the 2010s (and acquired significant shares in traditionally "sovereign" sectors such as power transmission and distribution grids) was the State Grid Corporation of China, which is recognized as the world's largest utility company (Sebi; Criqui, 2024). Since then, they have expanded, acquiring large shares enough for a blocking minority at local gas and electricity network operators in Italy (Cassa Depositi e Prestiti, 2024) and Greece (Shenggao, 2019). Meanwhile, the EU's swiftly imposed sanctions on Russia following the latter's invasion of Ukraine led to a void of a source for gas, an important transitional fuel: one that was to an extent filled by the United States, which has emerged as the primary producer and exporter of LNG to Europe (Rashad; Abnett, 2024). Countries such as Czech Republic, Slovakia, and Poland have also turned to the United States for constructing new nuclear power plants,

primarily due to funding and technical expertise, as the EU continues to block support for nuclear projects within its borders (Woessner, 2023).

As the EU crafts and implements its energy diplomacy, it cannot ignore the ideologies propagated by these two nations. China pursues expansive investments in critical infrastructure, adhering to a "no strings attached" policy while collaborating with non-democratic regimes. Conversely, the United States adopts an isolationist stance, prioritizing national interests over multilateralism through its "energy dominance" strategy. In the years ahead, if the EU implements appropriate measures, North Africa could emerge as a crucial ally in Europe's transition to cleaner energy. With its abundant potential for renewable energy, particularly in solar and wind power, it could significantly bolster Europe's energy resources by exporting surplus capacity. However, there are contrasting views from some Global South countries, such as Brazil and Indonesia, regarding the EU's efforts to promote its climate goals through trade, which they perceive as a modern form of 'colonialism' (Reiners; Grimm, 2020). Their involvement in global governance initiatives like BRICS, or the G20 grants them substantial international clout. They possess significant influence in shaping the political embrace of sustainability-driven transformations on a global scale and should not be forgotten. A deeper understanding of the perspectives of these partners is necessary to forge a collective understanding. In our opinion, it will not suffice to solely grasp country-specific avenues for cooperation;

the EU must also shape a Green Deal narrative that is attuned to the concerns of its partners.

But not only does a universal approach include an international approach. It also calls for a universal approach to a green economy. So on to the second question. What is the goal of green energy for the EU itself? Should one look at the information published by the European Commission (European Commission, n.d.a), one would repeatedly see the emphasis on the reduction of greenhouse gas emissions, aiming to become the first climate-neutral geographical region, and to alleviate the environment, becoming a green economy. It is important to identify the motives to judge whether the efforts taken would actually help achieve it. One cannot draw a map if one does not know where they are going.

The United Nations Environmental Program (UNEP) in its often cited synthesis for policy makers recognized three underlying components of natural capital that one should preserve by striving towards a truly green economy: biodiversity, ecosystem services, and economic values (UNEP, 2011). A green economy, it stated, recognizes the value of all these pillars. EU policymakers also contend that climate change and biodiversity policies should complement each other. According to the Message from Athens (2009): "We cannot halt biodiversity loss without addressing climate change, but it is equally impossible to tackle climate change without addressing biodiversity loss."

It is therefore essential that climate change policy is fully complementary with biodiversity policy." However, it is argued in academia that there has been a disassociation between these pillars of an environmentally sustainable future and economy toward which green energy is a means, and the actual key resolutions and plans of actions that we are seeing.

One could argue that biodiversity had seemed to disappear from discussion (Dulluri; Rat, 2019), which underlines the ignorance of key aspects of Green Energy behind that which is valued by the current energy politics. Van Hees (2018) argued in two points: 1) there is a conflict between the aim of conserving nature, which involves safeguarding designated areas from adverse effects, and the objective of the energy directive, which seeks to expand and authorize a growing number of projects in these areas, and 2) there is a lack of integration between the biodiversity and renewable energy directives in the EU. Despite the seemingly considerable effort towards protecting biodiversity and ecosystem services in the EU, such as through the Natura 2000 network, some renewable energy sources such as wind and hydropower (largest sources of renewable electricity generation; Eurostat, 2022), may not support this pillar as well as it could in its current form (especially in terms of infrastructure).

Examples are plenty: the key energy infrastructure project designation by the Commission as a Project of Common Interest (PCI) in Ötztal in Austria, where the planned expansion of its hydroelectric dam into untouched territories posed a threat to several conservation areas, including the Natura 2000 site "Ötztaler Alpen" (Schmidhuber; Jöstl, 2016), or the construction of the Sabor dam in Portugal despite the known negative impacts on biodiversity of areas to be flooded (Jackson, 2011). A recent report by OECD (2024) this year on the integration of biodiversity considerations into renewable power provided a comprehensive analysis of how renewable energy developments impact biodiversity across various stages of their lifecycle—from construction to decommissioning. These impacts are multi-faceted and range from direct effects, such as wildlife mortality due to collisions with infrastructure, to more indirect consequences including the spread of invasive species. Construction and operation of these facilities adversely affect terrestrial and aquatic ecosystems. The presence of renewable energy infrastructure often fragments habitats, creating barriers that disrupt the natural movements of wildlife, which can have profound effects on migration patterns and genetic diversity, or modifies local ecosystems, sometimes creating new habitats but more often negatively altering existing ones. Behavioral changes in wildlife due to the presence of renewable energy installations were also observed.

Even though moves in the right direction have been seen, e.g., with the Nature Restoration Law (European Commission, n.d.b), which underlines biodiversity even stronger as essential in the combat against climate change, the idea of such a compulsorily holistic approach still has not gained the traction it actually needs, as we have seen very recently in the debacle regarding the lack of support by Member States behind it (Guillot; Mathiesen, 2024). The derogation clauses embedded in the biodiversity framework offer member nations a legal foundation to deviate from the protection clauses delineated in Article 6(3) and Article 12 of the Habitats Directive, as well as Article 5 of the Birds Directive, as to permit projects with potential harm to proceed within or adjacent to protected areas based on considerations of paramount public interest (Dulluri; Rat, 2019; Krämer, 2009). Outside of the framework itself, Jackson (2011) saw inconsistencies in how Member States interpret and implement EU directives related to nature conservation and energy development. Some Member States may prioritize economic interests over environmental concerns, leading to lax enforcement of conservation measures. He likened the safeguarding of locations under the Habitats and Birds Directives to a tug of war, generally featuring the EU's Member States on one side, and the European Commission along with the European Court of Justice on the other.

However, it is not all doom and gloom. While certain renewable energy technologies might typically have detrimental impacts on biodiversity, there are others that exhibit significantly less negative effects, and some may even prove beneficial, such as marine renewable energy. According to Inger et al. (2009), installations can serve dual purposes as artificial reefs and fish aggregation devices, both of which have been successfully employed in the past to aid in the restoration of degraded ecosystems, effectively functioning as de facto marine-protected areas. Further research is here, and in other renewable energy infrastructure, therefore of importance. Additionally, Jackson (2011) underlined that it is essential not to overlook the demand side of the energy equation. He suggested that the range of alternatives evaluated by national authorities for large, centralized power projects should also include strategies like investing in end-user energy generation, implementing energy conservation initiatives, and pursuing an overall reduction in national energy consumption levels. These approaches address the broader context of energy policy by focusing on reducing demand and promoting sustainable consumption patterns.

One has to remember that this is just as important for the global stage: any policy choice to deviate from the rigorous nature protection provided by law would undermine the EU's standing as a frontrunner in biodiversity policy. Such a decision would also convey a message globally, emboldening those who advocate for weakening biodiversity protections, even beyond facilitating renewable energy initiatives (Jackson, 2011). The current initiatives and work of the EU on green energy, although maybe well-intentioned and practiced in vigor, may lack an actual focus on the goals it is trying to achieve, e.g. to protect and preserve the environment. The balance between renewable energy development and biodiversity conservation requires targeted policies, rigorous impact assessments, and ongoing monitoring to adapt practices in light of new information and technologies.

In exploring the integration of green energy within the European Union, it becomes evident that reconciling biodiversity and climate policies presents a formidable challenge. While initiatives like the "Fit for 55" package aim to establish a robust framework for achieving climate neutrality, the necessity of safeguarding biodiversity cannot be overlooked. The EU's intricate policy landscape, underpinned by directives like Articles 192(1) and 194(2) of the TFEU, emphasizes a balanced approach that respects Member States' sovereignty while promoting collective environmental goals.

However, achieving this balance is complicated by varying national interests, technological limitations, and economic pressures. The soft governance approach, relying heavily on National Energy and Climate Plans, might hinder uniform implementation across the Union. Furthermore, geopolitical dynamics and external economic influences from major powers like the United States and China introduce additional layers of complexity, impacting the EU's energy diplomacy and strategic positioning globally.

Ultimately, while the EU strides towards a greener economy and strives to uphold its commitments to climate change mitigation, the journey is fraught with challenges that necessitate innovative solutions and international cooperation. The pursuit of a truly integrated approach that harmonizes the objectives of both climate and biodiversity policies is critical. This endeavor not only ensures environmental sustainability but also reinforces the EU's role as a global leader in fostering a resilient and sustainable future. Such a synthesis of efforts, though daunting, is imperative to navigate the complexities of today's global environmental landscape.

About the Author

Viola Parma is a Bachelor's student of Political Science and Psychology at the University of Bonn, Germany. Alongside her academic work, she is working as a research assistant at the Centre for European Studies, also located in Bonn. Apart from European affairs, she is particularly interested in Migration Studies and hopes to specialize in that field. To learn about diplomacy and political education, she participates in Model United Nations simulations on a regular basis and recently finished an internship at a regional civic education forum of the Konrad Adenauer Foundation. In 2023, Viola joined the IGE as Magazine Design Lead and is now looking for a change of perspective, contributing content to it as well.

About the Author

Jonas P. Simorangkir is a Master's student of Biodiversity, Ecology and Evolution at the University of Göttingen, Germany. He holds a Bachelor's degree in Biology from the University of Bonn, where he wrote his thesis on the biodiversity of insects in a Eurasian national park. In the UN city of Germany, he actively participated in Model United Nations and came into contact with the world of policy-making. Despite being in the scientific field and currently specializing in Animal Ecology, he is interested in the research and works involving the intersection between nature and society. He considers this to be crucial in not even solving, but even just addressing global environmental issues.



Dialogues

What changes in energy policy should be introduced for the upcoming years?

Energy policy would be improved in the EU primarily by focusing on the **expansion of offshore wind systems**. The EU coastline is 68,000 kilometers long, meaning it has a coastline more than three times longer than the United States, and nearly twice that of Russia's. Focus in particular should be on 1) how to make these systems more **efficient**, 2) how to make these systems out of **recyclable** materials, and 3) how to create a **collaborative network** of knowledge transfer. Focusing on this policy area could greatly contribute to the EU's just transition.

-Dan Ziebarth



The "Green New Deal": Changing how the E.U. views the subject of human rights?

Tejvir Bawa & Apostle J. Kourbeles

The natural, urban, and cultural environment as a human right in the E.U. context

When asked about human rights, one usually recites the traditional catalogue of Enlightenment-originated rights (Nancy, 2014, p. 15). Of course, all these rights are important. Yet the increasing needs of humankind and the emergence of new forms of subordination have rendered protection by only these traditional, individual rights insufficient. Indeed, there exist violations which cannot be addressed or combatted by invoking individual rights. Especially after the Second World War, following the universalisation of human rights protection, it became clear that new forms of subordination require new rights to counter them (Knox & Pejan, 2018). Such a right that gained great significance was the right to the environment.

Indeed, the right to the environment was first conceived as a limit to unrestrained economic activity, mandated by the principle of free market economy. Gradually, however, it gained its own substantial basis, thus becoming an autonomous right (Kobol-Benda, 2022).

Very briefly, the right to the environment consists of a right to live within surroundings that guarantee a viable life (Galanis, 2023a; Rodriguez-Garavito, 2018). The right itself, furthermore, as it has been formed, consists of three aspects: a) the right to natural environment, i.e., the right to preserve a natural habitat and all organisms inhabiting it (Galanis, 2023a); b) the right to an urban environment, i.e., the right to live in urban centres constructed to guarantee a good life (Galanis, 2023b); c) the right to a cultural environment, i.e., the right to preserve a land's cultural heritage (Galanis, 2023c). These three aspects have been especially developed in the European Union, in the constitutions of many member states, but also in E.U. legislation and the decisions of the Court of Justice of the European Union (Galanis, 2023d). Yet the increasing environmental threats and the immediate need to tackle climate change raise questions as to the extent that the legislation currently adopted and implemented can have successful results (Limon, 2018; Galanis, 2023e).

The question arising thus is whether a new set of measures aiming at altering the way we view human rights protection can better ensure a sustainable environment. This article explores the policies constitutive of the "Green New Deal" in the E.U. and the extent to which they are up to the challenge of acting as paradigm-changers of how institutions perceive human rights and how the right to the environment fits within their framework.

The Green New Deal as a strategy for the effective implementation of the right to the environment

As a strategy, the Green New Deal builds on the European green package; environmental rights are the centre of the Green New Deal. The European Union's target through the Green New Deal is to reach the status of "climate neutral by 2050". At the core of the initiative is the augmented importance of the role of the local community and domestic states "cities" in upholding interstate commitment (Maya-Drysdale et al., 2020, p.1). In other words, the European Union's objective is to become a "resource-efficient and competitive economy" by attaining "a net-zero GHG emissions society by 2050" (Hafner & Raimondi, 2020, p. 385). Concerning dealing with the human rights question, the Green New Deal builds on that foundation by focusing on eye-catching goals in the ambit of the deal, including enhancing renewable power sources, glorifying the energy distribution mechanisms, supporting and investing in farming and decarbonising, crafting jobs for its local community (Dsouza, 2024).

The Green New Deal is a product of the current climate change and the advent of modern (new) powers who are plunging into the current course of the European Union by challenging the 'capitalist' framework in place (Jager, 2022, p. 2). The nuisance often attached to the capitalist development model is the incorporation of industrial factories and machine-based modes of production; with industries in place, pollution, global warming, and greenhouse gas emissions are some of the issues.

The role of the European nations in the fight for climate protection has been debated heavily within the European Commission; the EU funds and the European Investment Bank are committed to sweetening their funding percentage for climate preservation (Jager, 2022, p. 9). The policy is in sync with the United Nations sustainable goal development project. The development of the European states from within (inclusive) is paramount to the success of the policy, which is the allocation of equal responsibilities among the local community.

The diachronic aspect of the right to the environment in EU law

By this point, it is clear that preserving the environment is at the core of the Green New Deal. The European Commission aims to maintain and hold a sustainable energy project for its members. It must be said that the exterior challenges have been diverse and, at times, destructive; the outbreak of the COVID-19 pandemic and the Russian war in Ukraine is affecting the geographical imprint of the European states,

given the rising impairment to the atmosphere by the weapons employed in Ukraine. The backdrop is not ideal. A positive is that the protection of their rights remains in the hands of the citizens. Panarello and Gatto (2023) believe that the European general public can ensure that their respective governmental agencies and leaders coordinate and introduce ways to integrate with the plans of the European Union.

Certain points must be addressed in how the E.U. views the right to the environment. Defining environmental protection is the principle of precaution, i.e., that states and private actors must act to protect the environment and not attempt to amend *ex post* any degradations of it (Galanis, 2023d, p. 63). Another important principle codified into both E.U. laws and the legislation of many member states is the principle "the polluter pays" (Galanis, 2023d, p. 57). The individual or entity responsible for environmental degradation, in other words, must also bear the responsibility of amending said degradation. Measures restricting other rights (e.g., the right to property) in favour of environmental protection must also adhere to the principle of proportionality. In other words, the restriction must be necessary, suitable, and proportionate (i.e., non-exaggerating) for guaranteeing the right to the environment (Galanis, 2023d, p. 24). Yet the most important principle lies in the diachronicity of the right to the environment. Living in a sustainable environment is not a right reducible to generations present.

It involves preserving what past generations left us and leaving something behind for generations in the future (Fitzmaurice & Fijalkowski, 2000). Thus, the right to the environment rises as a fundamental principle and acquires an ethical dimension akin to the protection of human dignity.

The difficulties in implementing the Green New Deal policies within the EU states

At first glance, the Green New Deal policies are currently gaining ground in E.U. politics aim to ensure environmental protection as a diachronic and fundamental right. However, several predicaments exist in implementing said policies: first, the E.U. not being a federal state results in the member states having the final word in their implementation of E.U. legislation (which they are, nonetheless, compelled to implement). Conservative governments, therefore, with major economic interests, may create legislative impediments for sufficiently implementing measures of environmental protection. Relative to the above point is the status of environmental protection within the powers of the E.U., as it does not belong to the domains over which the E.U. has exclusive power (Galanis, 2023d, p. 21). On the contrary, the E.U. can only guide towards certain sets of environmental policies which will be implemented in coalition with the member states. Moreover, the system of human rights established within both the E.U. and the member states is an individual-centred system, adhering to the enlightenment-based idea of human supremacy over nature.

A set of policies aspiring to an environmental protection equal to that of human interests is bound to be opposed as it seeks to change the paradigm of the subject of human rights: from the individual, subjectivity shifts to the environment proving that us, humans, are not alone in the world (May & Dalyn, 2019). The rising environmental movements in the E.U. member states reveal the public's awareness of said fact and are thus pressing towards states and private actors to implement the necessary policies. In light of the aforementioned difficulties, it is up to radical political actors as well as social and environmental movements to protest and further the struggle against a status quo embedded in human supremacy. Instead, a coexistence between humans and natural habitat needs to be established by ensuring the preservation of a liveable and sustainable environment above economic development, thus not jeopardising ours and the lives of future generations.



About the Author

Apostle J. Kourbeles is a Jurist, having graduated from the School of Law of the National and Kapodistrian University of Athens, an author and, currently a Master of Research Candidate with the School of Law of Western Sydney University. At the age of 21, whilst an undergraduate student, he published his first textbook on Greek Civil Law. His current research examines why the subject of the institutions of Western, liberal constitutionalism is constructed as androcentric, thus impeding the sufficient implementation of feminist vindications. His main research interests include constitutional law, human rights, jurisprudence, feminism, political philosophy and law and Marxism.

Since 2018, Mr Kourbeles has been writing and publishing articles on matters of constitutionalism, human rights, jurisprudence, and the feminist movement. His greatest aspiration as a rising academic is to inspire future generations to think critically and further progressive social struggles. He is also interested in art, literature, and films.



About the Author

Tejvir Bawa is a Realist, having graduated with a bachelor's degree in Political Science from the University of Delhi. He is an author for the New Sentinel and the magazine editor for the Institute for a Greater Europe, a youth-led think tank. He is currently a Master of Research candidate with the School of Humanities and Communications Arts at Western Sydney University. His current research identifies a link between the realist political economy theory and international foreign policies, particularly focusing on the strategic economic competition between India and China in Central Asia. He is passionate about research and upholding research ethics. Most of his works are oriented towards geopolitics, geoeconomics and international relations.



Dialogues

What effects will renewable energy development in the EU have on energy security?

Following the **Russian invasion** of Ukraine, the Kremlin shut off the 80 billion cubic metres **gas pipeline** supplies to Europe. It has resulted in energy insecurity in the region, and the European Commission is looking for **alternatives**. However, the crisis provides an **opportunity** for the EU to transition its energy industry away from fossil fuels and instead **towards renewable energy sources**. This transformation will not only offer the EU sustainable and climate-friendly energy alternatives, but will also reduce its energy dependency on Russia. The sole disadvantage of this transformation is the high monetary cost during periods of global inflation. Thus, **effective governance and monetary policies are critical** to this transition.

-Waleed Sami

What changes in energy policy should be introduced for the upcoming years?

In response to the **Ukrainian crisis**, and to mitigate reliance on Russian gas, Europe must **strategically pivot towards alternative energy partners**, particularly Gulf countries and Azerbaijan. This entails prioritizing the expansion of renewable energy sources, fostering energy efficiency measures, and investing in innovative green technologies. Furthermore, modernizing energy **infrastructure** and engaging in robust **energy diplomacy** will not only enhance energy security, but also advance Europe's transition towards a greener and more sustainable energy landscape, aligning with global climate objectives and **reducing geopolitical vulnerabilities**.

-Keso Gigitashvili



EU Renewable Energy Directive: A Brief Analysis

Rüya Irmak Öney

The importance of using renewables for energy consumption in Europe is rising day by day. The increasing effects of the climate crisis, the current rise in prices, and issues about energy security were some factors which necessitated the European Union to take action in cleaning its energy sector. The introduction of the Renewable Energy Directive was a result of these evolutions. The article analyzes the content and impact of the Renewable Energy Directive.

Historically, the first Renewable Energy Directive (RED) came into force in 2009 to achieve a 20 % usage of renewable energy in total energy consumption by 2020 (Directive 2009/28/EC). In 2020, the share of renewable energy in the EU's total energy consumption was 22.03%, which suggests that the target of the first directive was met (Eurostat, 2023). Subsequently, with the introduction of the new Renewable Energy Directive in 2018 (RED II), the goal was set for increasing renewable energy consumption to 32% by 2030. (Directive 2018/2001/EU).

The latest Renewable Energy Directive (RED III) was introduced and came into force in 2023.

However, the European Commission proposed the revision of the directive in 2021, as the Commission wanted to increase the target from 32% to 40%, which has further increased to a proposed rate of 45% (European Commission, 2023). European Commission (2023) explains RED as "the legal framework for the development of clean energy across all sectors of the EU economy, supporting cooperation between EU countries towards this goal (para. 1)." Wind, solar energy, and hydropower are some examples of renewable energy sources. The main objective of the directive remains to increase the share of renewable energy sources in gross final energy consumption by 2030. The directive resonates with the EU's mission to be a global leader in renewable technology development. The progressive increase in the proposed target share of renewables in energy consumption shows the Commission's determination toward its commitment to UN Sustainable Development Goals and the Union's overall goal of being a climate-neutral continent by 2050 since renewables cause a significant decrease in greenhouse gas emissions.

Therefore, RED is closely linked to the Green Deal's overarching strategy, as renewable energy is a key element of the clean energy transition.

Interestingly, another reason for the Commission's intention to increase the target is inspired by the changing global balance. European Union's energy production "accounts for less than half of the EU's consumption in 2022. The EU is a net energy importer, especially of fossil fuels (European Parliamentary Research Service, 2024, p.2)". Considering that the majority of the EU countries, such as Germany, Netherlands, and Italy, are highly dependent on Russia for fossil fuels, especially natural gas, the EU's energy supply security has been impacted in light of the Russian invasion of Ukraine. Therefore, the EU wants to reduce its reliance on fossil fuels.

The developments in the renewable energy field include internal and external dynamics, as agreed upon by the European Commission, the Parliament, and the Council. The new directive set a target of 42.5% for the usage of renewable energy in total energy consumption, aiming to reach 45% by 2030.

The content of the directive highlights the European Commission's overarching ambitions. Notwithstanding, it should be considered that the EU relies on the member states to implement the directive. Here, it is essential to remember that EU directives are binding. However, member states are free to decide the methods they will apply to reach the target (TFEU, 288).

In line with these directive characteristics, even though the approaches and methods are autonomous, the objectives must be met by every member state.

Each member state sets its national renewable energy target, but the targets must meet the overall objective of the Commission. Member states must apply most of the directive's provisions into national law within 18 months (European Commission, 2023). In 2010, the average share of the EU's renewables in consumption was 12.5%. According to Eurostat (2023), in 2022, the EU's share of renewables in energy consumption was 23%.

The share of renewable energy sources is calculated by considering three key sectors: electricity, heating and cooling, and transport (EPRS, 2024). According to the RED, the current rate can be seen as an achievement as the European Commission states that the average share of renewables in consumption was 12.5% in 2010. However, the EU is far from reaching its target of 42.5%.

Furthermore, it should be highlighted that there are disparities between EU member states regarding the share of energy from renewable sources in final energy consumption. For instance, while the share of renewable energy in general energy consumption is 66% in Sweden, this rate is only 13.8% in Belgium and 13.1% in Ireland (Eurostat, 2023). The varied administrative capacities of member states can explain these differences.

Renewable energy transition is a long-term process; it takes time and necessitates infrastructure investments. All these challenges contribute to the implementation gap in EU policies.

It is imperative to retain that the Renewable Energy Directive is a crucial instrument for the EU to increase its share of renewables in its total energy consumption. The importance of the directive has been further strengthened by increasing the overall target. The ambitious efforts of the Commission have an important role in the development of the directive. Even though the implementation problems exist in the member states, the directive will remain significant in contributing to the climate policy of the EU.

About the Author

Rüya Irmak Öney is a first-year master's student specializing in European and Global Studies at the University of Padua. She has graduated from Middle East Technical University from the Department of Political Science and Public Administration. She made her Erasmus at Sciences Po Paris. During her undergraduate years, she actively engaged with esteemed think tanks and governmental institutions of Turkey, notably the Republic of Turkey Ministry of Foreign Affairs. She is deeply interested in the EU policy-making process. At the beginning of 2024, she started as a writer in the Europe Beyond Magazine.



Dialogues

What changes in energy policy should be introduced for the upcoming years?

Approaching the issues of energy policy from a **German perspective** one lesson to be learned from the past is to build the energy system on **redundancy and sustainability**. Especially during the previous years, Germany was benefitting highly from cheap Russian gas paying with the price of dependency. Simultaneously, Germany shut down their carbon mines, especially in Northwest Germany, as well as shutting down nuclear power plants. Consequently, many experts were **warning of blackouts**. Striving for energy security, foremost with the **Green Deal** in mind, the promotion of sustainable energy like solar or wind have to be promoted more. Nevertheless, complaints by civil society and an increasing bureaucracy hamper this green transition.

Therefore, the future of energy policy should be build on the following **three steps**:

- 1) A **reduction of bureaucracy** coming along with better **communications** about funding programs for a green transition towards a sustainable energy provision.
- 2) A **diversity of energy supply**, where in the long run a resilient sustainable energy supply should prevail, yet, ensuring that fossil fuels are fading out, but remaining as a critical backbone.
- 3) A **debunking of ideology** searching for **dialogue over competition**. Currently, energy supply is mostly seen through the lenses of either protecting past energy or discarding it for the future. A transition towards green energy will not be done all at once, yet, through **common forces**, clearly coming together for a sharing of future visions.

-Stephan Raab

UK's participation in Horizon Europe: A positive example of EU's Hydrogen Diplomacy after Brexit?

Otto Barrow

Horizon Europe's role in the EU's hydrogen diplomacy Horizon Europe is a 7-year EU "key funding programme for research and innovation" (European Commission, n.d.), and is the successor of the Horizon 2020 programme. It is one of the largest funding programs of its kind, with a budget providing €97.6 billion in funding to researchers in the EU and beyond (Kelly, 2018). The program exists to help Europe maintain its position as a world leader in science and innovation, and to address some of the biggest societal challenges of our time. The program supports research and innovation across a wide range of areas, classified into pillars and clusters (European Commission, n.d.), from health to digital technologies. Horizon Europe works through a system of calls for proposals. During these calls, researchers, and innovators can apply for funding for their projects (UK Research and Innovation, n.d.), with the program funding both the development and demonstration of new technologies. Funding is awarded based on the scientific quality of the proposals, as well as their impact on society.

Hydrogen related technologies play an important role in Horizon Europe because hydrogen is an important part of the European Union's strategy to decarbonize its economy and reach its climate goals (European Commission, n.d.). The EU has identified hydrogen as a key technology for achieving this goal, as it can be produced from renewable energy sources and used as a low-carbon fuel in a range of applications, including transportation, industry, and buildings (Strockl, 2021). The cluster 'Climate, energy and mobility' of Pillar II is significant for hydrogen activities, along with its dedicated Clean Hydrogen Partnership (European Commission, n.d.). In addition to this, the European Innovation Council supports the implementation of innovative solutions in Pillar III (European Commission, n.d.; European Commission, 2022). The EU has set out a hydrogen strategy, which aims to scale up the production and use of hydrogen across the EU. This includes the development of a hydrogen market and infrastructure, as well as support for research and innovation in hydrogen technologies. Thus, Horizon Europe is a key part of the EU's hydrogen diplomacy strategy.

(2) Horizon Europe and the UK's own hydrogen diplomacy

Before Brexit, the UK was one of the most important players in the EU's hydrogen strategy. For decades, the UK has led on the development of hydrogen technologies and has acquired significant expertise in the area through its universities (Carey, 2021). Horizon 2020, Horizon Europe's predecessor, played a critical role in the EU-UK Brexit negotiations, particularly in relation to research and innovation (Bruegel, n.d.). As a member of the EU, the UK was a significant participant in Horizon 2020 (Rough et al., 2023). However, following the UK's decision to leave the EU, questions arose about the country's continued participation in the program (Rough et al., 2023). During the negotiations, the UK government expressed its desire to remain part of the program, citing its importance for UK science and innovation. In the end, an agreement was reached that allowed the UK to continue participating in Horizon 2020 until the end of the program in 2020. This was seen as a positive outcome for both the EU and the UK, as it allowed for continued collaboration on research and innovation projects and set the stage for future cooperation in these areas.

The terms of the UK's participation in Horizon Europe were agreed in December 2020 as part of the UK-EU Trade and Cooperation Agreement (European Commission, n.d.). Under the terms of the agreement, the UK will be able to participate in Horizon Europe on a similar basis to EU member states, with access to funding and opportunities for collaboration

with other European researchers and innovators (European Commission, n.d.). The UK continues to contribute financially to Horizon Europe (Keep, 2023) and in return, UK-based researchers and innovators will be eligible to apply for funding through the program and participate in collaborative projects with other European partners (Carey, 2021). The UK's participation in Horizon Europe is significant for UK science and innovation, as it provides access to a significant pool of funding for research and development, as well as opportunities for collaboration with other European researchers and institutions. This support can help UK researchers to maintain their position as world leaders in science and innovation, and to develop new technologies and solutions to some of the biggest societal challenges of our time (UK Research and Innovation, n.d.). In addition, participation in Horizon Europe can help to support the UK's efforts to achieve its own climate and energy goals, by providing access to funding and opportunities for collaboration on critical issues like hydrogen research and development (Carey, 2021). The UK has identified hydrogen as a priority technology for achieving its own climate goals, and participation in Horizon Europe can help to accelerate the development of low-carbon hydrogen technologies in the UK and across Europe.

(3) Overcoming Brexit

The UK's participation in Horizon Europe can bring significant benefits to the EU, particularly in hydrogen research and development.

The EU has identified hydrogen as a key technology for achieving its climate goals, and the UK has significant expertise in this area. By collaborating on hydrogen research and development, the UK and EU can accelerate progress towards the deployment of low-carbon hydrogen technologies (European Commission, 2021). One potential benefit of increased collaboration between the UK and the EU on hydrogen research is the sharing of knowledge and expertise. At the same time, the EU has significant expertise in areas such as renewable energy production and hydrogen distribution, which can be shared with the UK to support the development of a low-carbon hydrogen economy (Carey, 2021). Another potential benefit of increased collaboration is the ability to pool resources and expertise to tackle shared challenges. For example, the EU and UK can work together to develop and test new hydrogen technologies in real-world settings, such as transport and industry applications, as was already the case with Horizon 2020. This can help to accelerate the deployment of low-carbon hydrogen technologies and support the EU's hydrogen diplomacy efforts. Finally, increased collaboration between the UK and the EU on hydrogen research and development can help to build stronger relationships between European researchers and institutions. This can help to create a more robust and interconnected research ecosystem, which can lead to further advances in hydrogen technologies and other critical areas of research.

By working together, the UK and EU can achieve greater progress towards a more sustainable and low-carbon future.

(4) Conclusions

Overall, the EU can leverage the UK's expertise in hydrogen technology to strengthen its diplomatic efforts in hydrogen diplomacy by collaborating on research, sharing knowledge and experience, establishing joint standards and regulations, and building partnerships with other countries. Horizon Europe is an essential part of the EU's hydrogen diplomacy strategy, as it provides the research expertise needed to provide hydrogen solutions to the climate problems that the EU is facing. While a member, Britain was an important member for the EU by providing expertise. And the fact that the UK can participate now despite all the diplomatic difficulties caused by Brexit shows the ability of scientific cooperation to enhance cooperation. To build on the model of the UK's participation in Horizon Europe and further advance its hydrogen diplomacy efforts, the EU could consider the following recommendations to build further on the relationship:

1. Establish a joint EU-UK hydrogen task force: A joint task force comprising experts from both the EU and the UK could be established to identify areas of collaboration and joint research projects. This could help to accelerate the development of low-carbon hydrogen technologies and strengthen partnerships between EU member states and the UK.

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- A portrait of Otto Barrow, a young man with curly brown hair and glasses, wearing a blue sweater over a white collared shirt. He is smiling slightly and looking towards the camera. The background is a blurred outdoor scene with greenery.
2. **Develop joint regulatory frameworks for hydrogen technologies:** The EU and the UK could work together to develop joint regulatory frameworks for hydrogen technologies. This could help to create a level playing field for companies operating in the hydrogen sector and ensure that safety, environmental, and other standards are consistent across the EU and the UK.
 3. **Strengthen partnerships with other countries:** The EU could leverage the UK's relationships with other countries in the hydrogen sector, such as Japan and Australia, to strengthen its own partnerships with these countries. This could help to create a global market for low-carbon hydrogen and support the EU's broader climate and energy goals.

About the Author

Otto Barrow is a masters' student at the Yenching Academy of Peking University. He previously served as the Secretary General of the Institute for Greater Europe, during his time studying European Affairs at the College of Europe. He completed his undergraduate studies in Philosophy, Politics and Economics at Magdalen College, Oxford.



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Lithium-ion: the Pandora's Box of the Green Transition?

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INSTITUTE FOR A GREATER EUROPE

124 AVENUE DE LA COURONNE, BOÎTE 1,
1050, IXELLES, BRUSSELS CAPITAL REGION,
BELGIUM.

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