

<https://doi.org/10.1038/s44168-024-00173-7>

The European Green Deal and turbulence for non-member states



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The European Green Deal (EGD) has had a significant impact on EU member states. In this article, we examine the extent to which it can also have large consequences for non-members. Based on a qualitative approach comparing Norway and the UK, and drawing on a burgeoning literature on ‘turbulence’, we ask whether the EGD creates turbulence in non-member states, what the nature of this turbulence is, and whether the extent and nature of turbulence varies with how closely affiliated a non-member is with the EU. Despite the ambitious climate policies of both countries, we identify a significant amount of turbulence generated by the EGD. Interestingly, we also find that turbulence increases with a closer EU-affiliation. However, our analysis also reveals an impressive capacity in both countries to adapt to their turbulent conditions, and a surprising durability of climate and energy policy in the face of turbulence.

The European Green Deal (EGD) is important for a study of climate governance^{1,2}, and particularly the turbulence³ of such governance, as it represents the world’s first large-scale, encompassing climate governance strategy for net zero greenhouse gas emissions in 2050. The EGD cuts across sectors and has introduced a host of new and revised policies at great speed, requiring political and societal changes in EU member states. To reach the net-zero target by 2050 included in the EGD, the EU has adopted a Climate Act, which also sets out an interim goal of reducing net emissions by 55% within 2030 compared to 1990. In addition, the EU has made a number of proposals and revised a swathe of climate regulations in the Fit for 55 (Ff55) package. Key elements of the Ff55 package are the EU ETS (covering emissions from power stations, energy-intensive heavy industry, civil aviation and (since 2023) shipping), the Effort Sharing Regulation (ESR) (covering emissions from road transport, agriculture, buildings and waste) and the Regulation on land, land use change and forestry (LULUCF) (covering emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities). Ff55 also contains important energy laws such as the Renewable Energy Directive and the Energy Efficiency Directive, as well as several transport laws that aim to speed up the roll-out of low and zero emission technology in the sector, including both infrastructure and fuels. The EU has also adopted innovative policies such as creating a separate emissions trading scheme for buildings, road transport and additional sectors (often dubbed ‘ETS 2’). Another innovation is the Carbon Border Adjustment Mechanism (CBAM), a mechanism to prevent carbon leakage, whereby a tax is placed on goods and services imported into Europe, corresponding to the carbon price under the EU ETS.

These changes present a challenge for policymakers, who need to balance a ‘regulatory tsunami’ and rapid reduction in emissions with social

and economic considerations. The complex and cross-cutting nature of many of these policies also presents a challenge for policymakers. Importantly, these developments go beyond regular changes and even individual crises within policymaking, constituting a ‘new normal’ of turbulent governance. The situation is turbulent because ‘events, demands and support interact in highly variable, inconsistent, unexpected and unpredictable ways’³. Such turbulence can either catalyse or impede climate policy development and implementation, making it important to study. A nascent body of literature has therefore begun to examine the turbulence of EU climate policy^{4–6}.

However, this literature has so far been focused on EU-level politics or EU-member states, with farmers’ protests erupting across Europe⁷ and party campaigns to reverse parts of the EU policy⁸. In one sense this is understandable, as these are the primary agents of change within EU climate policy. Yet the EGD and the turbulence it creates is also likely affecting non-member states, which cooperate with the EU to varying degrees. Not only are the implications for non-member states important to study in their own right, but also because implications for non-member states are likely to in turn affect the EU⁹. Despite the almost hegemonic status of the EU in relation to most non-member states, the relationship is still not only one way¹⁰. Focusing on the EGD, and in particular key climate and energy laws within the EGD’s climate package *Fit for 55*, we therefore ask the questions: *Does the EGD create turbulence in non-member states? If so, what is the nature of this turbulence? Does it vary depending on degree of affiliation with the EU?*

For comparative purposes we focus on two non-member states, Norway and the UK. Both countries are ‘least likely’ cases, as they have ambitious climate policies, and climate policies resembling those of the EU. They are also similar in important respects, such as favouring cost-efficient

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climate policy, promoting emissions trading. However, and importantly, the countries differ in terms of EU-affiliation. Norway is tightly integrated with the EU via the European Economic Area (EEA) and closely cooperates with the EU on climate policies. In contrast, the UK has divorced from the EU, negotiated a Trade and Cooperation Agreement (TCA) and wants to show that it retains sovereignty within climate and energy policy by extricating itself from key mechanisms such as the European Emissions Trading Scheme (EU ETS) and the EU Environment Agency. In comparison to the EEA Agreement, the TCA is less comprehensive, less binding and more subject to political negotiations¹⁰.

Focusing on three dimensions of turbulence – *shifting parameters*, *intercurrence* and *temporal complexity*, we assess whether the different relationships chosen by Norway and the UK matter for their experienced turbulence from the EGD. Treating turbulence as a condition, we investigate how well the strategy and structure of governing institutions are adapted to turbulent conditions. Although important, we do not systematically consider the capacity of public organisations to respond to turbulence¹¹, but focus on understanding whether it matters for the extent of turbulence created how loosely coupled a non-member state is.

The three mentioned dimensions of turbulence are presented by Ansell and Trondal³ in their seminal article on turbulence. The first dimension is the *shifting parameters* that organisations and institutions depend upon, such as budgets, political support or technology. When these are shifting they can make planning and operations difficult. The EU provides a policymaking capacity that single states do not possess. The closer a state is affiliated with the EU, the more it should be able to benefit from this capacity. By being closely affiliated with the EU, a state may also enjoy participation in financial solutions like loans from the European Investment Bank, research funding through Horizon Europe and different funds created as part of the European Green Deal (e.g. Social Climate Fund and energy-related Projects of Common Interest). Cooperating with the EU may also relieve factional conflict, as political actors can ‘blame’ the EU and get away with unpopular decisions by arguing that EU cooperation necessitates a certain action. However, when EU decisions significantly affect budgets of lower political levels, imposes certain choices of technology or creates political controversy amongst citizens, all of which at high speed, we can expect turbulence to occur. Moreover, differences in the possibilities and capacities to apply for—and use new funding streams at high speed may also cause turbulence. *Because the UK has spent four years extricating itself from the EU yet commits to alignment with it, but has less resources to achieve this objective, we expect the UK to experience more turbulence than Norway on the dimension of shifting parameters.*

The second dimension of turbulence is *intercurrence*, where unexpected interactions occur between otherwise independent or compartmentalized subsystems, institutional logics or governing norms, or across jurisdictional boundaries. Kingdon¹² has pointed out that the more firmly linked the community is, the more likely it is to generate common outlooks, orientations and ways of thinking. He argues that unity enhances effectiveness, while internal conflict might have the opposite effect. While Norway faces the climate challenge through ever closer cooperation with the EU, the UK has taken a dramatic decision to divorce from the EU, including from key climate and energy policy institutions and mechanisms. While Norway realises benefits of cooperating with the EU in this field¹³, the UK wants to show that the country retains sovereignty in climate and energy policy¹⁴. *As unity fosters effectiveness, we therefore expect that the UK will experience more turbulence as a result of the EGD than Norway on the dimension of intercurrence.* This is based on the assumption that both countries will have to relate to the EU in one way or the other, given that the EU is the largest trading partner for both countries.

The third dimension of turbulence is *temporal complexity*, which can arise from multiple or shifting tempos, for example when business as usual shifts to rapid response, when different time horizons clash or when competing time frames need to align. The temporal dimension is important due to the sheer speed of policymaking under the EGD, making it complicated for non-members to stay informed, discuss possible domestic implications

and influence outcomes. Given its closer cooperation on climate change we therefore expect Norway to experience more such turbulence than the UK. This is also related to the fact that Norwegian public administration plays a double role: first as a practitioner of EU regulations, which means participation also in EU expert committees; and second as a practitioner of national sector policy¹⁵. Although this double role might provide Norwegian stakeholders with useful information that UK stakeholders do not have access to in the same way, *we expect that in reality the sheer speed of policymaking under the EGD will make it difficult for Norway to influence the EU through its established channels and keep abreast with developments, thereby increasing the turbulence here relative to the UK.*

The three expectations are related to *turbulence of scale*, which occurs when what happens at one level of authority affects what happens at another level or scale³. A solution that is considered optimal at one level might be considered suboptimal or even detrimental at another level. Given Norway’s closer cooperation with the EU, we expect EU decisions overall to have a larger impact on Norway than the UK. However, as formulated above, this might vary on different dimensions. Although we don’t anticipate the EU’s chosen climate solutions to be detrimental to Norway, they might still be suboptimal, and nonetheless have to be implemented at speed. As such, *we expect that there is more such turbulence in the Norwegian case than in the UK.*

Results

Comparing EGD-induced turbulence in Norway and the UK, we find that while both countries experience such turbulence, Norway experiences more of it than the UK. There are four key reasons as to why: First, the UK has a large and flexible administration while Norway’s administration is small in comparison. Second, the UK public administration has over time participated in the development of some of the policies introduced by Fit for 55, as many of them were already being discussed before Brexit. The Norwegian administration has been less involved in these discussions. Third, for the duration of the UK Conservative government, the focus was on making Brexit a success rather than following developments in Brussels closely – an approach that has not changed significantly under a new Labour government. In contrast, Norway has struggled to maintain being simultaneously ‘outside and inside’ the EU. Our evidence highlights how this dual role creates significant turbulence, especially as the EU encroaches on an increasing number of policy areas through the EGD, and because EU membership remains controversial. Fourth, we show that there is a significant difference between the coercive pressures faced by Norway to implement swathes of EGD legislation as an EEA member and the UK’s competitive pressures to merely be ‘aligned’ with such legislation via the TCA. Moreover, and crucially, the non-regression-clause in the TCA has received criticism for only applying to the weakening of protections *as they impact on trade and investment* (TCA, Article 391 – our italics)¹⁶. The pressures for the UK to follow the developments of the EGD are therefore different both in nature and degree.

Interestingly, despite this turbulence, climate and energy policy and cooperation with the EU remains remarkably stable for both countries, though creating dilemmas for each – for example related to popular support for climate measures in Norway and suboptimal solutions including high administrative costs for the UK. By showing how the EU *creates* – and not just responds to—turbulence, and by analysing how the EGD creates turbulence also for *non-member* states, we therefore make important contributions both to the literature on turbulence and EU climate policy. In the following we show how turbulence manifests itself on the three dimensions of shifting parameters, intercurrence and temporal complexity.

Shifting parameters

Despite budget increases to deal with the increased workload emanating from the EGD¹⁷, Norwegian civil servants nonetheless report that the EGD is putting significant demands on their capacities and budgets. The head of the Norwegian Environment Agency warned that never in her 30-year career had she experienced more changes in environmental legislation, and

that the ‘extraordinary’ tempo, ambition and scale of change made her ‘concerned that we do not have sufficient resources to deal with the new regulations that are coming’ (our translation)¹⁸. For example, as a large shipping nation, the incorporation of shipping into the ETS will significantly increase the administrative burden on government agencies such as the Norwegian Environment Agency, which need to grapple with an almost doubling in the number of actors covered by the EU ETS, for example, by verifying emissions, reporting and providing guidance¹⁹. On the other hand, the incorporation of shipping into the EU ETS might mean new opportunities to export green technology such as electric ferries, where Norway is well positioned, as there will likely be a higher demand for such technologies.

While the new and revised laws in Ff55 imposes additional constraints on the public administration in terms of analysis, reporting and provision of guidance to Norwegian stakeholders, there are also budget implications from the different funds created under the EGD, such as the Social Climate Fund. The income from the new ETS 2 will go towards this Fund, intended to counteract adverse social distribution effects for households, micro-enterprises and transport users. Norway is required to pay 5.5 billion NOK into this fund as it is integral to the ETS, but as of May 2024 the government had not decided whether Norway was also going to be able to benefit from it¹⁹. Other budgetary implications are more positive, such as three Norwegian hydrogen and carbon storage projects being added to the EU’s list of Projects of Common Interest, which improves funding opportunities for Norwegian businesses.

More important for causing turbulence is the (decreasing) public support for cooperating with the EU in a situation where energy prices are increasing. Norway has enjoyed a situation of low energy prices and a fully renewable power sector with a surplus of electricity, thus being a net exporter of electricity. The Norwegian power sector is therefore very different from other EU countries²⁰. Politically, this makes it harder to defend investments in interconnectors. This issue is also related to questions of technology, as Norway’s situation also makes it difficult to gain public acceptance for investments in wind power, as this is primarily supported for local and national purposes²¹. As such, the enhanced focus on joint energy infrastructure projects in the EGD, which might drive up energy prices, have received a cool reception amongst the Norwegian public, especially after the Russian invasion of Ukraine and ensuing energy crisis, which also hit Norwegian consumers.

Another controversial issue for Norway is how the EGD affects its forest policies. The move in the EGD towards stricter and binding national targets for 2030 in the LULUCF sector could have implications such as significant restrictions on deforestation, reduced logging and stricter land use policy. Ironically, because of Norway’s aging forests, such restrictions may also affect the country reaching its long-term targets beyond 2030^{19,22}. These changes have met with fierce criticism by Norwegian interest groups representing the forestry sector (stakeholder workshops). Moreover, the EGD represents a powerful change in direction, with the EU more actively engaging in forest policy despite it formally being a competence of member states¹⁹. The revised LULUCF regulation centralises important aspects of forest policy, with the Commission justifying this in terms of climate change. Forest-rich EU member states like Sweden and Finland, but also Norway, are particularly concerned about this development (policy roundtable; stakeholder workshops).

The CBAM will also have significant financial implications for Norwegian stakeholders, due to the phasing out of free emission quotas to be completed in 2034^{19,22,23}. Sectors that are considered vulnerable to carbon leakage have been given generous amounts of free quotas in the past. Norwegian industry argues that this phase out—contrary to the purpose of CBAM—could mean increased carbon leakage in the power-intensive industry, meaning that Norwegian and European businesses lose out in competition with businesses outside the EU/EEA area. Norwegian industry is particularly concerned with the effects on the production of aluminium and mineral fertilizers.

The situation for the UK is somewhat different than for Norway. After leaving the EU, ‘the UK government has made clear that there will be no

regulatory alignment and no rule-taking from the EU’, a position that will affect Britain’s markets, trade negotiations and stance in global climate action²⁴. Now outside the EU, the EU rules do not *in principle* have effective influence, and the UK needs to develop its own emissions regulations and renewable targets. The UK seeks to ensure the delivery of their net zero target by for example expanding the UK ETS to domestic shipping, planned from 2026²⁵. Interestingly, the UK government does not mention similar changes to the EU ETS as a reason for expanding its own ETS. However, as part of the consultation on the inclusion of shipping in the UK ETS, ‘several respondents highlighted the importance of alignment with EU proposals and carbon leakage mitigation policies, to ensure that no differences between carbon costs in the UK and the EU are introduced which could impact the functioning of cross-border and international markets’²⁶. Respondents to the consultation also expressed that ‘it was important for the UK and EU ETS to remain similar in terms of market design and scope. Respondents expressed concerns that recent UK and EU consultations indicated that the two schemes may diverge’²⁷. Although not stated explicitly, these responses imply that the EU ETS amendments have played a role in influencing UK policy-making.

A further issue in the UK is the prospect of ‘zombie legislation’ (i.e., legislation that is not enforced) post-Brexit, which has created widespread concerns about maintaining environmental standards^{28–30} as EU regulations no longer apply and recourse to EU institutions such as the European Court of Justice (ECJ) are no longer present³¹. Although this situation is likely to challenge the ambition of UK climate policies, it does not necessarily create turbulence—or to the extent that it does, this is likely a result of Brexit rather than the EGD.

However, the EGD, with its significant sources of funding for green technology and infrastructure projects, will be giving non-UK actors a competitive advantage, which definitely can create turbulence in the UK²⁴. By extricating themselves from key EU institutions and cooperative relationships, the UK is losing out on vast amounts of funding for the low carbon transition. Likewise, having also pulled out of the EU ETS and Single Energy Market, the UK administration faces not too dissimilar challenges to the Norwegian in having to keep track of- and seeking to influence policymaking in Brussels. However, in this instance the challenge is more related to the administrative burden of seeking to align two separate systems and markets rather than implementation (Interview 5; 6; see more under Intercurrence below). Several interviewees pointed out how the EGD, most notably the CBAM, adds to UK actors’ (both public and private) administrative burden, increases in costs and a potential loss of trade—all of which were already increasing due to Brexit (Interview 1)^{32,33}. As the UK’s and the EU’s climate interests continue to be closely tied together, ‘ignoring European climate policy developments might jeopardize the UK’s long-term climate security’²⁴.

In terms of capacity, however, interviewees point out that the UK has a strong public administration, highlighting the public administration as important for not experiencing much turbulence in the public administration, ‘it’s just that the UK does have a really big government machine’ (Interview 10).

In summary, both countries are facing turbulence from shifting parameters, although Norway more so than in the UK. In Norway, the EGD significantly increases demands on the capacities and budgets of the public administration and challenges political support in particularly controversial areas like in the LULUCF sector but also provides new funding opportunities for investing in new technologies. The UK has, in contrast, always had a large public administration, however UK businesses are experiencing less funding opportunities.

Intercurrence

Exploring the influence of the EU on states, Boasson³⁴ highlights two key logics that are relevant for understanding climate policy development: first, the market logic, which is based on the assumption that actors are profit-maximising and rational; and second, the technology development logic, which is based on technological rather than economic criteria. The EU

typically promotes the market logic^{35,36}. Norway and the UK both also lean towards a market logic^{37,38}. However, facing the energy crisis and the war in Ukraine, and wanting to promote the green agenda in the EGD, the EU decided to relax its competition requirements in the state aid guidelines. This relaxation of competition represents a critical juncture for the EU, as the Commission has always fought against distortion of competition³⁵. It also goes against the idea behind the EEA Agreement (Interview 9). The EEA is designed for market integration to a greater extent than the EGD, as the EGD increasingly goes beyond the EU's traditional focus of how to guarantee a level playing field within the internal market³⁹. This change in institutional logic can potentially constitute an opportunity for both Norwegian and UK actors, who can now receive more state aid for green projects falling under the new guidelines without being challenged under the EEA Agreement or the TCA. Overall, however, this development is likely to be challenging, as both countries have always promoted the market approach within climate and energy policy (Interview 2) and is particularly concerning for Norway as a small and open economy.

Another issue for Norway is the holistic approach of the EGD, which challenges the entrenched 'silo' structure in its public administration. In contrast, the public administration in the UK is relatively dynamic and flexible, as demonstrated by the many departmental changes over the last decade, especially as regards climate change and energy. This flexibility contributes to reducing turbulence:

'It has the flexibility to make that change, I think. [...] The UK does have a massive government, even compared to similar democracies, partly because we still haven't really sorted local devolution to any meaningful extent. [...] You still have half a million people who work for the central government and I think there remains a lot of capacity to create at pace systems and processes, law etcetera' (Interview 10).

Moreover, the UK's net zero approach has strengthened the cross-sectoral approach in comparison to Norway. As pointed out by a UK senior civil servant:

'There have rarely been such big whole-government endeavours that have infiltrated all departments. [...] The accounting methodology of Net Zero, is quite innovative in breaking down those silos because it distributes responsibility in a quite clever mathematical way' (Interview 10).

The EGD might therefore be less challenging for the UK than Norway, given this similarity in approach.

A more controversial question for Norway, however, is the extent to which the increasing Europeanisation of forestry policy described above will affect agricultural policy in the future. In line with the definition of *intercurrence*, this development constitutes an unexpected interaction between otherwise independent subsystems, institutional logics and jurisdictional boundaries. Although the Commission's suggestion to combine forestry and agriculture into one sector (into a sector for Agriculture, Forestry and Other Land Use – AFOLU) did not survive the trilogue negotiations, there is still a commitment to return to this decision after a further review, meaning the door is open to introduce this at a later stage. Like in EU member states, this is a controversial topic in Norway, where agriculture is an area of national competency protected from the EEA agreement. A potential interaction between forestry and agricultural policy by the establishment of an AFOLU sector creates a dilemma for Norway, whereby it might have to decide between losing some autonomy over its agricultural sector or opting out of cooperating with the EU on forestry, with potential implications for that and other policy areas (Stakeholder workshop 1). More generally, the proposed AFOLU sector also underlines the challenges for Norway in disentangling the cross-sectoral developments in the EGD, for example in analysing whether a proposal is EEA-relevant or not, and protecting areas of national interest such as agriculture which become bound up with other related developments in the EU, such as those within forestry.

Likewise, the CBAM is creating challenges for both Norway and the UK, as both have large CBAM export shares to the EU⁴⁰. In Norway, the question of whether to join has proved controversial within the government, with the EU-sceptic agrarian Centre Party opposed. As of May 2024, therefore, Norway had not yet made a decision as to whether they would

participate – although should they do so, their membership of the EU ETS should make this quite straightforward, bar (again) increased administrative costs. For the UK, however, the CBAM is even trickier, due to the UK having left the EU ETS:

'The EU has already threatened to potentially apply this mechanism [CBAM] against the UK as part of its policy to ensure a "level playing field" in trade between the two. Non-alignment on European carbon taxation and border adjustment would help facilitate a quick trade deal with the US but it would likely make it harder for UK businesses to sell into the EU market'²⁴.

As pointed out by a UK energy sector representative (Interview 1),

'For me, the big one that directly impacts us is CBAM. [...] I've spent quite a long time thinking through what else hits us. Now offshore market design, offshore building zones [etc] has a direct impact. Is that a problem from our [the UK] perspective? No. The challenge is how do we operate a compatible system.'

Indeed, there have been large concerns related to the CBAM, which will 'hit hard' in the UK (Interview 9). Such an import duty would in most cases exceed the price difference between the UK and other EU countries, meaning that imports from the UK will often not pay off. The UK steel industry is also concerned:

'The UK risks a damaging trade barrier with our biggest trade partner if we don't quickly develop and implement our own measures. Failure to do so, could mean steel made here in the UK is blocked from being sold into the EU'⁴¹.

While the UK has chosen to liberate themselves from the objectives of the EGD, the EGD has had a considerable impact on the UK, which is highlighted by the country's decision to implement its own UK CBAM by 2027²⁷. However, there had been 'rumbling' about a CBAM for years, even long before Brexit, which may have reduced turbulence as the UK was more prepared for it (Interview 9; 10). Interviewees also mentioned that 'when looking at the European Green Deal, we [the UK] seem to be pulling in a similar direction', but the EGD is not featuring high on the agenda or affecting UK policymaking to a large degree (Interview 10). The impression is that the EGD is not driving the UK's policy agenda, except in terms of competition in terms of being an international climate leader and attracting investment. Asked about what challenges the EGD is creating, one senior civil servant in the UK responded:

'It's still very much the case that the UK Government internally thinks about itself in comparison with major European powers [...] I think having the European Green Deal over here, doing this sort of thing, will act as a sort of comparison, but I don't necessarily think that there's an explicit challenge that it has raised that I've heard about' (Interview 10).

The fact that the UK interviewees perceive that there are not many challenges for the government related to the EGD in the UK seems to be related to the UK's strong autonomy objective. Fossum et al.¹⁰ point out that it has been particularly important for the UK to show that the country is sovereign and has maintained its right to make ambitious climate policy. Along these lines, one civil servant in the UK pointed out that—at least outwardly—the UK government still genuinely believes in the Brexit project (Interview 10). Having 'left all that [the EU/EGD] behind', focus is directed towards other international organisations and in particular the Inflation Reduction Act (IRA) in the US: 'I have not heard the same conversations happening about the European Green Deal [as about the IRA]. [...] So I just don't think it's coming up as a particularly big topic' (Interview 10).

One the one hand, the war in Ukraine and ensuing energy crisis has pushed the two non-members closer to the EU. Although the EU's REPowerEU plan is not formally a part of the EGD, it is strongly linked to it and seeks to achieve and strengthen several of its goals in light of the Russian invasion of Ukraine. As pointed out by a UK energy industry representative, there has been a strong recognition from both the UK and the EU of the need for continued and strong cooperation on energy and climate. This need was understood on 'almost an emotional level [...] If the UK and Europe, with all of those shared targets and shared interests, cannot cooperate on energy and climate, what can we cooperate on?' (Interview 1). Such close cooperation has also likely been aided by the fact that both countries have similar and

similarly ambitious climate policies as the EU. Indeed, a civil servant pointed out that many of the thoughts behind the laws in the Ff55 climate package were originally developed by Brits (Interview 9), thus reducing turbulence. On the other hand, an argument was made by a Norwegian energy industry representative, that Norway risks falling outside the ‘exceptional institutional strengthening’ and ‘solidarity’ occurring in the EU, not just through the EGD, but also following the COVID-19 pandemic and in light of the war in Ukraine. They warned that Norway ‘needs to be careful not to become further marginalised as an energy actor’ (Interview 2), where Norway is known to be relatively powerful⁴².

In summary, while it is expected that unity (i.e., cooperation between the parties) fosters effectiveness, we see that the same unity is instead creating complications in areas with considerable disagreement or differences of approach. This is a bigger issue in Norway than in the UK, which is not forced to implement EU laws. Compared to Norway where silos are entrenched, in the UK silos are less firm and more dynamic. While the UK is driven more by its autonomy objective and competing with the EU in being the greenest or at least as green, in Norway there are stronger pressures related to the extent to which the EU is coercing Norway to implement rules.

Temporal complexity

The sheer speed at which the EGD is being passed into legislation and implemented increases the need for more administrative staff to implement faster also in non-member affiliated states¹⁹. Moreover, post the launch of the EGD, the speed at which the Commission is pushing through its green agenda and the novelty of several pieces of legislation makes it difficult for Norway to influence outcomes through traditional channels. As a non-EU member, Norway has the largest scope to influence EU policies ‘upstream’, i.e. when proposals are being discussed, through expert group participation and through ‘corridor diplomacy’ (Interview 2; 6)⁴³. The speed of decision-making in Brussels also makes it difficult to debate domestically in Norway. Several interviewees argued that EU policy receives far too little attention in Parliament and in the Norwegian media (Interview 2; 6; Policy roundtable), and lament the lack of parliamentary debates on the EGD^{22,44}. Furthermore, businesses have taken a more active approach to lobbying the EU than politicians, meaning that narrow business interests are potentially having a larger influence on the EU than elected politicians. Hence, the speed of the roll-out of the EGD challenges the democratic policy processes even more than stated in earlier analyses of Norway’s position as partly ‘inside’ and partly ‘outside’ the EU^{22,43,45,46}.

The above challenge is amplified further as Norway already struggles with a large backlog of implementing EU laws (Interview 2, Stakeholder workshop 2)^{19,44,47}. A particular concern with this backlog is the loss of competitiveness for Norwegian actors (Stakeholder workshop 1). One example is related to the implementation of the EU’s revised Energy performance of buildings directive, where the 2024 Directive draws on the EU’s Taxonomy when defining criteria for environmentally friendly buildings. When Norway drags its feet implementing the 2024 directive, and has yet to implement even the former Directive, Norwegian businesses risk losing funding opportunities from investors only wishing to support Taxonomy-aligned activities⁴⁸. In April 2024 the European Commission gave Norway a deadline to implement the Renewable Energy Directive revised in 2018, a directive that has already been revised in the EU in 2023⁴⁹. The revision is politically challenging, as one of the government parties (the agrarian Centre Party) has claimed that the energy package that the Directive is a part of, will not be implemented ‘on their watch’.

The sheer speed of policymaking under the EGD is also a challenge for the UK, as it struggles to keep up with Brussels in order to analyse impacts, influence outcomes and preparing a response. This challenge is perhaps amplified by the fact that the UK lacks Norway’s experience of being a ‘corridor diplomat’ influencing outcomes upstream. This role needs to mature more in the UK (Interview 10). Now, the UK more frequently needs to simply react to changes and address issues on a case by case basis⁵⁰. As expressed by a previous UK Cabinet Minister:

‘Practically there is little difference in energy and climate policy, but that’s very much seen from the outside. From the inside we are no longer having those crucial and continuous negotiations and discussions. (...) We were a real force for good, pushing the agenda. Now we come in at the end – not at the initial stages or in the middle, just at the end’ (Interview 8).

However, the UK’s larger and more flexible bureaucratic capacity means that the UK is able to act relatively faster than its Norwegian counterpart. The UK has been quite effective at proposing solutions, as the proposal of a UK CBAM demonstrates, whereas Norway seems slower at indicating its course of action. It has also helped that some of the ground-work took place already before Brexit, for example discussions about a CBAM.

In summary, the relatively large and flexible bureaucratic engine in the UK makes it fit to adapt to rapid changes, whereas Norway is struggling to a larger extent with the speed of policymaking and the backlog of implementation on particularly controversial policies.

Discussion

The EGD has had a significant impact on EU member states. We have examined the extent to which it can also have large consequences for non-members. Based on a qualitative approach and drawing on a burgeoning literature on turbulence, we have explored whether the EGD has created turbulence in Norway and the UK, what the nature of this turbulence is, and whether the extent and nature of turbulence varies with how closely affiliated the non-member is with the EU. Despite their ambitious and similar climate policies to the EU, we have identified turbulence in both countries generated by the EGD.

Starting with the first expectation regarding *shifting parameters*, we hypothesised that the UK would experience more such turbulence. Although the UK is certainly not unscathed by the EGD in this respect, we do not find support for this hypothesis – with administrative capacity, budgets and political support in Norway all being significantly more affected as a result of the EGD. It is potentially puzzling that a country that has spent four years extricating itself from the EU, only to commit to the alignment with it, but now has far less resources to achieve this objective, experiences less turbulence than a country which cooperates more closely with the EU. Exploring why this is so, we find that the UK’s large and flexible administration, and being a large market in itself, mean that the UK experiences less such turbulence in comparison to Norway. However, given the importance of the EU as a trading partner for the UK, the UK also has to deal with what is happening in the EU. Rather than benefitting from the EU administration, the UK needs to develop their own capacity to deal with similar problems, for example to develop a climate policy that is as ambitious as the EU’s while at the same time losing out on potential funding from EU funds. In the long run this effect might increase, as the UK played an important role in developing policies incorporated in Ff55. In future they will not benefit from insights from having contributed, when the EU develops new climate policies.

Referring to the second expectation about *intercurrence*, we also expected Norway to experience less turbulence than the UK due to the severity of the Brexit divorce, while Norway has expressed benefits of cooperating more closely with the EU in the climate field. However, we do not find support for this expectation, with Norway experiencing more such turbulence as a result of the increasing entanglement of policy areas, which are not in the EEA Agreement and which are politically controversial. For example, the suggested AFOLU sector demonstrates a general challenge for Norway in disentangling the cross-sectoral nature of the EGD and protecting areas of national interest. Moreover, CBAM is problematic for Norway, entailing a significant loss of revenue for Norwegian actors through the phasing out of free allowances under the EU ETS. For the UK, the EU CBAM has created so much concern that they have proposed to introduce their own version, which makes it the second CBAM to be created globally, and face the headache of seeking to align its own CBAM with the EU’s (an administrative headache Norway might also face should it decide to not join the EU CBAM). However, this also shows that the UK’s public

administration is capable of flexibility and resourcefulness when key interests are being affected; hence showing a capacity to deal with inter-currence as a source of turbulence. Similarly, both countries, although brought closer to the EU after the war in Ukraine, have nonetheless remained on the outside of the exceptional institutional strengthening as a result of both the war and Covid-19 pandemic.

When it comes to the third expectation about *temporal complexity*, our expectations are supported, finding that Norway experiences significant amounts of such turbulence. The closer institutional relationship between Norway and the EU means that the sheer speed of decision-making in Brussels are having a range of implications, from challenging traditional democratic decision-making procedures, to making it difficult for Norway to affect outcomes in Brussels through traditional channels, to increasing the backlog of EU directives that need to be implemented. Our findings show that, so far, Norway has not found a good way of dealing with both the tempo and complexity of the EGD. These challenges increase further with the implementation gap, which is particularly high in the energy area, and affects the competitiveness of Norwegian businesses and reduces the time that Norway has to achieve the revised climate objectives in the EGD^{19,44}. However, the UK is not unaffected, as it also struggles to keep up in order to retain its reputation as a global climate change leader, and also suffers from the lack of information and influence. This highlights a key difference between the pressures that Norway and the UK experience from the EU. While it is coercive for Norway, it is primarily competitive for the UK, which strives to be at the same pace or even better than the EU and other large countries and also competes for investment.

It is potentially puzzling that the non-member with the closest EU-affiliation, Norway, should experience the most turbulence. One might think that closer institutional ties and cooperation on climate policy increases information flows, access and influence, thereby reducing the impact of decisions taken in Brussels. However, both the speed and the scope of the EGD make this challenging, meaning Norway gets pulled into the vortex that is the EGD, but without the institutional mechanisms that EU-members have which might protect it from turbulence. However, our analysis has also showed that the UK's weaker EU affiliation has certainly not protected it from EGD-induced turbulence. Indeed, the severity of the divorce post-Brexit has amplified it in certain respects, by reducing the UK's access to funds, information and influence and by increasing the administrative burden of aligning schemes.

Our finding that also non-EU members are experiencing different types and degrees of turbulence underlines the importance of expanding analyses beyond the EU and affiliated non-members. This becomes even more relevant as the EU seeks to use the EGD strategically to influence other countries' climate policies, for example via the CBAM and its Deforestation Regulation, as well as its *Net-Zero Industry Act* which can be interpreted as a response to the US' *Inflation Reduction Act* and geopolitical challenges. Future research should therefore examine the turbulence created further afield than the EU's most immediate neighbours. Furthermore, we consider this an early study of the EGD-turbulence on non-member states. Focusing on multiple elements of the EGD and Ff55, and on two country case studies, the article naturally covers more breadth than depth. This was done for the purposes of exploration. In the future, however, research can with benefit go beyond this to focus in more detail on specific sectors and pieces of legislation, and to conduct more systematic and quantitative analyses (this is also the case for member-states, where the literature remains nascent). Similarly, we have not touched on the impacts for the EU, which are only likely to increase as both member and non-member states start reacting more to the EGD, particularly the parts which seek to influence them such as the CBAM.

We make a significant contribution to the (EU) climate governance literature, and importantly the nascent literature on turbulence, by demonstrating that also non-member states experience turbulence as a result of the EGD. However, while turbulence is sometimes understood as something 'negative', it is quite possible that there is also a need for turbulence. On this note, we conclude our contribution with a quote from one of the interviewees:

'[W]hile I am pretty convinced that there is much less turbulence in the UK than in member states and in Norway, I'm not entirely sure that's a good thing. You know, for such a large piece of legislation that is going to define the economic and environmental life of the continent for the next 30 years, possibly it should be making our lives an absolute pain' (Interview 10).

Methods

We have taken a qualitative and comparative approach to assessing how the EGD affects non-member states within climate policy. In the following we present the case selection and the research techniques that we used.

Case selection

With ambitious climate policies resembling those of the EU, Norway and the UK constitute 'least likely' cases. The two cases share important similarities, notably being non-EU-members and climate leaders with liberalised energy markets, rendering our comparison a Most Similar Systems Design, as we expect that the turbulence that the EGD creates will differ between them. Our expectation is that this is due to the relationship between the countries and the EU, with the UK no longer being party to the ambitious targets from the EU, in contrast to Norway which is cooperating closely with the EU on climate policy. We do not here study the relationship between the UK and Norway, or the triangular EU-Norway-UK relationship (for more insight on these particular relationships, see Fossum et al.¹⁰).

Norway has been a member of the EEA since 1992, meaning it is part of the Single Market, though it has exemptions for certain areas such as fisheries and agriculture, and it is not part of the Customs Union. Norway's EEA membership means it largely has to follow the EU's environmental and energy *acquis*. Norway merged its emissions trading scheme with the EU ETS in 2008. It also cooperates with the EU on energy laws such as parts of the Clean Energy Package. In 2019, Norway also entered into an agreement with the EU to cooperate on reaching their climate goals. Norway chose to join the EU's Effort Sharing Regulation (ESR) and the LULUCF Regulation. This was important as it gave Norway increased flexibility to buy emission allowances from other EU countries in other sectors than the ETS sector⁵¹.

Despite being a major petroleum producer, Norway likes to portray itself as being an international climate leader⁵². It was among the world's first countries to set a unilateral climate mitigation target in 1989⁵³ and a carbon tax was introduced as early as in 1991. Over time, Norway has gradually increased its climate mitigation target, with its latest Nationally Determined Contribution (NDC) under the Paris Agreement in November 2022 being a reduction of at least 55% below 1990-levels. Despite its relatively ambitious climate goals and cross-party consensus on the issue, however, Norway has been slow to reduce its domestic greenhouse gas (GHG) emissions. Between 1990 and 2023, the country has reduced its emissions by 9.1% - with 4.7% of those being reduced in one year (between 2022–2023)⁵⁴. The sluggish progress has primarily been due to a booming petroleum sector, but also because Norwegian electricity supply is essentially already decarbonised due to the prominence of hydropower⁵⁵.

The UK entered the EU on 1 January 1973 and, until its formal exit in January 2020, had been allowed to take full part in the political development in the EU. As an EU-member, the UK had a reputation for helping to drive the EU's climate ambitions⁵⁶. For example, the UK was crucial for the EU's adoption of binding renewables targets in 2009^{37,57}. Post-Brexit, the TCA between the UK and the EU seeks to protect the environment in both jurisdictions through its *non-regression-clause*, meaning environmental protections should not be reduced below those existing at the end of the transition period¹⁰.

The UK has a history of committing itself to environmental protection and sustainable development⁵⁸. In 2008, the UK was the first country in the world to introduce a Climate Change Act (CCA), contributing to its reputation as a climate leader. Following the passing of the CCA and the global financial crisis, climate change descended the political agenda somewhat and was affected by several austerity measures in the 2010s⁵⁹. Since then, the Conservative government has had a mixed performance on climate change⁶⁰, with an increasing backlash against its 2050 net zero

target⁶¹. Nonetheless, the UK has still been able to meet its international climate commitments, largely due to the replacement of coal in the electricity sector⁶². However, certain observers have questioned whether Brexit might have significant implications for UK climate policy, including the CCA⁶³. Given the severity of the divorce with the EU, a key question is therefore whether and how the EGD creates turbulence for the UK.

Research techniques

We have collected evidence through extensive document analysis (covering academic research, grey literature, consultation responses and media coverage). We also conducted ten semi-structured elite interviews with key actors within climate and energy policy based in Norway, the UK and Brussels: energy industry representative in the UK, 1 March 2022 (Interview 1); energy industry representative in Norway, 8 March 2022 (Interview 2); environmental organization representative in the UK, 9 March 2022 (Interview 3); civil servant, the Norwegian Ministry of Trade, Industries and Fisheries, 11 March 2022 (Interview 4); environmental organization representative in the UK, 16 March 2022 (Interview 5); environmental organization representative in Brussels, 17 March 2022 (Interview 6); two civil servants, the Norwegian Ministry of Petroleum and Energy, 23 March 2022 (Interview 7); one former Cabinet minister, 23 March 2022 (Interview 8); energy industry representative in Norway, 5 April 2024 (Interview 9) and one civil servant in the UK, 21 May 2024 (Interview 10). With two exceptions (Interview 4 and 9, which took place physically in Oslo in accordance with the interviewees' preference), the other interviews were conducted online via Teams. The interviewees were asked questions about how they perceived the EGD, the effects of Brexit, as well as implications of the EGD for both countries.

Our analysis is also complemented by findings from a policy roundtable and two stakeholder workshops. The policy roundtable and stakeholder workshops operated under Chatham House Rules and consisted primarily of Norwegian stakeholders, though a limited number of stakeholders from a UK and EU perspective were also included. The policy roundtable took place in Oslo, 1 December 2021, with representatives from: Academia, two representatives of the Mission of Norway to the EU, two representatives from the energy industry, and one environmental non-governmental organisation. The first stakeholder workshop took place on Teams, 29 October 2021, with representatives from academia, the Norwegian Ministry of Climate and Environment, Norwegian Ministry of Foreign Affairs, Norwegian Environment Agency, Norwegian Agriculture Agency, The Norwegian Agency for Local Governments ('Kommunalbanken'), The Norwegian Board of Technology, Statkraft, Statnett, Bellona, Sabima, Confederation of Norwegian Enterprise, Norwegian Shipowners' Association, Norwegian Forest Owners Association, and the Norwegian Farmers Union. The second stakeholder workshop was held in Oslo, 28 February 2023 with researchers and representatives from the Norwegian Ministry of Foreign Affairs, the Norwegian Ministry of Climate and Environment, Norwegian Environment Agency, Norwegian Agriculture Agency, Statkraft, Statnett, Renewables Norway, Confederation of Norwegian Enterprise and Norwegian Shipowners' Association.

Prior to data collection, the Norwegian Agency for Shared Services in Education and Research approved the project and the interview guides. An information letter was prepared and sent to the interviewees. This letter detailed information about the purpose of the research, funding sources, interview procedures, the plan for dissemination as well as the interviewees' rights under Norwegian data protection laws and adhered to general ethical guidelines in social research (i.e., data storage methods, procedures for anonymization, conditions for voluntary consent and the right to withdraw from the study). Informed consent was collected prior to or at the beginning of each interview.

Data availability

Only project data will be made publicly available that can be shared without compromising the quality of the data or research ethical principles. Such ethical considerations include obstacles of anonymisation, engagement in

the policy roundtable and the two stakeholder workshops, tracking and privacy connected to stakeholder interaction.

Received: 15 April 2024; Accepted: 30 September 2024;

Published online: 09 October 2024

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Acknowledgements

The study was funded by the Research Council of Norway (DEAL, project no: 335505). We are grateful to the interviewees and participants in the policy roundtable and stakeholder workshops for giving some of their time to respond to our queries, making it possible to accomplish this study. We also thank the two anonymous reviewers for their constructive feedback.

Author contributions

M.D.L. wrote the initial draft, did conceptualisation, methodology, investigation, writing (review and editing), funding acquisition and project administration. F.F. did conceptualisation, methodology, investigation, writing (review and editing) and funding acquisition. Both authors have read and approved the manuscript.

Competing interests

The authors declare no competing interests.

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