polish sociological review 3(231)'25
ISSN 1231 – 1413
DOI:10.26412/psr231.04

OSKAR KULIK
University of Warsaw

Zooming into the Life Cycle of a Net-Zero Norm in Poland

Abstract: This study with an insiders' perspective may contribute to the understanding of Poland's troubled transition towards a net-zero economy. It utilizes Finnemore and Sikkink's life cycle of a norm framework within the context of net-zero ambitions at a national level. The findings are based on 15 semi-structured interviews and a mapping of Poland's decarbonization field both undertaken with insiders of that field. Findings based on the sample reveal initial results that various norm entrepreneurs advocate for operationalizing a net-zero target in Poland, typical for the *norm emergence* phase, clashing with strong opponents of change: norm antipreneurs. The findings provide hints of a *tipping point* and further *cascadization* of the norm. Due to the only ongoing *cascadisation*, no further *internalization* or taken-for-granted status of the net-zero norm was found. This study contributes to the understanding of the field by its insiders. By following existing research and adding a new perspective it contributes to a better understanding of the diffusion and adoption of climate policy and understanding of the decarbonization field in Poland.

Keywords: net-zero, climate policy, life cycle of a norm, Poland, mapping

Introduction

This article looks at the stance of the transition towards a net-zero economy in Poland, based on preliminary research of the climate and energy field undertaken through triangulating an insiders perspective of the field. Hereby I understand a field as a social space where actors occupy positions that relate to each other (Bourdieu 1993; Wooten & Hoffman 2008). Specifically, I look at Poland's position within the life cycle of a norm following Finnemore and Sikkink's (1998) framework. For this step I operationalize the framework in the context of efforts for setting and operationalizing net-zero, or a climate neutrality target. Hence, I look at what the advancement of a global norm means at a national level. Hereby, a framework from international relations is connected with established sociological concepts providing descriptions suited to a national level.

Empirically, I present the position of Poland within the global life cycle of the net-zero norm, by zooming into the national context based on a perspective sketched by insiders of that field in interviews and during a mapping process. I demonstrate how the decarbonization field in Poland is organized, and what actors and factors are responsible for accelerating or slowing down the transition toward a net-zero future, showing distinct groups of *norm entrepreneurs*: proponents of change, and *norm antipreneurs*: defenders of the status quo.

While the general perspective on the limited decarbonization efforts in Poland has been broadly researched the methods, 15 interviews and a participatory mapping exercise, both

undertaken with insiders of the decarbonization field provide a novel perspective. As for now limited work is based on broad interactions with insiders in the field and the use of two various methods and a diverse range of interviewees, supported by literature and the authors' insiders perspective helped to triangulate the understanding of the field.

From the theoretical side, this article tests what the life cycle of a global norm, as proposed by Finnemore and Sikkink (1998), means within the context of a net-zero norm and at a national level. Additionally, sociological concepts are utilised to strengthen the theoretical tools.

Within this article, I hypothesise that the norm of endorsing a net-zero future, that has globally *cascaded* (Coppenolle 2023; Kulik 2023) has decisively *emerged* in Poland among *norm entrepreneurs*. I claim that a *tipping point* and slow *cascadisation* process is ongoing but without clear signs of an acceleration. The norm has, based on the findings, not yet reached the last *internalization* stage in which it becomes taken-for-granted.

This article is organized as follows. First, Finnemore & Sikkink's life cycle of a norm (1998) framework is presented. Hereby connections between sociological and foreign international relations literature are underlined. Secondly, an overview of climate and energy policy in Poland is presented, based on existing literature. In the next step, research methods are shown. The findings section presents the results of the interviews and participatory mapping process, while the discussion places the results back within the theoretical context, showcasing limitations and potential further research.

Theoretical Background

As climate change requires collective action, states possessing the (potential) power to regulate play a critical role (Stoddart, Tindall & Greenfield 2012). This process requires rules, forming the incentive structure of a society (North 1994). Rules are by political scientists often recognized as norms and by sociologists as "institutions" (Finnemore & Sikkink). Hereby I understand norms as "a relatively stable collection of practices and rules defining appropriate behavior for specific groups of actors in specific situations" (March & Olsen 1998: 948). Similarly, institutions are characterized by their regulative, normative and cognitive pillars determining the game's rules (Scott 2013).

My understanding of a norm is built upon Katzenstein's (1996) "standard of appropriate behavior for actors with a given identity" that can "discourage or forbid [but] also tolerate, encourage, or require" and place particular expectations (Sandholtz 2008; Wiener 2004). Within the context of achieving net-zero emissions, a similarity can be drawn, as reaching this state can be interpreted as a norm that expects stakeholders to follow a particular pattern of actions to get there. Moreover, such a norm is advocated (Keck & Sikkink 1998) in a competitive field (Florini 1996) where others can refer to or contest them (Krook & True 2010).

In 1998, Finnemore and Sikkink presented their approach to the life cycle of a norm. The idea of a norm's life cycle with its cascadization resembles the sociologically rooted concept of diffusion (Rogers 1962). The "life cycle of a norm" sketches a clear framework identifying steps taking place one after another. Finnemore and Sikkink's (1998) widely cited article presented a framework on how norms *emerge* (1), reaching a *tipping point*

within the community, after they broadly *cascade* (2) becoming *internalized* (3). Examples of utilizing this framework include debates on suffragettes, the norm on land mines or gender aspects (Krook & True 2010), but also several studies and references to climate policy (e.g., Acosta et al. 2019; Fry 2020; Dranicki 2022; Coppenolle et al. 2023; Sikkink 2024).

In the *norm emergence* (1) stage "norm entrepreneurs" attempt to convince a critical mass of states to adopt new norms with agents (actors) aiming to spread specific behavior. Those norm entrepreneurs "do not appear out of thin air" (Finnemore & Sikkink 1998: 896), being built by agents, often with the support of Transnational Advocacy Networks (TANs). This resembles DiMaggio and Powell's (1983) purpose-specific organizations and normative isomorphism within which members of organizations establish a common cognitive and occupational autonomy that may help with spreading ideas and practices. Those networks, having experience and influence, can leverage the position of a local norm entrepreneur (Keck & Sikkink 1998).

Examples of such purpose-specific organizations include NGOs such as Greenpeace (Finnemore & Sikkink 1998). More recently this includes other movements as Extinction Rebellion or Fridays for Future. Through such means isomorphism and diffusion occur by spreading ways of action and adopting similar strategies (Boxenbaum & Jonsson 2017; Colyvas & Jonsson 2011). Through international connections, lobbying and advocacy, media presence, or even civil disobedience (Heidrich & Nakonieczna-Bartosiewicz 2021) agents aim to secure the support of local state actors to endorse their norms and make them part of the broader agenda. Besides technical pressure, such interventions also aim to raise societal expectations, all playing a role in convincing stakeholders (Boxenbaum & Jonsson 2017). For norms to become more appealing, often vital morally, ethically or altruistically motivated concepts are raised (Nadelmann 1990). Hereby fighting for a norm can be defined through the sociological concept of coercive isomorphism (DiMaggio & Powell 1983), which explains how formal and informal pressures on organizations lead to shifts towards one organization more resembling others, or adopting a broader carried norm.

The prolonged action of norm entrepreneurs, including frontrunners, may lead to reaching a "tipping point," distinguishing the moment between the norm emergence and its further cascadization. At this point, a critical mass of actors adopts the norm, which may change quickly. In May 1997, only 60 states supported a ban on anti-personnel land mines, reaching 124 by December of that year (Finnemore & Sikkink 1998: 901). It has been hypothesized and shown that to "tip," at least one-quarter to one-third of states should adopt a norm (Khagram et al. 2002).

To progress to the norm cascadisation (2) stage, the norm should be (at least partially) institutionalized (Finnemore & Sikkink 1998: 900). Within a sociological context this can be understood as the process of implementing (embedding) a norm or rules of behavior (Goffman 2007) by which social processes, obligations, or actualities come to take on a rule-like status in social thought and action (Meyer & Rowan 1977: 341). At this stage, the norm gets adopted even without domestic pressure. Reasons for this may include potential international incentives, sanctions, identification with a particular group, peer pressure or a particular leader's approach (Finnemore & Sikkink 1998). This

theorizing greatly resembles DiMaggio & Powell's (1983) mimetic isomorphism in which organizations model themselves after other organizations. If not complying, the cost of becoming a laggard will grow through a loss of reputation, trust and credibility (Finnemore & Sikkink 1998).

The third stage is the internalization (3) of a norm. Here the norm receives a taken-for-granted status, building further on the embedding and rule-like status present within the cascadisation stage. This stage can be seen as one in which individuals adopt and internalize cultural values and norms, making them part of their belief system (Rokeach 1973). It involves the conscious and unconscious acceptance of norms and values of a group which become integrated into their own identity (ibid.). Within this stage the norm becomes powerful not only by having a rule-like status but also by being no longer questioned or controversial, becoming challenging to overthrow (Finnemore & Sikkink 1998). Risse et al. (1999) shows that endorsing a norm "not only expresses a belief but also creates an impetus for behavioral consent with the belief." While a taken-for-granted status would make a pathway towards a net-zero future within reach, this stage is far from achieved, as shown within the discussion section.

As in a typical framework, the norm advances smoothly in a one-way direction. In practice, the advancement is a complex process. Norms emerge in a contested space where they compete with other norms, interests and negotiated meanings (Acosta et al. 2019) with "norm antipreneurs" (Bloomfield & Scott 2016) being active. Simultaneously, norms are often associated with other normative ideas (Kelley 2008) forming "norm clusters" (Winston 2017), resonating with pre-existing cultural values (Checkel 1998). Consequently, completing the life cycle is not inevitable. The making of meaning is therefore a "messy" and "bloody" rather than a clean-cut process (Epstein 2008: 11).

Climate and Energy Policy in Poland: Existing Research

Climate and energy policy is largely created in the context of mitigating climate change, a challenge that if not managed will have catastrophic consequences (IPCC 2018). A form of declaring climate ambitions is setting a net-zero target, in which greenhouse gas emissions are balanced with absorption (IPCC 2024). A national net-zero target emerged in 2007 in Norway (regjeringen.no). This type of target, long remaining in a norm emergence phase "cascaded" within the EU and globally in 2019–2021 (European Council 2019; WWF 2019; Coppenolle et al. 2023; Kulik 2023). While Poland, after long negotiations (WWF 2019), endorsed the EU climate neutrality target by 2050, it stated that it will not reach this target by itself (European Council 2019)[1]. As of 2024 the target has still not been formally set in a national strategy or law.

While many internationally recognized norms were implemented without significant issues in Eastern Europe after 1989 (Zwingel 2012), climate policies lag. Poland is a country with the highest share of coal within the energy mix in Europe (Ember Climate

[1] Formally, the Conclusions state: "One Member State, at this stage, cannot commit to implement this objective as far as it is concerned, and the European Council will come back to this in June 2020" (European Council 2019). Among observers it was an open secret that this Member State is Poland. Due to the COVID-19 Pandemic this topic did not come back to the agenda.

2023), with a high energy intensity due to, i.a., heavy industry investments in the communist times (Pastukhova & Westphall 2020; Mrozowska et al. 2021). Literature suggests that such a system is maintained due to a high level of clientelism and politicization of state bureaucracies in Central-Eastern Europe (Levitsky & Way 2010), and the high penetration of political elites in the energy sector and vice versa (Ruszkowski 2018; Mrozowska et al. 2021).

The energy landscape and role of coal are deeply rooted in historical economic and political development. This has been present at least since the regaining of Polish independence after World War 1 and was profound during the communist times (Leszczyński 2013) when coal was called "black gold" and the motto "Poland stands on coal" played a crucial role in communication towards the society (Kuchler & Bridge 2018). Nowadays, defenders of the role of coal within the Polish energy sector repeatedly use the argument of national sovereignty (Szulecki et al. 2011; Kuchler & Bridge 2018; Żuk & Szulecki 2020).

Due to the high dependence on coal, a transformation is costly from political, economic and social perspectives (Mrozowska et al. 2021). Moreover, Poland stays behind its peers in the region regarding other transitions required for effective climate change mitigation, such as public transit, transport emissions or thermal insulation and heating (WiseEuropa 2019; Mattioli 2020). While several models (IPCC 2018; IEA 2023) show that OECD countries must quit coal by 2030, this is highly unlikely to happen in Poland. According to the Polish Energy Policy (Ministry of Climate and the Environment 2021), the role of coal will only gradually decline, and even within the newest governmental proposals including "additional measures," coal will remain present within the electricity sector well beyond 2030 (Ministry of Climate and the Environment 2024).

The evolution of Poland's climate and energy policy framework within the EU context has generated interest within the Polish scientific community, particularly regarding the structural tensions between climate objectives and the reality of the Polish energy sphere. Early analyses following EU accession deepened the understanding of institutional adaptations, with Michalski and Lelątko (2005) identifying path dependencies in energy governance that persist in contemporary debates. Implementation challenges of EU climate policies have been researched, revealing discrepancies between formal policy adoption and execution (Kasztelewicz 2011; Jeżowski 2011; Karaczun 2012; Wojtkowska-Łodej 2014), while Malucha (2013) and Sobolewski (2014) provided syntheses of policy constraints. More recently, Tomaszewski (2020) identified struggles regarding the Polish implementation of the European Green Deal, while Mrozowska et al. (2021) looked at the energy transformation from a political, economic and social perspective.

The challenges of implementation have recently been confirmed by Brodny et al. (2024) who measured structural challenges within climate and energy policy in Poland through policy performance metrics, revealing measurable but insufficient progress in emission reductions. Additionally, sector-specific studies, e.g., on coal-dependent regions, underscore the multidimensional character of energy transitions, with Korski et al. (2016) quantitatively demonstrating the economic lock-in effects of mining infrastructure, while Baran et al. (2018), Bukowski et al. (2018), and Dmochowska-Dudek and Wójcik (2022) map the barriers to a "just transition." Also, the financial sector and ESG aspects have been shown from a Polish perspective (Dmuchowski et al. 2023), highlighting the role of

the financial sector in (green) energy investments (Pyka & Nocoń 2021), which follows global developments within the financial sector with regard to monitoring and regulating financing green or sustainable assets vs. coal and other fossil-fuel-based technologies (see, e.g. PCAF 2022). Moreover, socio-political dimensions of energy transitions have also been the subject of research with Szulecki et al. (2011) and Żuk and Szulecki (2020) exposing critical differences in societal perceptions of transitions, particularly regarding renewable energy adoption and populist narratives.

While existing literature provides robust technical and political economy analyses, significant research gaps remain. In the Polish environmental sociology state of the art Tusznio et al. (2023), reveal them e.g., on the power of vested economic interests and how private and public spheres interact within energy transition governance. Additionally, the field lacks long-term studies of policy implementation cycles across changing political administrations, and systematic evaluations of participatory governance models in energy policymaking.

Methods

As the Polish climate and energy policy field is complex, understanding the position within the climate neutrality norm requires a deep understanding of the field. Having been an insider of the field at the time of research I considered myself as having an understanding of it However, this perspective has been verified and further supported by undertaking a literature review. Having had access to other insiders in the field I have decided to design my research around the perspectives of other insiders within that field, which has been done through interviews and participatory mapping.

In 2021 15 semi-structured interviews were made. Participants were selected to ensure a variety of viewpoints, from strong proponents to declared opponents of decarbonization measures. Invitations were sent through my network, familiarity with a particular person e.g., from publications or public meetings and through recommendations of previous interviewees. The interviewees included journalists, high-level (former) public servants, energy sector practitioners, a politician and members of the NGO and think-tank community (an anonymized list is shown in Appendix 1). The interviews included questions on the perception of the decarbonization field in Poland, stakeholders, a more personal interpretation of the field and an outlook on the future. After 15 interviews saturation was reached, as several viewpoints became repetitive and limited new data was collected. Nevertheless, a sample in qualitative studies will never be full and this forms a limitation of the research methods and used findings.

The interviews, of which recordings were made, were coded using MAXQDA. In the coding process, focus was put on determining factors having an impact on progressing or holding back decarbonization measures. Codes included, among others, “[historical] facts,” “critical players,” “risks,” “main barriers,” “bright spots,” “personal perception,” “looking further” or “other thoughts.”

Another method, undertaken after the interviews, in November 2021, was the participatory mapping technique. This exercise supplements the interviews, showcasing the relations

within the field. It also visualizes the main groups in the field, including the proponents and opponents of change. The exercise resulted in a common understanding of the decarbonization field at the time, as perceived by five insiders (see Figure 1 in the findings section). The mappers comprised a journalist, two NGO employees, and two think-tank members. Due to the difficulty of reaching out to actors opposing the transition, participants generally supported an ambitious energy transition in Poland, although not unconditionally, differing on the pace and means to be used.

Exercise-wise, the participants, as a group of five, were tasked to position stakeholders in Poland's decarbonization field, represented as post-its, on a sheet of paper with an X- and Y-axis. The X-axis is centered around the studied contentious field (Hoffman 1999) with regard to the approach towards decarbonization. The Y-axis, by following Battilana and Casciaro's (2021) idea of mapping power relations, referred to influence or power of actors within the field.[2] The mapping had a form of a facilitated two-hour focus group discussion in which the participants together negotiated the position of actors on the map. The most straightforward actors, such as major politicians, political parties and utilities, were provided by the exercise' facilitators, to provide momentum to the discussion, while several others were added by the mappers themselves. The mapping resulted in the negotiation and placement of over 70 actors. After the mapping process, the map was photographed and digitized by using Miro.

The rather supportive perspective towards decarbonization efforts by the mappers may have resulted in a skewed perspective of the field, forming a limitation of this research. The triangulation and overlap with findings from literature and interviews were a mean to mitigate this risk. Additionally, in line with critical cartography (Crampton 2009, while such a map does not objectively represent a given area, it does reproduce and represent aspects of power, values and social constructs of mappers, which I perceived as a critical value of the exercise.

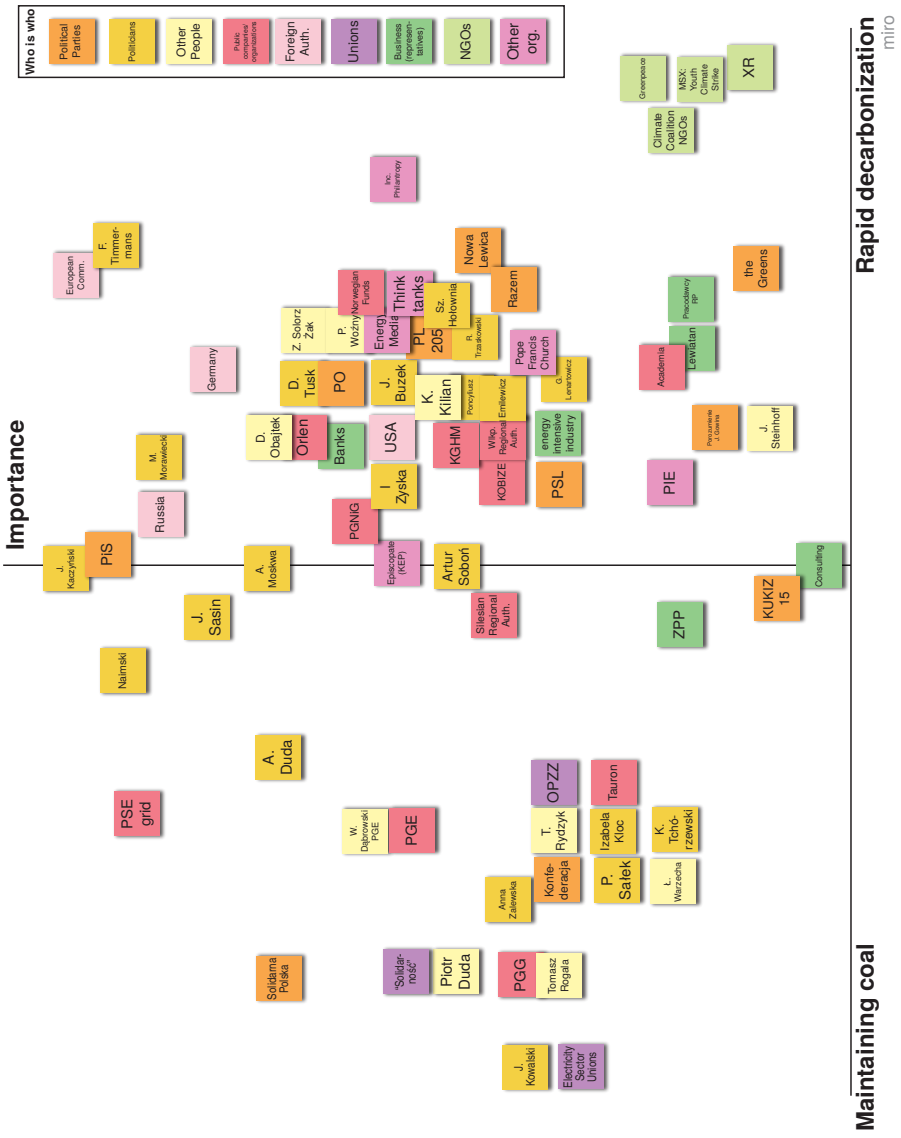
Findings

This section presents the result of interviews and the mapping within the context of Finnemore & Sikkink's life cycle of a norm framework. It indicates what actors and factors influence the current position of Poland within the framework, making the imbalance between norm entrepreneurs and norm antipreneurs visible. For further analysis two aspects must be considered.

Firstly, the findings are heavily focused on the electricity and mining sector, showcasing the political and social importance of it, as interpreted by the insiders of the field and explicitly confirmed (interview-1,6,9,13), a phenomena also visible in existing literature, as shown in the literature review. This happens even though the electricity sector is "the easiest to decarbonize" (interview-4), and it was widely supported that climate policy should be part of a broader modernization strategy (interview-1,9,10,11), especially since Poland lags behind its peers in decarbonizing other sectors too (interview-1,4,9,10,12,13,15).

[2] The broader methodology of the mapping has been presented in a paper in review of which first draft was presented on EGOS 22 (Kulik, Pawlak, Hermes & Koistinen 2022).

Figure 1
The decarbonization field in Poland



Secondly, the center of the field, as interpreted by its insiders on Figure 1 can be misleading. It suggests that more actors are in favor rather than opposing a rapid decarbonization. Several stakeholders using climate denialistic arguments were placed around the center of the map. This included the most influential actor on the map: Jarosław Kaczyński, the head of the largest conservative-right party, then in power. While not being very active within the field, strong connections with other actors on the left side of the map, including other politicians, unions and utilities made his position so influential. This indicates that at the time of research, the "centre" of the debate was far from a consensus on undertaking ambitious climate measures.

Norm Emergence

Looking at the map (Figure 1) it is striking that the influence of typical norm entrepreneurs was perceived as low. This includes actors proposing policies in line with the scientific climate consensus, notably NGOs. Moreover, the positioning of the mainstream represented by liberal or pro-European opposition Parties (as of 2021) and businesses is modest. At the same time, outspoken proponents of change are often linked with foreign entities such as global NGOs and philanthropic organizations: Transnational Advocacy Networks (TANs).

Among norm entrepreneurs in Poland only one was considered very influential: the European Commission, assessed by the mappers and two interviewees (interview-1,8) as being at the same level of influence as Jarosław Kaczyński. However, even though placed on the far right of the spectrum, its policy does not fully align with a 1.5-degree target (Climate Analytics, 2024). This showcases that the debate in Poland is far from endorsing ambitious climate policies. This becomes evident when seeing Extinction Rebellion's (XR) position: an actor having a whatever it takes approach, whose influence has been assessed as low. This unfavorable position from the perspective of proposing ambitious climate policies is rooted in the role of coal in Poland's economy, politics and society, as raised in several interviews (1,6,7,9,10,15).

From the interviews the phenomena of norm entrepreneurs operating in a contested space (Acosta et al. 2019) where they resonate with pre-existing values (Checkel 1998) and "norm antipreneurs" (Bloomfield & Scott 2016) is clear. On the left side of the map, a group which I named the "defenders of the status quo" or "*norm antipreneurs*" is visible. This part of the field is defined on the extreme side by such actors as coal mining unions and a populistic-right MP Janusz Kowalski, as earlier confirmed in an interview (interview-9).

A prime example of an actor on this side of the map is the influential former plenipotentiary of energy security, Piotr Naimski (see the upper left in Figure 1). Naimski, believing that coal power will remain important for the next 30 years (Żuk & Szulecki 2020) has been involved in critical energy security projects, such as developing the nuclear project, constructing an LNG port, or a new gas pipeline from Scandinavia (the Baltic Pipe). Interestingly, those projects only include large investments in conventional energy technologies, fitting into the perspective present by more conservative decision makers, as explained by one of the interviewees (interview-1).

The mapping process, including the communication between the mappers, revealed connections between politicians, coal-centered unions, and state-controlled utilities, described in an interview as "a melting pot of political and economic interests" (interview-9), which has been confirmed by other interviewees (interview- 5,12,13). One of the interviewees indicated that the well-paid positions within state-owned mining and energy companies are "political prey" (interview-10). This is also an example of the politicization of the sector in which the state has a two-sided position: "From the one side it is the regulator, while from the other side, it is the owner of utilities that are ruled by politicians" (interview-12). One of the interviewees even called this informal network a "coal mafia" that secures the delivery of goods and services to the mines and utilities (undisclosed interview). However, it is not so that "miners dream about mining their whole life, and especially not about their children doing so" (interview-13). Nevertheless, miners, and especially mining unions and its prominent members, have an existential interest in defending the status quo, and hence are the main blockers of more progressive policy as has been stressed in several interviews (4,5,9,10,12,13), as well as by the mappers.

Resisting climate action can be part of a set of values and a cultural clash, similar to the US (Selby 2014). This is visible in the approach of, for example, Łukasz Warzecha, a libertarian columnist, or Janusz Kowalski, a far-right populistic politician who uses climate-denialistic arguments as can be found in the analysis of their opinions (*Nauka o Klimacie* 2019; Oko.Press 2024). Also, one of the interviewees indicated that climate mitigation measures are centred around a "religion of CO_2" (interview-8), and the person also undermined the scientific climate consensus by indicating that the CO_2 measurements are faulty. Moreover, interviewee 8 also used more economic and geopolitical arguments showcasing that EU climate policy is a tool to push Western, notably German, technologies. On this note, however, several more moderate, or even progressively-oriented interviewees acknowledged that climate policy remains, besides its direct purpose, a vital tool for pushing industrial technologies of major European economies (interview-1,6,9). Nevertheless, other interviewees indicated that Poland is not utilizing its opportunities in this field, having a passive approach (interview-4,10,13).

A Tipping Point and Potential Cascadization

While the norm emergence stage has shown that the position of norm antipreneurs is strong, insiders noticed a shift in the last several years, potentially indicating a tipping point and cascadisation of the norm of net-zero ambitions.

One of the interviewees, an expert and long-term high-level manager in an energy utility said: "I remember that 10–12 years ago there was no discussion about energy and climate policy in Poland: it only started several years ago, and now this topic is present in large newspapers and people and businesses are interested in it [and also] definitely the activity of NGOs and think-tanks is visible" (interview-6). A conservative-oriented expert added "ten years ago I was one of the few in my bubble that agreed with the scientific consensus on climate change" (interview-1). This mindset was confirmed by another interviewee from another utility who stated: "starting from 2016 change was

becoming visible and COP 24, organized in Katowice in 2018, marked a shift: suddenly the topic was everywhere" (interview-5). The person added that "a decade ago for many employees within the sector it was hard to understand why Western utilities were moving away from coal assets" (interview-5). The shift of the dominant paradigm was also raised in other interviews (1,4,9,10,13) with a punch line of "the time of coal mining passed away" (interview-4).

In this shift, the decreasing costs of renewables have been mentioned as a driving factor (interview-3,6,10). Also, the financial sector, represented as "banks" on the map, was considered as a major actor within the Polish field (interview-4,5). This is due to the move of the sector to decrease its exposure to assets in the fossil industry such as by measuring the emission intensity through the PCAF (2022) standard and coalitions such as the Net Zero Banking Alliance (UNEPFI 2025). Consequently, new coal developments became non-bankable and non-insurable in the European Union, which led to halting the construction of the "Ostrołęka C" coal-fired power plant, as admitted by its developer, a state-owned utility (Enea 2020). Moreover, according to several interviewees, the broader social interest and external pressures of inter-governmental organizations (especially the EU), countries, and companies greening their agenda, in line with the perspective of Environmental, Social and Governance (ESG) aspects adds momentum (interview-1,4,5,9).

The perceived change among employees of utilities can be part of a generation shift and the composition of staff. One of the interviewees (interview-10) highlighted that while the political agenda might still be dominated by securing the role of coal, office staff and managerial members of utilities are based in the largest Polish cities. As the population of large cities in Poland tends to have more liberal or left-wing leaning perspectives on social-economic and cultural aspects (ESSPL 2025), this might be represented in their perceptions. A hint supporting this was that another interviewee was surprised that while managers of utilities defended status-quo-like positions in public, they had a more progressive approach in private conversations (interview-14).

At the level of Polish society, the growing number of energy prosumers generating electricity through photovoltaic systems, with over 1.5 million households as for early 2025 (ARE 2025) has been identified (interview-3,5,6,7,10) as one of the potential sources and drivers for further change. A shift is also visible in the interest in climate change in the Polish Internet, with the term gradually becoming more popular, and such terms as "climate disaster" (Polish: *katastrofa klimatyczna*) used by climate movements appear only since 2019, the year of massive climate strikes worldwide (Google Trends 2024).

Together with the society, although causation cannot be determined here, political parties have moved, with climate and energy issues becoming a more prominent topic (interview-6). An example is the center-right Civic Platform [Platforma Obywatelska], in power 2007–2015 and again since 2023, which early on challenged the climate consensus and EU targets (interview-10). As an example, Donald Tusk, the Prime Minister in 2013, forced the construction of the "Opole" coal power plant despite a poor economic lookout, resulting in the departure of Krzysztof Kilian, the CEO of the utility PGE, and his personal friend (interview-4; CIRE.pl). Nowadays the party, at least declaratively, supports a transition (Platforma Obywatelska 2023: 16) and in late 2021 the party has been placed on the centre-right of the map.

The general discourse among the right-conservative side is also changing, of which an example is the "Green Conservatism" voice of Klub Jagielloński (2024). The "Polish deal" prepared by the conservative-right PiS government in 2021 highlights the development of photovoltaics, or offshore wind and nuclear power plants, while at the same time hiding the existing role of coal (Polski Ład 2021).

Norm Internalization

While among influential stakeholders a shift is visible, taking the norm of reaching net-zero as a taken-for-granted standpoint is only endorsed by actors positioned to the far right of the map. This includes typical norm entrepreneurs, as mentioned within the norm emergence section. As only few substantial actors follow the scientific position on climate change in actual implementation, and the norm is still cascading throughout Poland, no consensus on a net-zero norm, and hence: its internalization, can be found. As the norm is not fully endorsed or implemented, it cannot be perceived as being taken-for-granted. This perspective was also not becoming prominent in the outlooks of interviewees. While one them (interview-6) mentioned that in the future, "we will not believe what kind of discussions we have held," the general perspective was that only a modest further shift will occur. It was stressed that probably the role of the state within the sector will remain important (interview-4,11), risking ongoing politicization and that we will rather follow other countries and general market developments (interview-2,4,5,6,7,9).

The lack of internalization is also visible through the approach of stakeholders, where such mechanisms as the European Trading Scheme (ETS) and pollutant emission standards are by mining groups portrayed as the biggest enemy (interview-13). Additionally, to become internalized, or taken-for-granted, the norm must be integrated in identity (Rokeach 1973), being no longer questioned or controversial (Finnemore & Sikkink 1998). On the ground, no clear pathway, worked out together with partners throughout the field, with clear indicators (interview-13) is to be found, and no major independent organisations monitoring the transition, such as Agora Energiewende in Germany function (interview-4). The internalization will also require a certain degree of trust, to be provided to such actors as local governments, cooperations and citizens (interview-4). A hint, provided by one of the high-level utility officers is that time to change the identity is required. While in Silesian cities we mostly observe modern office and industrial sites, the societal association remains coal-oriented (interview-5).

Discussion, Conclusion and Further Research

In this article, a zoom-in of the life cycle of the net-zero norm has been undertaken at the level of Poland, largely based on the understanding of this field by its insiders. Globally, the net-zero norm rapidly cascaded among states (Coppenolle et al. 2023; Net Zero Tracker 2024) with an overwhelming majority having set targets. However, at the level of a national case study, the picture is less straightforward. Hereby, based on the insiders' perspective

I provide an initial interpretation of how Poland's formal endorsement of a net-zero target at the EU level relates to the field within the country. Moreover, I discuss the theoretical implications. Lastly, I provide limitations and several hints for further research.

Looking at the setting of actors as portrayed by existing literature, the interviews and the mapping process it is visible that a *norm emergence* phase is already taking place in Poland. Several internal and external norm entrepreneurs have led to the emergence of the norm locally, including through the support of foreign networks (TANs). These findings relate to Finnemore and Sikkink's observations of various fields in the 1990s that such agents do not come "out of thin air" (1998: 896) and transnational organisations actively build or support local agents and influence the field through their prominence. This, however, partly confirms the voice of opponents of change, highlighting foreign influence within the field. An extreme example, also showing the deep-rooted distrust towards foreign entities, mentions "climate hysteria" fuelled by "leftist propaganda" introduced by elites plotting against Poland, with notable examples of Germans, Russians and, in more extreme cases: the Jews represented, e.g., by George Soros (Żuk, Szulecki 2020).

As apparent, proliferating norms clash with pre-existing cultural values (Checkel 1998). Clashing norms and values also include the ethos of coal and coal miners (Leszczyński 2013; Kuchler & Bridge 2018) which forms an important source of cultural and symbolic capital, by using Bourdieu's (1986) types of capital. Hereby it is visible that norms form a "norm cluster" (Winston 2017): climate mitigation measures, or its resistance, remain strongly associated with other parts of the political agenda. At the same time conservative values tend to go hand in hand with climate scepticism (Poortinga et al. 2011), with notable exceptions in Poland as the "Green Conservative" voice of Klub Jagielloński (2024). This is not unique to Poland and aligns with e.g., the UK and Denmark (Forchtner and Kølvraa 2015).

Concerning the tipping point and further cascadisation, the picture is not unequivocal. On the one side, several researched insiders mentioned COP24 (in late 2018) as a moment when a large group of stakeholders changed its approach, with the topic gradually becoming challenging to obey. Additionally, Brodny et al. (2024) indicated with numeric values that while the transition remains slow, progress in Poland is visible. At the same time, being in favour or against, positioning towards the topic became a must for stakeholders within and even outside the field, which partly confirms the theoretical hint that the norm should be institutionalised (Finnemore & Sikkink 1998: 900), having a rule-like status in social thought and action (Meyer & Rowan 1977: 341). An example is the position of the main political parties: PiS and PO that remains far from being in-line with scientific targets, but does not omit the topic and proposes its solutions that at least partly go in-line with existing trends, as shown in the findings section.

On the other side, in the researched period of 2021 and 2022 actors connected to the PiS-led government showed limited ambitions: several important "norm antipreneurs" were playing important roles within the political elite, and the goal of Poland reaching net zero was not perceived as an evident direction by most (leading) actors. The mapping process, supported by the interviews, shows that the power of those "antipreneurs" remains strong. At the same time the "norm entrepreneurs," while visible, are not yet able to dominate the discussion and their position in the mapping was assessed as low, contributing to the rather slow pace of decarbonization measures undertaken in Poland.

Despite political changes in late 2023, the new center-oriented government did not publicly endorse a Polish-specific net-zero target or coal phase-out date, although it has shown more ambitious pathways for decreasing greenhouse gas emissions (Ministry of Climate and the Environment 2024). All in all, I claim that a tipping point has been reached, but a broader cascadization of the norm is only starting and far from finalized. To grasp this, further research, e.g., based on numeric indicators could strengthen our understanding of a norm cascadization.

As the cascadization is not widespread and does not have a rule-like, taken-for-granted status: it remains questioned and controversial. Hence, following Finnemore & Sikkink (1998) it does not yet meet the prerequisites of an internalization, in which the norm becomes challenging to overthrow. As shown above, even if one would argue that the norm starts to show signs of becoming, at least partly, a rule, it is far from being fully established. Poland still does not have a national net-zero target, climate science is widely put in doubt and misunderstood among the general public (Eurobarometer 2025), and, as shown in the mapping, interviews and following analysis, is far from being depoliticized.

The question remains open whether ambitious climate mitigation measures will ever be fully internalized. Hereby it would be recommended to look back at the "internalization" only when certainty about the established and "cascaded" norm on net-zero in Poland will strengthen, e.g., in the form of a binding net-zero target that is actively and cross-politically operationalized.

With regard to this process we have to bear in mind that striving for environmental (and climate protection) is a complex and ongoing process, similar to the fight for equality of marginalized groups, being far from over. Hence, complete internalization and perception of net-zero compliant policies as taken-for-granted remains challenging and implementing new policies might not occur fully. As in historical examples e.g., the Equal Rights Amendment (Soule & Olzak 2004), the transition can remain partial, being neglected and not result in a complete translation of the new norm into existing systems (Acosta et al. 2019). The transition, including in Poland, occurs within a spiral model in which domestic support and opposition are mechanisms of change (Risse et al. 1999). As there are significant clashes between norms, values and interests, the process is characterized by ongoing pushbacks and politicization, making it "bloody" and "messy" (Epstein 2008) rather than smooth, as in a typical conceptual framework.

The findings also support the concept of DiMaggio and Powell's (1983) isomorphism, with it being visible within the Polish decarbonization field. The shift towards being more in favor of a transition is a sign of formal and informal pressures having an impact on organisations, which can be theorized as coercive isomorphism. At the same time, the growing uncertainty of maintaining the status quo and growing costs of non-compliance impact the positioning towards the issue through imitating others, by at least formally endorsing the norm, being a sign of mimetic isomorphism. Lastly, signs of normative isomorphism are also visible, as professions bring change to the field. Examples include the wider acceptance of the scientific climate consensus, understanding the financial position of maintaining coal vs. decreasing costs of renewable energy sources and the fact that among the mid-level and leadership of utilities people from the largest, more liberally-oriented,

cities are overrepresented, having an impact on day-to-day decision-making, or at least the perception of those decisions.

Regarding the main conceptual framework, Finnemore and Sikkink's life cycle of a norm can be used not only for understanding the global net-zero norm (see: Coppenolle et al. 2023; Kulik 2023). This paper has shown that while analyzing climate policy (net zero targets) at a global level, the same framework can be brought to a national level to better understand the position of a particular country. Additionally, the study has presented links between international relations and sociology with the life cycle of a norm framework aligning with sociological literature, providing insights on how the "bloody" (Epstein 2008) processes look like. This study has also shown that the model can be applied to assess the state of play within a national context.

A limitation that becomes visible in this context is the lack of clear boundaries determining when the critical moment of transition between the stages happens. One might interpret that Poland passed the tipping point and that a (slow) cascadization of the norm occurs, while others would state the norm is still in the emergence phase. Finnemore and Sikkink's hint regarding a quarter to one-third of states needed for a norm to cascade remains hard to apply in the context of an ambiguous number of stakeholders and a non-straightforward approach towards the issue. While the plain setting of a target or supporting a particular regulation can be measured, the approach of a specific actor in practice cannot be easily ranked.

This applicability issue follows a well-acknowledged concern within institutional theories, in which more attention must be paid to conforming the work with practice (Boxenbaum & Jonsson 2017). In its defence, as a general framework, it does not provide finite answers on correlation and causation, but rather supports the general understanding of the field with this effect being reached. For this, Finnemore and Sikkink's framework remains convincing, making the research of a broad array of case studies possible and providing a clear setting.

This paper invites further research of particular parts of the economy with regard to its approach to decarbonization, including the role of the financial sector. Moreover, comparative analysis with other countries or a more precise setting of what the specific stages mean on the ground of net-zero policy could be further developed. Regarding research methods, numerical, statistical or discourse analysis could help with providing more detailed and precise results. Lastly, considering the political shift in Poland in late 2023, the research could be repeated to map a potential shift among actors within the field.

Anonymised list of interviews

interview-1	(formal) governmental representative
interview-2	(formal) governmental representative
interview-3	(formal) governmental representative
interview-4	energy sector expert
interview-5	energy sector expert
interview-6	energy sector expert
interview-7	energy sector expert
interview-8	energy sector expert
interview-9	journalist

interview-10 journalist
interview-11 NGO representative
interview-12 NGO representative
interview-13 politician
interview-14 think-tank expert
interview-15 think-tank expert

References

Acosta, M., Bommel van, S., Wessel van, M., Ampaire, E. L., Jassogne, L., Feindt, P. 2019. Discursive translations of gender mainstreaming norms: The case of agricultural and climate change policies in Uganda, *Women's Studies International Forum* 74: 9–19.

Baran, J., Lewandowsky, P., Szpor, A., Witajewski-Baltvilks, J., & Szpor, A. 2018. Coal transition in Poland: Options for a fair and feasible transition for the polish coal sector. IDDRI and Climate Strategies.

Battilana, J., & Casciaro, T. 2021. *Power for All: How it Really Works and why It's Everyone's Business*. New York: Simon and Schuster.

Bloomfield, A., Scott, S. V. 2016. *Norm Antipreneurs in World Politics in Norm Antipreneurs and the Politics of Resistance to Global Normative Change*. London: Routledge.

Bourdieu, P. 1986. The forms of capital, in: J. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood, pp. 241–258.

Bourdieu, P. 1993. *The Field of Cultural Production: Essays on Art and Literature*. New York: Columbia University Press.

Boxenbaum, E., & Jonsson, S. 2017. Isomorphism, Diffusion and Decoupling: Concept Evolution and Theoretical Challenges, in: R. Greenwood, C. Oliver, T. B. Lawrence, & R. E. Meyer (Eds.), *The SAGE Handbook of Organizational Institutionalism* (2nd ed.). London: SAGE Publications, pp. 77–101.

Brodny, J., Tutak, J., Grebski, W. 2024. Empirical Assessment of the Efficiency of Poland's Energy Transition Process in the Context of Implementing the European Union's Energy Policy, *Energies 17*(11): 2689. https://doi.org/10.3390/en17112689

Bukowski, M., Śniegocki, A., Wetmańska, Z. 2018. Od restrukturyzacji do trwałego rozwoju. Przypadek Górnego Śląska. Raport WiseEuropa dla Fundacji WWF Polska, Warszawa, Polska, source: https://wise-europa.eu/2018/11/29/od-restrukturyzacji-do-trwalego-rozwoju-przypadek-gornego-slaska/, access: 1. 01.2024.

Checkel, J. T. 1998. The Constructivist turn in international relations theory, *World Politics 50*(2): 324–348.

Colyvas, J. A., & Jonsson, S. 2011. Ubiquity and legitimacy: Disentangling diffusion and institutionalization, *Sociological Theor 29*(1): 27–53.

Coppenolle van, H., Blondeel, M., Graaf van de, T. (2023). Reframing the climate debate: The origins and diffusion of net zero pledges, *Global Policy 14*(1): 48–60.

Cortell, A. P., & Davis, J. W. 2005. When norms clash: international norms, domestic practices, and Japan's internalization of the GATT/WTO, *Review of International Studies 31*(1): 3–25.

Crampton, J. W. 2009. Cartography: performative, participatory, political, *Progress in Human Geography 33*(6): 840–848.

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, *American Sociological Review 4*: 147–160.

Dmochowska-Dudek, K., Wójcik, M. 2022. Socio-Economic Resilience of Poland's Lignite Regions, *Energies 15*(14): 4966. https://doi.org/10.3390/en15144966

Dmuchowski, P., Dmuchowski, W., Baczewska-Dąbrowska, A. H., & Gworek, B. 2023. Environmental, social, and governance (ESG) model; impacts and sustainable investment—Global trends and Poland's perspective, *Journal of Environmental Management* 329: 117023.

Dośpiał-Borysiak, K. 2013. Polska polityka klimatyczna — analiza czynników politycznych, społecznych i ekonomicznych, *Kwartalnik Naukowy OAP UW "e-Politikon"* 7: 108–139.

Dranicki, T. 2022. Land mines, climate change and norms. What are the limitations of M. Finnemore and K. Sikkink's "life cycle of norms"?, *Alcumena 2*(10): 25–37.

Epstein, C. 2008. *The Power of Words in International Relation*. Cambridge, MA: MIT Press.

Finnemore, M., & Sikkink, K. 1998. International Norm Dynamics and Political Change, *International Organization 52*(4): 887–917.

Florini, A. 1996. The evolution of international norms, *International Studies Quarterly 4*(3): 363–389.
Forchtner, B., & Kølvraa, C. 2015. The nature of nationalism: Populist radical right parties on countryside and climate, *Nationalism and Ethnic Politics 21*(4): 427–446.
Fry, J. E. 2020. Networks in the Norm Life Cycle and the Diffusion of Environmental Norms. PhD dissertation, University of South Florida.
Goffman, E. 2007. *Asylums Essays on the Social Situation of Mental Patients and Other Inmate* (1st Edition First Published 2007). New York: Routledge. https://doi.org/10.4324/9781351327763
Heidrich, D., Nakonieczna-Bartosiewicz, J. 2021. Young Activists as International Norm Entrepreneurs: A Case Study of Greta Thunberg's Campaigning on Climate Change in Europe and Beyond, *Studia Europejskie 2*(82): 117–152.
Hoffman, A. J. 1999. Institutional evolution and change: Environmentalism and the US chemical industry *Academy of Management Journal 42*(4): 351–371.
IPCC. 2018. Summary for Policymakers. In: Global warming of 1.5°C, in Press, source: https://www.ipcc.ch/sr15/, accessed: 10.11.2024.
IPCC, Intergovernmental Panel on Climate Change. 2024. Sixth Assessment Report: Frequently Asked Questions. source: https://www.ipcc.ch/report/ar6/wg3/downloads/faqs/IPCC_AR6_WGIII_FAQ_Chapter_01.pdf, accessed: 10.11.2024.
Jeżowski, P. 2011. Polityka klimatyczna UE a rozwój polskiej energetyki konwencjonalnej. Kwartalnik Kolegium Ekonomiczno-Społecznego, *Studia i Prace* 2: 137–168.
Karaczun, Z. M. 2012. Polska polityka klimatyczna. Próba analizy, *Studia BAS* 1: 85–108.
Kasztelewicz, Z. 2011. Wpływ polityki klimatycznej UE na górnictwo i energetykę Polski, *Zeszyty Naukowe Instytutu Gospodarki Surowcami Mineralnymi i Energią PAN* 81: 147–163.
Katzenstein, P. J. 1996. *Collective Identity in a Democratic Community. In The Culture of National Security: Norms and Identity in World Politics*. New York: Columbia University Press, pp. 357–399.
Keck, M. E., & Sikkink, K. 1998. *Activists Beyond Borders*. Ithaca, NY: Cornell University Press.
Kelley, J. 2008. Assessing the complex evolution of norms: The rise of international election monitoring, *International Organization 62*(2): 221–255. https://doi.org/10.1017/S0020818308080089
Khagram, S., Riker, J. V., Sikkink, K. 2002. *Restructuring World Politics: Transnational Movements, Networks and Norms*. Minneapolis, MN: University of Minnesota Press.
Korski, J., Tobór-Osadnik, K., Wyganowska, M. 2016. Reasons of Problems of the Polish Hard Coal Mining in Connection with Restructuring Changes in the Period 1988–2014. *Resource Policy* 48: 25–31.
Krook, M. L., True, J. 2010. Rethinking the life cycles of international norms: The United Nations and the global promotion of gender equality, *European Journal of International Relations 18*(1): 103–127.
Kuchler, M., & Bridge, G. 2018. Down the black hole: Sustaining national socio-technical imaginaries of coal in Poland, *Energy Research and Social Science* 41: 136–147. https://doi.org/10.1016/j.erss.2018.04.014
Kulik, O. 2023. Climate neutrality targets from a norm analysis perspective with a case study of Poland, as presented as a first draft at the New Institutional Workshop (NIW) 2023 in Toruń, A final paper is currently in advanced review elsewhere.
Kulik, O., Pawlak, M., Hermes, J., Koistinen, K. 2022. Mapping Poland's decarbonization field: a visual tool for uncovering the organization of a field, as presented at the EGOS conference 2022 in Vienna. A final paper is currently in review elsewhere.
Leszczyński, A. 2013. Skok w nowoczesność. Polityka wzrostu w krajach peryferyjnych 1943–1980, *Krytyka Polityczna Press*. ISBN: 9788363855291
Levitsky, S., & Way, L. A. 2010. *Competitive Authoritarianism: Hybrid Regimes after the Cold War*. Cambridge: Cambridge University Press.
Malucha, M. 2013. Europejska Polityka Klimatyczna. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu no. 281: 95–102.
March, J. G., Olsen, J. P. 1998. The institutional dynamics of international political orders, *International Organization 52*(4): 943–969.
Meyer, J. W., & Rowan, B. 1977. Institutionalized Organizations: Formal Structure as Myth and Ceremony, *American Journal of Sociology 8*(2): 340–363.
Michalski, D., & Lelątko, P. 2005. Determinanty sukcesu wspólnotowego rynku emisji dwutlenku węgla — pierwsze doświadczenia, *Wspólnoty Europejskie 6*(163): 31–40.
Mrozowska, S.; Wendt, J.A.; Tomaszewski, K. 2021. The Challenges of Poland's Energy Transition, *Energies* 14: 8165.
Nadelmann, E.A. 1990. Global Prohibition Regimes: The Evolution of Norms in International Society, *International Organization 44*(4): 482–516.
North, D. C. 1994. Economic performance through time, *The American Economic Review 84*(3): 359–368.

Oliver, C. 1991. Strategic Responses to Institutional Processes, *Academy of Management Review* 1: 145–179.
Pastukhova, M., Westphal, K. 2020. Governing the Global Energy Transformation, in: M. Hafner, S. Tagliapietra, (eds.), *The Geopolitics of the Global Energy Transition. Lecture Notes in Energy*, vol. 73. Cham: Springer.
Poortinga, W., Spence, A., Whitmarsh, L., Capstick, S., & Pidgeon, N. F. 2011. Uncertain climate: An investigation into public scepticism about anthropogenic climate change, *Global Environmental Change 21*(3): 1015–1024.
Pyka, I., & Nocoń, A. 2021. Responsible lending policy of green investments in the energy sector in Poland, *Energies 14*(21): 7298.
Risse, T., Ropp, S., & Sikkink, K. (Eds.). 1999. The Power of Human Rights: International Norms and Domestic Change, *Cambridge Studies in International Relations*. Cambridge: Cambridge University Press.
Rogers, E. M. 1962. *Diffusion of Innovations*. Free Press of Glencoe.
Rokeach, M. 1973. *The Nature of Human Values*. New York: Free Press.
Ruszkowski, P. 2018. Polityka energetyczna a grupy interesów, *Energetyka — Społeczeństwo — Polityka 7*(1): 23–37.
Sandholtz, W. 2008. Dynamics of international norm change, *European Journal of International Relations 14*(1): 101–131.
Scott, W. R. 2013. *Institutions and Organizations: Ideas, Interests, and Identities*. London: Sage Publications.
Selby, J. 2014. Positivist Climate Conflict Research: A Critique, *Geopolitics 19*(4): 829–856. https://doi.org/10.1080/14650045.2014.964865
Sikkink, K. 2024. How International Relations Theory on Norm Cascades Can Inform the Politics of Climate Change. *PS: Political Science & Politics 57*(1): 36–39. doi: 10.1017/S1049096523000380
Sobolewski, M. 2014. Nowe ramy unijnej polityki klimatyczno-energetycznej, *Analizy BAS* 16: 1–6.
Soule, S. A., & Olzak, S. 2004. When Do Movements Matter? The Politics of Contingency and the Equal Rights Amendment, *American Sociological Review 69*(4): 473–497.
Stoddart, M. C. J., Tindall, D. B., Greenfield, K. L. 2012. "Governments have the Power"? Interpretations of Climate Change Responsibility and Solutions Among Canadian Environmentalists, *Organization & Environment 25*(1): 39–58
Szulecki, K., Pattberg, P. H., & Biermann, F. 2011. Explaining variation in the effectiveness of transnational energy partnerships, *Governance 24*(4): 713–736.
Tereszkiewicz, F. 2016. Partie antyunijne a działania zewnętrzne UE, in: M. Musiał-Karg (Ed.), *Bezpieczeństwo Europy i Unii Europejskiej w czasach kryzysu*. Poznań: Wydawnictwo Naukowe WNPiD UAM, pp. 133–146.
Tomaszewski, K. 2020. The Polish Road to the new European Green Deal—challenges and threats to the national energy policy, *Polityka Energetyczna—Energy Policy Journal 23*(2): 5–18.
Tusznio, J., Matczak, P., Choryński, A., Rechciński, M., Niedziałkowski, K. 2023. Rising to the Challenge? The State of the Art and Future Research Directions of Polish Environmental Sociology, *Polish Sociological Review* 1(221).
Wiener, A. 2004. Contested compliance: Interventions on the normative structure of world politics, *European Journal of International Relations* 2: 189–234.
Wiener, A., & Puetter, U. 2009. The Quality of Norms is What Actors Make of It: Critical Constructivist Research on Norms, *Journal of International Law and International Relations 5*(1): 1–16.
Winston, C. 2017. Norm structure, diffusion, and evolution: A conceptual approach, *European Journal of International Relations 24*(3): 638–657.
Wojtkowska-Łodej, G. 2014. Wyzwania klimatyczne i energetyczne a polityka Unii Europejskiej, *Polityka Energetyczna 17*(2): 39–52.
Wooten, M., & Hoffman, A. J. 2008. Organizational Fields: Past, present and future, in: *The Sage Handbook of Organizational Institutionalism*. London: Sage, pp. 130–147.
Zwingel, S. 2012. How do norms travel? Theorizing International Women's Rights in Transnational Perspective, *International Studies Quarterly 56*(1): 115–129.
Żuk, P., Szulecki, P. 2020. Unpacking the right-populist threat to climate action: Poland's pro-governmental media on energy transition and climate change, *Energy Research & Social Science* 66: 101485.

Internet and news sources

ARE. 2025. Informacja Statystyczna o energii elektrycznej, biuletyn miesięczny, styczeń 2025, source: https://www.are.waw.pl/oferta/wydawnictwa#informacja-statystyczna-o-energii-elektrycznej, access: 14.03.2025.

CIRE.PL. 2013. Krzysztof Kilian zrezygnował z funkcji prezesa PGE, source: https://www.cire.pl/artykuly/serwis-informacyjny-cire-24/83317-krzysztof-kilian-zrezygnowal-z-funkcji-prezesa-pges, access: 10.11.2024.
Ember Climate. 2023. Poland, source: https://ember-climate.org/countries-and-regions/countries/poland/, access: 09.09.2023.
Enea. 2020. Raport bieżący nr 5/2020 "Zawieszenie prac w ramach projektu Ostrołęka C," source: https://ir.enea.pl/pr/485525/zawieszenie-prac-w-ramach-projektu-ostroleka-c, access: 12.03.2025.
ESSPL. 2025. European Social Survey [Poland], source: https://esspl.shinyapps.io/ess-webapp/, access: 10.03.2025.
Eurobarometer. 2025. European citizens' knowledge and attitudes towards science and technology, source: https://europa.eu/eurobarometer/surveys/detail/3227, access: 12.03.2025.
European Council. 2019, December 12. Conclusions. https://www.consilium.europa.eu/media/41768/12-euco-final-conclusions-en.pdf
Google Trends. 2024. Trends, source: https://trends.google.com/trends/explore?date=all&geo=PL&q=zmiana%20klimatu&hl=en, access: 10.11.2024.
IEA. 2023. Net Zero Roadmap: A Global Pathway to Keep the 1.5°C Goal in Reach, 2023 update, source: https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach, access: 30.06.2024.
Klub Jagielloński. 2024. Zielony Konserwatyzm, source: https://klubjagiellonski.pl/temat/zielony-konserwatyzm/, access: 1.01.2024.
Mattioli, G. 2020, source: https://twitter.com/giulio_mattioli/status/1327181529919987712, *Twitter thread compiling sources on the growing emissions, especially in the transport sector in Poland*.
Ministry of Climate and Environment. 2021. Polityka energetyczna Polski do 2040 r., source: https://www.gov.pl/web/klimat/polityka-energetyczna-polski, access: 09.09.2023.
Ministry of Climate and the Environment. 2024. Krajowy plan na rzecz energii i klimatu, Scenariusz WEM, source: https://www.gov.pl/web/klimat/projekt-krajowego-planu-w-dziedzinie-energii-i-klimatu-do-2030-r–wersja-do-konsultacji-publicznych-z-102024-r, access: 10.11.2024.
Nauka o klimacie. 2019. Warzecha od rzeczy w do rzeczy, source: https://naukaoklimacie.pl/aktualnosci/warzecha-od-rzeczy-w-do-rzeczy-369, access: 23.02.2025.
Net Zero Tracker. 2024. Data Explorer, source: https://zerotracker.net/, access: 30.06.2024.
OKO.press. 2024. Janusz Kowalski: „Wielkie koncerny zarabiają na klimatycznej propagandzie". Sprawdzamy, source: https://oko.press/janusz-kowalski-koncerny-zarabiaja-na-klimatycznej-propagandzie-sprawdzamy, access: 23.02.2025.
PCAF 2022. Financed Emissions 2nd edition, source: https://carbonaccountingfinancials.com/en/standard#the-global-ghg-accounting-and-reporting-standard-for-the-financial-industry, access: 12.03.2025.
Platforma Obywatelska. 2023. 100 konkretów na pierwsze 100 dni rządów, source: https://platforma.org/upload/document/201/attachments/413/100%20konkretow-pdf.pdf, access: 10.11.2024.
Polski Ład. 2021, Polski Ład, source: https://www.gov.pl/web/polski-lad, access: 09.09.2023.
Regjeringen.no. 2007. Tale til Arbeiderpartiets landsmøte 2007, source: https://www.regjeringen.no/no/dokumentarkiv/stoltenberg-ii/smk/taler-og-artikler/2007/det-norske-arbeiderpartis-61-ordinare-la/id463749/, access: 10.11.2022.
UNEPFI. 2025. Net Zero Banking Alliance, source: https://www.unepfi.org/net-zero-banking/, access: 10.03.2025.
WiseEuropa. 2019. *Nowe otwarcie Polska na drodze do zeroemisyjnej gospodarki*, source: https://wise-europa.eu/wp-content/uploads/2019/03/Nowe_otwarcie_Polska_zeroemisyjna.pdf, access: 11.11.2022.
WWF. 2019. *EU net zero climate goal: momentum reduced to a footnote*, source: https://www.wwf.eu/?348893/EU-net-zero-climate-goal-momentum-reduced-to-a-footnote, access: 20.07.2024.
WWF. 2020. *Zeroemisyjna Polska 2050*. Source: https://www.wwf.pl/sites/default/files/inline-files/Raport_Zeroemisyjna_2050.pdf, access: 7.11.2024.

Biographical Note:

Oskar Kulik is a PhD candidate at the University of Warsaw (Poland). His focus covers climate policy analysis at both global and national levels. Next to his academic work, he works as a practitioner, now as a civil servant in the Netherlands, having over 10 years of experience in (inter-) governmental organisations, NGOs and corporations.

ORCID iD: 0000-0003-3229-1044

E-mail: okulik@uw.edu.pl