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A DEEP-SEA DILEMMA

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An Analysis of EU Member States' Positions on Deep-Sea Mining in International Waters

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In recent years, political tensions on deep-sea mining (DSM) have reached new heights. More than 167 countries are currently negotiating under the auspices of the International Seabed Authority (ISA) on the future of seabed mining in international waters, with both staunch supporters and opponents of the practice (Delacroix, 2023). As demand for critical raw materials such as cobalt and nickel continues to rise, driven by the digital transition and the global climate crisis, some countries are looking to deep-sea mining as a potential source. However, the practice remains highly controversial due to the possible environmental damage it could cause to the deep-sea ecosystems, which, moreover, are still largely unknown.

While the European Union (EU) is a recognised member of the ISA, it has yet to take a prominent role in the ISA negotiations. This reluctance is sharply in contrast with the role it plays in other environmental and marine-related negotiations (for example the Biodiversity Beyond National Jurisdiction negotiations (BBNJ) or the UN Climate Conferences) (Ardito, 2022). A proposal by the European Commission in 2021 for a unified EU

stance on deep-sea mining remained unanswered by the Council of the EU – seeming to indicate an interinstitutional conflict on deep-sea mining within the European Union (European Commission, 2021a).

Starting from the hypothesis that this is due to too many contradictions between EU Member States' positions, this paper examines the positions of four Member States – Belgium, Germany, France and Poland – on deep-sea mining in international waters. By analysing the salience, polarisation, and evolution of their stances throughout the period 2017-2023, this paper set out to reveal the possible internal dynamics that prevent a cohesive EU strategy on deep-sea mining, finding that although the positions of the EU Member States differ, they are not necessarily incompatible (and may be reconciled with the Commission proposal).

Deep-sea mining: a brief introduction

Mining the seabed has long been an industrial dream, often presented by mining companies as an alternative to land-based mining. However, the concept of deep-sea mining is not uniform

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and broadly refers to three distinct processes of extracting minerals from the seabed: the mining of polymetallic nodules (also called manganese nodules), the mining of cobalt-rich crusts and the mining of metal sulphides on the seabed. Not every type of deep-sea mining is equally evident (only the exploitation of polymetallic nodules and metallic sulphides is estimated to be realistic in the near future) or requires the same kind of technical knowledge, skills, and investments. Nevertheless, it always involves the extraction of rare metals such as manganese, copper, cobalt, and nickel at a depth of several thousand metres below the water surface. Therefore, every kind of exploitation of the seabed presents a technologically challenging undertaking and, moreover, does not come without consequences for deep-sea ecosystems (Pirlet et al., 2015).

Already in the early 1970s, encouraged by the publication of geologist John Mero's "The Mineral Resources of the Sea" (in which he claimed 10% of all seabed minerals could provide the world's critical metals consumption for thousands of years), industrial companies began to invest in seabed mining (Cronan, 2022). Despite extensive research efforts and the first successful test mining operations, in the 1980s the industrial interest disappeared almost completely due to technological complications, dropped demand, increased costs (partly due to the 1973 and 1978 oil crises) and a new wave of environmental awareness in public opinion. On top of that, in 1982 the United Nations Law of the Sea Treaty (UNCLOS) established a legal framework, regulating all marine and maritime activities in international waters – imposing limits on the concept of *Mare Liberum*², dominant in maritime law up until then (Cronan 2022; Sparenberg 2019).

The International Seabed Authority (ISA)

The same UNCLOS provided the foundation of a new international authority in charge of the regulation of all human activities on the international seabed. Although its effective establishment took

time – several large industrial countries like the United States of America and West-Germany were put off by the demands of countries in the Global South to share revenues between North and South – the International Seabed Authority (ISA) finally came into being in 1994. The ISA has its seat in Kingston (Jamaica), counts 169 Member States and has officially been mandated with a double mission: on the one hand – in the common interest of humanity – regulating, organising and controlling the possible future exploitation of the seabed. On the other hand it is tasked with a protective mission: safeguarding the deep sea and its ecosystems against all possible effects of human activities (Jaeckel, 2024).

To find a balance between exploitation and conservation of the seabed, the Member States of the ISA are negotiating the legal framework on the prospection, exploration and exploitation of the deep sea since 1994. Entities that are interested in one of those activities on the seabed must receive the official permission of the ISA, via a contract. To receive authorisation, it is necessary that a Member State of the ISA backs the request of the entity – or is the requesting party itself (Willaert, 2021). Due to a revived interest in deep-sea mining in the first decennia of the 21st century (spurred by concerns of resource dependency, vulnerable commodity chains and a growing demand of critical rare metals), the ISA has already successfully approved more than 30 requests for exploration of the deep sea (ISA, "Exploration contracts").

Nevertheless, mid-2024 seabed mining in international waters is still not a reality. Years of scientific research into the possible environmental consequences of deep-sea mining have shown that the practice could be disastrous for the deep-sea ecosystems (Petrossian & Lettieri, 2024). Not only could mining itself harm the habitats of numerous species, but released sediments would also threaten life in higher zones of the ocean (Sparenberg, 2019). The growing body of

² The *Mare Liberum* principle of Hugo Grotius, set out in a manuscript in 1609, refers to the idea that the sea belongs to everyone, as long as its use does not hinder the use by others. To this day, the principle plays an important role in international maritime law (Treves, 2015).

evidence of seabed mining's disruptive side effects has prompted multinational companies (BMW, Volvo, Samsung...) and an increasing number of countries (Brazil, Canada, the United Kingdom...) to voice their opposition to the practice – at least until there are solid indications that such mining can be conducted without harm (McVeigh & Michael, 2023; Sanderson, 2021).

However, this does not mean seabed mining is officially off the map. Not only is the ISA still negotiating on a legal framework for exploitation, an unexpected legal move from island state Nauru (urged on by the Canadian mining company *The Metals Company*) provoked a crisis atmosphere within the ISA. In 2021, Nauru invoked a controversial provision of the 1994 UNCLOS Implementation Agreement (Annex: Section 1 (15)), forcing ISA to establish regulations for deep-sea mining within two years. If the deadline was missed, companies could submit official mining applications. But by mid-2023, the legal framework was still absent, leaving deep-sea mining in a legal vacuum (Pickens et al., 2024). Despite ISA assurances that no exploitation applications would be approved without regulations, The Metals Company continuously states its ambition to submit one before the end of 2024 (Stanway, 2023).

Deep-Sea Mining & the European Union

Since the beginning of the ISA negotiations, EU Member States have played a significant role in the discussions on seabed mining and the conception of relevant legislation. Several EU countries (Germany, France, Poland and Belgium) now have their own exploration contracts for seabed mining. Through the Interoceanmetal Joint Organisation – a joint venture for research on seabed mining – Bulgaria, the Czech Republic, Slovakia, and Poland also share an exploration contract (together with Cuba and the Russian federation) (ISA, "Exploration contracts"). Although the European Union, as an international organisation, is an official member of the ISA, its role remains limited compared to its member states. This despite a proposal of the European Commission to the Council of the European Union in January 2021,

aiming to adopt a joint position within the ISA (European Commission, 2021a).

This EU position would require Member States to advocate that "marine minerals in the international seabed should not be exploited until the effects of deep-sea mining on the marine environment, biodiversity and human activities have been sufficiently investigated, the risks are known and it can be demonstrated that the technologies and operational practices used do not cause serious damage to the environment, in accordance with the precautionary principle" (European Commission, 2021b). So far, however, this proposal remained unanswered by the Council. The reluctance of Member States to give the Commission a negotiating mandate within the ISA is striking, especially in contrast to the Commission's role in other international negotiations related to (the protection of) international waters (Ardito, 2022).

EU legal experts do question the legal foundation of the Commission proposal, meaning that the Council would not be obliged to comply with it. The fact that the European Commission is still pushing its proposal can be seen as part of a wider strategy of the political body to claim exclusive competences regarding marine environmental policies, something it already has been doing for years now (Ardito, 2022; Arnesen et al. 2020). The academic debate, however, lacks a consensus on the motives of the Member States to withhold the European Commission of playing a bigger role within the ISA negotiations. Ardito (2022), for example, attributes the conflict to the advanced stage the negotiations have already reached. Moreover, granting the Commission more competences in this field could have consequences for similar cases in the future (Ardito, 2022). Sing et al. rather view the cause of the issue in the diverging interests, stakes and positions of the EU Member States towards deep-sea mining (Sing et al., 2024). Due to otherwise limited analysis on the subject, it remains unclear up to this date what exactly triggers this 'interinstitutional conflict' between the Council (the EU Member States) and the Commission on deep-sea mining in international waters.

The positions of EU Member States

In academic literature, the positions of EU Member States on deep-sea mining remain understudied. For Poland, for example, there are only publications that mention the level of salience (cf. *infra*) of the country within the ISA-negotiations and the Polish interests in seabed mining. The country has been a Member State of the ISA since 1996 and, moreover, has been investing a lot in research on deep-sea mining (Szamatek, 2018). Besides, the country is known to actively advocate for a fair distribution of revenues between countries of the Global North and the Global South (Willaert, 2021).

While little is written (academically) on the Belgian position on deep-sea mining. Pirlet et al. elaborate in a 2015 article on the decades of involvement of the Belgian state and industry in seabed mining research and exploration (e.g. the Belgian 'Union Minière', now Umicore, investing in the practice already in the 1970s). Furthermore, the Belgian legal framework for potential deep-sea mining activities has been studied and presented as an example of 'good practice' for other countries (with specific standards on transparency and nature conservation enshrined in it) (Willaert 2020; Willaert & Maes, 2024).

More is known on the official positions of both France and Germany on deep-sea mining. Bahout et al. (2023) state that France, since 2022, promotes a total ban on deep-sea mining – making the country a forerunner in protecting the seabed ecosystems. This ban marked a stark reversal from previous policies, with the country until 2021 opposing efforts for a moratorium on seabed mining. Other publications confirm the decades-long interests of the country in the practice (Marghelis, 2015; Vallat, 2017).

The German government, by contrast, did not go as far as to ban seabed mining, but did grow more critical of the practice over the past few years. The country now advocates for a "precautionary pause" on the ISA-negotiations until possible environmental risks are better scientifically mapped and understood (Jenisch, 2023). In a 2024 publication, Matz-Lück describes this German position

as ambivalent: the country does continue its investments in research on seabed mining technology and did not end its ISA exploration contract. According to the author, the country finds itself in a difficult exercise, balancing the long-standing interests of its industry and the growing scientific concerns regarding the deep-sea ecosystems (Matz-Lück, 2024).

Research design: research questions & methodology

The research conducted in this paper starts from the hypothesis that the interinstitutional conflict in the EU concerning deep-sea mining in international waters is due to highly divergent positions of EU Member States regarding the practice. To test this hypothesis, the positions of Belgium, Germany, France, and Poland are examined for the period 2017-2023. These four Member States were selected due to their significant involvement in the international negotiations within the ISA. All four countries hold or sponsor exploration licenses, allowing them to conduct seabed exploration with the prospect of future exploitation. Unlike other EU countries that participate via a joint initiative (cf. *supra*), these nations therefore operate independently in the ISA. Besides, the four countries also seem to represent different stances on deep-sea mining (based on preliminary research and journalistic sources): France openly advocates for a total ban, Poland rather seems to support deep-sea mining with strong regulations, while Belgium and Germany seem to take middle-ground positions, calling for environmental safeguards and further research (Deep Sea Conservation Coalition, 2022; Feitz, 2023; McVeigh, 2022; Merckx, 2023).

The choice of the research period (2017-2023) is influenced by two factors: limitations in the available source material (cf. *infra*) and the occurrence of a significant political shift during this period. International negotiations on deep-sea mining exploitation regulation only began in 2011, and as of 2024, they remain unresolved. In 2021, Nauru triggered a provision in the UN Convention on the Law of the Sea, creating a legal vacuum (cf. *supra*). As a result, negotiations face increasing

pressure and different ISA Member states now call for a moratorium on deep-sea mining (Valo, 2023). The selected research period captures both the years leading up to and following this political shift.

Central to the analysis is thus the following research question: To what extent do the positions of EU Member States (in casu: Belgium, France, Germany and Poland) on deep-sea mining differ throughout the ISA negotiations between 2017 and 2023? This question is further split up in three subquestions: the first sub-question examines the “salience” of the Member States within the ISA: how actively do Belgium, Germany, France, and Poland participate in the international negotiations on deep-sea mining within the ISA? The second sub-question focuses on the “polarisation” of the countries’ stances: to what extent do the most recent stances of these EU Member States on deep-sea mining differ? Finally, the third question investigates the potential “convergence” or “divergence” in their positions throughout the research period: have the views of the EU Member States on deep-sea mining grown closer together or further apart between 2017 and 2023?

Sources & Methodology

To conduct the research, two different sets of sources are used. On the one hand, the analysis is based on written and oral statements made by these countries during ISA meetings. Accessible through the ISA’s online archive, these provide direct insights in the stances of the Member States (ISA, “Statements”). However, these statements are only available for the negotiations that have taken place since 2017. On the other hand, daily reports from the International Institute for Sustainable Development (IISD) are utilised, which document the progress of ISA negotiations and highlight the participation of key countries. Together (further collectively referred to as “interventions”) these sources offer a combination of official statements and broader contextual information on the negotiations. In total the four countries intervened 335 times in the ISA-negotiations during the period 2017-2021. Most

interventions – 268 in total – were found in the IISD reports, with 67 written statements found in the ISA’s online archive.

However, the sources used in this research do present several limitations. Firstly, they only present information on how the ISA Member States negotiate, and not on their final voting decisions. Secondly, not all interventions are clear viewpoints – as some interventions only pose questions or provide information. For this reason, it is necessary to select relevant textual fragments and interpret these fragments in their broader context, introducing a degree of subjectivity. Moreover, the single-researcher nature of the study limits intersubjective validation. Consequently, it is essential to acknowledge that alternative analyses of the same source material might result in somewhat different results. To limit the impact of this subjectivity, the analytical framework and research methods are explicitly detailed in the following section, enabling readers to repeat the conducted analysis.

For the first subquestion of this research (“how actively do Belgium, Germany, France and Poland participate in the international negotiations on deep-sea mining within the ISA?”), a simple quantitative analysis is used to research the participation of the four countries. This participation is measured by the level of ‘salience’ these countries have within the ISA negotiations: how often do they intervene and about what? Specifically, this means that both the total number of interventions is analysed, compared to the interventions that are relevant for the here-conducted research. Relevant interventions are here defined as those directly related to the substance of the negotiations, such as the development of the mining code, environmental concerns, and scientific research. Interventions deemed procedural, administrative, or unrelated to deep-sea mining (such as those concerning internal organisational matters, financial issues or broader political discussions like the interventions on the 2022 Russian invasion in Ukraine) are excluded from this analysis.

The second subquestion (“to what extent do the most recent stances of these EU Member States

on deep-sea mining differ?”), is analysed using a critical, qualitative comparison of (a selection of) the interventions of the four Member States. More specifically, the most recent interventions included in the research – those of 2023 – are analysed. By this, not only the current stances of the four Member States should become clear, but also the discourse they use. Moreover, this analysis also improves the transparency of the research by improving insight into the used sources (the written and oral interventions). The “critical” reading means that the argumentation of each Member State is dissected, considered in the necessary context (based on, for example, the conducted literature review in this research), and is balanced against the argumentation of the other Member States. This makes it possible to comment on the level of ‘polarisation’ between the states’ most recent stances.

Finally, the third subquestion (*“have the views of the EU Member States on deep-sea mining grown closer together or further apart between 2017 and 2023?”*) is examined by applying a ‘sentiment-analysis’ to all relevant interventions (cf. supra) made by these countries during ISA meetings. The main focus is on how these Member States expressed their views on crucial issues such as environmental protection and the need for scientific research within the context of deep-sea mining. The approach involves manually assigning each intervention a score on a four-point scale. This scale ranges from “non-critical” (1: where there is no mention of environmental or scientific concerns) to “rather critical” (2: where those concerns are voiced), “critical” (3: imposing environmental or scientific conditions on deep-sea mining) and “highly critical” (4: where a country explicitly advocates for a ban on deep-sea mining due to environmental or research-related reasons). The goal here is to quantify the level of criticism each member state demonstrated towards the practice of deep-sea mining.

To ensure a more nuanced analysis, two scoring methods are employed to present annual scores

per country (in order to analyse the evolution in the stances throughout the research period). The first is a cumulative method, which assigns the overall score for a given year based on the most critical intervention a country made during that period. This method helps to correct the score of countries with a high polarisation level (cf. supra), preventing the devaluation of a significant intervention when multiple, less extreme (or less significant) statements are made throughout a certain year. The second method is a weighted approach, where all interventions made by a country in a given year are averaged to calculate an annual score. This method accounts for the fact that some Member States may make more frequent but less extreme statements, thereby offering a more balanced view of their overall stance. Once the scores are assigned, the results are compared over the entire seven-year period to detect patterns of convergence (where the positions of the Member States moved closer together) or divergence (where the positions drifted further apart).

Although sentiment analysis implies mainly a quantitative research method, the research results are supported by the (critical) discussion of some examples of interventions. This is done both for some less striking trends and for some outliers within the research findings.

By using this multi-method framework (cf. Table 1), it should be possible to not only state something about the positions on deep-sea mining themselves but also on how the four EU Member States participate in the ISA negotiations, on how their positions evolved through time and to compare their argumentation and discourse. Moreover, combining quantitative methods of analysis with a more qualitative analysis (for the purpose of the second sub-question) should also give the reader some insight into the nature of the source material and into how such a ‘statement’ on deep-sea mining looks like.

Table 1: Overview of the different sub-questions, corresponding analytical concepts and research method

Sub-question	Analytical concept	Research method
Sub-question 1: <i>“How actively do the EU Member States participate in the international negotiations on deep-sea mining within the ISA?”</i>	Salience	Simple quantitative analysis
Sub-question 2: <i>“To what extent do the most recent stances of these EU Member States on deep-sea mining differ?”</i>	Polarisation	Critical qualitative analysis
Sub-question 3: <i>“Have the views of the EU Member States on deep-sea mining grown closer together or further apart between 2017 and 2023?”</i>	Convergence/ Divergence	Sentiment analysis (mix of quantitative and qualitative research)

An analysis of EU Member States’ positions on deep-sea mining in international waters

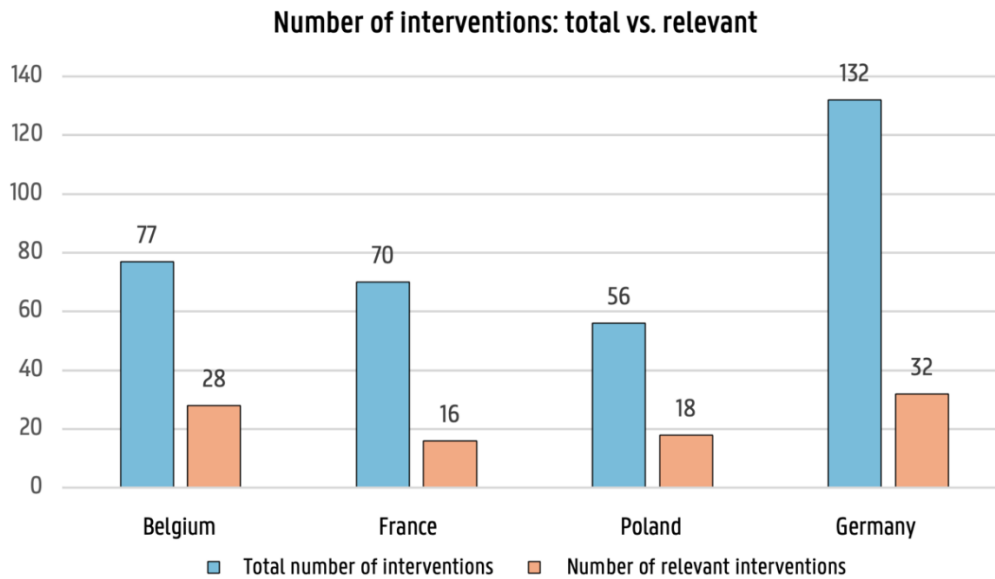
How do EU Member States view deep-sea mining in international waters? How actively are Belgium, Germany, France, and Poland participating in the international negotiations on deep-sea mining within the ISA? What are their most recent positions? And how have these positions evolved over the past few years? To answer the central research question every sub-question will be handled separately in the following part of this research article. In the conclusion, the research results of every part will be combined and reflected on.

Salience analysis: how actively do the EU Member States participate in the ISA negotiations

Between 2017 and 2023, Belgium, Germany, France, and Poland intervened at least 335 times in total throughout the ISA negotiations. The use of “at least” is significant because the used sources provide only a partial view of the activities within the ISA and do not tell something about, for example, behind-the-scenes negotiations or voting results. Important for the salience analysis is to look at both the total amount of

interventions and the number of ‘relevant’ interventions (specifically referring to regulations around deep-sea mining, environmental protection and/or scientific research). The next graph (Figure 2) shows the total amount of (relevant) interventions per member state. Looking at the figure, it is clear that not all four EU Member States are equally active in the ISA negotiations. Germany intervened most frequently (132 times) in the period 2017-2023, followed at a distance by Belgium and France (respectively 77 and 70 times), while Poland intervened the least during the research period (56 times). Even when considering only the number of ‘relevant’ interventions - related to regulations on deep-sea mining, environmental protection, and/or scientific research - Germany remains the leader (32 relevant interventions). Belgium follows Germany in terms of the frequency of intervention on issues relevant to the study (28 relevant interventions) having the highest ‘relevance ratio’ (the proportion of relevant interventions to the total number of interventions). France comes out as the country with the lowest saliency when regarding the number of relevant interventions, just behind Poland (with respectively 16 and 18 relevant interventions).

Figure 1: The total number of interventions within ISA negotiations per member state, compared to the total number of relevant interventions per member state



Because the chosen source material can only provide limited insight into the participation of Member States in the ISA negotiations, and a more in-depth analysis would require taking into account many other factors, the salience research remains rather superficial and in the first place provides support for the results and findings from the following parts of the research.

Polarisation analysis: how far apart are the most recent stances of the EU Member States?

In 2023 Belgium was the state with the highest level of saliency within the ISA negotiations (with 5 relevant interventions). In its interventions, Belgium seems not to be principally against deep-sea mining, but it makes its support highly conditional. The country emphasises three main requirements before exploitation can begin: (1) the adoption of a robust regulatory framework based on environmental protection, (2) more scientific research to create a solid environmental basis, and (3) the protection of at least 30% of the world’s oceans before any mining can proceed. As a Belgian delegate put it: *“there can be no exploitation of the deep seabed without agreeing on a set of rules and regulations that ensure high environmental standards and a sound scientific knowledge”* (ISA, 2023a, p.1). Moreover by posing these conditions, Belgium links its support for

deep-sea mining with the effective implementation of the BBNJ Treaty and, advocates to align the ISA negotiations to other, broader international commitments, such as the COP15 biodiversity goals (ISA, 2023b, p.1).

Germany, like Belgium, supports the development of regulations but adopts a more cautious tone. Germany consistently calls for a “precautionary pause” in deep-sea mining activities, emphasising the lack of scientific understanding of its environmental impacts. In one of its 2023 interventions, Germany highlighted that *“no plans of work for exploitation should be approved until the deep-sea ecosystems are sufficiently researched and regulations that effectively implement the precautionary approach are in place”* (IISD, 2023a, p.25). While clearly supportive of environmental protections and making its support conditional (although remaining rather vague about the exact conditions), Germany’s position lacks Belgium’s explicit ties to other relevant international treaties.

France, meanwhile, takes in its 2023 interventions the strongest stance against deep-sea mining: advocating for a complete ban. French officials argue that there is simply too little scientific knowledge available to justify any mining activities on the seabed, fearing the possibility of

irreversible environmental damage. As France's Minister of State for Marine Affairs, Hervé Ber-ville, stated: *"We must not and cannot embark on a new industrial activity without measuring the consequences and taking the risk of irreversible damage"* (IISD, 2023a, p.25). Nevertheless, the country does not rule out deep-sea mining operations in the future and seems to weaken its stance in other interventions that year to a conditional ban, stating that *"no approval can be made without the needed guarantees for environmental protection"* (IISD, 2023b, p.21).

By contrast, Poland, seems to adopt the most supportive stance toward deep-sea mining. Although the country stresses the importance of creating a robust regulatory framework, it focuses less on environmental safeguards than the other EU Member States. Poland's stance concentrates mostly on progressing with the negotiations, stating that *"Poland believes that the Council should continue its efforts for further development of exploitation regulations"* (ISA, 2023c, p.1). Although the country also states the necessity of rules on the protection of the marine environment (IISD, 2023b, p.5), it remains unclear to which extent this 'necessity' is conditional for its support of possible seabed mining activities in the future.

While the four Member States may seem to adhere to different stances in the 2023 ISA negotiations – from France's ban on deep-sea mining to Poland's call on progressing the exploitation regulations – the differences can be found more in their discourse than in their effective views on deep-sea mining. Despite using different terms to describe their stances (a "precautionary pause" on the negotiations, a "ban" on seabed mining,

Belgium's three conditions...), all four countries do express their concerns about the potentially negative effects of the practice for the environment and three out of four Member States (France, Belgium and Germany) translate those concerns into conditions necessary for their approval of the practice.

Moreover, the (highly) critical stances of both France and Belgium need to be further nuanced. France does state it is in favour of imposing a ban on deep-sea mining, but does not rule out any seabed mining activities in the future. Similarly, Belgium seems to profile itself as a true "Blue leader" with linking the ISA negotiations to the implementation of other relevant international treaties, but its position appears to be in stark contrast with its continuing support for the seabed exploration activities of the Belgian mining company GSR (a subsidiary of the Belgian industrial DEMA-group) (Custers, 2020; Willaert & Maes, 2024). On the other hand, Poland does seem to emphasise the 'necessity' of environmental protection in its interventions, coming close to also imposing a condition for its support.

Convergence/divergence-analysis: how did EU Member States' positions evolve? (2017- 2023)

When looking to the evolution of the four countries' positions on seabed mining, it becomes clear that although all countries advocate slightly different stances, they move in a similar direction during the research period (2017-2023): towards a more critical stance on deep-sea mining. The following two graphs (Figures 2 and 3), displaying the annual scores on the research scale for each analysed EU member state (cf. supra), demonstrate that evolution:

Figure 2 The annual scores by Member State, by year (cumulative calculation method)

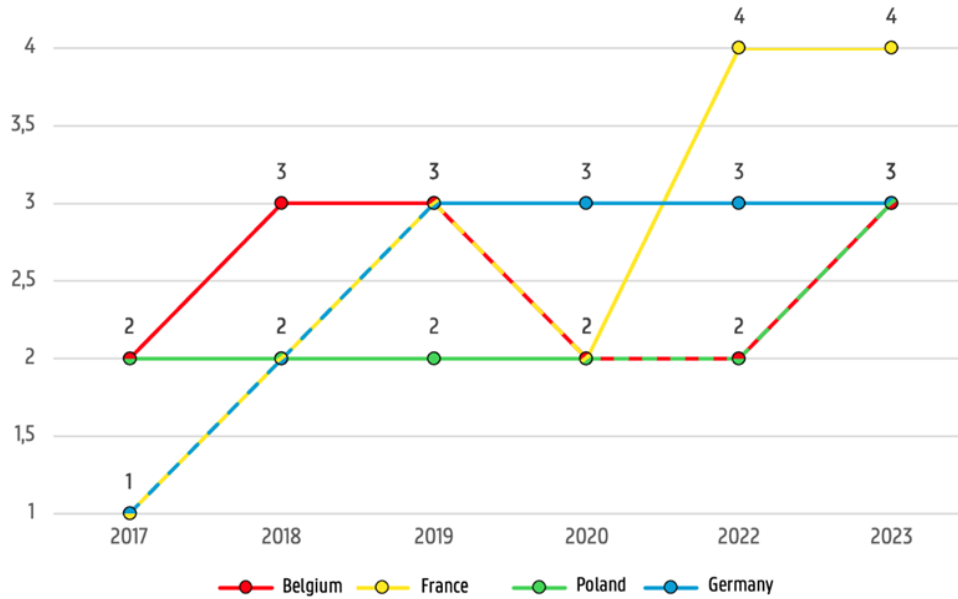
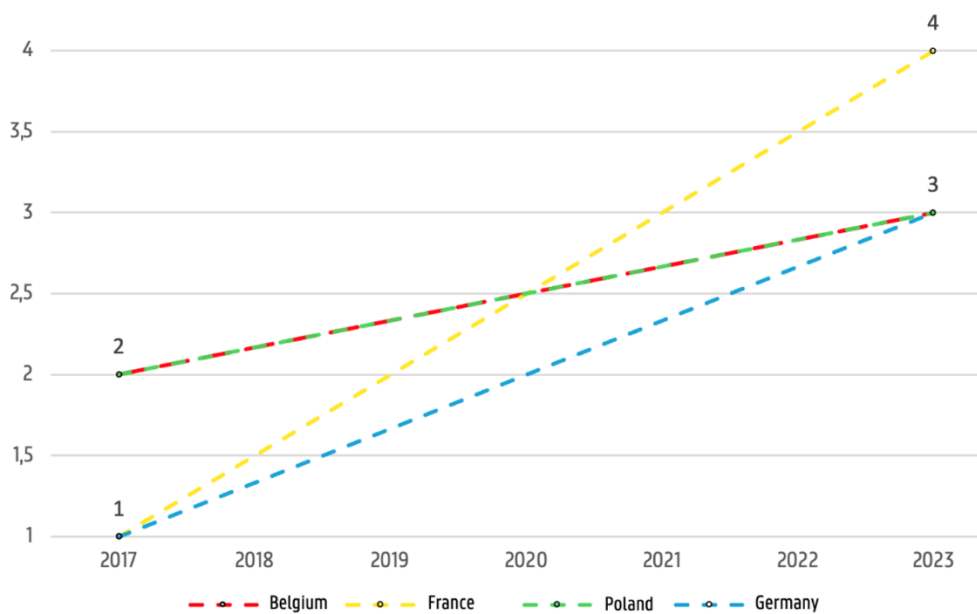


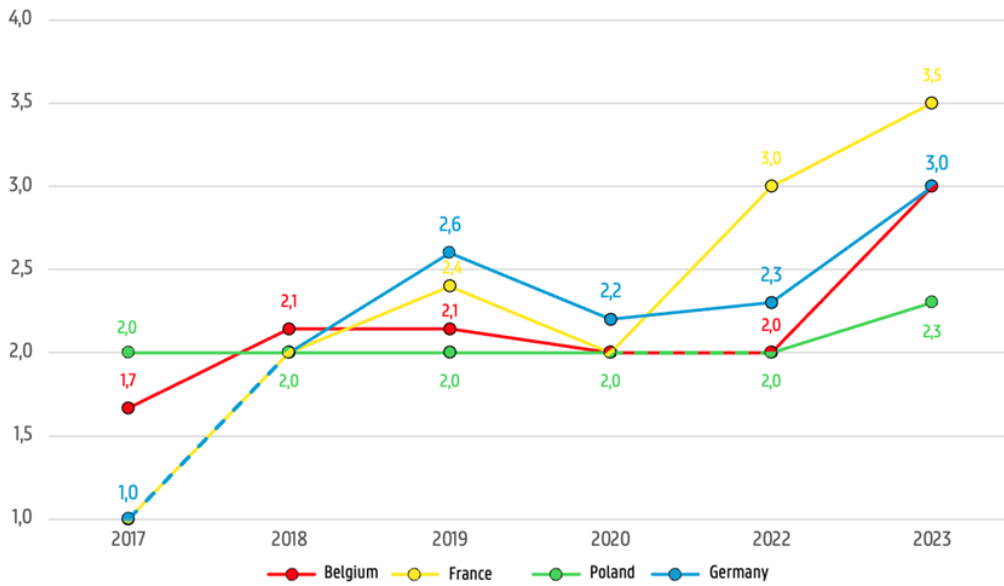
Figure 3: Trend lines by Member State, by year (cumulative calculation method)



Although all Member States have become more critical of deep-sea mining over the research period, the extent of this evolution varies between the four countries. Figure 2 shows how France has undergone the most radical shift of all analysed EU countries, moving from the least critical stance (scale 1) to the most critical stance (scale 4). Germany has also moved up from scale 1 in 2017 to scale 3 in 2023. Belgium and Poland have experienced the least pronounced change, both moving from scale 2 in 2017 to scale 3 in 2023. It should be noted, however, that Belgium and Poland already held more critical positions in 2017

compared to France and Germany. While France and Germany seemed to have few questions in 2017 when discussing the initial draft of the ISA mining code, Belgium and Poland did raise concerns. For example, Poland called for a systematic impact analysis and emphasised the importance of scientific information in developing the mining code. Belgium, on the other hand, requested that the ISA should organise more workshops and meetings on sub-topics such as environmental protection as part of the mining code negotiations (IISD, 2017a; IISD, 2017b).

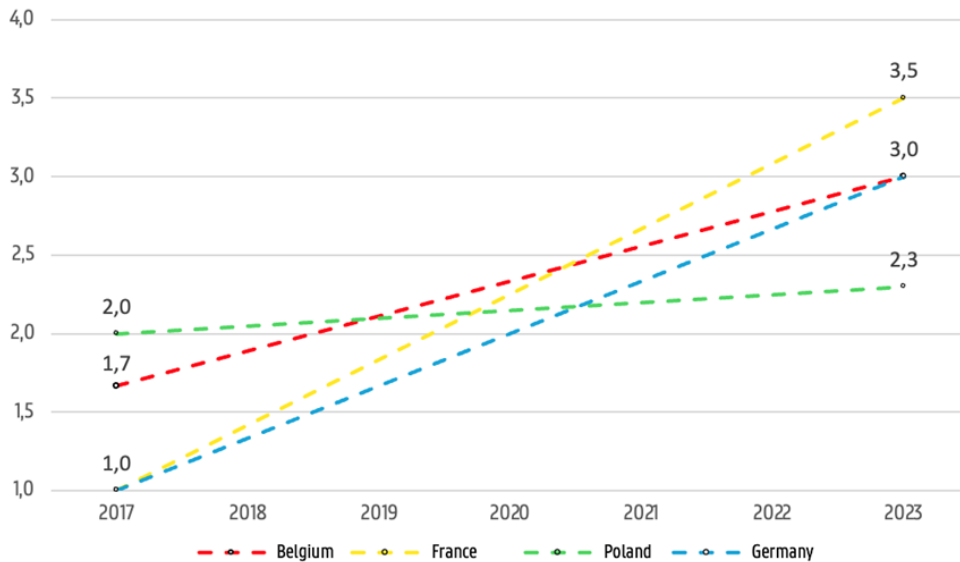
Figure 4 The annual scores by Member State, by year (weighted calculation method)



Since the cumulative calculation method can provide a distorted view of negotiating positions by not assigning equal weight to all interventions (see 1.3.2), and given that the analysis from the second part of the study clearly shows that the positions of Member States classified in the same

category (e.g. scale 3: conditional support) can still differ in substance, it is worthwhile to reanalyse the data using the weighted calculation method (cf. supra). Assigning annual scores to each country, per year, using this method provides the following results:

Figure 5: Trend lines by Member State, by year (weighted calculation method)



The calculation of annual scores, as shown in Figures 4 and 5, gives a more nuanced image of the evolutions in the countries' stances on seabed mining. The positions in 2017 appear to be, on average, closer together (due to a lower Belgian score) and those in 2023 further apart (primarily due to a lower Polish score) compared to the findings from the cumulative calculation method.

Additionally, it's noteworthy that France's position in 2023 is more nuanced. Instead of falling on scale 4 (strongly critical), it lies somewhere between scale 4 and scale 3 (critical). This is because, as mentioned earlier, France only advocated for a ban on deep-sea mining in international waters in one of two relevant interventions in the ISA negotiations in 2023 (cf. supra).

The weighted analysis also corrects the previously surprising finding based on the cumulative calculation method that Belgium’s position was substantially more critical in 2018 and 2019 than in 2020 and 2022 (because these scores were determined by a single intervention out of a total of seven interventions for both years). The same logic applies to France’s apparent regression between 2019 and 2020. For Germany, a certain regression can still be observed between 2019 and 2020, but this is a difference of less than half a point on the research scale. The decrease in the score seems to depend more on the specific topics on which Germany has responded rather than on a substantive change in course. The country does already support a conditional approach in 2020 (ISA, 2020, p. 2-3).

A final observation that becomes clear in the weighted analysis is the evolution of Poland’s

position over the research period. Apart from a slight increase between 2022 and 2023, its stance seems to not have evolved at all and consistently promoted stances that can be classified in the same research category: scale 2 on the research scale. This means that while Poland calls for more attention to environmental protection and scientific research within the ISA negotiations, it does not (until 2023) attach clear conditions to a possible approval of deep-sea mining activities. Based on the polarisation analysis it must be said that, although not supporting a clear conditional stance, the country does talk about the “necessity” of environmental protection measures (cf. supra).

Finally, to give an idea of the extent to which the stances of the four EU countries have converged or diverged between 2017 and 2023, Table 2 gives an overview of the annual scores in both years.

Table 2: An overview of the annual scores of the four EU member states in 2017 and 2023 (cumulative and weighted)

Annual scores	Cumulative Calculation		Weighted Calculation	
	2017	2023	2017	2023
Belgium	2	3	1,7	3,0
Germany	1	3	1,0	3,0
France	1	4	1,0	3,5
Poland	2	3	2,0	2,3

Looking at Table 2, it seems that the positions of the four EU Member States on deep-sea mining have neither significantly converged nor diverged between 2017 and 2023. According to the cumulative calculation method, positions varied by only one scale point in both years (differing between scale 1 and 2 in 2017 and between scale 3 and 4 in 2023). However, the weighted calculation method reveals a slight increase in divergence by 2023 – compared to the divergence in the cumulative calculation – with a 1.2 scale point difference (between the stances of Poland and France). Despite this, the relevance of this increased divergence can be questioned due to potential errors in the methodology and the subjective nature of the analysis, as there was no external validation and the increase is minimal.

Conclusion

The research conducted as part of my thesis, and presented in this paper, has explored the stances of four key EU Member States—Belgium, Germany, France, and Poland—on the issue of seabed mining in international waters (throughout the period 2017-2023). The first part of the research—the salience analysis—reveals that not all Member States are equally involved in the ISA negotiations on seabed mining. Germany stands out as the most engaged in these ISA discussions, with Belgium and France following, while Poland appears to be the least active over the research period (2017-2023). The second part—the polarisation analysis—offers insight into the most recent stances of the Member States in 2023. Although each country uses different labels to define its stance, in practice, their positions are not

far apart: three out of four Member States (Belgium, France and Germany) tie their support for deep-sea mining to certain conditions, particularly around environmental protection and the need for scientific research (with Poland's position being close to a conditional stance).

Finally, the convergence/divergence analysis indicates that while the positions of the Member States in 2023 are neither closer nor further apart than they were in 2017, all have become more critical of deep-sea mining. Nevertheless, throughout the study period, the four different positions did evolve at different paces and to different degrees. Also, the relatively small difference between the positions does not mean that the Member States have exactly the same negotiating position within the ISA: indeed, the conditions set by the Member States differ greatly, and the effectiveness of the different conditions does not seem to be the same in every case either. Certainly, the difference between the position of France and that of Poland stands out in this respect.

Regarding the hypothesis – ‘the interinstitutional conflict on deep-sea mining within the European Union is due to too many contradictions between

the positions of EU Member States’ – it is notable that the positions are not only relatively close to each other, but also lean close towards the Commission's proposal for a common EU position (that no seabed mining can find place before there are scientific guarantees that the ecosystems of the deep sea will be protected, cf. supra). Thus, it cannot be said that the stances of the four EU countries on seabed mining are fundamentally incompatible, nor with the stance of the European Commission.

Yet there seems to be less consensus among Member States on how far such guarantees should go. It is therefore difficult to assess whether Member States could find a consensus at the EU level - if only because the analysis conducted above considers only four EU Member States. Moreover, such an analysis should also examine other factors such as the (commercial) interests of Member States, possible legal issues, the advanced stage of negotiations.... to correctly assess the cause(s) of the conflict. Hopefully, the findings of this paper can encourage further research in this regard and contribute to future analyses on this interinstitutional conflict on deep-sea mining within the European Union.

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