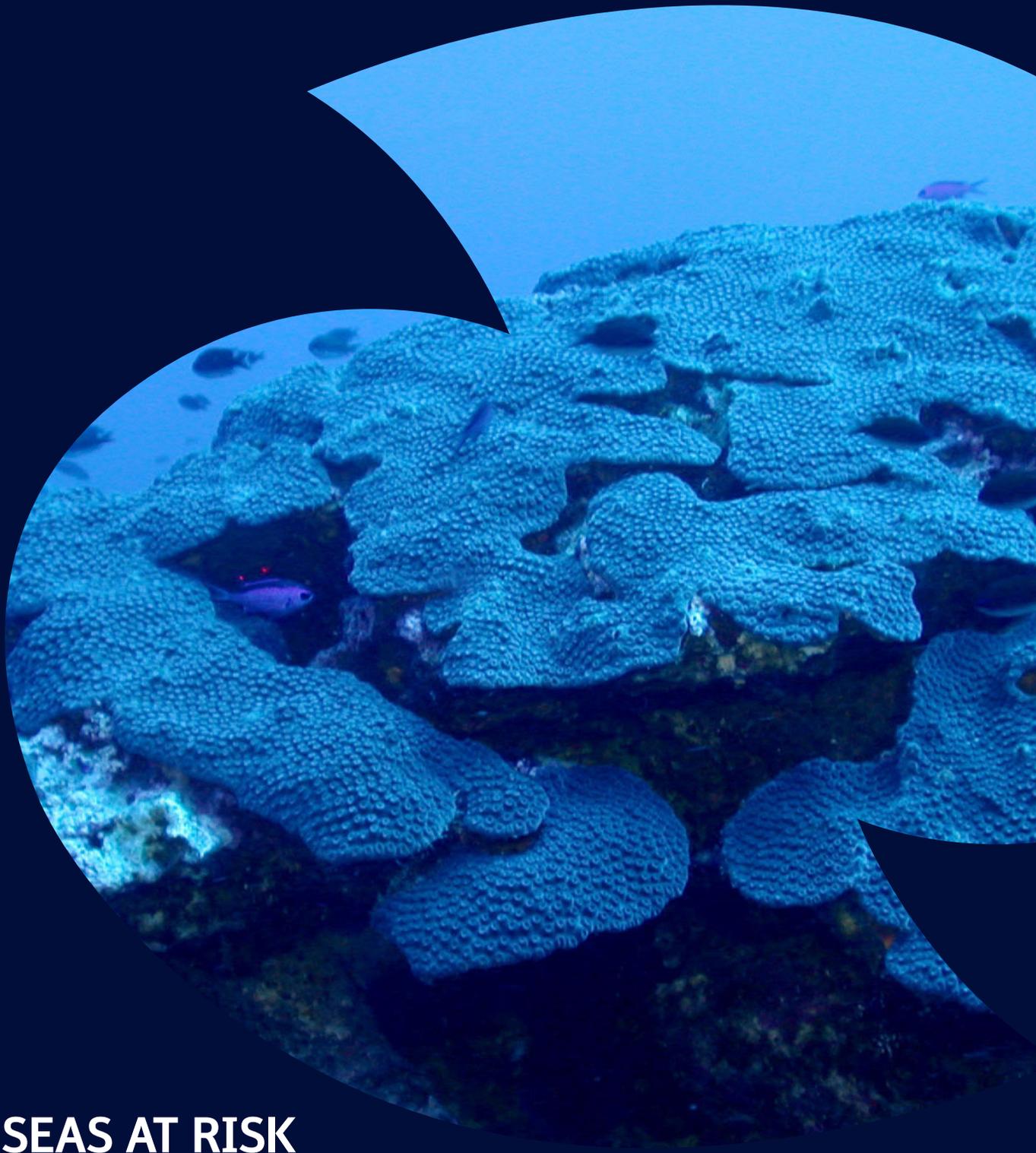


# The changing seascape

of deep-sea mining in Europe



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# Contents

<b>Summary</b>	<b>4</b>
<b>State of play</b>	<b>6</b>
Frontlines of extraction.....	7
International momentum for a moratorium.....	9
Where do European countries stand on deep-sea mining?.....	10
<b>The EU’s move away from deep-sea mining</b>	<b>12</b>
<b>Do it again!</b>	<b>15</b>
Mining Antarctica.....	15
The whaling moratorium.....	16
<b>Charting the way ahead: How can Europe defend the deep?</b>	<b>17</b>
<b>Appendix: Country factsheets</b>	<b>20</b>

# Summary

## Just three years ago, not a single country in Europe defended a moratorium, precautionary pause, or ban on deep-sea mining.

Instead, European countries wanted swift adoption of regulations to enable exploitation of deep-sea resources, including those sponsoring exploration contracts. Millions of euros of EU and national public funding were being channelled towards deep-sea mining (DSM) technologies, research, and development while environmental concerns were often downplayed. All this was covered in detail in the 2021 report [‘At a crossroads: Europe’s role in deep-sea mining’](#).

Since then, Europe has moved in the right direction. Eleven European countries, including a number of former strong defenders of DSM, now support a moratorium, precautionary pause or ban on DSM – a position also shared by the European Commission and repeatedly affirmed by the European Parliament. Such a rapid shift owes much to the growing scientific consensus on the tremendous negative impacts DSM would have if allowed to occur, and by relentless opposition by civil society organisations around the world.

This report is intended to help navigate the rapidly changing seascape of DSM. Firstly, it showcases the game-change in international negotiations at the International Seabed Authority (ISA), the United Nations-affiliated body that regulates the seabed in areas beyond national jurisdiction, and other relevant fora. It also updates the progress on putting a stop to DSM in national waters in several countries and the refusal by a growing number of large corporations to use deep-sea minerals in their products or support their extraction.

Secondly, this publication provides an intelligence briefing on where 22 European states (those belonging to the EU, the European Free Trade Association, and Monaco) currently stand in relation to DSM. These include the eleven European states that have so far publicly positioned themselves in support of a moratorium, precautionary pause or ban on DSM, the two states that have clearly expressed their support for DSM, and a number of other countries that either have no position or their position is unclear.

Thirdly, the report examines the shifting stance within EU institutions. Until 2020-2021, the European Commission had been a staunch supporter of DSM, funnelling over €80 million into the development of extraction technologies. But in 2022, after a number of resolutions passed by the European Parliament calling for a moratorium, the Commission publicly endorsed a prohibition of DSM.

You will also discover we have been at this same place before: in 1982, a moratorium on commercial whaling was adopted by the International Whaling Commission; and in 1991, the Madrid Protocol on Environmental Protection to the Antarctic Treaty banned mining in Antarctica. Let us add yet another example into the history books: a moratorium on DSM.

Finally, we chart the course towards protecting the ocean’s future in the shape of a number of key policy recommendations for the EU.

## How can Europe defend the deep?

**Back a moratorium at the ISA**

**Transform the ISA**

**Ban deep-sea mining in Europe**

**Embargo on deep-sea minerals**

**Deter deep-sea mining investments**

**End deep-sea mining funding**

**Make deep-sea mining obsolete**

# State of play

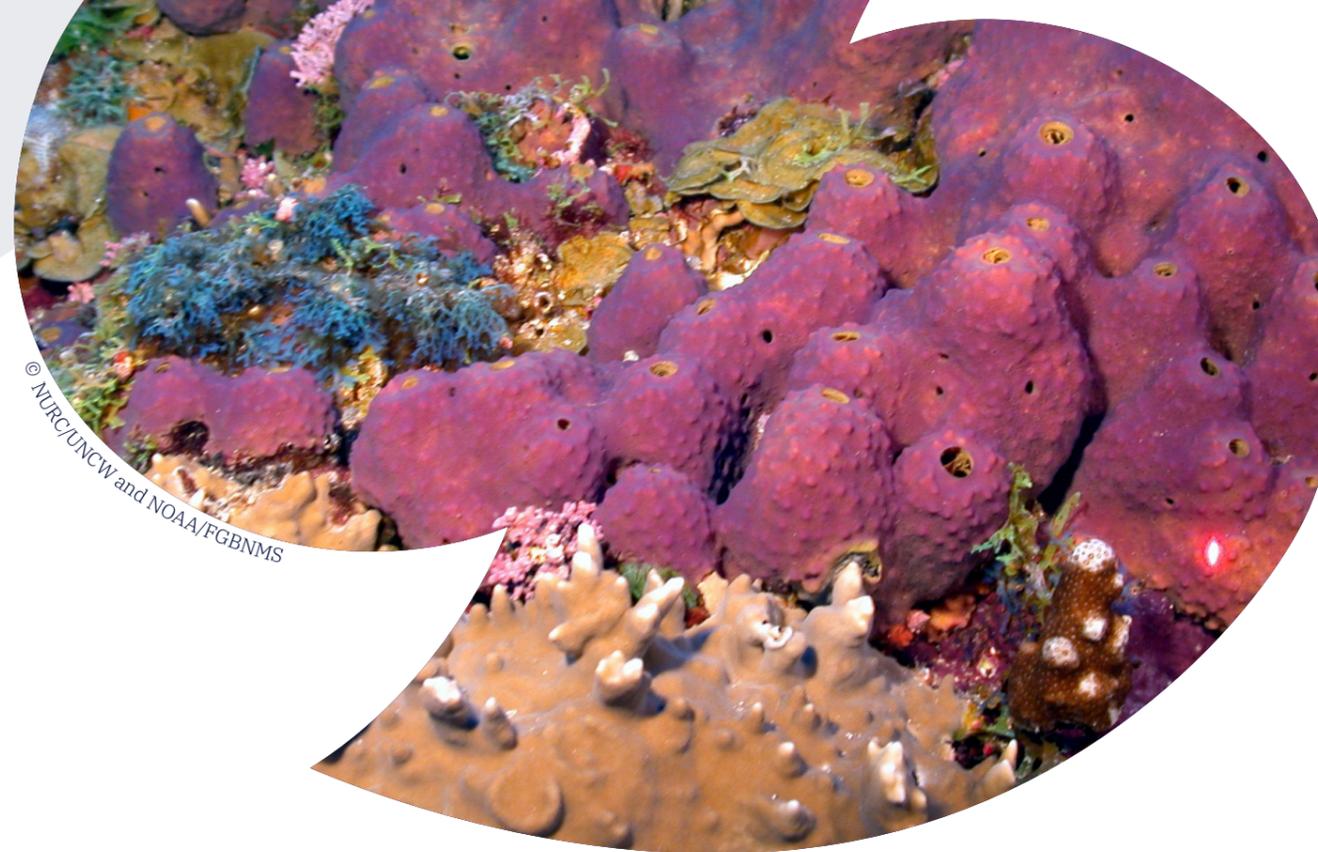
**The possibility of extracting metals in seamounts, hydrothermal vents and abyssal plains was mostly unheard of among the public at large until relatively recently.**

During the last decade, this theoretical possibility appeared to have reached the threshold of technological and economic viability, or so its proponents have claimed at least. An absence of scientific data led some policy-makers and institutions to consider DSM as a viable option to diversify raw materials supply.

This situation has now changed. Over [800 scientists](#) have warned that [damage from DSM would irrevocably harm deep seabed ecologies](#) and impose pressure without precedent on the [planet's largest and least studied ecosystems](#) before we fully understand them. DSM could bring about [large-scale irreversible biodiversity loss](#), causing many habitat-dependent lifeforms – such as those in nodule fields that take millions of years to form – to [never recover](#), and affecting global food webs and fisheries.

## Discoveries on DSM and the climate

As planetary boundaries are being crossed one after another and more is known about the important role played by the deep seabed, its protection is increasingly critical for planetary life support systems. The ocean – our planet's main carbon sink – locks away 25% of all carbon we emit and 93% of the heat trapped by greenhouse gas emissions. DSM would bring us closer to climate chaos by interfering with the planet's carbon pump, disturbing hydrothermal vents that play a key role in regulating climate and ocean geochemistry, affecting carbon-fixing organisms such as phytoplankton, and compromising the seabed's capacity to transport carbon from the atmosphere into deep-ocean water masses, trap carbon, promote healthy fish populations and detoxify a diversity of compounds.



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## Frontlines of extraction

While the ISA has the mandate to ensure the effective protection of the marine environment, in addition to regulating seabed activities, it has been mostly preoccupied with granting DSM exploration contracts and developing a mining code that would permit DSM to begin as early as 2025. Many of these exploration contracts are in the Clarion-Clipperton Fracture Zone, an area the size of the EU in the Pacific Ocean, where companies aim to extract polymetallic nodules from the abyssal plains in dozens of operation zones that would span between 8,000 and 9,000 square kilometres of seabed over the course of a minimum 30-year contract period. So far, the ISA has granted 30 active DSM exploration contracts covering [1.3 million square kilometres of seabed](#).

## The common heritage of humankind

In 1982, the UN Convention on the Law of the Sea (UNCLOS) declared that the seafloor beyond national jurisdiction is the “common heritage of [hu]mankind”, and that any use of that common heritage should also be for the benefit of humankind as a whole and for the “overall development of all countries.” UNCLOS established the ISA – the UN-affiliated body responsible for governing the seabed in the high seas. States remain in charge of any potential DSM activities in waters within their jurisdiction.

Lack of progress on negotiating a mining code, which [remains highly problematic](#), led Nauru – the sponsor for Nauru Ocean Resources Inc (NORI), a subsidiary of The Metals Company (TMC) – to activate the ‘[two-year rule](#)’ in June 2021. NORI has announced its intention to submit a mining application in the second half of 2024. The move was intended to force the ISA to fast-track the adoption of regulations or, if not completed within two years, allow mining to go ahead anyway. While in theory Nauru can present a plan of work on behalf of NORI for approval at any time, the strategy backfired, instead boosting support for a moratorium or a precautionary pause among previously ambiguous or pro-mining states. This stance implies no DSM should take place unless and until a set of conditions around filling existing knowledge gaps, preventing environmental damage and ensuring good governance are met.

In this context, an agreement was reached to continue negotiations on the mining code with the view of adoption by July 2025, with the ISA’s Secretary-General and pro-mining states attempting to rush them through against the clock. This has placed additional urgency on the need to achieve a moratorium, as the approval of a mining code would make it extremely difficult to prevent the approval of future mining permits given the structure and voting mechanisms at the ISA. The path forward to achieve a moratorium or precautionary pause is through a [General Policy](#) of the Assembly, the supreme body of the ISA that represents all 168 member states. Momentum for a moratorium has been building, with at least 25 states supporting a precautionary approach to stop DSM from going ahead.

Additionally, observers and member states have long raised concerns about the ISA’s biased approach to advancing DSM in a context of [revolving doors, conflicts of interest, secretive meetings, leaks of confidential data to mining companies, and unwarranted luxurious spending](#). This has led many to call for a thorough review and reform. The forthcoming Secretary-General elections, for which Brazil has announced it will put forward a candidate, are critical to put such a process in motion.

Besides the push to mine in waters beyond national jurisdiction, certain states have also opened up the seabed within their jurisdiction to DSM activities. This includes some small states such as the Cook Islands, which in 2013 and 2016 reached [agreements](#) with Belgian company Global Sea Mineral Resources (GSR), and Norway, which in January 2024 opened 281,200 square kilometres in the Arctic to DSM exploration and future exploitation.

### Frontrunners in DSM prohibition

In 2021, Australia’s Northern Territory was the first to [prohibit DSM](#) in its waters (a move [replicated by New South Wales](#) in 2024). In 2022, the Government of New Caledonia tabled a similar proposal, and a [law \(loi du pays\) establishing a ten-year ban on DSM](#) is expected to be adopted by the Congress of New Caledonia in Spring 2024. In the Azores (Portugal), the Regional Government announced a Legislative Decree enforcing a moratorium on both DSM exploration and exploitation until 2050, based on a [resolution](#) unanimously adopted by its Parliament. Also in Portugal, an [amendment](#) of the Maritime Spatial Planning Law, preliminarily adopted in October 2023, proposed the establishment of a moratorium until 2050. The French Parliament passed a resolution in January 2023 calling for the prohibition of DSM in its own waters.



### International momentum for a moratorium

While in recent years the threat of DSM taking place has been closer than ever, 2021 marked a turning point. In September, a [motion on a moratorium](#) was voted at the International Union for Conservation of Nature (IUCN) World Conservation Congress. A whopping 81 governments and government agencies voted in favour of the resolution, while only 18 voted against, and among NGOs and civil society organisations attending, 577 supported the motion. European countries supporting the motion included Albania, Austria, Georgia, Germany, Italy, Kosovo, Monaco, Portugal, Romania, Spain, Sweden and Switzerland. Only Belgium and Norway voted against while some of the countries that then abstained subsequently came to support a ban, moratorium or precautionary pause (Finland, France, Monaco and the United Kingdom). In 2022, France, Germany and Spain became the first EU countries to express their support for a ban or precautionary pause at the ISA.

As a sign of growing international support, during the February 2024 meeting of the Convention on the Conservation of Migratory Species (CMS), another [resolution](#) was adopted urging states “not to engage in or support deep-seabed mineral exploitation activities until sufficient and robust scientific information has been obtained to ensure that deep-seabed mineral exploitation activities do not cause harmful effects to migratory species, their prey and their ecosystems.” The UN High Commissioner for Human Rights, Volker Türk, also [called upon delegates](#) to the ISA to issue a moratorium.

The purported need for deep-sea minerals is also being challenged by companies that could be their biggest potential users, including electric vehicle manufacturers BMW, Renault, Scania, Volvo and Volkswagen, and technology companies such as Google and Samsung. More than 60 companies, banks and financial institutions have already [declared](#) they will not use metals from the seabed in their production chains



and will not invest in or finance DSM. This is also reflected by the UN Environment Programme Finance Initiative, which has [stated](#), “there is no foreseeable way in which the financing of deep-sea mining activities can be viewed as consistent with the Sustainable Blue Economy Finance Principles.”

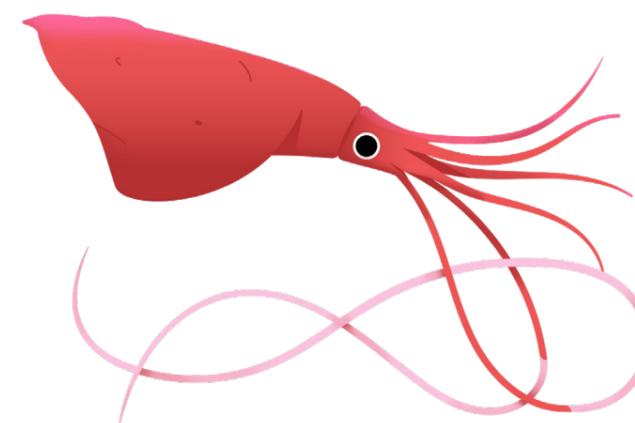
[Indigenous communities, NGOs and other community and civil society groups](#) have been instrumental in raising awareness on the issue. Fishers, coastal communities and fisheries organisations have also been vocal about the need to implement a global moratorium given the impact DSM would have on biodiversity and food webs. This includes the EU fisheries advisory councils (Long Distance, Pelagic, North-western waters and South-western waters) as well as the Norwegian Fisheries Association.

## Where do European countries stand on deep-sea mining?

	Position	ISA Contracts	ISA Council	ISA LTC
Austria	Unclear	No	No	No
Belgium	Unclear	Yes	2025	Yes
Bulgaria	No position	Yes (IOM)	No	No
Czechia	Unclear	Yes (IOM)	2024	Yes
Kingdom of Denmark	Precautionary pause	No	No	No
Finland	Precautionary pause	No	No	No
France	Ban	Yes	2024-2026	Yes
Germany	Precautionary pause	Yes	2024, 2026	Yes
Iceland	No position	No	No	No
Ireland	Precautionary pause	No	No	No
Italy	Unclear	No	2024-2026	No
Malta	No position	No	No	No

Monaco	Precautionary pause	No	No	No
Norway	Pro-DSM	No	2024	Yes
The Netherlands	Unclear	No	2025	Yes
Poland	Pro-DSM	Yes	2024	Yes
Portugal	Precautionary pause	No	No	Yes
Slovakia	No position	Yes (IOM)	No	No
Spain	Precautionary pause	No	2024	Yes
Sweden	Precautionary pause	No	No	No
Switzerland	Moratorium	No	No	No
U.K.	Moratorium	Yes	2024	Yes

**Table A.** The table above summarises the detailed country factsheets found in the appendix. It lists the ten countries that have expressed support for a moratorium or precautionary pause, in addition to France, which calls for an outright ban. Countries that clearly call for advancing DSM have been listed as “pro-DSM”, while those with more nuanced or ambiguous stances have been marked as “unclear”. Other listed countries are yet to officially announce their position, but have been included on the basis of their interest in the issue, such as being part of sponsoring organisations (InterOceanmetal Joint Organization - IOM) or facing DSM in the vicinity of their national waters. The list also indicates if countries are state sponsors for exploration contracts at the ISA (either directly or through IOM), their membership of the ISA Council, and if they have members on the ISA Legal and Technical Commission (LTC).



# The EU's move away from DSM

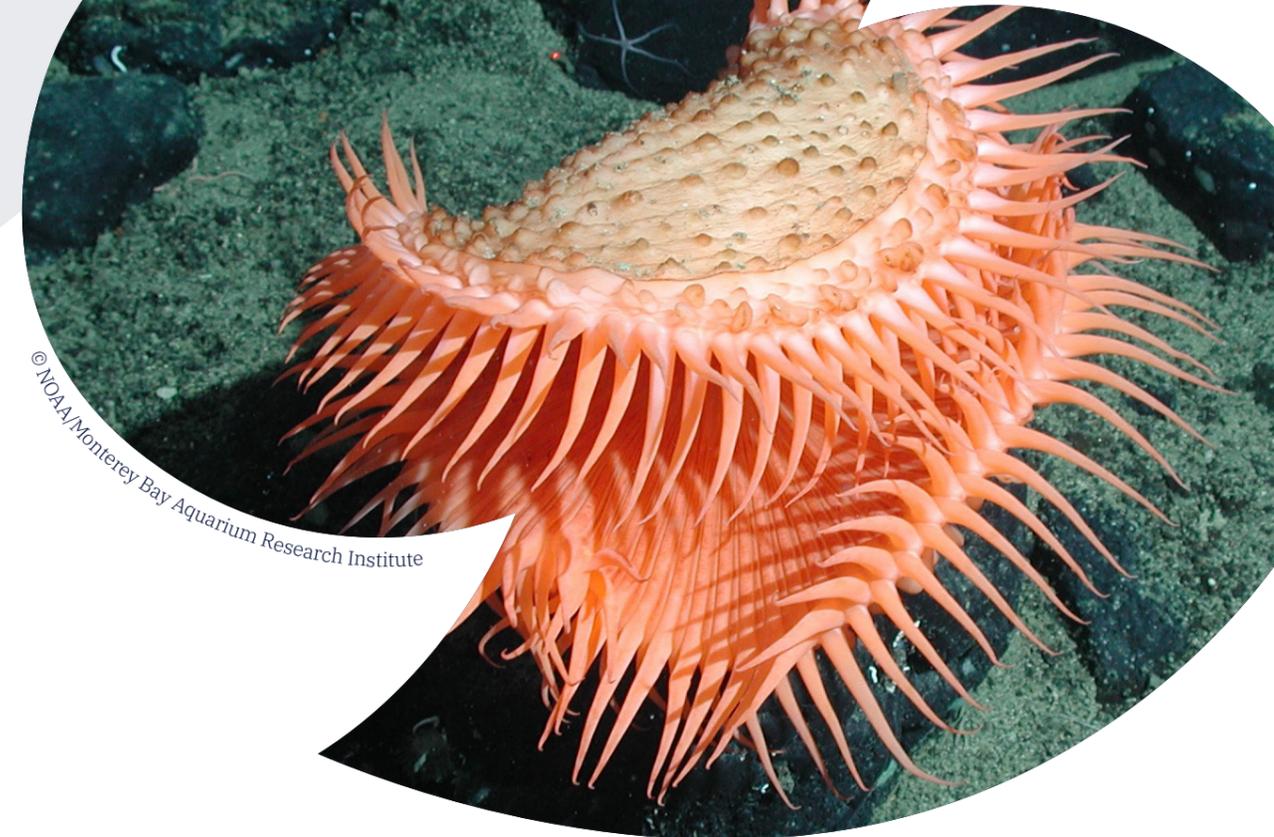
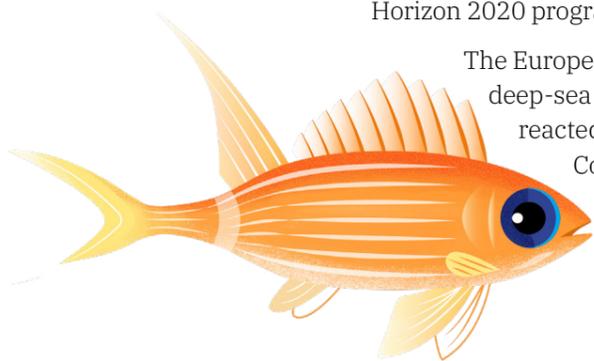
**Over the course of a decade, the EU shifted its approach on DSM from an opportunity for growth to risky business.**

In June 2022, the European Commission issued its [Joint Communication](#) on the EU's International Ocean Governance agenda 'Setting the course for a sustainable blue planet'. The document marked as a key EU priority the need to **"prohibit deep-sea mining until scientific gaps are properly filled, no harmful effects arise from mining and the marine environment is effectively protected."** The Commission committed itself to supporting research to improve knowledge on deep-sea ecosystems and on monitoring and supervising technologies, and encouraged active engagement at the ISA.

This position is remarkably different from what the Commission had defended a decade ago. In 2012, another [Communication](#) from the Commission, 'Blue Growth opportunities for marine and maritime sustainable growth', claimed that by 2020 "5% of the world's minerals, including cobalt, copper and zinc could come from the ocean floors," a figure that "could rise to 10% by 2030." As part of the Commission's call to "harness the untapped potential of Europe's oceans," the [EU invested over €100 million](#) in projects related to DSM over the following decade. As recently as 2021, a [Strategic Foresight Report](#) by the Commission still claimed that "novel ways of sourcing, such as seabed and space mining need to be explored."

While a 2016 [Joint Communication](#) on international ocean governance acknowledged that "the current framework does not ensure the sustainable management of the oceans," specifically referring to the ISA, it nevertheless established a mandate for the Commission to "produce guidance on the exploration and exploitation of natural resources on the seabed in areas under national jurisdiction." The aim was to initiate DSM in European waters. During this time, funding for DSM technologies through the Horizon 2020 programme peaked at [€84 million](#).

The European Parliament, "alarmed by the Commission's insistence on deep-sea mining being one of the Union's priority sectors for blue growth," reacted by adopting a historic [resolution](#) in 2018 which urged the Commission and EU countries to "stop sponsoring deep-sea mining exploration and exploitation licences in Areas Beyond



© NOAA/Monterey Bay Aquarium Research Institute

National Jurisdiction [...] and not to issue permits for deep-sea mining on Member States' continental shelf." The resolution, adopted by an overwhelming majority, also called on the EU "to support an international moratorium on commercial deep-sea mining exploitation licences until such time as the effects of deep-sea mining on the marine environment, biodiversity and human activities at sea have been studied and researched sufficiently and all possible risks are understood."

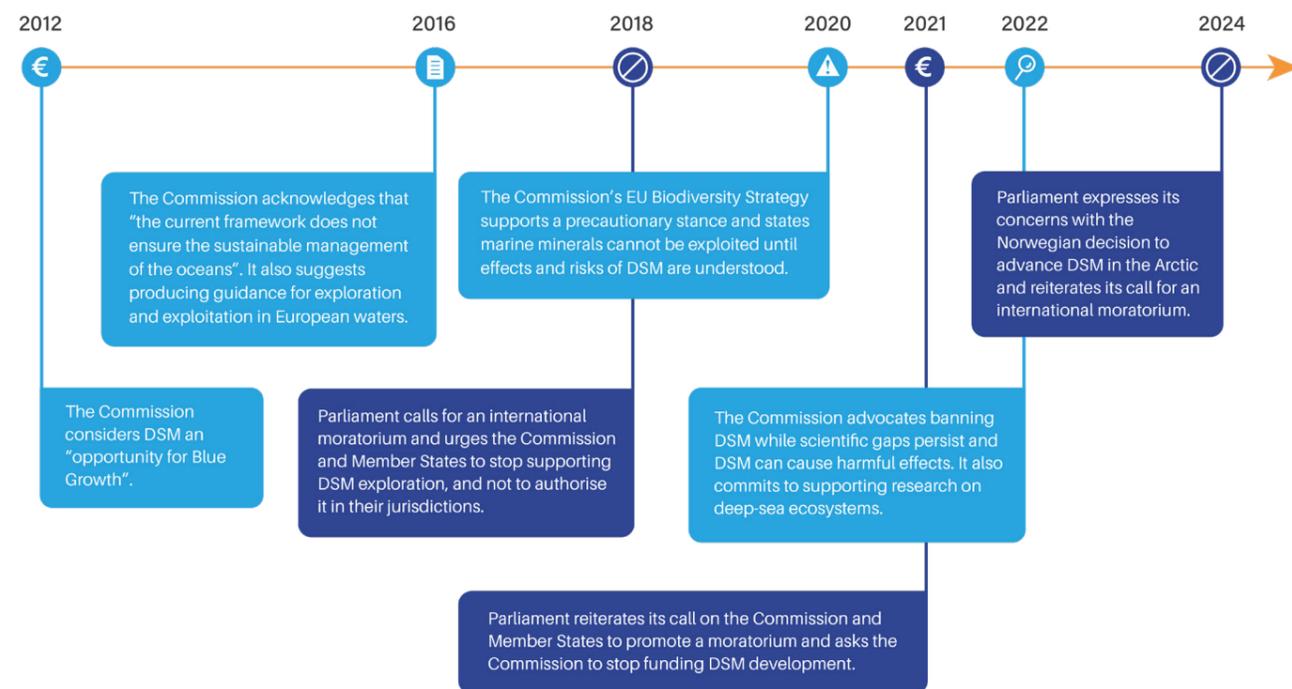
This resolution was key to initiate the Commission's shift away from DSM. In 2020, the Commission's [EU Biodiversity Strategy](#) stated that "the EU should advocate that marine minerals in the international seabed area cannot be exploited before the effects of deep-sea mining on the marine environment, biodiversity and human activities have been sufficiently researched, the risks are understood and the technologies and operational practices are able to demonstrate no serious harm to the environment." In a response to this strategy, in their July 2021 [resolution](#), the Parliament again called on the Commission and Member States to promote a moratorium and expressly asked the Commission "to cease funding for the development of seabed mining technology." Such calls would be reiterated in many other resolutions by the Parliament, including the 2022 [ocean governance and biodiversity resolution](#) and the [2024 resolution](#) on Norway's decision to advance seabed mining in the Arctic.

While the Commission and Parliament now essentially share a common position, there is no common EU position as such. Despite the fact that the EU, as a party to UNCLOS, has voting rights at the ISA, it currently has no mandate to take a position on behalf of its Member States and has mostly remained a silent observer. In January 2021, the Commission issued a [proposal for a Council of the EU Decision](#) on the position to be taken on behalf of the EU at the meetings of the ISA Council and Assembly, referring to the same language used in the EU Biodiversity Strategy. Diverging views among Member States, at a time when no single EU country had publicly endorsed a moratorium or precautionary pause, stalled the process.

Similar differences within the Council of the EU prevented the adoption in 2023 of the [language agreed upon by the European Parliament](#) for a recital of the Critical Raw Materials Act, which, in line with previous resolutions, supported a precautionary position. Although limited and weakened, the [adopted](#) regulation restricted the possibility of granting strategic status to DSM projects. To date, little indicates that the Commission will allow for any DSM activities as part of its strategic partnerships or partnerships to come.

In parallel, other EU institutions have taken concrete steps to stop DSM. One example is the European Investment Bank, which in 2022 adopted its [‘Eligibility, Excluded Activities and Excluded Sectors’ list](#). The guidelines explicitly list the “extraction of mineral deposits from the deep sea” among bank-wide excluded activities, considering such an activity “unacceptable in climate and environmental terms.” In terms of research funding, with the exception of the [TRIDENT project](#), support has been shifting toward fundamental research into the role and functioning of deep-sea ecosystems, although still at insufficient levels.

Additionally, a number of EU advisory bodies, including the [European Academies’ Science Advisory Council](#) (2023), the [Pelagic Advisory Council](#) (2020) and the [Long Distance Fleet Advisory Council](#) (2019) issued statements and recommendations that supported calls for an international moratorium on DSM.



**Figure 1.** The above timeline depicts how language on DSM has evolved since 2012 until present. Developments from the European Commission are depicted in light blue, while those from the European Parliament are reflected in a darker blue.

# Do it again!

**The recent dramatic increase of support for a moratorium, precautionary pause and outright ban on DSM is reminiscent of similar international policy processes of the last 40 years.**

## Mining Antarctica

Three decades ago, the possibility of mining in Antarctica seemed imminent, just like the threat that today looms over the seabed. In 1988, the “Convention on the Regulation of Antarctic Mineral Resource Activities” (CRAMRA) was [signed by 19 states](#), establishing an Antarctic Mineral Resources Commission and a state-sponsored exploitation regime with many similarities with the ISA.

However, a small number of states refused to sign the Convention, and started working on a new agreement. While France and Australia had been active during the negotiations, both countries took a U-turn, instead advocating for states to adopt regulations that would effectively prohibit mining in Antarctica.

Australia was the first to step forward, proposing to instead declare Antarctica as an international wilderness reserve. France joined Australia soon after, following a campaign that gathered [1.2 million signatures against mining Antarctica](#). [Belgium](#) and [Italy](#) adopted (still standing) laws banning their citizens from conducting mining activities in Antarctica, and other countries joined the chorus. In 1991, the Madrid Protocol on Environmental Protection to the Antarctic Treaty was signed, effectively banning mining in Antarctica.

The quick transition between 1988 and 1991 illustrates how existing frameworks and inertia can be altered through public pressure and political will, and how states can use both domestic laws and international fora to bring about change. It would not be difficult, for example, to imagine similar laws being passed today by champion states banning companies, vessels and individuals under their jurisdiction from conducting DSM related activities.





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## The whaling moratorium

The [1982 whaling moratorium](#) adopted by the International Whaling Commission (IWC) tells a different but equally relevant story. The IWC was established in 1946 for the orderly development of the whaling industry, but has since completely shifted its focus to the conservation of whales. While the original mission remains on paper, it was redefined through the [2018 Florianópolis Declaration](#).

The whaling moratorium was achieved as a direct consequence of a growing global anti-whaling movement that had already gained momentum at the 1972 UN Conference on the Human Environment, in which a ten-year moratorium had been recommended. Anti-whaling and non-whaling states swiftly achieved the necessary three-quarters majority on the moratorium.

After 1982, a number of whaling states objected, but several countries (including some EU countries) imposed bans on the importation of fishing products from countries not respecting the moratorium, which moved many of them into compliance. While the moratorium was not able to put a complete stop to whaling, it again illustrates options to pressure countries that could allow DSM to go ahead, including bans on importing seabed minerals or goods that include such minerals.

Today, as more and more ISA member states have indicated their commitment to engage in its meetings, a critical point in which a moratorium is adopted could be close. And, like the IWC, the ISA could similarly refocus its mission from regulating mineral extraction to the protection of the seabed ecosystem in areas beyond national jurisdiction, particularly considering the latter is already within its existing mandate.

# Charting the way ahead

## How can Europe defend the deep?

As previous historical examples illustrate, there are decisive movements and strategic opportunities in which events quickly unfold and new consensus can be built. Undoubtedly, this is one such moment, and very likely the most critical moment in recent history where a bold decision can be made to stop unprecedented destruction of the ocean. In the face of the rising threat of the deep sea being transformed into a new extractive frontier and geopolitical battleground, stopping deep sea mining before it happens is the right decision to protect the ocean and planet.

This is what the EU and European states can do to make it happen.

### 1. Back a moratorium at the ISA

At this point, eleven European countries have vocally expressed their support for a ban, moratorium or precautionary pause. These ocean leaders should coordinate among themselves and with other global champions for a moratorium and advocate for other countries inside and outside the EU to join. This includes supporting a General Policy to achieve a moratorium at the ISA and working within the EU and other international organisations to achieve the objectives set below.

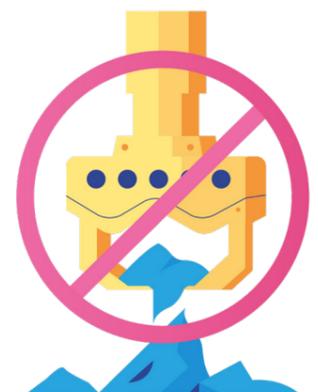


### 2. Transform the ISA

The ISA, like the IWC, is a product of a different time, in which nobody could have imagined that the deep sea was so full of life and had such critical functions. Just as the IWC collectively agreed in 2018 to redefine its role, so must the ISA undergo a similar transformation as part of a thorough institutional reform. A reformed ISA must establish environmental and scientific committees, enhance environmental competence and transparency, ensure accountability, and secure the full involvement of civil society organisations and stakeholders.

### 3. Ban DSM in European waters

A prohibition of DSM in European waters is not only critical for the protection of its ecosystems – it is also a way to send a clear message to the world on the firm rejection of the destruction DSM would cause. This bold move has already been made or initiated by a number of countries and territories, both within and outside Europe. At the EU level, a new legal act or new provisions in an existing act could establish an obligation for Member States to prohibit DSM in waters within their jurisdiction. The EU could also restrict the ability of operators from Member States to engage in DSM activities in third-countries, similar to Belgium and Italy banning mining activities in Antarctica.



## 4. Embargo on deep-sea minerals

Just as bans on imports of whale products were instrumental in the 1980s, regulations banning import and use of raw materials or manufactured goods that have been obtained from or produced with deep-sea minerals would have a strong dissuasive impact on countries that continue to push for DSM and deter DSM investments. There are already clear precedents set, such as in the 2023 Regulation on deforestation-free products and the 2021 Conflict Minerals Regulation. This should apply to the entire European Economic Area to address potential DSM exports from EFTA states.



## 5. Deter DSM investments

Although several companies have already deemed the financial risks of DSM holdings too high, a number of Europe-based companies are still willing to support DSM. One way of deterring such investments is to label DSM as an unsustainable economic activity, following the lead of the European Investment Bank. For example, the Sustainable Finance Disclosure Regulation could play a critical role by excluding financial products from receiving a green label if they involve DSM companies.



## 6. End DSM funding

Investing public funds into DSM ventures risks prioritising industry interests over independent foundational research that is much needed to address critical knowledge gaps of deep sea ecosystems. EU funding for DSM projects has decreased significantly since its peak in the late 2010s. Still, the EU continues to channel large sums to DSM projects, such as the €11.8 million TRIDENT project (2023-2027) or the Geological Service for Europe's ongoing mapping of 'Critical Raw Materials Offshore Occurrences'. JPI Oceans, a European intergovernmental funder, has financed ongoing DSM impact studies with €22.9 million since 2013 with the participation of Belgium, Germany, Norway, Portugal, and the Netherlands.

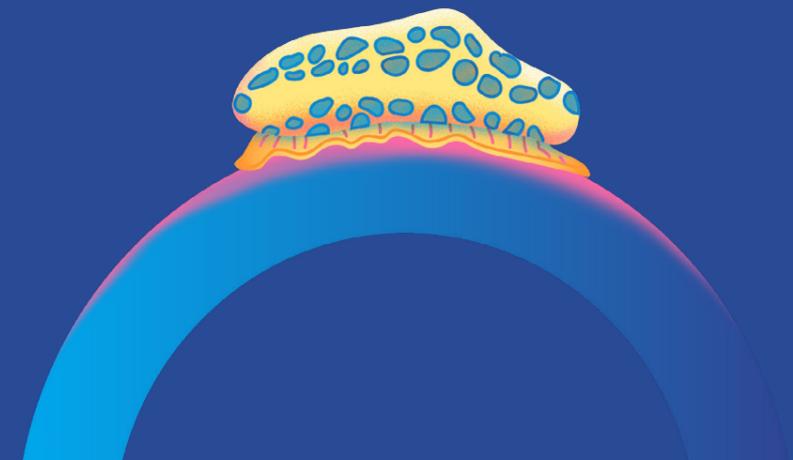


## 7. Make DSM obsolete

DSM's economic viability depends on 'growth scenarios' that predict a steep demand for metals. Still, DSM would, at best, only meet a tiny fraction of global demand for metals at an enormous ecological cost. DSM was never conceived to replace terrestrial mining; only by recognising planetary boundaries and rethinking the pursuit of perpetual growth will we avert large-scale biodiversity collapse. The EU should adopt ambitious targets to reduce its material footprint and develop a list of measures, policies and innovation pathways to drastically reduce resource use in all mineral demanding sectors.



#KeepItInTheSeabed



# Austria



**UNCLEAR POSITION**

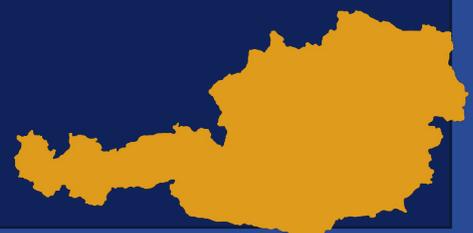
**ISA CONTRACTS: NO**

**ISA COUNCIL: NO**

**ISA LTC: NO**

Austria has consistently endorsed the precautionary principle in its public statements regarding deep-sea mining (DSM) since at least 2020, when the [Austrian delegation at the International Seabed Authority \(ISA\)](#) stated that “minerals in the Area should not be exploited before the effects of deep-sea mining on the marine environment, biodiversity and human activities have been sufficiently researched, the risks are understood and technologies and operational practices are able to demonstrate that the environment is not seriously harmed - in line with the precautionary principle and the ecosystem based approach”. In [response to a parliamentary inquiry](#), in September 2023 the Minister for Foreign Affairs, Alexander Schallenberg, reiterated this stance. In January 2024, a [motion for a resolution urging the government to call for a moratorium](#) was submitted to the Austrian Parliament and as of April 2024 is under consideration in the [foreign policy committee](#).

At the 2021 International Union for Conservation of Nature (IUCN) World Conservation Congress, Austria voted in favour of Resolution 122 to protect deep-ocean ecosystems and biodiversity through a moratorium on deep-sea mining.



# Bulgaria



NO POSITION

ISA CONTRACTS: YES (IOM)

NO ISA COUNCIL

NO ISA LTC

Bulgaria is a founding member of the Interoceanmetal Joint Organization (IOM), in which it currently shares membership with Poland, the Czech Republic, Slovakia, Russia and Cuba (see [Poland](#) for further details). Bulgaria is represented in the IOM Council by a representative of the Directorate of Geology of the Ministry of Energy.

Researchers from the Strashimir Dimitrov Geological Institute at the Bulgarian Academy of Sciences have been involved in IOM activities, although Bulgarian contributions to IOM's research have focused mostly on seabed ecology.

While Bulgaria's 1999 Subsurface Resources Act includes within its scope the "subsurface resources in the continental shelf and in the Black Sea exclusive economic zone", there are no significant mineral deposits of commercial relevance within Bulgarian waters.



# Belgium

UNCLEAR POSITION

ISA CONTRACTS: YES

ISA COUNCIL: 2025

ISA LTC: YES

For years, the Belgian government has implicitly positioned itself in favour of deep sea mining (DSM) not only by sponsoring the International Seabed Authority (ISA) exploration contract held by Global Sea Mineral Resources (GSR), a subsidiary of the Belgian dredging and offshore activities company DEME, but also by pushing for the adoption of exploitation rules at the ISA. While Belgium has always stressed the need for strict environmental regulations, including binding regional environmental management plans, its position has recently evolved into a more precautionary stance.

During the July 2023 ISA Assembly, Belgium called for deep-sea mining to “be delayed until certain conditions can be met”, in reference to the adoption of “rules and regulations that can ensure no harm to biodiversity,” including protecting 30% of marine areas by 2030, referencing the High Seas Treaty. In February 2024, Belgium expressed its strong support at the Convention on Migratory Species conference in favour of a [resolution](#) urging states not to engage in, or support, DSM.

Prior to this, a [draft moratorium resolution](#) was debated at the Federal Parliament. A public hearing was organised in the Belgian Parliament in June 2020, and in January 2021 a resolution was voted on but did not pass. A second [resolution](#) calling for a moratorium was again [raised](#) in 2023, but failed to gather enough support.

Belgium continues to sponsor GSR’s exploration contract for polymetallic nodules in the Clarion-Clipperton Fracture Zone, which is due to expire in 2028. However, GSR [announced](#) in March 2024, following a board decision made the previous year, that it would suspend further development of its DSM machinery due to legal uncertainty



that GSR “can actually apply for a mining permit.” GSR developed the “Patania II” nodule collector that was temporarily stranded during a test carried out in April and May 2021. GSR has also reached an [agreement with the Cook Islands](#) to pursue DSM in the country’s exclusive economic zone (EEZ).

NGOs were heard for the first time in June 2018 during a conference on DSM organised by the Minister of Economy. As a result of NGO advocacy, a cross-ministerial coordination group was created involving the Federal Ministries of Economy, Environment and Foreign Affairs, engaging NGOs, scientists, GSR and Jan De Nul (a Belgian dredging company) to discuss the Belgian position at ISA meetings and to provide recommendations.

Belgium adopted its [seabed mining legislation](#) on 17 August 2013. The revision discussion was initiated in 2019, including language on DSM exploration as well as exploitation, and a report with recommendations was submitted to the ministries. A new [legislative proposal](#) was issued by the Council of Ministers in June 2023 and was passed after [discussions](#) in May 2024.



# Czechia

UNCLEAR POSITION

ISA CONTRACTS: YES (IOM)

ISA COUNCIL: 2024

ISA LTC: YES

The Czech Republic is a full member of the Interoceanmetal Joint Organization (IOM) as a successor state to former Czechoslovakia, an original founding member of the organisation, in which it currently shares membership with Poland, Bulgaria, Slovakia, Russia and Cuba (see [Poland](#) for further details). The Czech Republic participates on the IOM's Council through its Ministry of Industry and Trade in cooperation with the Ministry of Foreign Affairs. As a member of the ISA Council, the representative of the Czech Republic has served as the chairman of and spokesperson for the Regional Group of Eastern European Countries. However, in 2019, the Czech Audit Office (NKU) [recommended](#) the country's withdrawal from IOM and since the 2023 ISA Assembly Czechia has not participated in further Council sessions.

In June 2023 the [first protest](#) against DSM took place in Prague, in front of the Ministry of Industry and Trade, calling on the government to support a moratorium. Protesters were met by Director of Raw Materials Policy Pavel Kavina, who had led the ISA delegation. Around the time of the protest, a member of the Czech Chamber of Deputies filed a question on the role of Czechia in the ISA, with an ambiguous response.

The Czech Republic, together with Slovakia, is one of only two only landlocked countries participating in deep-sea bathymetric surveying and has contributed to IOM's research at its Clarion-Clipperton Zone contract area in the Pacific. Researchers from the University of Chemistry and Technology in Prague are actively involved in IOM activities, conducting chemical and granulometry analysis. Members of UCT Prague's Department of Metals and Corrosion Engineering have often participated in IOM meetings and a member of the University sits at the LTC after being nominated by Czechia.



The Czech Republic adopted Act No. 158/2000 of 18 May 2000 on Prospecting, Exploration for and Exploitation of Mineral Resources from the Seabed beyond the limits of National Jurisdiction, per their obligation to adopt national DSM legislation under the United Nations Convention on the Law of the Sea as a sponsoring country.



# Kingdom of Denmark

PRECAUTIONARY PAUSE

ISA CONTRACTS: NO

ISA COUNCIL: NO

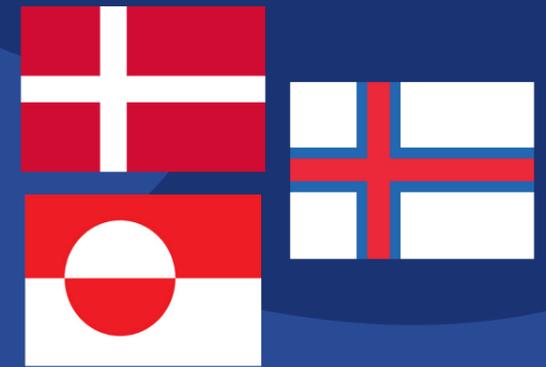
ISA LTC: NO

The Kingdom of Denmark publicly [expressed](#) its support for a precautionary pause during the March 2024 International Seabed Authority (ISA) Council. The statement was given on behalf of the Danish, Greenlandic and Faroese governments, which have their own exclusive competences on extractive seabed activities. In an [official statement](#), the Danish Government indicated that no deep sea mining (DSM) should take place until robust regulations are in place and “sufficient scientific understanding of negative impact and effective protection of the marine environment from the harmful effects of DSM activities is ensured”. Prior to this, the Greenlandic government had issued a [statement](#) supporting a precautionary pause on DSM (although time-bound for two years) and commissioned a report on the impacts of seabed mining within Greenlandic waters.

In 2023, the Danish Ministry of Environment commissioned a report on DSM from the National Centre of Environment and Energy at Aarhus University to inform upcoming work at the ISA. The [report](#) was published in March 2024, highlighting a lack of knowledge and environmental risks. It also summarised occurrences of hydrothermal vents within Greenlandic waters based on previous findings.

Following a written question at the Danish Parliament to the Climate, Energy and Supply Minister about the Danish government’s position on DSM, in November 2023 the government [explained](#) that it is following international negotiations and referenced the Geological Survey’s assessment that there is no potential for DSM in Danish waters.

Following the [decision](#) of Norway in January 2024 to open its waters to DSM, a Greenlandic MP tabled a [written question in the Nordic Council](#) aimed at the Norwegian government, asking how it intends to ensure that DSM does not harm fishing in the area and how information will be shared with other Nordic countries.



On the business side, the Danish shipping company Maersk obtained shares in The Metals Company through a contractor agreement. However, in 2023, Maersk [announced](#) its plan to divest entirely from The Metals Company. Prior to that, it [sold its drilling subsidiary](#) to the Danish Noble Corporation. The Denmark-based consultancy and engineering firm Ramboll IMS [has been involved](#) in advancing DSM technologies, most notably through the [Blue Mining](#) project. Furthermore, the architect firm Bjarke Ingels Group (BIG) [was contracted](#) by The Metals Company to work on the design of its water vessels and underwater robots.



# Finland



**PRECAUTIONARY PAUSE**

**ISA CONTRACTS: NO**

**ISA COUNCIL: NO**

**ISA LTC: NO**

Finland was particularly interested in deep-sea mining (DSM) in the 1980s, when companies such as Rauma-Repola Oy or Hollming Oy sought to diversify their stakes beyond offshore drilling, and a joint Finno-Soviet project to develop a nodule mining system was conducted. More recently, the shipping company Bore participated in Nautilus's (now Deep Sea Mining Finance Ltd) DSM exploration by providing its vessel MV Norsky.

At the 2021 International Union for Conservation of Nature (IUCN) World Conservation Congress, Finland voted in favour of a Resolution to protect deep-ocean ecosystems and biodiversity through a moratorium on DSM. During the March 2023 International Seabed Authority (ISA) Council meeting, Finland's delegation **called** for no exploitation of the seabed to commence before strict environmental standards are in place, and stressed that more scientific research is needed. That same month, Finland's Ministry for Foreign Affairs confirmed that Finland supports a precautionary pause, while the then-Minister of the Environment and Climate Change **stated** that a "good example of ecocide is the effect of seabed mining". Since then, Finland has consistently raised concerns about the functioning of the ISA and called for more transparency, compliance and monitoring mechanisms as well as meaningful stakeholder consultation.

Finnish environmental NGOs have asked the government to increase its ambition by making use of its diplomatic and political connections to like-minded countries to back a precautionary position.



# France

BAN

ISA CONTRACTS: YES

ISA COUNCIL: 2024-2026

ISA LTC: YES

France's position on deep-sea mining (DSM) shifted after French President Emmanuel Macron stated at the June 2022 UN Ocean Conference that there was a need "to create the legal framework to stop mining in the high seas and to not allow new activities putting these ecosystems in danger". The position was made clear when Macron announced in his opening speech at United Nations Framework Convention on Climate Change COP27, in November 2022, that "France is calling for a ban on all exploitation of the deep seabed." France has subsequently defended this view at all international fora and within the EU under the lead of State Secretary for the Sea, [Hervé Berville](#).

This position was seconded by the French Parliament in January 2023, after an absolute majority adopted a [resolution](#) on banning deep-sea mining in international waters and calling on the government to block the adoption of any regulations for seabed mining by the International Seabed Authority (ISA). In December 2022, the French Polynesian Assembly also adopted a formal [declaration](#) supporting a moratorium of DSM, while in 2019 the Territorial Assembly of Wallis and Futuna issued a "[Declaration of the Ocean](#)" calling for a 50-year moratorium. The President of the Government of New Caledonia [defended](#) a moratorium at the July 2021 France-Oceania Summit and, following an initial [proposal](#) from the government for a moratorium, a proposal for a [law \('loi du pays'\) establishing a 10 year ban of DSM](#) was tabled at the Congress of New Caledonia.

Prior to this shift, France, which has the world's largest exclusive economic zone (EEZ), had been actively engaged in DSM exploration through IFREMER, the French Research Institute for Exploitation of the Sea, mainly in Wallis and Futuna. In 2001, IFREMER signed the first ISA contracts for the exploration for polymetallic nodules in the Clarion-Clipperton Zone, and in 2014 a second contract was signed for polymetallic sulphide deposits along the Mid-Atlantic Ridge. Although French laws that regulate the possibility of DSM in its waters have not yet been repealed, certain aspects have been [amended](#).

France's policy turn was the result of a process to define its position on DSM. Prior to



this shift, France had considered DSM as one of seven areas for innovation included in the Innovation 2030 Commission and, in January 2021, an update of the [national strategy for exploration and exploitation of mineral resources in the deep seabed](#) was launched during CIMer (the Inter-ministerial Council of the sea), programming oceanographic campaigns in the French EEZ and the development of a demonstrator to test operations. In spite of government support at the time, no large French corporations expressed interest in DSM, while governments and populations of the French overseas territories in the Pacific, particularly in Wallis and Futuna, objected to additional exploration from 2018 onwards.



# Germany

PRECAUTIONARY PAUSE

ISA CONTRACTS: YES (PUBLIC)

ISA COUNCIL: 2024 & 2026

ISA LTC: YES

In November 2022, Germany [announced](#) its support for a precautionary pause and stated “it would not sponsor any applications for commercial deep-sea mining of raw materials until further notice”. This departs from the previous position stemming from the 2018 coalition government [agreement](#) that supported deep sea mining (DSM) as a path to secure access to metals. In a 2019 [parliamentary inquiry](#), the German government expressed its support for ‘environmentally sensitive’ DSM based on strong environmental standards, including mandatory regional environmental management plans.

Germany still holds two International Seabed Authority (ISA) exploration contracts: one for manganese nodules in the Clarion-Clipperton Zone (up for renewal in 2026), and another for sulphide deposits in the central Indian Ocean (up for renewal in 2030). Both licenses were granted to the Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany (BGR), advising the Federal Ministry for Economic Affairs and Energy. BGR has been conducting exploration in the Clarion-Clipperton Zone since 2006 and in the Indian Ocean since 2015. Germany’s designated expert at the ISA Legal and Technical Commission (LTC) is the former head of nodule exploration at BGR. DSM had been regulated in Germany since the 1980 Interim Regulation of Deep-seabed Mining, followed by the Seabed Mining Act of 6 June 1995 (amended in 2010).

The industrial DSM lobby is organised around the [DeepSea Mining Alliance](#), which includes maritime industry, suppliers and research institutions and focuses on the implementation of commercial DSM projects. The 2020 [German raw materials strategy](#) still referred to DSM as an avenue to source raw materials and envisioned conducting pilot tests in BGR contract areas if industry should express such a demand.



Funding for DSM has been provided by the Federal Ministry for Economic Affairs and Energy to BGR, while research focusing on the long-term impacts of DSM has been supported by the Ministry of Education and Research and EU research programmes. Notable projects with BGR involvement include the Horizon 2020 [BlueNodules](#), [BlueHarvesting](#) and [BlueMining](#), as well as [MIDAS](#).

At the ISA, the German delegation is headed by the Ministry of Economy, supported by the Ministry of Environment and with the involvement of the German Environmental Agency, the Ministry of Research and the Foreign Office. Civil society movements are organised around the German NGO Working Group on Deep Sea Mining (AG Tiefseebergbau), including member organisations of the [German NGO Forum on Environment and Development](#).



# Iceland



NO POSITION

ISA CONTRACTS: NO

ISA COUNCIL: NO

ISA LTC: NO

While Iceland has not been involved in the International Seabed Authority (ISA), nor made any official statements on its position on deep-sea mining (DSM), it did [submit a response](#) during the Norwegian consultation on their Strategic Environmental Impact Assessment on DSM in the Arctic. After Norway's opening of an area for DSM, including an area around Svalbard, Iceland formally notified Norway that the [Svalbard Treaty](#) provides equal rights to all contracting parties, including Iceland, challenging Norway's ability to exploit deep-sea mineral resources on its own. This is a long contested issue where Norway claims it has the right to manage the continental shelf around Svalbard, which has been contested by most signatories of the Svalbard treaty.

Iceland's EEZ and [proposed extended continental shelf](#) includes large areas with [potential deep-sea mineral deposits](#), particularly sulphide hydrothermal mineralisations. While Iceland has not expressed direct interest in advancing DSM in these areas, during OECMs (Other effective area-based conservation measures) discussions at the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) Commission and the North East Atlantic Fisheries Commission (NEAFC), it supported (together with Norway) the limitation of designated areas to a depth of 1,400 metres, claiming that no commercial fishing is viable beyond such depths.

Several written questions have been tabled in the Icelandic Parliament on DSM. In November 2023, the Minister of Food, Agriculture and Fisheries [responded](#) that she was not able to provide a detailed explanation, but promised to look further into the matter. The same month, the [Minister of Foreign Affairs responded](#) that the ministry is currently reassessing Iceland's involvement in the ISA. Icelandic environmental NGOs have signed joint letters to the government in late 2023 and early 2024 calling for Iceland to back a moratorium on DSM.



# Ireland

PRECAUTIONARY PAUSE

ISA CONTRACTS: NO

ISA COUNCIL: NO

ISA LTC: YES

In July 2023, Ireland publicly expressed its support for a precautionary pause “until the scientific knowledge base is sufficient to allow for informed decision-making”. Ireland’s Deputy Prime Minister and Minister for Foreign Affairs, Micheál Martin, [stated](#) that “Ireland today joins a growing chorus of countries, scientists, civil society organisations and private companies calling for a precautionary pause of deep sea mining” (DSM), highlighting that the “international community has a responsibility to protect the marine environment, which is under greater pressure than ever”.

While Ireland had not been vocal on this issue in international fora, in December 2022 it adopted its [Policy Statement on Mineral Exploration and Mining](#), which essentially established a moratorium for mineral exploration and DSM on the Irish seabed until evidence is available “to adequately assess the impacts of any such potential activity, including on fishers’ interests and livelihoods.” The policy also indicates that International Seabed Authority (ISA) activities should be “followed closely” as “any seabed mining that may occur close to our maritime area may have adverse consequences in Ireland’s waters”. Ireland has subsequently become an active player at ISA meetings, supporting the inclusion in the agenda of the General Policy proposal during the July 2023 Assembly, while also making a strong statement at the February 2024 [Convention on Migratory Species](#) conference in favour of a Resolution urging states not to engage in, or support, DSM.

After the United Kingdom stepped down from its role as lead of DSM work within the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) Commission, Ireland was designated as the new lead together with Seas At Risk in April 2024. The DSM Task Group is mandated to draft a report on applicable



DSM measures within the North-East Atlantic.

The Marine Institute, an Irish state agency, together with the University of Limerick and University College Cork, is engaged in [TRIDENT](#) (2022-2027), which is currently the largest EU-funded DSM research project with a budget of €11.8 million. In June 2023, the project organised a [workshop](#) on “Assessing the Environmental Impacts of Potential Deep-sea Mineral Resource Extraction” at the University of Limerick.



# Italy

UNCLEAR POSITION

ISA CONTRACTS: NO

ISA COUNCIL: 2024-2026

ISA LTC: YES

Italy has only recently signaled some interest in deep-sea mining (DSM) activities. In May 2023, the Italian Ministry of Foreign Affairs facilitated a [visit to Italy](#) of the International Seabed Authority's (ISA) Secretary-General. During the visit, Italy's Minister for the Environment and Energy Security, Gilberto Pichetto Fratin, expressed the view that "there is no strong legal basis for a 'moratorium' or a 'precautionary pause'".

At the 2023 ISA Assembly, Italy stated that DSM should not go ahead until a strong regulatory framework preventing harmful effects to the marine environment is adopted. However, in November 2023 Italy published its [National Plan of the Sea](#) that dedicates a section to DSM, stating that Italy intends to "encourage and promote the development of sustainable technologies that can ensure the exploitation of the seabed".

The Ministry of Foreign Affairs had [urged](#) Eni, an oil 'supermajor' company controlled by the Italian state, to explore DSM opportunities, and in 2020 its offshore services subsidiary Saipem signed an [agreement](#) with Fincantieri, a shipbuilding company, to promote "business opportunities in the field of designing, engineering, building, and managing DSM systems". Fincantieri [remains interested](#) in DSM technologies.

Eni - which already has hydrocarbon interests in Norwegian waters - has sought to extend its operations to DSM in the Arctic, while Fincantieri has noted the existence of poly-metallic sulphide deposits in the southern Tyrrhenian Sea (mainly around the Palinuro Seamount), the only proven deposit of its kind in the Mediterranean. The easy access to Palinuro is seen by Fincantieri as an advantage to develop a



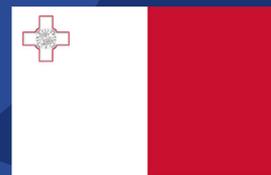
pioneering Italian DSM platform, in spite of the environmental vulnerability of the area.

In 2020, the Ministry of Foreign Affairs and the National Research Council of Italy organised a workshop on the theme "From Offshore Oil & Gas to Deep Seabed Mining: New technologies and emerging issues", providing formal government support to Fincantieri and Saipem's venture. The [workshop](#) was facilitated by the coordinator of seas and oceans affairs of the Ministry of Foreign Affairs together with Ocean Mining Intel, with the aim of opening up "a platform for further discussion about innovative technologies and consolidated practices for environmental monitoring and deep seabed operations".

In a 2017 [presentation](#), representatives of Fincantieri Oil and Italy's National Institute of Oceanography proposed that "Italy follows other technologically advanced countries such as Germany, France and Japan in creating a cluster of selected companies and research institutions to work towards establishing a deep sea mining industry in Italy."



# Malta



NO POSITION

ISA CONTRACTS: NO

ISA COUNCIL: NO

ISA LTC: NO

In spite of Malta's long history of involvement with the United Nations Convention on the Law of the Sea (UNCLOS) - it was Malta's Permanent Representative, Arvid Pardo, who first expressed in 1967 the idea of considering ocean resources beyond national jurisdiction as "the common heritage of mankind" - the country is yet to publicly express its position on deep-sea mining (DSM).

However, in November 2022 Malta's Ocean Ambassador Alan Deidun **indicated** the Government's support for a moratorium during a seminar on Ocean Governance at the University of Malta. In an article published that same month in The Times of Malta, Deidun **labelled** DSM as a "climate hazard".

During the July 2023 International Seabed Authority (ISA) Assembly, Malta **signalled** concern indicating that "the work of the authority must be guided by data and science".



# Monaco



**PRECAUTIONARY PAUSE**

**ISA CONTRACTS: NO**

**ISA COUNCIL: NO**

**ISA LTC: NO**

Prince Albert II of Monaco officially announced its position in September 2023 during the 'Grand Océan' conference. Monaco's Head of State **affirmed** "it's totally irresponsible to consider extracting mining resources when there isn't enough scientific data on these extreme marine environments, to conduct operations without having studied their impact."

In July of the same year, Monaco attended the International Seabed Authority (ISA) Assembly declaring that it will "clearly and explicitly oppose any mining plan in the current state of scientific knowledge", while the Government of the Principality **indicated** its opposition to deep-sea mining (DSM).

Monaco has committed to bring DSM to the centerstage of the **Monaco Blue Initiative** and the **Monaco Ocean Week**, which are co-organised by the Oceanographic Institute of Monaco, the Prince Albert II of Monaco Foundation and other institutions. In May 2023, the Foundation and the Institute for Sustainable Development and International Relations (IDDRI) published a **policy paper** providing guidance on how to reach a precautionary pause at the ISA.



# The Netherlands

UNCLEAR POSITION

ISA CONTRACTS: NO

ISA COUNCIL: 2025

ISA LTC: YES

The position of the Netherlands on deep-sea mining (DSM) has been unclear. While stressing that the environmental impacts of DSM should be minimised (i.e., through an overarching environmental management plan and regional environmental management plans), it has yet to explicitly support a moratorium or precautionary pause. At the same time, it indirectly promotes offshore industries.

In March 2023, the Dutch government **committed** to issuing a “substantive position” by the summer of that year, which was **released** in July by the Ministry of Foreign Affairs. While the position upholds the precautionary principle and states that DSM should not proceed unless science proves that it can be done within marine ecological thresholds, it argues that calling for a moratorium or precautionary pause “does not contribute to a broad and open exchange of views” and so, the Dutch government “does not use the label moratorium or precautionary pause in its participation in international consultations”.

While the Netherlands does not have any International Seabed Authority (ISA) exploration contracts or significant mineral deposits in its own waters, the country remains active at the ISA. This is mainly because of the Netherlands’ strong offshore and maritime industry, which has interests in DSM through logistic and technical support. The Metals Company has **relied** on the Dutch-Swiss Allseas to commission the Hidden Gem —the vessel used for its deep-sea extraction trials in 2022. Another Dutch company, Seatools, **worked** with both The Metals Company and Allseas to develop a nodule collector. Dutch banks such as ING Group and ABN Amro **financed** Nautilus Minerals in its failed Papua New Guinea project, Solwara 1.

A 2015 **report** by the Centre of Expertise on Resources strongly recommended more proactive involvement by the Netherlands in DSM, raising its profile on the political agenda and enacting legislation so that Dutch companies can be competitive



internationally in the DSM sector.

Dutch institutions have also supported and engaged in DSM research projects, including the EU-funded **Blue Nodules**, led by Netherlands-based IHC Mining and that included the participation of the Royal Netherlands Institute for Sea Research, or the **TREASURE: Towards Responsible Extraction of Submarine mineral Resources** project, made up of a consortium of seven Dutch organisations. DSM events such as the 2020 EIT International Summer School “From Dredging to Deep-Sea Mining”, the 2021 Deep Sea Mining Summit, or the 2023 Underwater Minerals Conference.



# Norway

PRO-DSM

ISA CONTRACTS: NO

ISA COUNCIL: 2024

ISA LTC: YES

While lacking international exploration contracts of its own, Norway is among the most vocal countries advocating for deep sea mining (DSM) globally, and has been actively engaged at the ISA to secure approval of a mining code, supporting DSM both in international waters and its own waters. Norway has a highly developed underwater off-shore oil and gas industry, even though the biggest players have not expressed interest in DSM.

Norway has [mineral deposits](#) on its continental shelf, including ferromanganese crusts and sulphide deposits between Jan Mayen Island and Svalbard, in the Arctic, as well as around [Bouvet Island](#), in the [South Mid-Atlantic Ridge](#). To allow future exploitation, a [law](#) was passed in 2019 with almost no environmental considerations, despite strong NGO [criticisms](#). This was followed by an Strategic Impact Assessment [initiated](#) in 2021.

Numerous stakeholders, including the Institute for Marine Research, the Norwegian Geological Survey, NGOs, financial institutions and research institutions, [criticised](#) the assessment, while the Norwegian Environmental Agency [concluded](#) it “does not provide evaluations of whether it is possible to conduct mineral activities in line with international obligations and expectations for sustainable management.”

Still, the government went ahead to [propose](#) the opening of 281,200 km<sup>2</sup> in the Arctic to DSM exploration and future exploitation. In reaction, 120 European lawmakers wrote an [open letter](#) calling on the Norwegian parliament to reject the proposal. The scientific journal Nature [argued](#) that Norway’s ocean hypocrisy is undermining progress towards global ocean sustainability. In January 2024, Norway’s parliament [approved](#) the proposal with minor changes. The European Parliament voted in favour of a [resolution](#) expressing its concerns and calling for a moratorium while WWF launched [legal action](#).



The first exploitation licences could be issued in the second half of 2024, and a number of companies, including Loke Marine Minerals (that [holds ISA contracts](#) under UK sponsorship), Adepth Minerals and Green Minerals, have expressed interest. All of these companies are part of the Norsk Forum for Marine Mineraler pro-DSM lobby. The first plan for exploitation must be approved by the Norwegian Parliament, but no new impact assessment is to be conducted, risking that large-scale cumulative and transboundary impacts are not addressed.

In late 2022, a consortium of DSM industry actors was [granted](#) public research funding of €6,16 million to develop technologies and methodologies. Norwegian entities have also worked with other EU partners on EU-funded projects including MIDAS, Blue Mining and the ongoing [TRIDENT](#) project. Norway has also [funded](#) ISA efforts to encourage African and Pacific countries to become sponsoring states for DSM through the Norwegian Agency for Development Cooperation.



# Poland

PRO-DSM

ISA CONTRACTS: YES

ISA COUNCIL: 2024

ISA LTC: YES

Poland remains a vocal advocate for deep-sea mining (DSM) and pursues its exploration agenda both through its own government-controlled exploration contract and through the Interoceanmetal Joint Organization (IOM), an intergovernmental institution formed within the Soviet bloc that survived the collapse of the Soviet Union and that currently includes Cuba, Czechia, Bulgaria, Russia and Slovakia in addition to Poland. The IOM holds an International Seabed Authority (ISA) exploration contract in the Clarion-Clipperton Zone (up for renewal in 2026).

The IOM has its headquarters in Szczecin, Poland, and is governed by a council of representatives from each of the IOM member states, continuing to operate in spite of Russia's war of aggression against Ukraine. Participating governments offer particular areas of expertise, with Poland being responsible for management and, previously, Russia providing ocean research vessels. In its host city, the IOM has long-term collaborations with the Maritime Academy of Szczecin – which has a specialisation in DSM – and with the University of Szczecin, which has conducted research on deep-sea organisms for the IOM.

In spite of its participation in the IOM, the government of Poland requested its own exploration contract for sulphide deposits in the Mid-Atlantic Ridge: this was granted in 2018 and is valid through 2033. This step was **criticised** by international and Polish environmental NGOs, particularly considering the absence of environmental considerations. Poland's contract area lies just **235 metres away** from Portugal's exclusive economic zone (EEZ) and extends over a Convention on Biological Diversity-designated **Ecologically Significant Marine Areas (ESMA)** which includes the "Lost City", a **unique hydrothermal vent field** where simple hydrocarbons are created abiotically in conditions similar to when life started on Earth.



The ISA has publicly stated that the status of the area as an EBSA is "**of no relevance**". In a clear conflict of interest, the ISA Legal and Technical Commission's (LTC) recommendations on the potential environmental impact of this 2018 contract were made with Poland's Director of the Department of Geology and Geological Concessions of the Polish Ministry of Climate and Environment, Piotr Nowak, serving in the body. Mr Nowak previously served as country manager of Celtique Energie Petroleum LTD – a now-defunct British shale oil and gas company with **documented disregard** for the environment.

DSM affairs are managed by Poland's Under Secretary of State-Chief National Geologist (Główny Geolog Kraju) and government representative for the state's raw materials policy, who acts as the government representative to the IOM and chairs the Polish delegation at sessions of the ISA. Additionally, an inter-ministerial team for maritime policy, chaired by the Ministry of Maritime Economy and Inland Navigation, has addressed DSM as part of its mandate. The Polish Geological Institute-National Research Institute also has a department of marine geology involved in DSM research.



# Portugal

PRECAUTIONARY PAUSE

ISA CONTRACTS: NO

ISA COUNCIL: NO

ISA LTC: YES

Portugal defended a precautionary pause at the July 2023 International Seabed Authority (ISA) Assembly. Earlier that year, the Legislative Assembly of the Azores unanimously approved a [resolution](#) calling on the Regional Government to adopt a moratorium of both DSM exploration and exploitation until 2050, and to act before the Portuguese Government and the ISA to extend such a moratorium to national and international waters. The current Regional Government is expected to develop a Regional Legislative Decree enforcing a moratorium in the Azores during the current term. At the national level, a [law project](#) calling for a moratorium in all waters under Portuguese jurisdiction until 2050 was also approved at the national parliament, but the legislative process to bring this into effect is yet to begin.

Portugal has significant sulphide deposits in the waters around the Azores, an archipelago 1,360 kilometres west of mainland Portugal within the Mid-Atlantic Ridge area. South of the Azores there are several known fields of hydrothermally active vents within the Portuguese continental shelf. Additionally, there are manganese nodules and cobalt-rich crusts within the Portuguese exclusive economic zone (EEZ) and extended continental shelf. Poland's Mid-Atlantic Ridge ISA exploration contract area is [235 meters away](#) from Portugal's EEZ.

In 2008, the Canadian company Nautilus Minerals – formerly responsible for the failed Solwara 1 project in Papua New Guinea – submitted a formal exploration request in [several areas](#) around the Azores. After that, the autonomous government of the archipelago created the Marine Park of the Azores where DSM exploitation is explicitly prohibited. This led to a constitutional conflict between the Azores and the central Portuguese government, as the latter passed new legislation to restrict the powers of autonomous regions to establish resource-use plans and protected areas within the EEZ.



Portugal's new Geological Resources Law (Law 54/2015 of 22 June) made explicit reference in its title to resources within the national maritime space, including any resources within the EEZ and extended continental shelf, and was a direct response to the requests by Nautilus Minerals for DSM exploration around the Azores. However, a 2020 a decree-law developing a regulation for the 2015 law excluded references to deep-sea minerals that were part of the initial draft.

A number of Portuguese public and private research institutions are engaged in [TRIDENT](#) (2022-2027), which is currently the largest EU-funded DSM research project, with a budget of €11,8 million. In the past, Portuguese institutions have been involved in other projects, including MIDAS, Blue Mining and Blue Atlantis. The Blue Atlantis programme sought to establish the world's only deep-sea mining test facility in Azorean waters, but failed to materialise. Portugal also participates in the ISA Legal and Technical Commission (LTC), having designated a member of its Extended Continental Platform Mission.



# Slovakia



NO POSITION

ISA CONTRACTS: YES (IOM)

ISA COUNCIL: NO

ISA LTC: NO

Slovakia is a full member of the Interoceanmetal Joint Organization (IOM) as a successor state to the former Czechoslovakia, an original founding member of the organisation, in which Slovakia currently shares membership with Poland, Bulgaria, Czechia, Russia and Cuba (see [Poland](#) for further details). Slovakia participates in the IOM Council, where it is represented by Branislav Žec from the State Geological Institute of Dionyz Stur.

As one of only two landlocked countries participating in deep-sea bathymetric surveying, Slovakia has contributed to the IOM's exploration missions in its Clarion-Clipperton Zone contract area in the Pacific conducted from Russian research vessels. Slovak scientists at the IOM are mostly affiliated with the Technical University of Košice and the Institute of Geology at the Slovak Academy of Sciences. Public [references](#) to deep sea mining in Slovakia are relatively rare. In June 2023, IOM's Deputy Director General [presented](#) the results of its exploration activities at a workshop on critical raw materials at the State Geological Institute of Dionyz Stur.



# Spain

PRECAUTIONARY PAUSE

ISA CONTRACTS: NO

ISA COUNCIL: 2024

ISA LTC: YES

Spain was the first EU country to express support for a precautionary pause at the International Seabed Authority (ISA), which was done during the July 2022 Assembly. In February 2023, the Spanish Parliament adopted a [resolution](#) calling on the government to back a precautionary pause at the ISA and to consider the prohibition of deep sea mining (DSM) in waters within Spanish jurisdiction. The Parliaments of the [Canary Islands](#) (November 2021), [Galicia](#) (November 2021) and [Catalonia](#) (April 2023) also adopted resolutions calling for an international moratorium of DSM and its prohibition in Spanish waters.

A process to revise the 1973 Mining Law, through which a prohibition of DSM in Spanish waters could have been established, was initiated but stalled after the July 2023 general election. A [Royal Decree](#) was adopted in March 2022 establishing the precautionary and precautionary principles cited in the EU Biodiversity Strategy 2030 and in the European Parliament's call for a moratorium as criteria for the compatibility of activities with marine strategies.

Several mineral deposits are known to exist both within Spain's exclusive economic zone and their proposed extended continental shelf areas, particularly in seamounts in the vicinity of the Canary Islands, but also off the Atlantic coast in Northern Spain. Overlapping continental shelf claims over Mount Tropic by Spain and Morocco, together with the unresolved Western Sahara issue, have so far deterred attempts for formal claims. Still, exploration activities have continued under the guise of scientific research.

Prior to 2022, DSM had been openly promoted by the Geological and Mining Institute of Spain (IGME) – both at the ISA, where members of the institute had been present



at the Legal and Technical Commission (LTC), as well as at the ministerial level, where it set the tone of Spain's position at the ISA. No Spanish companies have shown interest in DSM, in spite of attempts by the Ministry of Foreign Affairs to promote public-private partnerships. Furthermore, the fisheries sector has [repeatedly called](#) for a moratorium, after a [2017 report](#) by the Scientific Advisory Committee of the Fishing Vessel Owners Cooperative of the Port of Vigo. In 2024 the Spanish government announced that in future nominations for the LTC, it would endorse marine scientists from the Spanish Institute of Oceanography.

Several Spanish public and private research institutions are engaged in [TRIDENT](#) (2022-2027), which is currently the largest EU-funded DSM research project with a budget of €11,8 million. In the past, Spanish institutions have been involved in other projects, including EMODnet Geology, MINEDeSEA (led by IGME), Blue Nodules, and more. IGME also signed an MoU with the UK National Oceanography Centre that allowed its participation as a guest on research cruises by the RSS James Cook around Mount Tropic as part of the MarineE-tech project.



# Sweden



**PRECAUTIONARY PAUSE**

**ISA CONTRACTS: NO**

**ISA COUNCIL: NO**

**ISA LTC: NO**

When debating the Swedish Arctic Policy in 2020, the Swedish Parliament discussed a [motion](#) to impose a moratorium on deep-sea mining (DSM). The motion was dismissed, as the political majority considered the then diplomatic and political working methods on marine protection in the Arctic sufficient.

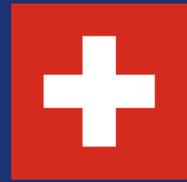
At the 2021 International Union for Conservation of Nature (IUCN) World Conservation Congress, Sweden voted in favour of Resolution 122 to protect deep-ocean ecosystems and biodiversity through a moratorium on deep-sea mining. Ahead of the International Seabed Authority (ISA) Assembly meeting in 2023, Sweden announced its support for a precautionary pause on DSM. In a [press statement](#), the Swedish environmental minister declared that no licence on exploitation should be granted unless there is sufficient knowledge about its environmental ramifications. Although Sweden has not yet participated with a delegation in the ISA, it has been and is using its diplomatic channels to gather information and discuss the proceedings.

In October 2023, a Member of the Swedish Parliament initiated a [proposal](#) for a resolution on DSM at the Nordic Council through the second largest party group (the Centre Group). The group decided to table the proposal in the Nordic Council in November, asking the Council to recommend Nordic countries back a moratorium on DSM in international waters. The proposal is currently being processed by the Committee for a Sustainable Nordic Region and due to be voted on during the 2024 autumn session in Reykjavik.

Major Swedish-based companies such as Volvo, Scania and Northvolt have [declared](#) that they will not use deep seabed minerals in their products.



# Switzerland



**MORATORIUM**

**ISA CONTRACTS: NO**

**ISA COUNCIL: NO**

**ISA LTC: NO**

At the 2021 International Union for Conservation of Nature (IUCN) World Conservation Congress, Switzerland voted in favour of Resolution 122 to protect deep-ocean ecosystems and biodiversity through a moratorium on deep-sea mining.

In June 2023, the Swiss Federal Council publicly [announced](#) its support for “a moratorium on commercial exploitation of the Area until there is more scientific knowledge of its impact and protection of the marine environment can be guaranteed.” In the same month, Switzerland launched its [Maritime Strategy for 2023-27](#), which marked as a target to “develop strict environmental standards for seabed mining and explore the idea of a moratorium on commercial seabed mining.” During the July 2023 International Seabed Authority (ISA) Assembly, the Swiss delegation reiterated its position in favor of a moratorium.

Credit Suisse, one of the country’s largest banks, has [pledged](#) not to fund deep-sea exploration and extraction, while Swiss Re, a major reinsurance company, [assured](#) that it would not insure any DSM-related activities. However, the Dutch-Swiss offshore contractor Allseas has forged an [alliance](#) with The Metals Company to pursue its DSM exploration and equipment testing activities in the Pacific.



# United Kingdom

MORATORIUM

ISA CONTRACTS: YES

ISA COUNCIL: 2024

ISA LTC: YES

In October 2023, the UK government **announced** its support for moratorium until there is sufficient scientific evidence on deep sea mining (DSM) impacts and strong environmental regulations. While it **expressed** a similar position in 2019, **reports** in March 2020 revealed that an internal government memo from May 2019 described the “need...to avoid overly precautionary regulation for initial contracts.”

This position has come under increasing criticism, particularly after the UK’s cross-party House of Commons’ Environment Audit Committee issued a **report** in January 2019 recommending that “the exploitation of resources must be prohibited in unique ocean environments, such as hydrothermal vents, until it can be determined that adequate mitigation techniques are available.”

Three months before the government’s 2023 pro-moratorium statement, the Labour Party **expressed its support** for the UK’s endorsement of a precautionary pause. In March of the same year, Lockheed Martin sold its subsidiary UK Seabed Resources Ltd. (UKSR) to the Norwegian company Loke Marine Minerals. The UK currently sponsors two ISA exploration contracts on behalf of UKSR (expiring in 2031), but it is unclear if it will continue to do so in the future. While the UK has been a supporter of the controversial ISA Secretary-General Michael Lodge, who was re-elected in 2020, his term ends in 2024. Within the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) Commission, the UK led the DSM Task Group until December 2023, but stepped down quoting the need of focusing on the ISA.

Lack of transparency concerning UK-sponsored exploration contracts has been **questioned** in Parliament. After years of obstruction, the UK government was forced to make UKSR’s licenses public in February 2021. Undue political influence has also been of concern. In a 2020 parliamentary debate on the UK DSM industry, MP Sheryll Murray **requested** that financial government support be provided to Lockheed Martin. UKSR’s CEO had worked with Prime Minister David Cameron before being



hired by Lockheed Martin as government liaison. Murray also sponsored – together with Baroness Wilcox – a private member’s bill that, unusually, served to adopt the Deep Sea Mining Act of 2014.

The UK provided significant funding for DSM research, notably through the £4,2 million MarineE-tech project, which ended in 2019. The project focused on the northeast Atlantic, with expeditions to Mount Tropic and the Madeira-Tore complex, and the Rio Grande seamount complex off the coast of São Paulo, Brazil. The National Oceanography Centre, together with other public and private entities, is a partner of **TRIDENT** (2022-2027).



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