

A deep-sea coral reef scene with various coral species, including a large, branching, pinkish-red coral on the left and several smaller, star-shaped, pinkish-red corals on the right. The background is dark blue.

# WWF'S NO DEEP SEABED MINING INITIATIVE

IMPACT REPORT 2020-2024



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# STATE OF PLAY

Deep seabed mining has not yet started. We thus have a chance to stop this destructive industry before it irreversibly damages the ocean.



Deep seabed mining would essentially mean strip-mining the seabed for minerals from deposits that have formed over millennia and that are an intrinsic part of the ecosystem on deep ocean seamounts, hydrothermal vents and abyssal plains.

While very little test mining has taken place to date, existing information and observations from exploratory deep seabed mining are leading scientists to warn that biodiversity loss would be inevitable, extensive, and most likely irreversible. Deep seabed mining would also disturb our planet's largest carbon sink at a time of global climate emergency.

## MINING COMPANIES ARE LOBBYING TO OPEN OUR DEEP OCEAN TO THE LARGEST MINING OPERATION IN HISTORY.

A few companies from developed countries are seeking short-term economic gain by pushing to extend mining from land to sea. They claim we have no choice but to mine the ocean to power the energy transition, ignoring the more sustainable option of making better use of the metals we've already extracted and improving land-based mining as we fast-track the next generation of cleaner batteries and renewable energy infrastructure.

## THE DEEP SEA MAKES LIFE ON EARTH POSSIBLE.

Opening our ocean to mining would be a planetary gamble of the highest stakes. We know that the consequences of mining the ocean floor for metals and minerals would be dire – it would irreversibly destroy important habitats, wipe out species on a massive scale and risk disturbing invaluable carbon storage. Yet we cannot predict the full extent of its impacts because we know very little about this complex area of our planet and how it works. If this dangerous gamble goes wrong, it would risk triggering a domino effect of unintended consequences that could destabilize the ocean and impact global food security.

Besides the ecological functions and services it provides, the ocean holds cultural and spiritual values for many coastal communities and Indigenous Peoples, and the international seabed is considered the “common heritage of humankind” in the UN Law of the Sea (UNCLOS). As such, the law states that its exploration and exploitation must be carried out for the benefit of humankind as a whole.

## SCIENCE IS SIMPLY NOT THERE TO MAKE INFORMED DECISIONS.

More than 800 marine and policy experts from 44 countries have called for a precautionary pause to be applied until sufficient and robust scientific information has been obtained to make informed decisions about deep seabed mining. In a groundbreaking discovery, scientists have recently revealed that oxygen is being produced in the deep sea through a process associated with polymetallic nodules on the seafloor of the Pacific Ocean, in the complete absence of sunlight, therefore named “dark oxygen”. This finding challenges what

### DEEP SEABED MINING GOES AGAINST THE PRINCIPLES OF A CIRCULAR ECONOMY BY:

- Creating significant pollution and environmental destruction
- Exploiting finite resources that are essential to the functioning of deep-sea ecosystems
- Upsetting ocean carbon, metals and nutrients cycles
- Undermining efforts to increase recycling of minerals and metals
- Undermining efforts to reduce material intensity in design and production

is known about how oxygen reaches the deep ocean and how oxygen is produced, and even how life on our planet originated. Deep seabed mining – which is targeting these nodules – could impact this extraordinary process, a building block of life.



THE FUTURE IS CIRCULAR.



There is an alternative to opening a new frontier for extracting minerals and exacerbating the biodiversity and climate crisis. It is called the circular economy.

An analysis commissioned by WWF shows that demand for minerals required to support the transition from fossil fuels to renewable energy and battery storage can be cut by as much as 58% through innovation in renewable technology and circular economy measures. This would avert potential bottlenecks in mineral supply without initiating a harmful new extractive industry in the deep ocean. Innovation in batteries technology and chemistry – e.g sodium-ion, solid state and iron-phosphate (LFP) batteries – will eventually reduce the need for deep sea minerals, making deep seabed mining irrelevant in the future.

New recycling technologies, experimental innovation such as using bacteria or algae to extract rare metals, and increased reuse of rare minerals can all be part of the circular economy solution.



WE NEED TO ACT NOW.

The International Seabed Authority (ISA), the UN Agency responsible for governing deep seabed mining and protecting the deep seabed on behalf of all humankind, is scrambling to fast-track the regulations for this highly controversial industry.

Commercial mining on the seabed is not yet occurring. Deep seabed mining is not permitted in international waters, but without urgent intervention from the international community, it could start whenever a mining company decides to submit an application to the ISA. Member states meet at the ISA several times a year to discuss whether and how deep seabed mining could proceed – this is the ‘regulations’. To date, the ISA has approved 31 contracts to explore the international deep seafloor for minerals. No contracts for mining have yet been granted.

A DANGEROUS LOOPHOLE.

In July 2021, Nauru, a small island state in the Pacific Ocean triggered an obscure loophole in the Law of the Sea, which allows a member state to notify the ISA of their intention to start deep seabed mining, whatever state the regulations are in after the expiry of this two-year period. The two-year loophole was intended to avoid bureaucratic logjams, but it is being used as an ultimatum: adopt regulations or give any company a contract to mine the deep sea without any regulations in place. The triggering of the two-year loophole has made a moratorium on deep seabed mining even more urgent.

In July 2023, due to the ultimatum posed by the two-year loophole, the ISA agreed to attempt to complete the regulations by 2025 to avoid unregulated mining. It is extremely unlikely that regulations will be fit for purpose any time in the next decade or two. Regulating deep seabed mining so that states also protect the marine environment from any impacts would be extremely difficult, if not impossible, due to the inaccessibility of the deep sea and our lack of understanding of its fragile ecosystems. Before any regulations are fit for purpose, states also need to solve many other issues, including ensuring that any proceeds are equally shared by all humankind.

The efforts of the current ISA leadership and some states to silence the debate over whether deep seabed mining is worth the risk and its prioritization of pro-mining interests over ocean protection has led to increased scrutiny of its relationship with some mining companies and its legitimacy in the eyes of the public (see [LA Times](#), [NYT](#), [The Guardian](#), [CNBC](#)).

WWF'S NO DEEP SEABED MINING INITIATIVE

Since 2019, WWF has worked to ensure a global moratorium on deep seabed mining. Such a moratorium needs to be in place until there is enough science available to make informed decisions about whether to go ahead with this destructive industry, and all alternatives have been explored.

To achieve our ambition toward a **global moratorium on deep seabed mining**, our team of experts has designed a 3-pillar strategy which will achieve the following outcomes:

- 1. A critical mass of member states agree on a moratorium on deep seabed mining at the International Seabed Authority.
- 2. Key business leaders and investors commit not to source minerals from the seabed and not to finance any deep seabed mining activities.
- 3. The public is informed about the risks of deep seabed mining, and civil society voices are diversified and amplified.



# OUR STRATEGY



## WWF'S INTERVENTIONS



ADVOCATE AT THE  
INTERNATIONAL  
SEABED AUTHORITY  
AND RELEVANT FORA



BUILD COALITION  
OF BUSINESSES  
AND FINANCIAL  
INSTITUTIONS



INFORM AND  
MOBILIZE DIFFERENT  
STAKEHOLDERS

### OBJECTIVE

1



By end 2025,  
at least half of the  
ISA member states  
join the  
**call for a pause/  
moratorium**

### OBJECTIVE

2



By end 2025,  
**at least 100  
companies and  
investors have  
joined the business  
coalition against  
deep seabed  
mining** with key  
members engaging  
consistently on the  
issue

### OBJECTIVE

3



By end 2025,  
**a strong public  
voice** against deep  
seabed mining has  
been  
established

## BUILDING GLOBAL MOMENTUM



### MISSION

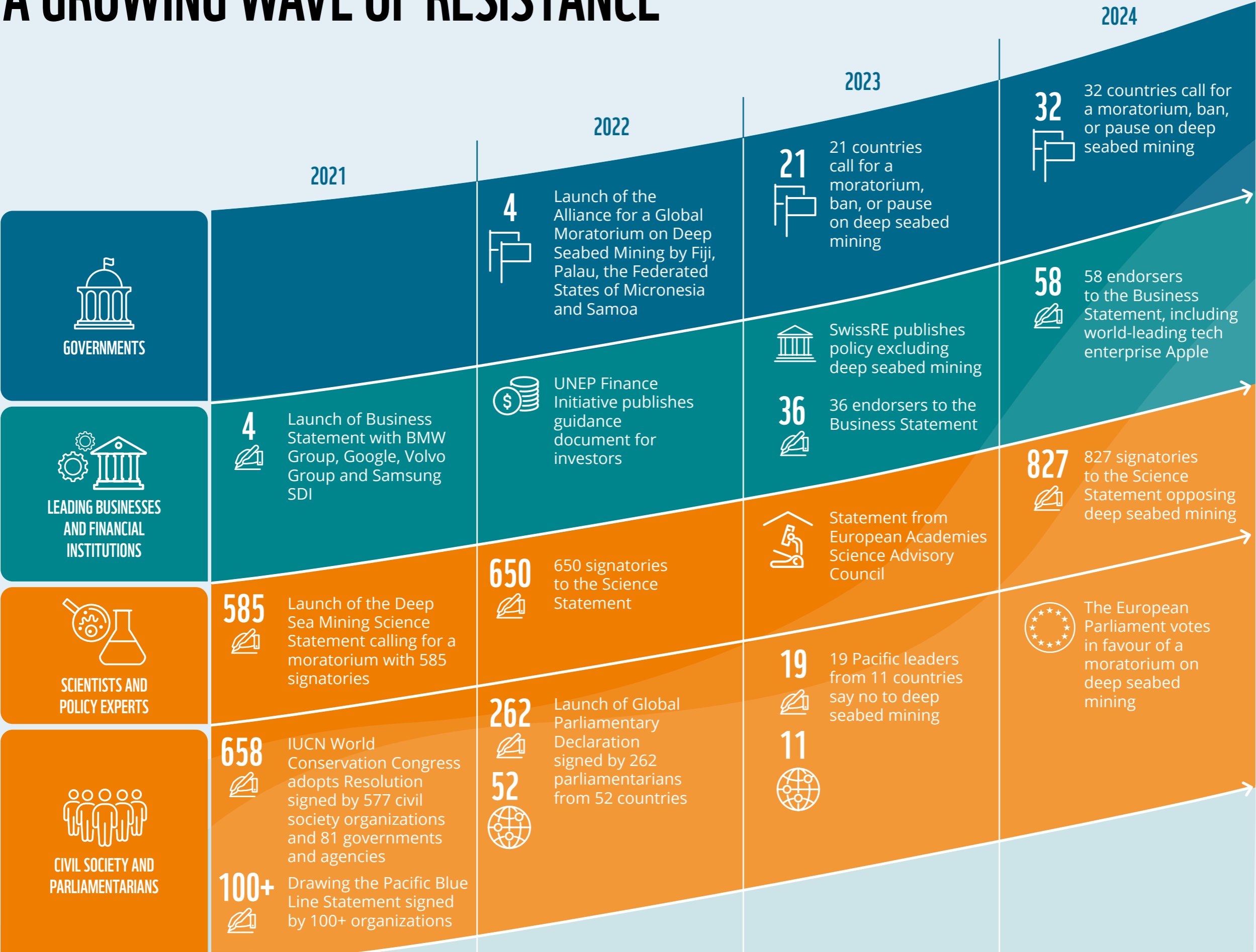
**GLOBAL  
MORATORIUM  
ESTABLISHED ON  
DEEP SEABED  
MINING BY 2026**



### VISION

**THE WORLD IS MOVING  
TOWARD A SUSTAINABLE,  
CIRCULAR FUTURE WITHOUT  
DEEP SEABED MINING.**

# A GROWING WAVE OF RESISTANCE



**THERE IS GROWING MOMENTUM AGAINST DEEP SEABED MINING.**

WWF works with some of the largest brands in the world, civil society movements, global leaders, parliamentarians, leading scientists and partner NGOs to amplify and diversify the global wave of resistance to deep seabed mining.

Achievements are direct and indirect results of our advocacy, corporate engagement and communications campaigns, and many can be attributed to our collective action as part of the Deep Sea Conservation Coalition (DSCC).

# TRACKING OUR IMPACT

Across WWF, 20 offices are actively engaging their governments, corporate partners and local NGO partners, using our reports, the Business Statement and other tools, advocating for their involvement in the push for a global moratorium on deep seabed mining.

## GLOBAL TIDE OF OPPOSITION TO DEEP-SEA MINING

BE THE NEXT COUNTRY TO SAY NO TO DEEP-SEA MINING

ADD YOUR VOICE

The wave of resistance continues to grow

32  
COUNTRIES  
SAY NO

2022

Palau  
Fiji  
Samoa  
Chile  
Costa Rica  
Ecuador  
Federated States of Micronesia  
Spain  
New Zealand  
France  
Germany  
Panama

2023

Vanuatu  
Dominican Republic  
Switzerland  
Sweden  
Ireland  
Canada  
Brazil  
Finland  
Portugal  
Monaco  
United Kingdom  
Mexico

2024

Kingdom of Denmark  
Greece  
Peru  
Malta  
Honduras  
Tuvalu  
Guatemala  
Austria

deepsea  
conservationcoalition

*“We have a mandate to protect and preserve the marine environment not just for ourselves, but for future generations and to ensure we continue to have a livable planet.”*

HON. RALPH REGENVANU,  
VANUATU'S CLIMATE CHANGE MINISTER



## POLICY ADVOCACY

2021

At the World Conservation Congress, 577 civil society organizations and 81 governments and agencies sign the [IUCN Resolution No.122](#), following a motion co-sponsored by WWF. This is a strong signal showing there is no social license for deep seabed mining and putting the issue in front of governments.

2022

The [Alliance for a Global Moratorium on Deep Seabed Mining](#) is launched by Palau, Fiji, the Federated States of Micronesia and Samoa at the UN Ocean Conference, in a high-level event co-organized by WWF and the DSCC. This is the first time member states of the ISA officially call for a moratorium. Shortly after, French President Emmanuel Macron called for a ban on deep seabed mining.

Through the [Global Parliamentary Declaration](#), 262 parliamentarians from 52 countries call on their governments to participate in negotiations at the ISA, therefore increasing the level of transparency in the ISA decision-making process, and allowing more voices in favor of a moratorium to express their positions. One year later, the [Pacific Parliamentarians Alliance on Deep Sea Mining](#) welcomed the call by the Melanesian Spearhead Group Leaders for a moratorium on deep sea mining across the Pacific.

2023

WWF collaborates with SINTEF, one of Europe's largest research institutes, to publish the [“Future is Circular”](#), which presents new evidence showing that future mineral demand can be met without deep seabed mining. This is providing new insights for debates at the ISA and in relevant business and policy fora such as the World Resources Forum (Geneva, 2023), the MOVE Conference (London, 2023) and the European Parliament (2023), where WWF shared these findings.

2024

The Kingdom of Denmark, Greece, Peru, Tuvalu, Austria, Malta, Honduras and Guatemala join the group of countries calling for a moratorium, or a pause, on deep seabed mining, taking the total to 32 countries. The attendance of senior political figures, Indigenous Peoples leaders and youth leaders from across the world at events organized by WWF, and our strong advocacy at the ISA, add weight to the push to stop deep seabed mining.



© Doug Anderson/SilverbackNetflix



## ENGAGING CORPORATES AND FINANCIAL INSTITUTIONS

2021

WWF launches the Business Statement in support of a global moratorium on deep seabed mining with four leading car manufacturers and technology companies BMW Group, Volvo Group, Google and Samsung SDI.

2022

WWF works with the UNEP Finance Initiative to develop a briefing paper on harmful marine extractives, and issues its own Brief to Investors. This guidance document, which draws on the Sustainable Blue Economy Finance Principles that WWF contributed to, is being used as we engage across the investment and insurance community.

2023

Advocacy with insurance and reinsurance companies using WWF-Switzerland / Deloitte Guidance for Investors leads to SwissRE issuing a policy excluding insuring deep seabed mining based on key sustainability risks, setting an important mark for this sector.

2024

58 companies have pledged not to source minerals from the deep seabed, to exclude such minerals from their supply chains and not to finance deep seabed mining activities. This work - involving several other NGOs - is being led by WWF.

Other signatories include:



14 banks and insurance companies including Aquamarine, ASN Bank, Triodos Bank and Storebrand



11 technology leaders including Apple, Google, Samsung SDI, Salesforce, SAP and Philips



14 car and e-batteries manufacturers including BMW, Volvo, Renault, Volkswagen, Polestar and Northvolt



19 food, retail and other sectors including Bolton Food, Breitling and Patagonia

STOP  
DEEP SEABED MINING



BUSINESS COALITION

STOPDEEPSEABEDMINING.ORG

*“There are currently insufficient scientific findings to be able to assess the environmental risks of deep-sea mining. For this reason, raw materials from deep-sea mining are not an option for the BMW Group at the present time.”*

PATRICK HUDDLE, HEAD OF SUPPLY CHAIN SUSTAINABILITY AND INDIRECT PURCHASING RAW MATERIALS MANAGEMENT, BMW GROUP



## PUBLIC MOBILIZATION

2023

WWF launches the #ThinkDeeply communications campaign that reaches over 2 billion people in 46 countries through at least 590 articles produced in various media including Al Jazeera, BBC News, New York Times, Associated Press, Reuters Bloomberg, Daily Mail, The London Evening Standard, The Indian Express, and The Wall Street Journal. The #ThinkDeeply “hero” video generates over 37 million impressions alone.

Over 30 pieces of deep seabed mining content have been published across WWF’s social media properties with the objective to raise public awareness and pressure on the issue. Organically, WWF’s deep seabed mining content generated over 2 million impressions across LinkedIn, Twitter, Instagram and Facebook with an overall average engagement rate of 3.17%, in line with industry averages.

2024

Celebrities like Leonardo DiCaprio and Lukas Bravo take an active stance against deep seabed mining, echoing WWF’s messages on their social media channels.

The HBO TV show Last Week Tonight with John Oliver addresses deep seabed mining and highlights the Business Statement, gathering 3 million views at the time of writing this report. Several interviews with WWF experts informed the script.

*“By supporting a moratorium on deep-sea mining with the International Seabed Authority, governments and world leaders can take a stand for our blue planet and stop deep-sea mining.”*

LEONARDO DI CAPRIO, ACTOR AND FILM PRODUCER



# JOIN US AND SAY NO TO DEEP SEABED MINING

With your support, we can grow this global momentum – mobilize more governments to stand up for a moratorium, work with businesses to demonstrate that a future without deep seabed minerals is possible and profitable for all, and strengthen our collaboration with the Deep Sea Conservation Coalition and local grassroot movements to make a moratorium on deep seabed mining a reality by 2026.



**YOUR SUPPORT IS VITAL. HELP US STOP DEEP SEABED MINING BEFORE IT IS TOO LATE.**

[PANDA.ORG/NODSM](https://panda.org/nodsm) | [PANDA.ORG/THINKDEEPLY](https://panda.org/thinkdeeply) | [STOPDEEPSEABEDMINING.ORG](https://stopdeepseabedmining.org)  
[#THINKDEEPLY](https://panda.org/thinkdeeply) | [#DEFENDTHEDEEP](https://panda.org/defendthedeep)



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