



Tesla Inc (TSLA)

Vote Yes: Item #12 – Commit to a Moratorium on Deep Sea Sourced Minerals

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SUMMARY

Deep sea mining (DSM) risks irreversible damage to marine ecosystems by destroying sensitive habitat that has formed over millions of years, obliterating surrounding wildlife, and drastically reducing biodiversity. The detrimental impacts of DSM-related activities could reduce the functioning of vital ecosystem services the deep sea provides. Tesla's refusal to support a DSM moratorium (an official pause) and take a stance against battery-related minerals sourced from the deep seabed raises concerns about Tesla's reputation. Deep sea mined materials are not necessary to support significant electric vehicle deployment as underscored by the fact that 47 companies – including several of Tesla's auto manufacturing peers and leading financial institutions – support a DSM moratorium.

THE RESOLUTION

BE IT RESOLVED: Shareholders request that Tesla commit to a moratorium on sourcing minerals from deep sea mining, consistent with the principles announced in the Business Statement Supporting a Moratorium on Deep Sea Mining.

SUPPORTING STATEMENT: If Tesla cannot so commit, shareholders request that the Board disclose its rationale and assess the Company's anticipated need for deep sea materials.

RATIONALE FOR A YES VOTE

- 1. Deep sea mining is environmentally destructive.** DSM risks irreversible damage to marine ecosystems, destroying habitat, obliterating surrounding wildlife, and drastically reducing biodiversity. In its pursuit for polymetallic nodules, DSM machinery dredges the ocean floor. This indiscriminately kills the sea life in its path and could create a cascading effect of biodiversity loss not limited to the mining site. The detrimental impacts of DSM related activities could reduce the functionality of the vital ecosystem services the undisrupted deep sea provides.
- 2. Deep sea mining is not necessary to support substantial electric vehicle deployment, as demonstrated by moratorium commitments from Tesla's peers.** To date, 47 companies have signed the business statement calling for a moratorium on deep seabed mining. Tesla lags behind its auto manufacturing peers BMW, Polestar, Renault, Rivian, Scania, Volkswagen, and Volvo all of which have supported a DSM moratorium. Several battery manufacturing companies have been proactive in committing to a DSM moratorium as well. Tesla's energy and mobility peers have



already come to the conclusion that the environmental, regulatory, and financial risks are not worth taking, and Tesla should join them in committing to a moratorium.

- 3. Tesla risks reputational harm by not excluding from its production and supply chains deep sea mined minerals.** As the face of the electric vehicle (EV) transition, without adopting a moratorium on DSM until it is proven safe to the marine environment, Tesla is likely to be perceived as a dominant driver of deep sea mineral demand and destruction. Such an association could make Tesla a target for backlash from those with environmental and climate concerns, which includes a significant number of Tesla's customers. The Initiative for Responsible Mining Assurance (IRMA) – the very authority Tesla uses to authenticate its responsible sourcing – does not apply to mining for deep sea minerals. Falling out of compliance with IRMA due to the use of deep sea minerals means Tesla would not only have to deal with the reputational risks of being affiliated with DSM, but the reputational risks of losing its membership in the leading standard for mining at large. Conversely, by committing to a moratorium, Tesla can shield itself from these unnecessary risks.
- 4. Including deep sea sourced minerals in its production and supply chains opens Tesla up to regulatory and financial risks.** The financial stability of the DSM industry is currently highly questionable, making deep sea mined minerals a risk material for Tesla to incorporate into its production and supply chain. Tesla can avoid these risks by supporting a DSM moratorium and furthering the already established industry efforts to increase and scale battery recyclability and innovation. Further, 25 countries and the European Parliament support a ban, moratorium, or a precautionary pause on DSM. Tesla's market share could be reduced should these countries follow their moratoriums with laws or regulations limiting or banning the sale of batteries containing deep sea minerals. Financial institutions are also increasingly taking stances against deep sea mining, which could reduce Tesla's access to financing and insurance.

DISCUSSION

1. Deep sea mining is environmentally destructive.

While the green transition – including electric vehicle (EV) deployment – quickens its pace, some companies are considering using minerals strip-mined from the seafloor for battery-related minerals, namely cobalt, copper, manganese, and nickel. Supporters of DSM argue that mining deep sea nodules poses fewer risks to climate and biodiversity compared to terrestrial mining. However, growing scientific consensus shows otherwise.

DSM risks damage to sensitive marine ecosystems on an enormous scale. Studies show that DSM is likely to be devastating to marine ecosystems, even when performed cautiously. Removing nodules directly removes habitat for deep sea life including corals and sponges.¹ Dredging obliterates seafloor life and releases sediment plumes laced with toxic metals that poison marine food chains.² In the Clarion-Clipperton Zone – an undisturbed seabed in the Pacific Ocean identified as a future hotspot for DSM – researchers found the presence of over 5,500 species, with 92% of those species being new to science.

¹ <https://www.sciencedirect.com/science/article/pii/S0308597X1630495X?via%3Dihub>

² <https://nhm.openrepository.com/handle/10141/622833>



This is likely only a small fraction of the over 90% of ocean species yet to be classified.³ Studies simulating deep sea mining demonstrate that biodiversity is likely to steeply decrease after deep sea mining, with little to no recovery after over 25 years.⁴

To mine the deep sea means disrupting interspecies relationships, and the services they provide, in ecosystems we do not yet fully understand. Deep sea life has evolved over millions of years to be reliant on the unique and undisturbed environment of the deep sea. Studies have found that deep-sea organisms are slow-growing and fragile, and habitats may never recover to pre-impact states.⁵ The likelihood of biodiversity loss associated with DSM also jeopardizes fish-based livelihoods and food supplies.⁶ As importantly, industrial-scale seafloor exploitation could have grave consequences for the ocean's ability to absorb carbon dioxide and may lead to release of carbon stores.⁷ In the deep sea, it takes roughly 10,000 years for the ocean floor sediment layer to grow 1 millimeter, a process that includes sequestering carbon. The robotic mining vacuum's disturbance reaches 10 centimeters into the seafloor, releasing a million years' worth of carbon.⁸

2. Deep Sea mining is not necessary to support substantial battery electric vehicle deployment, as demonstrated by moratorium commitments from Tesla's peers.

As of April 2024, 47 companies have signed the business statement calling for a moratorium on deep seabed mining. Tesla lags its auto manufacturing peers BMW, Polestar, Renault, Rivian, Scania, Volkswagen, and Volvo which have all supported a global moratorium on DSM and have committed to not sourcing minerals from the deep seabed. These companies have also excluded deep sea metals from their procurement policies and/or their investment policies. Several battery manufacturing and charging infrastructure companies including Addvolt and Charge have also been proactive in committing to or supporting a DSM moratorium.^{9,10}

Increasingly, car companies are using electric vehicle battery chemistry without cobalt and nickel – two of the metals found in nodules mined from the deep sea.¹¹ For example, lithium iron phosphate (LFP) batteries have grown in popularity due to lower cost, higher stability,¹² greater availability of raw materials, better resilience to price shocks, and fewer ESG concerns.¹³

In early 2022, half of the Teslas coming off the production line globally used LFP battery technology.¹⁴ BMW, Ford, and Rivian announced plans to switch multiple models and/or their entire lineups to LFP

³ <https://oceanservice.noaa.gov/facts/ocean-species.html#:~:text=vital%20ocean%20ecosystems-,Scientists%20estimate%20that%2091%20percent%20of%20ocean%20species%20have%20yet,%2C%20unobserved%2C%20and%20unexplored..>

⁴ <https://www.nature.com/articles/s41598-019-44492-w>

⁵ <https://www.fauna-flora.org/wp-content/uploads/2023/05/fauna-flora-deep-sea-mining-update-report-march-23.pdf> p.17-18

⁶ <https://www.nature.com/articles/s44183-023-00016-8>

⁷ <https://www.mining.com/deep-sea-mining-could-contribute-to-increasing-the-scale-speed-of-climate-change-study/>

⁸ <https://www.reuters.com/graphics/MINING-DEEPSEA/CLIMATE/zipqezqzlp/>

⁹ <https://www.stopdeepseabedmining.org/endorsers/>

¹⁰ <https://www.racetothetop.app/>

¹¹ <https://www.iea.org/reports/global-ev-outlook-2023/trends-in-batteries>

¹² <https://marketscale.com/industries/transportation/electric-car-battery-bottlenecks-have-a-way-of-being-worked-out/>

¹³ <https://www.fastmarkets.com/insights/the-ev-battery-chemistry-debate-just-got-more-complicated/>

¹⁴ <https://electrek.co/2022/04/22/tesla-using-cobalt-free-lfp-batteries-in-half-new-cars-produced/>



batteries.¹⁵ Others battery technologies, including sodium-ion, avoid some, if not all, deep sea metals and are already incorporated into production by several automakers and battery manufacturers including the world's second biggest electric carmaker BYD¹⁶, CATL¹⁷, and Yiwei, a joint venture of VW.¹⁸ Solid-state batteries are increasingly being deployed, such as Solid Power¹⁹ which BMW plans to use in a 2025 model.²⁰ Toyota and Honda are working on solid state batteries.²¹ Other cobalt, nickel and copper free options are attracting attention including sodium sulfur,²² lithium-sulfur²³ and certain lithium silicon batteries.²⁴

These commitments reflect strong consensus that mineral needs can be met without DSM. Statements by mining interests and others have distorted much of the public's perception of the need for DSM, resulting in a false correlation between deep sea minerals, EV production, and a green transition.²⁵ The institute for Sustainable Futures concluded that even under a global, 100% renewable energy by 2050 scenario — the most ambitious future energy scenario — mineral needs could be met without mining the deep sea.²⁶

SINTEF, one of Europe's largest independent research organizations, presented models showing that new technology, circular economy strategies, and increased recycling could reduce demand for critical minerals by 58% by 2050.²⁷ Currently, just 8.6% of the world's materials are part of a circular economy, but by 2050, researchers predict 45–52% of cobalt, 22–27% of lithium, and 40–46% of nickel could be supplied from recycled materials.²⁸ The European Academies Science Advisory Council (EASAC), which represents all National Academies of Science in Europe, supports a moratorium on DSM until ecological consequences can be properly understood, measured, and controlled. In a 2023 statement, EASAC concluded that claims that deep-sea mining is essential for the clean energy transition are “misleading” and that deep-sea mining “lacks the mitigation and remedial measures available to terrestrial mining.”²⁹

UN Sustainable Development Goals call for both ocean conservation and sustainable consumption and production.^{30,31} In line with these goals and the Kunming-Montreal Global Biodiversity Framework's target to protect 30% of seas by 2030,³² companies should be concentrating on reforming terrestrial mining practices, choosing materials with the least environmental impact, investing in developing

¹⁵ [https://www.recurrentauto.com/research/lfp-battery-in-your-next-ev-tesla-and-others-say-yes#:~:text=What%20is%20an%20LFP%20battery,%20cobalt%20\(NCA\)%20cousins](https://www.recurrentauto.com/research/lfp-battery-in-your-next-ev-tesla-and-others-say-yes#:~:text=What%20is%20an%20LFP%20battery,%20cobalt%20(NCA)%20cousins)

¹⁶ <https://electrek.co/2024/01/05/byd-breaks-ground-first-sodium-ion-ev-battery-plant/>

¹⁷ <https://www.catl.com/en/news/6201.html>

¹⁸ <https://electrek.co/2023/12/27/volkswagen-backed-ev-maker-first-sodium-ion-battery-electric-car/>

¹⁹ <https://www.solidpowerbattery.com/all-solid-state-batteries/default.aspx>

²⁰ <https://www.electrive.com/2023/11/09/bmw-receives-first-solid-state-cells-from-solid-power/>

²¹ <https://www.engineering.com/story/solid-state-ev-batteries-are-closer-than-you-think>

²² <https://www.sciencedirect.com/topics/engineering/sodium-sulfur-battery>

²³ <https://lyten.com/products/batteries/>

²⁴ <https://sionenergy.com/lithium-ion-battery-technology>

²⁵ <https://www.blueclimateinitiative.org/sites/default/files/2023-10/whitepaper.pdf> p.5

²⁶ https://www.eu-midas.net/sites/default/files/publications/DSM%20RE%20Resource%20Report_UTS_July2016.pdf

²⁷ <https://sintef.brage.unit.no/sintef-xmlui/bitstream/handle/11250/3032049/CircularEconomyAndCriticalMineralsReport.pdf?sequence=7&isAllowed=y>

²⁸ <https://oceanfdn.org/wp-content/uploads/2024/02/dsm-finance-brief-2024.pdf> p.4

²⁹ https://easac.eu/fileadmin/user_upload/EASAC_Deep_Sea_Mining_Web_publication_.pdf p.3

³⁰ <https://sdgs.un.org/goals/goal14>

³¹ <https://sdgs.un.org/goals/goal12>

³² <https://www.cbd.int/gbf/targets/3>



technology and systems for reducing the use of raw materials, improving recovery and recycling of battery materials (as the EU is requiring in a new law³³), and accelerating the transition to a more circular economy.³⁴ A press statement from BMW emphasized that its “sustainability strategy is also relying more on resource-efficient closed-loop material cycles – with the aim of significantly increasing the percentage of secondary material in vehicles.”³⁵

	DSM Related Commitments	
	Supports a Global Moratorium	Excludes Deep Sea Mined Metals from Supply Chain
Volkswagon	Yes	Yes
Renault	Yes	Yes
BMW	Yes	Yes
Rivian	Yes	Yes
General Motors	No	No
Tesla	No	No

These commitments demonstrate confidence that the transition to EVs and the green transition at large can happen without the addition of another highly damaging, extractive industry. Tesla’s energy and mobility peers have already concluded the environmental, regulatory, and financial risks are not worth taking, and should join them in committing to a moratorium.

3. Tesla risks reputational harm by not excluding from its production and supply chains deep sea mined minerals.

Given Tesla’s size and prominence in the EV space, investors are concerned that the Company’s stance (or lack thereof) on DSM could be consequential to its reputation. Tesla is a potential customer of deep sea-sourced minerals for its vehicle batteries. Tesla is the largest EV company globally by a wide margin. Teslas are widely regarded as an “environmentally friendly” vehicle option. In fact, 40% of consumers named Tesla as the auto brand they first associate with “eco-friendly cars.”³⁶ Among those who purchase an EV, 72% cite “helping the environment” as a major reason why.³⁷ Suffice it to say, a

³³ <https://www.europarl.europa.eu/news/en/press-room/20221205IPR60614/batteries-deal-on-new-eu-rules-for-design-production-and-waste-treatment#:~:text=All%20waste%20LMT%2C%20EV%2C%20SLI,portable%20batteries%20of%20general%20use.>

³⁴ <https://deep-sea-conservation.org/solutions/no-deep-sea-mining/>

³⁵ <https://www.press.bmwgroup.com/global/article/detail/T0328790EN/bmw-group-protects-the-deep-seas>

³⁶ <https://pro.morningconsult.com/instant-intel/electric-vehicles-tesla-interest>

³⁷ <https://www.pewresearch.org/short-reads/2023/07/13/how-americans-view-electric-vehicles/>



substantial number of Tesla's customers chose to purchase a Tesla because they believe it to be an "environmentally friendly" choice.

Tesla may lose competitive advantage and market share if customers perceive that Tesla's operations have substantial negative impacts on ocean systems and biodiversity. The emerging deep-sea mining industry embodies one of the most significant new threats to global oceans and their biodiversity.

While Tesla may not have taken an affirmative stance on deep sea mined metals, its failure to establish any public facing policies on the subject leaves a vacuum for others to fill. The Company's failure to establish a position on DSM, given that it is the largest manufacturer of EVs, can drive investment in DSM. Customers too are likely to read into Tesla's failure to take a stance on DSM. If given the choice between Tesla and a peer committed to a DSM moratorium, the environmentally minded consumer may choose the latter.

If the Company ultimately uses deep sea mined materials, the Company will be in contravention of the IRMA responsible mining and refining program, to which it subscribes.³⁸ The Initiative for Responsible Mining Assurance (IRMA) is a leading independent assessment body, covering a range of environmental and social issues related to industrial scale mines.³⁹ IRMA has taken the position that its system:

"was not developed to assess the unique risks associated with deep-sea mining and cannot be used to describe best practice for this type of extraction. As such, and in light of the need for ongoing research, the current inability to audit impacts, and a risk that IRMA's Standard could be inappropriately applied if used in the deep-sea context, IRMA does not allow its system...to be used by companies involved in deep-sea mining exploration."⁴⁰

IRMA's stance highlights that pre-existing mining guidance cannot reasonably be applicable or decision useful for DSM. Losing membership with the leading authority on responsible mining would jeopardize the responsible mining claims Tesla has made about the minerals used in its production and supply chains. The World Economic Forum (WEF) has also stated that responsible sourcing standards and tools used for terrestrial minerals may not readily transfer to the deep sea.⁴¹

Deep sea mineral extraction is unique from terrestrial mining in a plethora of ways, and it would be unreasonable to apply any due diligence guidance to deep sea sourced minerals that does not explicitly mention deep sea mining. IRMA and WEF's stances are consistent with the moratorium on DSM, which asserts that we do not yet fully understand the environmental, social and economic risks of DSM, and we cannot clearly demonstrate DSM can be managed in such a way that ensures the effective management of the marine environment and prevents loss of biodiversity.⁴² To avoid adding to Tesla's growing list of mining related controversies,⁴³ Tesla should align itself with its mining standard of choice, and support a moratorium on DSM.

³⁸ https://www.tesla.com/ns_videos/2022-tesla-impact-report.pdf p.154

³⁹ <https://responsiblemining.net/about/about-us/>

⁴⁰ <https://responsiblemining.net/2022/06/14/irmas-deep-sea-mining-position/>

⁴¹ https://www3.weforum.org/docs/WEF_Deep_Sea_Minerals_2021.pdf p.6-7

⁴² https://deep-sea-conservation.org/wp-content/uploads/2024/01/DSCC-Position-Statement-on-Deep-Seabed-Mining_July2019-1.pdf

⁴³ <https://www.theverge.com/2023/6/15/23760915/tesla-supplier-glencore-human-rights-abuse-allegations-battery-minerals-mining-energy>



As the face of the EV transition, Tesla will have to answer for the demand it is driving for deep sea minerals and the environmental harms that result from DSM if the Company pursues deep sea minerals.

4. Including deep sea sourced minerals in its production and supply chains opens Tesla up to regulatory and financial risks.

A growing number of national governments, parliamentarians, regional authorities, and other elected officials and government bodies have joined the call for a precautionary pause, moratorium, or all out ban on DSM in international waters, national waters, or both.²⁵ Countries including Canada, France, and the U.K., the European Parliament, and over 20 parliamentarians have taken stances against DSM.⁴⁴ Additionally, over 800 marine science and policy experts from over 44 countries have called for a pause on DSM,⁴⁵ and 72 Indigenous groups have called for a ban on DSM.⁴⁶ Globally, the DSM industry lacks the social license to operate.⁴⁷

International opposition to DSM risks reducing Tesla's market share. If Tesla begins selling models containing deep sea sourced minerals, countries with a DSM ban, moratorium, or pause in place might take legislative or regulatory action (similar to how the US has banned all imports from China's Xinjiang unless the company can prove they were not made with forced labor).⁴⁸ European organizations have already begun advocating for governments to "adopt a ban on the use or import of raw materials from the deep sea"⁴⁹ and to "ensure that relevant specific trade and sectoral regulations include a ban on the import and use of raw materials or manufactured goods that have been obtained from or produced with deep- sea minerals."⁵⁰

The current regulatory arena surrounding DSM is highly charged and uncertain. The International Seabed Authority (ISA) has delayed its target deadline for a finalized deep sea "mining code" to July 2025. Two years after the initial target date,³⁰ major outstanding issues remain, and the regulations require consensus in the executive body of the ISA, giving reason for several state representatives to doubt the extended deadline will be met.⁵¹ Meanwhile, the CEO of The Metals Company (TMC) – the main company pursuing DSM – has claimed the company is on track for its plans to launch commercial mining in July 2024, regardless of the state of the development of the regulations for exploitation, under a legal loop-hole called the two-year rule.⁵² Thus, the first deep sea sourced minerals to come to market may be unregulated and are likely to remain unregulated as there is no funding mechanism from the ISA to routinely monitor the impacts of DSM or to ensure that companies extracting nodules from the deep

⁴⁴ <https://deep-sea-conservation.org/solutions/no-deep-sea-mining/momentum-for-a-moratorium/governments-and-parliamentarians/>

⁴⁵ <https://seabedminingsciencestatement.org/>

⁴⁶ <https://www.blueclimateinitiative.org/say-no-to-deep-sea-mining#:~:text=Indigenous%20Voices%20for%20a%20Ban%20on%20Deep%20Sea%20Mining&text=Cultures%20across%20the%20Pacific%20consider,a%20member%20of%20our%20family.>

⁴⁷ <https://www.nature.com/articles/s44183-023-00009-7>

⁴⁸ <https://www.businessinsider.com/congress-passes-ban-on-all-imports-from-chinas-xinjiang-2021-12>

⁴⁹ <https://www.sharkproject.org/en/cooperation/ocean-resilience/deep-sea-mining/>

⁵⁰ <https://seas-at-risk.org/wp-content/uploads/2023/03/The-unsustainability-of-deep-sea-mining-Unearthing-threats-to-the-UN-Sustainable-Development-Goals.pdf> p.9

⁵¹ <https://news.mongabay.com/2024/04/deep-sea-minings-future-still-murky-as-negotiations-end-on-mixed-note/>

⁵² <https://www.miningwatch.ca/news/2023/11/15/while-metals-company-construct-their-own-reality-commercial-deep-sea-mining-long#:~:text=TMC%20CEO%20Gerard%20Barron%20claimed,called%20the%20two%20year%20rule.>



seabed are accountable for the environmental damage they cause. This creates risk to potential future purchasers such as Tesla.

Tesla's inclusion of deep sea minerals may also reduce its access to financing. A growing movement of leading financial institutions have called on governments to not permit DSM.⁵³ These financial institutions represent over EUR 3.3 trillion and cited policy, regulatory, and reputational risks in their statement opposing DSM.⁵³ The UN Environment Program's Finance Initiative (UNEPFI) states –

"the sustainable blue economy is a goal for the wider blue economy, and therefore excludes non-renewable extractive industries (e.g. offshore oil and gas, and deep seabed mining) ..."⁵⁴ and that "[i]n their current form, 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."⁵⁵

Similarly, the European Investment Bank excludes DSM as "Projects unacceptable in climate and environmental terms."⁵⁶ Several financial institutions, including Swiss Re,⁵⁷ Credit Suisse,⁵⁸ Lloyds,⁵⁹ Standard Chartered,⁶⁰ NatWest,⁶¹ Storebrand Asset Management,⁶² Triodos Bank,⁶³ and BBVA bank⁶⁴ have come out with exclusions on DSM.

The financial risks of DSM continue to compound when the market volatility, macroeconomic trends, and technical hurdles associated with the industry are analyzed. Business models for DSM rely on expected growth in demand for EV minerals, so demand fluctuations, including reductions in new demand due to recycling, may affect the industry's ability to sell DSM products. A report commissioned by the ISA found that, considering the uncertainty around the prices for commercial metals, it is possible that relatively high-cost minerals from the seabed will not be competitive, and will generate little to no profit.⁶⁵ Metal prices have fluctuated over the past decade, in part because of battery innovation, and have not risen in tandem with EV production – while EV production increased by 2000% between 2016 and 2023, cobalt prices have dropped by 10%⁶⁶ and nickel prices have crashed from over 40% last year.⁶⁷

⁵³ <https://www.financeforbiodiversity.org/leading-financial-institutions-call-on-governments-to-not-permit-deep-sea-mining/>

⁵⁴ <https://www.unepfi.org/publications/turning-the-tide/>

⁵⁵ <https://www.unepfi.org/publications/harmful-marine-extractives-deep-sea-mining/>

⁵⁶ https://www.eib.org/attachments/publications/eib_eligibility_excluded_activities_en.pdf

⁵⁷ <https://www.swissre.com/dam/jcr:52d75760-2c43-4d96-be2f-0514382ac51a/2023-sustainability-report-en.pdf>

⁵⁸ <https://www.eco-business.com/news/credit-suisse-joins-growing-list-of-banks-shunning-deep-sea-mining/>

⁵⁹ https://www.lloydsbankinggroup.com/assets/pdfs/investors/annual-report/2019-download-links/2020apr_lbg_esg_approach.pdf p.20

⁶⁰ <https://www.sc.com/en/about/sustainability/position-statements/extractive-industries/>

⁶¹ <https://www.mining-technology.com/news/banks-one-third-uk-assets-deep-sea-mining/?cf-view>

⁶² https://www.storebrand.no/filbibliotek/_attachment/inline/42b9db43-4da4-4333-a1cc-21680cf63260/86158%20-Storebrand-Policy-on-Nature.pdf

⁶³ <https://www.triodos.com/en/articles/2021/triodos-bank-supports-moratorium-on-deep-sea-mining>

⁶⁴ <https://shareholdersandinvestors.bbva.com/wp-content/uploads/2021/01/Environmental-and-Social-Framework--Dec.2020-140121.pdf>

⁶⁵ <https://www.isa.org/jm/wp-content/uploads/2022/12/ISA-Technical-Study-32.pdf> p.16

⁶⁶ <https://oceanfdn.org/wp-content/uploads/2024/02/dsm-finance-brief-2024.pdf>

⁶⁷ <https://www.bloomberg.com/news/articles/2024-02-03/from-green-hype-to-bailouts-the-nickel-industry-has-imploded?embedded-checkout=true>



Experts are questioning if deep sea mining is even technically viable.⁶⁸ The technology to mine the deep seabed on an industrial scale is unproven while the delivery rate needed to be profitable is high. The development plan of TMC requires 12.2 million tons of (wet) material a year, which would require 33,000 tons a day, or 1,392 tons an hour, assuming operations continued 365 days a year, 24 hours a day.⁶⁹ For reference, in Fall 2022, TMC brought up 3,000 tons of nodules (of the 4,500 tons it collected) during a two-month long collector test. To achieve full production, TMC must achieve a rate 3,000x its current rate.⁷⁰ TMC would have to deliver at this rate using remotely operated vehicles (with limited spatial awareness, depth perception, and ability to transmit information wirelessly) while dealing with unique operational challenges including high pressure at unprecedented depths, freezing temperatures, corrosive sea water, high turbidity, and low light.⁷¹

Investor's caution over these mounting risks have been demonstrated by TMC's performance on the stock market. TMC has repeatedly struggled to maintain a stock price above \$1 and thus to stay listed on the NASDAQ, receiving three delisting notices since December 2022. Using TMC's own financial model with a market adjusted discount rate (TMC's original 9% rate is *extremely* optimistic considering its risk profile) the total project net present value would be brought down from \$6.8 billion in TMC's published financial model to \$1.8 billion, a 73% reduction based only on a change in the discount rate (and not reflective of either decreased metal prices or increased costs since the financial model's publishing in 2021).⁷²

Given these factors, TMC's profitability and ability to steadily deliver materials is highly uncertain. Should Tesla integrate deep sea sourced minerals into its production and supply chains, the Company could be met with inconsistent and unreliable supply, leading to costly production delays. DSM introduces risk to investors at an economy-wide scale as well. One recent report calculated a loss in value of ecosystem services of US \$465 billion if 10,000 square kilometers were mined annually for 15 years.⁷³ This is a highly conservative estimate given significant knowledge gaps regarding deep sea ecosystems. Another report noted that:

The latest scientific research indicates that the environmental damage caused by DSM is likely to be extensive, irreversible and unmitigable. DSM risks disrupting the global carbon cycle, threatens fisheries and food security, and would lead to irreparable biodiversity loss with devastating consequences for both people and planet.⁷⁴

Given the role of deep sea biodiversity in food webs, the deep sea's role in the global carbon cycle, the high vulnerability of deep sea ecosystems to disturbance, and our own limited knowledge of deep sea systems,⁷⁵ the significant disturbance caused by deep sea mining represents a threat to the very systems that support the global economy and thus to diversified portfolios.

⁶⁸ <https://nautil.us/the-dubious-economics-of-deep-sea-mining-309597/>

⁶⁹ https://www.sec.gov/Archives/edgar/data/1798562/000121390021013348/ea137001ex99-2_sustainable.htm

⁷⁰ <https://allseas.com/news/trial-run-concludes-with-record-haul/>

⁷¹ <https://www.nature.com/articles/s41893-020-0558-x>

⁷² <https://oceanfdn.org/wp-content/uploads/2024/02/dsm-finance-brief-2024.pdf> p.15-16

⁷³ <https://planet-tracker.org/wp-content/uploads/2024/02/How-to-Lose-Half-a-Trillion.pdf>

⁷⁴ <https://ejfoundation.org/resources/downloads/towards-the-abyss-ejf-deep-sea-mining-report.pdf>

⁷⁵ *Ibid.* p.6-8



The DSM industry is demonstrably fraught with risk. By publicly supporting a DSM moratorium, and prioritizing investments in battery recovery, recyclability, and innovation, Tesla can avoid the myriad risks associated with deep sea mining, especially at this early stage, while also permanently reducing need for this destructive and expensive technology.

RESPONSE TO TESLA BOARD OF DIRECTORS' STATEMENT IN OPPOSITION

Board statement: “We source responsibly according to the Organisation for Economic Co-operation and Development (OECD), the OECD Due Diligence Guidance for Responsible Mineral Supply Chains and Responsible Business Conduct (the OECD DDG), and the United Nations Guiding Principles on Business and Human Rights. In doing this, we set forth clear expectations for our suppliers, including through our Responsible Sourcing Policy and Supplier Code of Conduct.”

Proponent Stance: To date, the approach of OECD DDG does not provide guidance for sourcing minerals mined from the deep sea. Therefore, compliance with OECD guidance is not relevant to the ask of the proposal. Should manufacturers or metals markets seek to transfer the approach of the OECD DDG to the deep sea to promote the exclusion of minerals whose production circumstances do not meet their environmental or social expectations, or those of their stakeholders, the task would be formidable.

The OECD DDG is a 120-page document, which details roles, responsibilities, risks, model policies and recommended actions in a range of specified circumstances for each entity in the supply chain. Initially designed for application to small-scale mining in areas of physical insecurity, the text of the document reflects circumstances that are significantly different to those of deep-sea mineral extraction. Additional guidance, requiring working group consultations and lengthy stakeholder engagement processes, was required for each new sector incorporated in the OECD DDG. Moreover, the few issues manufacturers and metal exchanges currently address through the OECD DDG – the association of mineral extraction with gross human rights violations and conflict – are not stakeholders' principal concern with deep-sea minerals.

New and detailed guidance would need to be written and agreed upon if the approach of the OECD DDG were to be transferred to deep-sea minerals, and this process could take many years. Ten years elapsed between the inception of the OECD DDG in 2006, and the first pilot alignment of a voluntary standard with the guidance, in 2016-2017. Meanwhile, deep-sea minerals could enter supply chains before the end of the decade.

- **Board Statement:** “We source responsibly according to the Organisation for Economic Co-operation and Development (OECD), the OECD Due Diligence Guidance for Responsible Mineral Supply Chains and Responsible Business Conduct...”

Proponent Stance: The operations and impacts of deep sea mining are significantly unique from those of terrestrial mining. It is therefore unreasonable to expect a document intended to address the risks and concerns surrounding *terrestrial* mining to be decision useful in the context of deep sea mining supply chains.



- **Board Statement:** “[O]ur supplier relationships are inherently complex, and decisions by Company management regarding the entry into agreements with suppliers for the purchase of raw materials, the availability of raw materials particularly during periods of significant supply chain disruption or uncertainty, the timing of such agreements and decisions under those agreements are fundamental to our ability to operate nimbly on a day-to-day basis while adhering to high responsible sourcing expectations.”

Proponent Stance: Tesla argues that adhering to a moratorium would be too burdensome for its operations. Tesla is not currently using deep sea sourced minerals in its production and supply chains (full scale industrial mining has not yet begun, and the minerals are not yet on the market). The proposal is simply asking for Tesla to continue business as usual by maintaining the deep sea mineral free supply chain it currently has. If there is a burden to be considered, it should be the significant reputational, financial, and regulatory risks discussed above, all of which can be avoided through implementation of a DSM moratorium until the technology has been proven feasible and not destructive of the deep sea ecosystem.

- **Board Stance:** “The Company’s management, rather than the stockholder proponent, is in the best place to make informed and specific decisions based on its specialized expertise and judgment.”

Proponent Stance: Investors seek assurance that Tesla is addressing the risks described above concerning deep sea mining. Tesla has no public disclosure on the topic leaving investors in the dark on how the Company is considering these risks, if at all. The Moratorium provides an important way of signaling its cautious approach to the issue, while helping it remain competitive with its peers.

CONCLUSION

Vote “Yes” on this Shareholder Proposal 12. This proposal reduces Tesla’s risk exposure to highly controversial deep sea mining. .

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For questions, please contact Elizabeth Levy, As You Sow, elevy@asyousow.org

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