



VIA ELECTRONIC MAIL & U.S. MAIL

July 1, 2021

Office of the Chairman  
U.S. Securities and Exchange  
Commission  
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Office of Energy and Transportation  
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Commission  
100 F Street, NE  
Washington, DC 20549

Disclosure Review Program  
Division of Corporation Finance  
U.S. Securities and Exchange  
Commission  
100 F Street, NE  
Washington, DC 20549

Re: De-SPAC Merger of Sustainable Opportunities Acquisition Corp. (ticker: SOAC;  
CIK: 0001798562) and DeepGreen Metals, Inc.

Dear Chairman Gensler and SEC staff:

The undersigned civil society organizations urge the U.S. Securities and Exchange Commission to undertake a full cover-to-cover review of the proposed Special Purpose Acquisition Company (SPAC) business combination transaction between Sustainable Opportunities Acquisition Corp. (SOAC) and DeepGreen Metals, Inc, a Canadian company. (Where the intended future company is referred to, it is referred to as DeepGreen/TMC or SOAC/TMC, as TMC does not yet exist. Where the current company is referred to, it is referred to as DeepGreen).

Based on credible news accounts, court records, and other public information, there is cause for serious concern that SOAC’s Registration Statement, Form S-4 filed April 8, 2021 (“Form S-4”), which it last amended on June 22, 2021,<sup>1</sup> has failed to comply with securities laws in its disclosures to prospective investors.

As the Commission will be increasingly aware, there is a danger that companies with vague or questionable business plans have been attempting to access the top-tier US capital markets through the SPAC process, which allows them to circumvent the more robust due diligence, underwriting, and regulatory processes required in an initial public offering. Many of these SPAC offerings involve companies promoting plays on green technologies or green energy, possibly the hottest area currently in the capital markets. In our view, the planned SPAC transaction between SOAC and DeepGreen epitomizes the concerns being raised about this trend in the financial press, the regulatory community, and among veteran market observers.

Our primary concern is that DeepGreen’s untested plans to mine the floor of the deep ocean present enormous environmental risks, and that the company’s representations about how it is going to be able to adequately manage these risks have lacked credibility and have threatened to mislead the investing public concerning the future profitability of the company.

The SEC has recently recognized the increasing importance of claims that publicly-traded companies are making regarding their impact on the environment. Last year, the SEC Investor Advisory Committee issued recommendations for an effort to update reporting requirements for issuers to include material, decision-useful environmental, social, and governance, or ESG factors.<sup>2</sup> In December 2020, the ESG Subcommittee of the SEC Asset Management Advisory Committee issued a preliminary recommendation that the Commission require the adoption of

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<sup>1</sup> Form S-4. (April 8, 2021). [https://www.sec.gov/Archives/edgar/data/0001798562/000121390021020731/fs42021\\_sustainableoppacq.htm](https://www.sec.gov/Archives/edgar/data/0001798562/000121390021020731/fs42021_sustainableoppacq.htm); Form S-4/A. (June 22, 2021). [https://www.sec.gov/Archives/edgar/data/1798562/000121390021033645/fs42021a2\\_sustainable.htm](https://www.sec.gov/Archives/edgar/data/1798562/000121390021033645/fs42021a2_sustainable.htm).

<sup>2</sup> “Recommendation from the Investor-as-Owner Subcommittee of the SEC Investor Advisory Committee Relating to ESG Disclosure.” (May 14, 2020). <https://www.sec.gov/spotlight/investor-advisory-committee-2012/recommendation-of-the-investor-as-owner-subcommittee-on-esg-disclosure.pdf>.

standards by which corporate issuers disclose material ESG risks.<sup>3</sup> Our comments are intended to be input into this process. While this comment process is ongoing, we believe that existing SEC standards for securities offerings already require greater and more accurate disclosure of clear and significant risks facing SOAC and DeepGreen from the latter’s business. Let us begin with an explanation of the key underlying environmental harms posed.

Firstly, the nodules that SOAC intends to mine have their own ecology, about which we know very little. They form surfaces for some animals to grow,<sup>4</sup> and provide foraging and spawning grounds for others.<sup>5</sup> Nodules take millions of years to form, so the loss of the habitats they provide, and the creatures that depend on them, would be permanent in human time frames. Deep sea environments are extremely slow to recover from damage.<sup>6</sup> Scientists have warned that biodiversity loss from deep-sea mining (DSM) would be inevitable.<sup>7</sup>

Even the foreword of DeepGreen’s own white paper “Where Should Metals for the Green Transition Come From?”<sup>8</sup> acknowledges biodiversity loss as a significant impact of DSM, and that it is impossible to determine whether impacts on biodiversity would be less than from those of land-based mining, due the paucity of information and the longevity of the impacts likely to occur to deep-sea organisms and ecosystems.

However, we do know that recovery of terrestrial ecosystems after the cessation of mining may occur within decades to hundreds of years, as opposed to thousands or millions of years for DSM. This is a fundamental difference between

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<sup>3</sup> “Public Input Welcomed on Climate Change Disclosures.” (March 15, 2021). <https://www.sec.gov/news/public-statement/lee-climate-change-disclosures>.

<sup>4</sup> Stratmann, T., Soetaert, K., Kersken, D. & van Oevelen, D. Polymetallic nodules are essential for food-web integrity of a prospective deep-seabed mining area in Pacific abyssal plains. bioRxiv 2021.02.11.430718; doi: <https://doi.org/10.1101/2021.02.11.430718>.

<sup>5</sup> Kaiser, S., Smith, C.R. & Arbizu, P.M. Editorial: Biodiversity of the Clarion Clipperton Fracture Zone. *Mar Biodiv* 47, 259–264 (2017). <https://doi.org/10.1007/s12526-017-0733-0>.

<sup>6</sup> Kaiser, S., Smith, C.R. & Arbizu, P.M. Editorial: Biodiversity of the Clarion Clipperton Fracture Zone. *Mar Biodiv* 47, 259–264 (2017). <https://doi.org/10.1007/s12526-017-0733-0>.

<sup>7</sup> Van Dover, C., Ardron, J., Escobar, E. et al. Biodiversity loss from deep-sea mining. *Nature Geosci* 10, 464–465 (2017). <https://doi.org/10.1038/ngeo2983>.

<sup>8</sup> Paulikas, D., Katona, S., Ilves, E. et al. Where Should Metals for the Green Transition Come From? (April 2020). <https://metals.co/download/237815/>.

terrestrial mining and DSM, placing DSM into a potentially equally severe category of environmental impact than land-based mining.

According to University of Hawaii oceanographer Jeff Drazen, “We’re going to strip-mine a massive habitat, and once it’s gone, it isn’t coming back.”<sup>9</sup>

Secondly, not only would DSM destroy species and habitats on the seabed, but also pollution from mine waste, light, sound, and sediment plumes would have potentially significant consequences<sup>10</sup> on the many other species in the water column – so-called pelagic species – that rely on the Pacific Ocean, including as a migratory highway. Science is just starting to shed light on the interconnections between deep, mid, and surface waters through the movement of species, currents, nutrients, and carbon. Mining the seabed will potentially result in negative consequences for the rest of the ocean and the people who depend on its health.

DeepGreen has falsely claimed<sup>11</sup> that their operations will produce no tailings or waste – which are a key environmental impact of mining on land. However, nodule mining will involve continuously discharging a wastewater laden with sediment and mining fines (small particles of the nodule ore) back into the ocean after pumping nodule slurry from the seabed for processing to the surface support vessels.<sup>12</sup> This would occur 24/7 for the duration of the mining operation (expected to be over 30 years and possibly much longer, with multiple 10 year renewals) and contain unknown quantities of chemicals and heavy metals that could contaminate marine food webs and commercially valuable fisheries.<sup>13</sup> Additional discharges may occur depending on how the nodule ore would be transferred at sea from the collector ships to the transport vessels taking the ore to port.

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<sup>9</sup> Wil S. Hylton. “History’s Largest Mining Operation Is About to Begin It’s underwater—and the consequences are unimaginable.” *The Atlantic*. (February 2020). <https://www.theatlantic.com/magazine/archive/2020/01/20000-feet-under-the-sea/603040/>.

<sup>10</sup> Chin, A and Hari, K. Predicting the impacts of mining of deep sea polymetallic nodules in the Pacific Ocean: A review of Scientific literature. Deep Sea Mining Campaign and MiningWatch Canada. (2020). [https://miningwatch.ca/sites/default/files/nodule\\_mining\\_in\\_the\\_pacific\\_ocean.pdf](https://miningwatch.ca/sites/default/files/nodule_mining_in_the_pacific_ocean.pdf).

<sup>11</sup> Gerard Barron: “...we generate zero tailings and zero waste... So, we can collect these nodules and process them and generate no waste and no tailings.” [https://www.sec.gov/Archives/edgar/data/1798562/000121390021023176/ea140009-425\\_sustainable.htm](https://www.sec.gov/Archives/edgar/data/1798562/000121390021023176/ea140009-425_sustainable.htm).

<sup>12</sup> Drazen et. al. Opinion: Midwater ecosystems must be considered when evaluating environmental risks of deep-sea mining. *Proceedings of the National Academy of Sciences*. (2020). <https://www.pnas.org/content/117/30/17455>.

<sup>13</sup> Preliminary research indicates that between 5-15% of the catch of yellowfin, skipjack and bigeye tuna – by Ecuador, USA, Mexico, Spain and Panama could be at risk of being impacted by DSM waste discharged in the Clarion Clipperton Zone. <https://www.sciencedirect.com/science/article/pii/S0308597X21001755>.

Thirdly, simply put, the deep ocean floor is a carbon sink, helping reduce the amount of CO<sub>2</sub> gas in the atmosphere that is causing climate change by acting as a long-term store of carbon that, when undisturbed, is largely isolated from the overlying seawater and atmosphere. This is a scientific fact that even DeepGreen does not dispute. If these sediments are disturbed over an extended area as a result of mining activity, those carbon stores and the natural processes that add to them could be damaged and a significant amount of the sequestered carbon could be released back to the water column, with a proportion eventually reaching the atmosphere. This carries long-term implications for ocean acidification and climate change.

In their SEC filings and public promotion of this SPAC transaction, SOAC and DeepGreen have consistently downplayed the possibility that disturbing the deep ocean floor will either degrade the natural carbon sequestration process or possibly even lead to the release of huge amounts of sequestered CO<sub>2</sub>.<sup>14</sup> Many respected environmental organizations, such as the World Wildlife Fund, are not convinced by these self-interested assurances.<sup>15</sup>

While we believe DeepGreen/TMC's DSM plan presents unacceptable risks for our planet, we also believe it presents major risks to investors in SOAC/TMC: as more about the people and funding behind this SPAC becomes known, and the environmental threats of DSM become better known, we believe it is highly likely that responsible governments will act to delay, limit, or halt DeepGreen's operations and damage its ability to make a profit. SOAC/TMC and DeepGreen should be required by the SEC to be more candid in acknowledging the extent and implications of this material risk.

Indeed, until last week, SOAC's disclosures about environmental and regulatory risk were generic – saying little more than that environmentalist opposition and government regulatory denials could thwart their plans.

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<sup>14</sup> "DeepGreen Responds to Greenpeace Seabed Mining Report." The Maritime Executive. (July 31, 2019). <https://www.maritime-executive.com/editorials/deepgreen-responds-to-greenpeace-seabed-mining-report>.

<sup>15</sup> In Too Deep: What We Know, and Don't Know, About Deep Seabed Mining. (2021). [https://wwfint.awsassets.panda.org/downloads/in\\_too\\_deep\\_what\\_we\\_know\\_and\\_don\\_t\\_know\\_about\\_deep\\_seabed\\_mining\\_1.pdf](https://wwfint.awsassets.panda.org/downloads/in_too_deep_what_we_know_and_don_t_know_about_deep_seabed_mining_1.pdf).

Last week, two and a half months after its preliminary disclosures for this merger, SOAC conceded the environmental impact of its mining techniques on sea-floor life “could potentially be more significant than currently expected” and require further study. It reads: (page 50 of [June 22 filing](#))

*There is some uncertainty regarding the impact of polymetallic nodule collection on biodiversity in the CCZ seabed which could potentially be more significant than currently expected.*

The potential impact of commercial scale polymetallic nodule collection on CCZ seabed habitats is currently difficult to measure and will require further studies. We cannot predict how long these studies will take, whether the environment and biodiversity is impacted by our activities, and if so, how long the environment and biodiversity will take to recover. In addition, it is unknown how effectively mitigation strategies can prevent potential biodiversity loss and species extinctions. Organisms that inhabit the deeper parts of the water column, which likely include thousands of species of jelly organisms, ctenophores, larvaceans, swimming mollusks, larval fish, and others, may be vulnerable to sediments extending upward from plumes or released in returning lift water in connection with nodule collection. Given the significant volume of deep water and the difficulty of sampling or retrieving biological specimens without damage, a complete biological inventory might never be established. Accordingly, impacts on biodiversity and the ocean ecosystem cannot, and may never be, completely and definitively known. Although our Contract Areas will account for less than 0.1% of the global seabed, it is unknown whether the impact of nodule collection on global biodiversity will be less significant than those observed and measured with respect to land-based mining for a similar amount of required metal.

The concession came amidst a raft of reporter enquiries, followed by negative press coverage about SOAC’s merger with DeepGreen, including its environmental dangers.<sup>16</sup> There could have been little doubt for months if not years before this belated admission about the possible harm to floor life. Even this belated admission concerned only one of the major environmental risks discussed above that could spur governmental and civil society action thwarting or restricting DSM.

Potential investors in SOAC/TMC also need to be adequately warned of other related rosy projections and glaring omissions in the S-4 that are typical of the problems now surfacing in the SPAC frenzy. As one commentator recently noted, “DeepGreen perhaps embodies the worst of this excess with business operations

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<sup>16</sup> Todd Woody. “A Mining Startup’s Rush for Underwater Metals Comes With Deep Risks.” Bloomberg. (June 23, 2021). <https://www.bloomberg.com/news/articles/2021-06-24/a-mining-startup-s-rush-for-underwater-metals-comes-with-deep-risks>. Scheck, J., Brown, E., & Foldy, B. “Environmental Investing Frenzy Stretches Meaning of ‘Green.’” The Wall Street Journal. (June 24, 2021). <https://www.wsj.com/articles/environmental-investing-frenzy-stretches-meaning-of-green-11624554045>. Kate Lyons. “Mining’s new frontier: Pacific nations caught in the rush for deep-sea riches.” The Guardian. (June 23, 2021). <https://www.theguardian.com/world/2021/jun/23/minings-new-frontier-pacific-nations-caught-in-the-rush-for-deep-sea-riches>.

precipitated on a concept and commercial operations not expected to start until 2024.”<sup>17</sup> The merged company’s purported \$3 billion valuation “is extremely problematic for what amounts to nothing more than a concept idea with semi altruistic ambitions.”<sup>18</sup> Worse, its projected commencement of commercial mining by 2024, appears to be hopelessly optimistic and unrealistic.<sup>19</sup>

In the amended S-4 last week, SOAC made another belated concession (page 178 of [June 22 filing](#)) that the Environmental Impact Study Approval standards through the International Seabed Authority for exploitation are “currently unclear and have not been finalized,” which “may result in delays that could impact DeepGreen’s projected timeframe for collection and production.” Elsewhere, SOAC disclosed (page 66 of [June 22 filing](#)) that “projected financial information considered by SOAC may not be realized,” because of regulatory and other risk. These damning admissions – revealing SOAC’s and DeepGreen’s prior omission of the regulatory perils faced by its environmentally risky exploitation plans – are too little, too late. SOAC has buried within its amended filing a few incomplete and disconnected dots belying or casting doubt upon many of its other assertions on record. But SOAC still does not directly admit to investors the extent to which various kinds of environmental difficulties have *not* been grappled with – omissions that render its projections and valuations (based on a 2024 commercial production start date) potentially misleading to investors.

The “canary in the coal mine” in SOAC’s business combination filings is its claim of the target business’s “sustainability.” In its latest amended S-4, the canary fell silent. Where SOAC had earlier claimed (page 118 of [April 8 filing](#)) that mining

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<sup>17</sup> “DeepGreen’s \$3 Billion Valuation Is Extremely Ambitious.” Winds Research. (March 19, 2021). <https://seekingalpha.com/article/4415131-deepgreens-3-billion-valuation-extremely-ambitious>.

<sup>18</sup> “DeepGreen’s \$3 Billion Valuation Is Extremely Ambitious.” Winds Research. (March 19, 2021). <https://seekingalpha.com/article/4415131-deepgreens-3-billion-valuation-extremely-ambitious>.

<sup>19</sup> See a critique at Hieronymus Bosch. Column: The Metals Company: What Lies Behind the Subsea Mining Pitch? – Part Two. (May 24, 2021). <https://www.bairdmaritime.com/work-boat-world/offshore-world/column-the-metals-company-what-lies-behind-the-subsea-mining-pitch-part-two-offshore-accounts/>. “No, the real question is what is really going to happen? How will you protect the marine environment? How will you gather the nodules in an economically viable manner? How will you transport them to the surface and then to a port? How will they be processed safely and cleanly? “The Metals Company and BIG have deliberately chosen to provide unrealistic but attractive-looking visions of what the subsea mining industry will look like. Subsea mining is an industry just starting on its journey. It makes one question the credibility of The Metals Company in the marine industry, and the credibility of BIG as a serious industrial design house.” And on the 2024 claim, see, “DeepGreen’s \$3 Billion Valuation Is Extremely Ambitious.” Winds Research. (March 19, 2021). <https://seekingalpha.com/article/4415131-deepgreens-3-billion-valuation-extremely-ambitious>.

polymetallic nodules from the sea bed was a “sustainable and cost effective alternative to traditional land based extraction,” now that language claiming sustainability and cost-effectiveness is gone, replaced (page 125 of [June 22 filing](#)) by the “opportunity to dramatically compress most lifecycle ESG impacts associated with conventional metal production from land-based ores,” and that (page 50 of [June 22 filing](#)) “it is unknown whether the impact of nodule collection on global biodiversity will be less significant than those observed and measured with respect to land-based mining for a similar amount of required metal.” Unable to claim sustainability in the face of public opposition from hundreds in the scientific community, SOAC is resorting instead to giving investors this inscrutable jargon, cynically continuing to take advantage of the popularity of ESG investing among both ordinary and institutional investors. For a SPAC with “sustainable” in its name, this is a particularly momentous and telling disintegration.

The SOAC filing is silent on a major question regarding its “subsidiary”<sup>20</sup> (contractor) in Nauru, a tiny Pacific island with a long, sad history of mining.<sup>21</sup> The SOAC filing states (page F-50 of [June 22 filing](#)) that two foundations in Nauru that own DeepGreen’s local subsidiary are in turn 100% owned by DeepGreen.<sup>22</sup> That seems to be at odds with prior statements by the International Seabed Authority, which said the foundations “are controlled by Nauru and will distribute within the State the income the company received from mineral production in the Licence Area.”<sup>23</sup> The SOAC S-4 does not explain how DeepGreen gained control of these entities, or how its arrangements with the subsidiaries are consistent with

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<sup>20</sup> DeepGreen refers to the Nauru and Tonga contractors as “subsidiaries” in their presentations.

[https://www.sec.gov/Archives/edgar/data/1798562/000121390021028039/ea141395-425\\_sustainable.htm](https://www.sec.gov/Archives/edgar/data/1798562/000121390021028039/ea141395-425_sustainable.htm).

<sup>21</sup> Davies, A. and Doherty, B. “Corruption, incompetence and a musical: Nauru’s cursed history.” The Guardian. (September 3, 2018). <https://www.theguardian.com/world/2018/sep/04/corruption-incompetence-and-a-musical-naurus-riches-to-rags-tale>.

<sup>22</sup> This was in order for Nautilus to establish what DeepGreen describes as subsidiaries in Nauru and Tonga which could in turn be sponsored by those countries. In 2008, Nautilus established wholly-owned subsidiaries in the Pacific Island countries of Nauru (NORI) and Tonga (TOML). See ISBA/14/LTC/L.2. 21 April 2008. Available at <https://digitallibrary.un.org/record/625358?ln=en>. And ISBA/14/LTC/L.3 at <https://digitallibrary.un.org/record/625355?ln=en>.

<sup>23</sup> <https://www.isa.org.jm/news/seabed-authority-and-nauru-ocean-resources-inc-sign-contract-exploration>.

requirements for effective control under the United Nations Convention on the Law of the Sea.<sup>24</sup>

In conclusion, we believe the S-4 filed by SOAC and DeepGreen does not meet the SEC's high standards for disclosure by companies seeking to sell securities to ordinary investors through a major US stock exchange. We urge the SEC to order SOAC and DeepGreen to amend their S-4 or withdraw it altogether.

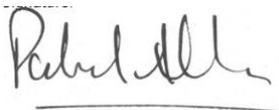
Sincerely,



Annie Leonard  
Executive Director  
Greenpeace Inc.



Sian Owen  
Director  
Stichting Deep Sea Conservation Coalition



Patrick Alley  
Director  
Global Witness

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<sup>24</sup> Article 153 of the United Nations Convention on the Law of the Sea. See Rojas, A and Phillips, F-K "Effective Control and Deep Seabed Mining: Toward a Definition." Centre for International Governance Innovation. (2019).

<https://www.cigionline.org/publications/effective-control-and-deep-seabed-mining-toward-definition-1>.