

## NORI-D Polymetallic Nodule Collection Project

### Stakeholder feedback form for NORI-D Social Impact Assessment Scoping

Instructions: Fill out and email as word or pdf attachment to [stakeholders@nori.nr](mailto:stakeholders@nori.nr) with subject “NORI-D SIA scoping consultation”. An online version of this may also be filled out and accessed [here](#).

Contact Information	
Last Name	van der Grient
First name	Jesse
Name of Organization	Deep Ocean Stewardship Initiative
Type of Stakeholder*	Other
Country	N/A
Email/contact details	<a href="mailto:grientj@hawaii.edu">grientj@hawaii.edu</a>
Request confidentiality (Y/N)	N
List up to 5 social/cultural/economic attributes or receptors you believe could be <b>negatively</b> affected by the Project	
Carbon export to the deep sea	
Fisheries support	
Cultural values of Pacific Island communities	
Additional impact on nature as land-based operations are not offset (and may potentially increase)	
Loss of pharmaceutical opportunities for current and future generations.	
List up to 5 social/cultural/economic attributes or receptors you believe could be <b>positively</b> affected by the Project	
Scientific knowledge generation – but this may be limited to exploration licenses only during baseline data collection.	
General Comments	
<p>There are a lot of statements presented in the scoping report that cannot be verified. There are also a lot of promises in here that cannot be guaranteed. That makes assessing this scoping report difficult. What is the value of this assessment, and what are the safeguards for presenting outcomes? It seems that the timing of this report is not in line with the timeline for when data are available, which has implications for this work. This includes the collector test results and EMMP results. It gives the impression that this work is rushed.</p>	
<p>There seems to be a lot of repetition of arguments in this report focused on only benefits of deep-sea mining. Where are the considerations for the negative impacts? These only seem presented when considering land-based mining projects,</p>	

and especially ones that have a reputation for having negative impacts. Why are comparisons not made with terrestrial mines that are equivalent in rules and regulations as the proposed NORI-D? Why are the negative impacts of the proposed NORI-D not presented in a similar way as the negative terrestrial mines? Right now, this report risks coming off as cherry-picking facts to make the NORI-D project look exceptionally good.

Several statements are made based on preliminary data or are unsupported in general. This is not clearly identified or evaluated in the report. This lack of focus risks limiting the assessment and its scope.

It also seems odd that this report seems insistent on using land-based standards for something that is not land based. It would benefit this effort to evaluate deep-sea mining focused on deep-sea mining impacts and criteria, allowing for better evaluations. Right now, it seems like a comparison of oranges with apples. (A better comparison might be to dredge mining or deep sea oil drilling, where we know environmental consequences have sometimes been severe.)

Some important literature does not seem to have been consulted, and instead are supported by ‘observations from NORI’ which are not adequate.

It is not clear how TMC and NORI are two separate entities as they share the same personnel and they are often listed together in this report. It would be good to clear this up in case there are major issues – e.g., who is responsible for bearing those?

The comparison of Co2 emissions with land-based mining operations is misleading, particularly since the primary environmental concerns are related to ecological damage, not the CO2 emissions of the operation.

### Specific and Prioritized Comments

Section or Topic	Page	Comment
I.	1	There is no outline for how feedback will be considered; no guidelines or criteria as of what is required for a comment to be considered or omitted or how it will inform future work. How will the comments be evaluated?
I.	2	It is not clear how TMC/NORI-D will ensure all necessary stakeholders are engaged, or how TMC/NORI-D would check this.
II. A.	2	How is NORI supported by TMC? It seems that NORI is made up of TMC members only, or are there differences between the two? Presenting select TMC members in the NORI section also supports the idea that there is no difference between NORI and TMC. Neither could this information be found on TMC’s website, and specifically on the NORI project page. This clarification will be helpful in case major issues arise – who is responsible?
III. A	4	The referral to figure 3 should be figure 2
III. B	7	For a better overview it would be useful to include how nodules are created (precipitation of metals from out of the water around an organic nucleus) and that the process takes millions of years to grow a nodule. Please include.
III.B.	7	

		<p>The statement about CCZ containing some of the lowest biomass on Earth can easily be misinterpreted here. First and foremost: the CCZ is understudied. NORI-D has released some high-level data during their final submitted EIS to the ISA (note that the approved EIS is not publicly available), but that is not detailed enough to determine whether biomass for all faunal groups follow this pattern. That is, most benthic and pelagic faunal groups were not analysed sufficiently to determine this. Second, Paulikas et al. (2020) do <b>not</b> describe or estimate biomass. Using search terms like ‘biomass’, ‘weight’, ‘fauna’ or ‘CCZ’ does not provide an indication to what biomass estimate reference 9 refers to here in Paulikas et al. Neither does Paulikas et al. (2020) estimate or determine that abyssal plains are common habitats. This use of reference is incorrect and should be replaced with something that supports the claims, and ideally the biomass claim. Further, one other issue with using Paulikas et al. (2020) is that it is funded by TMC, and thus would need support in any case from another reference that is not funded by proponents of deep-sea mining.</p>
III.C.1	9	<p>The wording is somewhat misleading here – in the original expedition planning TMC/NORI would have commenced with test mining before the approval, but because of winch failure the expedition was delayed, thereby obtaining approval first.</p>
III.C.1	9	<p>only successes are described here – why not what went wrong and lessons learned? For example, the discharge was less than planned, therefore the discharge plume was smaller than projected. How will this affect the outcome? These aspects also need to be considered.</p>
III.C.2	10	<p>The unknown location of the existing or “brownfield” port facility and production plant locations are an issue, as how is it guaranteed that this will not be in a country that may have labor-right issues, which is especially important as TMC regularly reminds the public that deep-sea mining avoids such issues. What steps are being taken to ensure that this is indeed true?</p>
III.C.3	12	<p>Same as the comment from page 10 – what parties in Asia are considered? How are labor-right protected and ensured?</p>
III.D table 2	15	<p>For completeness’s sake, there should be factors considered here that are unique to the sea. It would be just as easy to create such a table focusing on just deep-sea mining impacts and ticking no for terrestrial mines in all the boxes. That would make terrestrial mines look good. For example, health, safety, and fatality risks at sea, affected fisheries, affected culture and values, conflict with other industries that use that area, migration routes of highly-migratory animals, multi-year presence of ships and ROV/AUVs (and noise), discharge of sediment plumes, oil spills, removal of fauna - it is not correct to focus on just flora -, restructuring of seafloor (for decades if not centuries), etc. As TMC (or any of the other contractors) have no connection to land-based mining operations, this operation is and needs to be considered as an additional impact on nature, regardless of whether there is impact on terrestrial nature from land-based mining projects. It is not going to mitigate terrestrial impacts. Further, I see here no considerations for potential indirect negative pressure on terrestrial nature via increased competition in ores. Additional resources will likely affect the prices of metals on the market, and that could result in an increased production on land as companies want to maintain their profits. Further, that could have potential repercussions for people working in land-based mines. Again, for completeness’s sake, that ought to be considered. Last, there is no consideration here for land-based activities involved in the NORI-D operation. For example, where are the ships going to be built, where are the port and processing facilities? As long as this is not identified you cannot reliably claim that NORI-D ticks ‘no’ in any</p>

		of those boxes. Thus, this exercise may provide no information at all regarding understanding social impacts of deep-sea mining – it is comparing apples with oranges.
III.D table 2	15	Based on details provided on pages 16 and 17, the statement about the number of arriving people seems untrue for NORI’s ‘no’. It is likely that such seagoing activities will especially attract foreigners as often knowledge of this type of work is not present in large numbers in one country. Join any ship and you will find multiple nationalities.
III.D table 2	15	Further, with regards to resettled/affected communities – should NORI decide to use facilities that have already displaced/affected communities, is that considered as no effect on NORI-D as it already occurred, or will the industry that NORI-D delivers be considered as upholding such issues? Same for co-location with local communities.
III.D	16	Nothing can be interpreted from statements like ‘NORI is exploring’. Nothing is guaranteed and thus cannot be evaluated. This information needs to be available first before impact assessments can have any value.
III.D table 3	17	It does seem like this example was chosen as it has issues in its operation. Why not compare it to mines in Australia or Canada? Why not compare it against a mine that would uphold the same kind of regulatory standards as NORI-D is aiming for? That would give a better comparison.
III.D table 3	18	Table 3 misses discharge pipe in description for NORI-D.
III.D table 3	19	Table 3 - are no other wastes expected from processing the ores?
III.D table 3	19	Near-misses have occurred during the baselines expeditions – are these not considered for a complete understanding of health, safety and security? What is meant by security? There was an incident with a fire in the engine room on one of the expeditions and a muster was called. Does that require consideration?
III.D table 3	20	Based on the few datasets that are available from the CCZ, it indicates that there is a lot of heterogeneity in seafloor communities, so a statement like ‘general common habitat’ is not correct. There are lots of new species discovered, numbering in the 1000s at the moment (why are these not listed like for the Malagasy mine?). Based on the expeditions NORI-D has conducted, it is difficult to understand how NORI will ‘identify and select’ PRZs, at least, not based on informed decisions supported by data. The limited data that NORI provided for their final EIS submission to the ISA showed that even at low taxonomic resolution there are clear differences between the biological communities of the PRZ and IRZ, so that would suggest the preservation function of the PRZ is limited and may not include communities found in wider areas. Further, limited work has been done on connectivity, thus suggesting that the undisturbed nodules can function as stepping stones is not informed by data, and thus perhaps should not be listed here as it can hint at false promises. Last, it is pretty well established that the risk to biodiversity cannot be mitigated as it includes habitat removal. In that same line of thought, reducing the impacts also seems unlikely. This is further supported by the unique traits of deep-sea organisms (slow pace of life, low reproductive production) which means recovery will be slow, if at all possible. These results we have seen from small-scale disturbance experiments and impacts of deep-sea trawling.
III.D table 3	20	

		The APEI are not necessarily similar to NORI-D. It is up to NORI-D to show data to support that they are. Further, a statement like this requires an equivalent for the Malagasy mine. There are protected areas in Madagascar as well which may be more likely to be similar to the flora and fauna found at Ambatovy.
III.D table 3	20	This does lead me to state: more care ought to be taken to ensure that similar things are considered here. Equivalent factors are not included in the two comparisons, which can give the interpretation of cherry picking facts. This needs to be avoided, and thus I encourage you to take greater care in what is compared.
III.D table 3	20	GHG emissions: it is not just nickel that is collected though. It is not clear whether this includes all the support vessels and transport to processing facilities. It is not clear how these numbers are derived (what is the breakdown)?
III. D table 3	20	Another factor that ought to be considered are cumulative impacts.
III.E	21	<p>For completeness's sake, there ought to be a statement that the royalties estimates are preliminary and by no means a guarantee. Where is the consideration of risks to the proposed endeavor? The payment regime of the ISA is not complete or established and until this is clearer, it is not clear how much money is left for TMC and what that means for the viability of the project.</p> <p>As per report  <a href="https://www.sec.gov/Archives/edgar/data/1798562/000121390021033645/fs42021a2ex96-1_sustainable.htm">https://www.sec.gov/Archives/edgar/data/1798562/000121390021033645/fs42021a2ex96-1_sustainable.htm</a>):</p> <p>The Qualified Persons caution that this IA is preliminary in nature, and that further planning, engineering studies, design, cost estimation and seafloor tests are required before Mineral Resources can be converted to Mineral Reserves. There is no certainty that the proposals and results presented in this IA will be realized. A prefeasibility study has not yet been undertaken. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.</p>
III.E table 4	22	Table 4: this is perhaps disingenuous. As stated in the policy brief, the formula is a possible example for the distribution of revenue. As stated earlier, there is currently no payment regime established and possibly the ISA is not even close to establishing one any time soon – there continues to be much debate about this. This table seems to me to misrepresent the situation and possibly hint at false assumptions/outcomes.
III.E	22	Again, the statement about potential money gained is based on preliminary results. Stating how much tax may be paid therefore is not a fair representation of the situation. Much more language is necessary to highlight that these estimates are preliminary and by no means should be expected.
III.E	23	Alternative/new battery technologies are not considered, while this area is fast paced. This ought to be included in the scenarios: a combination of new battery technology, and recycling and switching to green technology.
III.E	24	As the study is not available for the public, it is difficult to assess whether the LCA has made the proper assumptions and considerations, and thereby calculations of GWP. At this point, again, we are supposed to just trust TMC/NORI without showing proof.

III.E	26	<p>Even if deep-sea PMN nodules are collected, it is likely that land-based operations will continue, may expand or even create new operations. This is because NORI-D or TMC are not working with any terrestrial mining operation, and thus this operation will not offset land-based operations. Therefore, the idea that the start of deep-sea mining is reducing land-based impacts, in all its forms, is incorrect. Indirectly, the new competition this industry gives to terrestrial based operations could result in increased land-based pressures, and worsening of labor rights. The continued use of the argument that the NORI-D project is going to “solve” these issues is disingenuous. The only conclusion that can be made is that the start of this project will add to the total impacts on nature by human activities. Nothing is reduced, nothing is offset, there are only additional impacts on nature. The studies’ highlights would have been useful if deep-sea mining would result in a reduction of land-based mining, which is not proven that it will, therefore the comparison is not useful. Further, it would be good to highlight that there is opposition to deep-sea mining as well, including by indigenous people from Pacific Island States for comparison.</p>
III.E	27	<p>Starting deep-sea mining will also result in biodiversity risk and biodiversity decline. The point of this statement is not clear – are you suggesting that the loss in biodiversity would be acceptable when it would result in the rapid delivery of battery metal supply?</p>
III.E	27	<p>Unique biodiversity from the deep sea is preserved by not mining. There is no possibility of avoiding biodiversity loss should mining commence. There is likely little opportunity for mitigation as habitat is removed as sediment plumes are generated. Reducing the risk of biodiversity loss is again unlikely. Natural recovery rates are not known, but there are some estimates: 10s to 100s of years, which ought to be included here (e.g., Jones et al. 2017). The operational EIS is unlikely to estimate this risk because the results will not be available before TMC/NORI intends to apply for a commercial license.</p>
III.E	27	<p>Stop giving percentage areas of the CCZ, this is disingenuous as NORI-D is not shown to be homogeneous, let alone the CCZ. This argument would not fly for suggesting that deforestation in some areas is ok. Everyone realizes that there are many different forest types; you would not consider cutting down part of the Amazonian rain forest because it represents a small percentage of the whole of the Amazonian rainforest or it represents a small percentage of all forest in the world. These comparisons represent a false narrative.</p>
III.E	27	<p>The results of the effects of partial nodule cover and no-take areas will not be available for several years. To include that analysis in an assessment as this would mean waiting for the results to be available. What does recovery mean here? Nodule-dependent species will reduce in abundance with the risk that small populations face, as the nodules will be removed and these will not come back for millions of years.</p>
III.E	28	<p>What determines the success of NORI’s training and internship opportunities? Just stating that they occurred may not be enough to determine there has been a benefit.</p>
IV.A	29	<p>A section dedicated to land mining is not pertinent in this document, which should be limited to its purpose (a scoping report for a particular deep sea mining activity). There is no reason to assume that the proposed activity (extracting polymetallic nodules from the NORI contract area at the CCZ) will have any effect in any other mining activities. Therefore, this section is out of scope and must be eliminated.</p>

IV.B	29	The impacts of deep-sea mining, should be listed and are: habitat removal of which restoration is unlikely, sediment removal, sediment compaction, sediment redistribution, increased sediment deposition, sediment plumes, metal-laden sediments in the environment, biomass removal, smothering of animals, clogging of filtering apparatuses and gills, decreased quality of visual environment, light pollution, noise pollution, and that is for the seafloor. The release of the discharge plume also includes the sediment, light and noise pollution. It is also worth to state that these impacts are not limited to the area that is directly mined. Thus, the footprint of mining is significantly larger.
IV.B	30	Note that the pilot trial will provide limited information, and especially for the pelagic impacts as the discharge plume generation was not as successful and impacts on metazoans were not investigated.
IV.B	30	What is the 90% estimate based on? How is this estimated? I assume this occurs in the collector vehicle, but again, how?
IV.B	30	Note that there is a decrease in pH measured in the discharge plume – thus increased acidification.
IV.B	30	What models show this? And is this based on data collected from the collector test? As that does not represent a commercial discharge plume. That seems to underrepresented the spatial scale.
IV.B	30	This focus on the removal of plants is not a fair comparison. Focus on the removal of animals instead.
IV.C	30	Building a processing plant will bring certain land-based impacts – however the impacts do not or seem to be very minimally described in the report?
IV.C	31	‘as will be detailed in TMC and/or NORI’s policies and commitments’ – a promise that cannot be checked or verified for guarantees.
IV.D	31	It is unclear how CSIRO will be able to develop an EMMP for NORI-D as the data from the baseline studies and collector test will be available too late for the timeline set by TMC/NORI. That is, CSIRO has stated they need 2 years, while TMC/NORI have indicated to submit their application for a commercial license in the second half of this year (2023), most likely July. However, is the EMMP needed for this application? The timelines for the various components of the application (this SIA, the EMMP, the data analyses, the EIS) seem unaligned and rushed, all in order for TMC/NORI to make their self-imposed deadline. What is the purpose of this, and how will Prizma ensure quality of this SIA given these pressures and limited data availability?
IV.D	31	There are currently no established environmental impact thresholds established. Is TMC/NORI here assuming they will set the thresholds? Based on what? How is this ‘digital twin’ going to work in this case? For suspended sediments alone, the thresholds may be low (van der Griest & Drazen 2022).
IV.D	31	What is ‘up to a percentage’? This is a statement that cannot be evaluated. Further, there has not been any data shown that these nodules can act as stepping stones. Further, several impacts, such as noise, light and suspended sediments (and deposition) can still impact those stepping stones, so how are these really going to be functioning as stepping stones and maintaining connectivity?

IV.D	31	NORI should not worry about the size of the CCZ, and instead focus on their area. Of course NORI-D is going to be smaller than the CCZ. TMC/NORI ought to show that the biological communities present in NORI-D are similar to APEI and that there is connectivity between NORI-D and the APEI should they wish to continue to use this argument.
IV.D	32	There are no studies investigating the recovery or resilience of pelagic communities in the CCZ, so where is this statement of years to decades based on? The recovery of seafloor communities is more likely to take decades to centuries. There is also no uncertainty around the recovery of fauna that requires the nodules as habitat – they will not recover without the hard substrate. This is limited by the amount of hard substrate, so removing that will not result in complete recovery, it will at most result in partial recovery related to what is left behind.
IV.E	33	Based on the limited data provided by TMC/NORI in their final submitted version of the collector test EIS, it indicates that the IRZ and PRZ are not similar in biological communities, and thus that limits the identification of and differentiation between natural variability and mining impacts. So far, TMC/NORI have not addressed this. How can the EMMP be submitted with the application for an exploitation license when CSIRO already indicated in talks that they won't be finished by then? What kind of EMMP will be submitted?
V.B	34	Given that this is the basis for the SIA, why is access to renewable energy sources as a search criterion not considered in the SIA, but in a different report? That is a social aspect.
V.B	34	According to a recent report published by the Guardian, it seems that carbon credits are 'empty promises' and do not result in offsetting. Perhaps TMC/NORI should consider alternatives to carbon credits rather than jump on this debunked train.
V.B	34	'With project' also does not equal elimination of social (and other types of) risks, and can be expected to be shifted to other projects/operations elsewhere. This statement seems not to consider the scenario that competition of deep-sea mining can result in new and additional mining projects on land to offset loss of income as a result of the new competition.
V.C	34	Counterfactual is a strange choice of words here – it means: relating to or expressing what has not happened or is not the case? What kind of scenario is that?
V.C table 5	35	<p>Table 5. Socio-economic impacts:</p> <p>The values in the 'with' project column are based on preliminary information and subject to change, but nowhere is this information given. For clarity, that ought to be included. It is unclear how this project will develop and expand the ISA? No negative impacts on fishing or cultural values listed. No considerations of the onshore-based part of the mining process considered with the negative effects here. Instead, the focus is solely on the positives. That is not a fair comparison. There may be a typo in this cell as well – 'economic benefits to be <i>disrupted</i> equitably'? what distribution meant?</p> <p>'no project': no positive economic ripple effect for who? The previous part of the report clearly tries to make a statement that the number of jobs created by deep-sea mining is limited. Or is this referring to tax or royalties lost? The benefits that are going to be distributed equitably; given the number of nations that are part of the ISA, that value won't be very high. Instead, it may be</p>



		<p>beneficial economically only to a small minority. Further, what capacity building will be missed out on? There will be no delay in deep-sea research as this is part of the exploration license, not exploitation license application. This is an inaccurate statement. One positive is missed: the preservation of pristine environments is ensured (that is, no additional negative environmental impacts).</p> <p>The ‘counterfactual column’ shows several misleading and incorrect statements. There will most likely be expansion of existing or developing of new mining projects regardless of the NORI-D project, and the addition of Indonesia seems a little scaremongering. This statement ought to be removed. Likewise, DSM within national jurisdiction will be developed or not regardless of the NORI-D project. This can also be removed. DLBPS will continue to be subject to global market forces even if the NORI-D project would start, thus this is a false statement. The compensation they may obtain from the NORI-D project may not be comparable to the loss in metal prices that could occur when NORI-D puts new resources on the market (potentially driving the price down). Thus this is also an inaccurate statement. The counterfactual does not consider alternative and new battery technology, or recycling. Instead, the focus on Russia seems a little scaremongering.</p>
V.C table 5	35	<p>Livelihoods:</p> <p>‘With project’ does not consider the connections that cultures such as Pacific Islanders have. Instead, these are dismissed which seems like a form of disrespect to them, just because they are not physically close to the site. As onshore impacts are not determined yet because of locations, this does not allow for comparison. Why is this done like this? Why should the whole of the Pacific Ocean be considered? This is not done for land-based mining projects. Or are these to be considered as several species are highly migratory and thus can transfer effects to other areas?</p> <p>‘counterfactual scenario’ again, this statement is not correct as it can still happen if NORI-D went ahead. The inclusion of this seems to scaremonger. There are many mines that are not using child labour. The presentation as it seems to suggest that this does occur everywhere which is false. Shortages may also increase prices for metals, what are the impacts of that?</p>
V.C table 5	36	<p>Health &amp; Safety:</p> <p>‘with project’: as the onshore facilities are not identified, there could still be a risk of child labour. This statement is thus false. What is considered as no lost incidents? As the collector test was delayed because of a broken winch. That impacted people in their work.</p> <p>‘Counterfactual scenario’ new and expanding projects can still occur even if the NORI-D project started. The exploitation of NORI-D has no influence over this, and it is disingenuous to present it as if NORI-D has this power.</p>
V.C table 5	36	<p>Marine scientific knowledge:</p> <p>‘With project’ – while this claim that scientists are free to publish is probably true, it does seem interesting that these scientists do not want to talk about operations on the ship or proceedings of the collaboration. So stating this freedom does seem a little disingenuous.</p>
V.C table 5	36	<p>Capacity building:</p>

		‘With project’ what are the criteria for success for capacity building? How is it determined that SIDS particularly highly value the training? And is presence on a ship enough to call it capacity building?
VI.A.	40	ISA is developing an international regulatory regime in coordination with the emergence of a new industry.
VI.A	40	It was not the presence of deep-sea minerals that drove the establishment of UNCLOS, but a concern that any benefits from resource exploitation would be concentrated with advanced economies and not benefit all of humankind.
VI.A	41	Box 1: The common heritage of humankind principle insists that seabed resources be used in the interest of humankind, not exploited under a regime for the benefit of humankind. The second paragraph is closer to an accurate statement of the principle, but the first paragraph is misleading.
VI. B	42	Clarify the procedures or thresholds for Assembly approval of rules, regulations, and procedures after Council adoption.  Describe the Council’s process for establishing environmental standards and role with regard to evaluation of environmental impact assessments and monitoring and enforcement.
VI. B	43	Describe procedures for the selection of LTC members, describe process and criteria for the review of application and opportunities for public comment and scientific review.
VI.E	46	In addition to the inclusion of SIDS representatives on the LTC, describe other areas of necessary scientific expertise and a transparency process for selection of these members
V.F	46	The expansion of APEI areas is a red herring and fails to address questions of ecological damage or social impacts from mining activities in NORI contract areas.
V.G	46	Describe processes for evaluation to ensure that sponsoring member states maintain “effective supervision and regulatory control over” sponsored contractors.
V.H	47	False claims to transparency or serious public stakeholder engagement: “Draft exploitation regulations have been prepared following a multi-year, transparent process, and involving public consultation.”  Describe any processes or procedures for “taking into account stakeholder input.”
VI.J	50	PS 5 – it is not a given or proven by NORI that the onshore processing of nodules will not result in land acquisition and involuntary resettlement. NORI claims both that they will use existing facilities as well as build their own, depending on where you look on their website and in this report. As this has not been determined yet, this report cannot exclude this PS 5 as there is no guarantee that it will not cause this. Further, existing facilities that NORI may use may have already caused this – would NORI consider this? Would NORI be implicit in the land acquisition

		as their work will maintain that status quo or will it conveniently not be NORI's problem as it was down before them working there?
VI.J	50	PS 7 as outlined in the report, Indigenous peoples of Pacific Islands have intrinsic relationships that transcend the distance NORI is from land. By taking this approach – only worrying about a physical distance – these people are disregarded. A conventional approach is not applicable here. Also, for the sake of balance, list the Pacific Island Nations that are against DSM beside the two that are in support of it.
VI.J	50	PS 8 – again, it does not feel right to use a common, land-based approach here. It sets the wrong precedent, and it disregards Indigenous peoples. Listening to Pacific Island Nations, it seems that DSM would affect cultural heritage, knowledge and practices.
VI.J	50	Further, it seems strange that the Common Heritage of Humankind is here only considered via the economic benefit – as if DSM will only result in economic benefits (for all) which is a limited take. The costs need to be equally considered. Future generations may not want this to occur. The youth may not want this to occur. This take here presented is way too narrow. Also, see comments on Box 1, p. 41.
VI.J	51	The location of the project's nodule collection area on Clarion Island does not address potential indirect social impacts on Indigenous People or their territories or impacts from land-based processing facilities and operations.
VII. table 9	55	Table 9 – why are other industries not included, such as deep-sea cables, shipping transport, fisheries?
VII. table 9	55	Traditional knowledge and cultural values from Pacific Islanders can be affected, but these are not included. They should be considered separately, and not be pushed into a box where Nations present at the ISA should deal with their concerns. You yourself already note that indigenous communities are not always considered or well represented, so there is an opportunity here to do better.
VII. table 9	55	Youth voices are not considered in this table. Common heritage is for everyone, including those after us, and someone ought to speak for them too.
VIII.A	56	Describe if stakeholder comments will be made public along with the summary of comments and NORI response.
VIII. A	57	With regard to 7, will all public comments and responses be made publicly available to member states, observers and other stakeholders? Also, who are the other stakeholders? Is there a plan for outreach or education on the SIA Scoping and TOR?
VIII.B	57	Is there any third party involvement in the summary of stakeholders' key concerns and comments?
VIII. C	58	The only social issue identified at NORI's San Diego global stakeholder consultation involved job losses for land-based mines? None of the subsequent concerns about social impacts expressed in written comments were raised? Also, can you cite the EIA review document that affirmed EIS methodologies and processes?

VIII. C	59	Describe or link to the updated monitoring plan.  University of the sunshine state? Or University of the Sunshine coast?
VIII. D	60	In addition to a grievance management process, will there be a monitoring and reporting process for stakeholders and the public? Can you provide a description?
IX.	63	As this concerns mining in the deep sea, it seems odd to me that the tests regarding social changes, processes and other impacts are all based on land-based mining. That is comparing apples with oranges, we are dealing with a completely different industry here.
IX.A (second one)	63	Also, the common heritage of humankind should be given more consideration than is given here. It should not be ‘may require a broader perspective’ – it <u>does</u> require a broader perspective. This is a new industry, the old tests for a different system do not translate and thus this requires extra care.
IX. B	63	Again a sentence ‘either NORI will construct or work with existing facilities onshore’. As this is not known, how can the social risks be considered? What if the general size and nature of the workforce cannot be characterized as these decisions have not been made by NORI? What does that mean for this SIA? How can we assess whether this scoping report considers all relevant aspects when the plan and data are not available to be presented?
IX.B (second one)	64	How are you assessing socio-economic impacts from the collector test in the SIA when the data for this may not be available in the timeline set out for the SIA?
IX.B (second one)	64	ISA contractor observations are not the best data available to determine whether fishing occurs in the CCZ. First, these data are not presented here. How often did they see ships? Was this noted down? Over what time period did NORI look? Second, there are better data out to determine this, like from the Regional Fisheries Management Organizations and the United Nations Food and Agriculture Organization, both have data that show fishing does occur. In addition, the first estimates of the overlap between the industries have already been done ( <a href="https://doi.org/10.1016/j.marpol.2021.104564">https://doi.org/10.1016/j.marpol.2021.104564</a> ).
IX.C	64	How can NORI test suspended sediment plume effects in the midwater when no data were collected on metazoan such as zooplankton, micronekton and gelatinous communities, for which environmental baseline data were collected? And since these data are absent, it is impossible for NORI to determine the socio-economic effects of midwater sediment plumes.
IX.C	64	The collector test will not give you information regarding the impacts to fisheries as the required data were not collected. This claim can therefore not be included in the SIA. Further, the discharge duration of the midwater plume of the collector test was so short it will not give you reliable information to inform fisheries impacts from commercial licenses. The concentration of the generated midwater plume was lower than planned because of issues with material and therefore is also not reliable or informative to make any conclusions regarding fisheries impacts.
IX.C	65	No statements can be made that the loss of climate regulation services are balanced out with positive effects from the project. It is well known that the creation of green technology still requires a lot of fossil fuel. It sounds like from building the ships (Netherlands) to collection to transport to land (Mexico) to transport to facilities (India) means crossing the whole world and I

		have not seen evidence presented that this has been consi for nodule operations, nor how this offsets the loss in cli the data required to estimate climate regulation would include the active carbon export pump, for which no data have been collected during the collector test, so again, this is a false statement.
IX.	65	The loss to Pacific Island cultures is not considered, nor is the loss of the common heritage of humankinds for future generations considered. To state that there are only benefits to humankind is an overstatement – given the opposition of many people, organizations and countries, there are clear expected negative impacts which are measured in perhaps other things than just monetary values. None of these are considered here.
IX.	65	No mining zones do not mitigate the impacts in mining zones as all mining in the deep sea are additional impacts on the ocean. Nothing is offset here, and connectivity is not known. A statement like this for protected areas is not supported. Further, it requires that the protected areas are similar in communities as the mining areas – which is not supported by the few data NORI has presented in their collector test EIS.
Table 12	68	Unclear how VSC baselines will be established and monitored over time.
IX.G	69	Besides illegal fishing operations, you can consider legal fishing operations.

\* Type of stakeholder may include International and State Actors, Companies, Interest Groups, Communities, Individuals or Other (please specify)