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**Sent:** mercredi 25 novembre 2020 13:50  
**To:** [REDACTED] (GROW); [REDACTED] (GROW); [REDACTED] (GROW)  
**Cc:** [REDACTED]  
**Subject:** GSR | EU and DSM  
**Attachments:** DEME 2020\_GSR.pdf

Dear [REDACTED],

Thank you for the time that you have made available for us today.  
Please find attached our presentation.

Also, some links to interesting papers and articles that provide insights wrt your questions.

**Sessile fauna:**

<https://www.nature.com/articles/srep26808> by Prof. Ann Vanreusel, who coordinates our environmental baseline study. (<https://www.marinebiology.ugent.be>)

This work has led to the identification of new set-aside areas to protect habitats and ecosystem functioning: <https://www.isa.org.jm/minerals/environmental-management-plan-clarion-clipperton-zone>

**Umicore process (Confidential):**

<https://worldwide.espacenet.com/patent/search/family/064755355/publication/WO2020126632A1?q=pn%3DWO2020126632A1>

**Stakeholder process on Standards & Guidelines:**

<https://www.isa.org.jm/stakeholder-consultations-draft-standards-and-guidelines-support-implementation-draft-regulations>

**More specifically on technology standards:**

ABS recently published their standard: [https://ww2.eagle.org/content/dam/eagle/rules-and-guides/current/offshore/318\\_guideforsubseamining/subsea-mining-guide-oct20.pdf](https://ww2.eagle.org/content/dam/eagle/rules-and-guides/current/offshore/318_guideforsubseamining/subsea-mining-guide-oct20.pdf)

DNV has a recommended practice on environmental aspects and

impacts: <https://www.dnvgl.com/oilgas/download/dnv-gl-rp-O601-managing-environmental-aspects-and-impacts-of-seabed-mining.html>

DNV has a recommend practice on technology

qualification: <http://rules.dnvgl.com/docs/pdf/dnv/codes/docs/2013-07/rp-a203.pdf>

Bureau Veritas created guidelines for deep sea mining as part of the EU Blue Nodules Project.

One of the goals of GSR's collaboration with JPIO is to set the threshold for impact: <https://miningimpact.geomar.de/miningimpact-2>

**Others activities:**

UK: <https://www.lockheedmartin.com/en-gb/features/uk-seabed-resources-undertakes-third-exploration-expedition.html>

Netherlands: <https://allseas.com/wp-content/uploads/2020/03/2020-0302-Allseas-acquires-ship-for-deep-sea-polymetallic-nodule-collection-in-partnership-with-DeepGreen.pdf>

Canada: <https://deep.green/deep-sea-science-program/>

Japan: [http://www.jogmec.go.jp/english/news/release/news\\_01\\_000033.html](http://www.jogmec.go.jp/english/news/release/news_01_000033.html)

India: <https://timesofindia.indiatimes.com/city/chennai/covid-delays-niots-mining-trials-6km-deep-in-ocean-undersea-crawler-may-be-deployed-in-february/articleshow/78781076.cms>

China: <https://chinadialogueocean.net/10891-china-deep-sea-exploration-comra/>

Germany: <https://miningimpact.geomar.de/miningimpact-2>

Should you have any questions, please don't hesitate to contact me.

Also, would it be possible to send us the names at the respective directorates that are working on DSM?

I must admit, it has been difficult for me to follow this and I apologise if I did not recognise the coordinated effort thus far.

Best regards, [REDACTED]

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