

Written evidence submitted by Dr Sue Farran, Reader in Law, Newcastle University

This response focusses on para 11 of the call for evidence and related matters

The response links to research interests in the Pacific, human rights and marine protected areas.

Batteries for electric cars require large amounts of rare metals. Currently the key supplier is China while one of the key sources is terrestrial mining in the Democratic Republic of Congo where mining causes environmental damage and raises issues of human rights abuses including of children.

Lithium-ion batteries as proposed by Britishvolt require cobalt, manganese and nickel.

The environmental impact of the proposed Gigafactories is not indicated. However, if renewable energy is to be used (from hydro, wind, solar etc) the storage of these renewables also requires rare earth elements and rare metals such as copper, cobalt, nickel, rare earths, lithium and silver – many of which have only previously been mined in small amounts.¹

It is correct that an alternative, possible source of the necessary metals lies in the deep-sea bed, notably in polymetallic nodules. It is also correct that very little is known about the biodiversity of these areas because of the difficulties of accessing them and the vastness they encompass. Some estimates are that only 0.01% of the total area of CCZ alone has been sampled by scientists and that 85% of the global seabed remains unmapped.²

It is incorrect to say that the International Seabed Authority has developed a Mining Code. It has not. The International Seabed Authority, created under the United Nations Convention on the Law of the Sea, has responsibility for that area of the seabed which falls outside the jurisdiction of states. It is only responsible for the seabed, not the column of water above it which is part of the global commons. To date the 168 members of the ISA have not agreed a Mining code for the extraction of metals. What has been agreed are regulations governing the exploration of metals.

Currently there are NO extraction agreements in place. The licences which have been granted are exploration contracts under which exploration is meant to establish not only the possible mining value of the deposits but also the potential environmental risks.

There are currently 31 ISA granted exploration licences including two to the UK. Some of these are due to expire this year (one has already done so). If exploitation regulations

¹ https://www.earthworks.org/cms/assets/uploads/2019/04/MCEC_UTS_Report_lowres-1.pdf

² The Atlantic

<https://www.theatlantic.com/magazine/archive/2020/01/20000-feet-under-the-sea/603040/>

cannot be agreed then there is the possibility that interim two-year licences to extract will be granted during which time ISA has to get regulations in place.

Also missing from the regulatory framework is any mechanism to insure against environmental damage. This damage could be caused by the exploration/extraction processes themselves, by shipping the metals to producers or to the interrelated ecosystems of the ocean which then impact on marine life including fish species such as tuna, which are essential to the economic well-being of countries most likely to be impacted by ocean pollution. This is a concern because even if a Mining Code is agreed, breaches will be difficult to evidence in terms of cause and effect, especially if they occur deep under the sea.

There is also no mechanism whereby the economic benefits of deep-sea mining (for example the royalties and fees collected by ISA) will be disbursed to benefit the least developed countries of the world. This is a requirement because this Area (the seabed under the authority of ISA) is the heritage of mankind and must be equitably managed for the benefit of mankind. Developing countries such as Nauru, Tonga, Kiribati and Cook Islands are sponsoring licence applications by private mining companies in the hope of large economic returns. At present there is little to safeguard this.

Deepsea mining is currently working not only literally but scientifically in the dark. Too little is known about the potential environmental impact of 'combining' the seabed with large robotic machines, disturbing the sediment and the microorganisms it contains, or the discharge back into the ocean of waste once metallic sources are removed. For example, the Deep Sea Mining Campaign and MiningWatch Canada states that 'the interconnected nature of the ocean means that impacts would be felt region wide'.³

Civil societies, states, scientists and key industrial leaders are calling for a moratorium on deep sea mining until there is greater and better knowledge to inform environmental impact assessments. Human rights campaigners point to the environmental rights of those most likely to be impacted because they live in the oceans identified as being sources of these metals.

There are two related points which need to be included in supply chain considerations:

At present the recycling of metals in batteries is very low. Any advances in technologies and research should place more emphasis on the circular economy of this move to electric cars. At present only about 5% of batteries for electric cars are recycled.⁴

Alternative solutions to the storage of renewable energy sources need to be found which do not require rare earth elements or metals.

May 2021

³ Luke Hunt The Diplomat May 20, 2020

⁴ <https://www.bbc.co.uk/news/business-56574779>).