Seawater | Photo source Pixabay

PROTOTYPE COLLECTS SEABED MINERALS WITHOUT HARMING DEEPWATER ECOSYSTEM

SUSTAINABILITY

New seabed mining technology is environmentally friendly and seeks to expand by incorporating gameplay.

The vast majority of innovations in the extractive industry apply to onshore mining practices. Notable examples include the use of autonomous drones for mapping underground spaces, and the conversion of disused mines into renewable energy hubs. Far less recognised, however, is the feasibility of deep seabed mining in a sustainable manner. As 10 billion tons of renewable mineral deposits are generated on the ocean floor annually, this gap is a major opportunity for investment.

Krypton Ocean Group, based in Tortola, has designed a submersive vehicle that collects polymetallic nodules located 6,000 meters below sea-level. The project was part of their 'Extractive Industries 2.0' stance against 'the destructive suicidal paradigm that conventional mining technologies apply to mineral resources'. One of its most significant features is adjustable buoyancy (i.e. 'floating-type') which differs from older 'riding-type' models inspired by onshore mining vehicles. Adjustable buoyancy means that only the nodule-harvesting tool makes contact with the ocean floor. This way, Krypton Ocean's vehicles can levitate over trenches, shipwrecks, hydrothermal vents and other deepsea obstacles that were formerly impassible. Crucially, it also reduces toxic sediment plumes and damage to marine biodiversity.

More recently, Krypton Ocean have considered gamifying the seabed mining process to attract a wider global audience. As players explore, extract and sell various deepwater minerals, they would use the virtual analogs of actual oceanic deposits along with Krypton's extractive technology. The so-called 'Crypto-Oceanic Mining' game would lead to a fusion of the real sector with virtual environments.

3rd October 2018
Email: info@kryptonocean.com
Website: www.kryptonocean.com
Contact: info@kryptonocean.com

Download PDF

Takeaway:
Deep-sea deposits provide an ample source of renewable energy metals for a sustainable future. Yet, procuring such metals – if done without care for the surrounding marine habitat – could defeat its entire purpose. Would the gamification of eco-friendly ventures help to solve this problem?