

TECHNOLOGIES BEHIND DEEP-SEA GREEN-BLUE ECONOMIES FOR SDG1 & 2

Impact investment studies in deep sea biodiversity conservation are among the most novel approach in the BESG sustainability reporting, hence a backbone in the sustainable growth of deep-sea blue economy which may lead to eradicate extreme poverty (SDG1) and zero hunger (SDG2) by 2030, but the main hinderance to achieve these targets lies with the pace of work necessary to make it sustainable without intervening the global warming target of 1.5* Celsius. Therefore, here we need state-of-the-art technological and financial instruments breakthroughs. studies have predicted certain recurrent uncertainties in these projects because of scarcity of data and assumptions taken for granted at the project level but these can be overcome by artificial intelligence, digital twins and remote sensing technologies. Actually, we need to study the areas of blue economic zones in layer-by-layer form and digitize it accordingly so that BESG sustainable principles could be applied successfully and technological advancements should be integrated accordingly. This process should be given top priority, so that financial and technological resources should be generated on a time scale of three years and made available for implementation of deep-sea blue economy projects. Previously, Investors have shown good appetite for the bonds covering impact investments in biodiversity conservation in general, while this new proposed stream of for-profit conservation finance is unlikely to be a 'terrible investment' primarily because of the risk mitigation measures in place.

Biodiversity conservation projects are monitored and evaluated using an array of related measures: inputs, activities, outputs, outcomes.

- Inputs are the resources invested in conservation programs.
- Activities are actions that mobilize inputs to produce specific outputs.
- Outputs are countable products of conservation actions.
- Outcomes are the observed (or assumed) responses to conservation outputs.

Outcomes should be scrutinized for their representativeness, i.e., what species or ecosystems are included or excluded and threat level, i.e., whether a conserved area is actually under any threat.

Critically however, these four measures do not explicitly identify conservation *impact*, meaning their use can undermine a project's effectiveness. Therefore, the impact of an impact investment, particularly, conservation impacts can only be determined by comparing outcomes to baselines and counterfactuals, which determine the 'added value' of the project.

Hence, a BESG sustainability reporting approach should be adopted in all blue economy projects and if included in the draft of political declaration of UNOC 2022 and got approval then other related activities would also follow the suite hence act as an instrument for acceleration of the SDG 1, 2 & 14 in particular and other SDGs in general by 2030.