BLUE NATURAL CAPITAL: THE INVESTMENT CASE

Francisco Saraiva Gomes, Ph.D.
Founding Partner & CIO, Ocean 14 Capital

Torsten Thiele
Founder, Global Ocean Trust

May 2024

OCEAN14 CAPITAL

Certified B Corporation

INTRODUCTION

Nature is the foundation of life and our economy, yet the financial markets are not adequately focussing on the crisis nature faces. The recent UNEP State of Finance for Nature report[1] suggests repurposing US$7 trillion to combat nature loss by reducing nature-negative investments and instead investing in nature-based solutions[2]. This can only be achieved if externalities are appropriately priced and adequately integrated into the financial system.

This paper proposes a realistic pathway to deliver a significant step in this direction, focussing on facilitating recovery in the largest and most complex ecosystem of our planet, the global ocean. On present trajectory the world is facing major ocean tipping points that crystallise significant and systemic risk[3]. The loss of biodiversity as a consequence of mis-pricing and resulting overexploitation, pollution and habitat destruction threatens marine life and human food security, over three billion people rely on seafood as primary source of protein[4]. Two-thirds of African cities are at "extreme" risk of climate and water-related shocks[5].

Yet as a recent OceanPanel report[6] showed, a third of the climate transition can be addressed through ocean-focussed efforts. Coastal wetlands—including salt marshes, tidal wetlands, and seagrasses are some of the world's most effective natural carbon sinks. Overall, ocean systems hold the largest carbon store on earth, yet we still underinvest in understanding and supporting these vital processes. Ocean solutions for ecosystem recovery, nourishment of coastal communities, human health and wellbeing[7], for global logistics and better earth system understanding exist. We can build a circular, regenerative and sustainable blue economy[8]. Whilst in the past the unique challenges of the ocean have been seen as a hindrance to good governance, it is precisely because of its scale and function as a global commons and a public good that it holds the potential for delivering the change required, using economic necessity as the yardstick.

Assigning value to blue natural capital, and constructing a comprehensive financial architecture in a way that this value is preserved and enhanced provides a credible way forward, based on what we know and can act on today. This can support national blue economy strategies[9] to deliver socio-economic benefits for current and future generations whilst protecting and restoring biological diversity and marine ecosystems and adapting and gaining resilience in the face of the growing impacts of climate change.

1. United Nations Environment Programme (2023). State of Finance for Nature: The Big Nature Turnaround – Repurposing $7 trillion to combat nature loss. Nairobi. https://doi.org/10.59117/20.500.11822/44278
2 UNEA-5 'Resolution on Nature-based Solutions for Supporting Sustainable Development', formally adopted the definition of NbS as 'actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits
3 a so-called "blue swan", in reference the green swan paper: to bis.org/publ/othp31.pdf
4 see FAO (2020) for further detail: openknowledge.fao.org/items/b752285b-b2ac-4983-92a9-fdb24e92312b
5 OECD (2021), Water Governance in African Cities, OECD Studies on Water, OECD Publishing, Paris, https://doi.org/10.1787/19effb77-en
6 Hoegh-Guldberg, O., Northrop, E. et al. 2023. "The ocean as a solution to climate change: Updated opportunities for action." Special Report. Washington, DC: World Resources Institute. Available online at oceanpanel.org/publication/ocean-solutions-to-climate-change
7 Fleming, L.E., P. J. Landrigan et al. 2024. How can a healthy ocean improve human health and enhance wellbeing on a rapidly changing planet?. Washington, DC: World Resources Institute. Available online at oceanpanel.org/publications/ocean-human-health
8 le Gouvello, R. & Simard, F. (2024). Towards a regenerative Blue Economy. Mapping the Blue Economy. Gland, Switzerland: IUCN
9 see eg: bluelifehub.com/2023/01/24/blue-economy-in-tunisia-development-opportunities

A CONFLUENCE OF TRENDS

A number of ongoing recent developments support this thesis. None of these alone will be sufficient to bring about the necessary wholesale transformation but they all contribute to highlighting the need for change and facilitating this transition. It is increasingly understood that nature needs to be brought into economic decision-making because the degradation of the web of life threatens human well-being today, social and economic progress, and even the future of our civilisation.[10]

Science and Technology Progress

Scientific progress in earth systems analysis, definition of essential ocean variables and understanding of ecosystem interactions is being harnessed through efforts such as the Intergovernmental Panel for Climate Change (IPCC)[11]; the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)[12], the United Nations Ocean Decade[13] to provide all stakeholders with the necessary knowledge. Multiple technology breakthroughs, from satellite remote sensing[14] and Artificial Intelligence (AI)[15], environmental DNA (eDNA)[16] and smart cables[17] offer a vision on how to build a global ocean data infrastructure of sufficient granularity to allow efficient decision-making across large spatial scales, considering system interactions and value chains.

Policy Frameworks

The UN Sustainable Development Goals (SDG) policy framework provided an attempt to engage action along 17 goals, with Life Below Water as SDG 14. Yet "the ocean is (still) in a state of emergency as increasing eutrophication, acidification, ocean warming and plastic pollution worsen its health. Significant overfishing persists, leading to the depletion of over one third of global fish stocks"[18].

The World Trade Organisation Agreement on Fisheries Subsidies[19] aims to prohibit harmful fisheries subsidies but is not yet in force and the UN plastics treaty is still under negotiation[20]. The International Maritime Organisation (IMO) Strategy on Reduction of Green House Gas Emissions from Ships[21], if implemented, would deliver significant resources to decarbonisation of marine transport. The UNFCCC Paris Agreement[22] includes the ocean in the preamble and under Art.4, providing finance pathways through the Green Climate Fund[23] and giving countries the opportunity to add blue commitments to their NDCs[24].

The Kunming-Montreal Global Biodiversity Framework[25] adopted in 2022 aims to halt and reverse biodiversity loss on land, sea and inland waters by 2030, and through the commitments to subsidy reduction and finance mobilisation for the Global Biodiversity Framework Fund supports the needed transition. The Biodiversity Beyond National Jurisdictions (BBNJ) implementation agreement under the UN Convention on the Law of the Sea, expected to enter into force in 2025, provides an overarching precautionary framework for biodiversity across the entire international ocean sphere and will facilitate conservation actions in the High Seas and on the international seafloor area but requires adequate resourcing[26].

10 Malhi Y, Daily GC. 2024 Bringing nature into decision-making. Phil. Trans. R. Soc. B 379 20220313. doi.org/10.1098/rstb.2022.0313
11 ipcc.ch
12 ipbes.net
13 https://oceandecade.org/
14 Kavanaugh, MT et al (2021) Satellite Remote Sensing and the Marine Biodiversity Observation Network: Current Science and Future Steps. Oceanography doi.org/10.5670/oceanog.2021.215
15 see for instance skylight.global
16 theoceanrace.com/en/news/14630_Groundbreaking-eDNA-data-collection-in-The-Ocean-Race-could-provide-crucial-insights-on-ocean-biodiversity
17 Rowe, CA; et al (2022) SMART Cables Observing the Oceans and Earth. Marine Technology Society Journal 2022-04-28
18 unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf
19 wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm
20 unep.org/inc-plastic-pollution
21 imo.org/en/MediaCentre/HotTopics/Pages/Cutting-GHG-emissions.aspx
22 unfccc.int/sites/default/files/resource/parisagreement_publication.pdf
23 see eg greenclimate.fund/news/plugging-finance-gap-caribbean
24 Lecerf, M. Et al (2023), Coastal and marine ecosystems as Nature-based Solutions in new or updated Nationally Determined Contributions, Ocean & Climate Platform,CI, IUCN, Rare, TNC, WI and WWF.
25 cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf
26 Gjerde, KM et al (2022) Getting Beyond Yes: Fast-tracking Implementation of the United Nations Agreement for Marine Biodiversity Beyond National Jurisdiction npj Ocean Sustainability

Multilateral development banks are increasingly focussing on the sustainable blue finance opportunity[27] and have been called upon to make more effective use of their balance sheets and supercharge nature-positive finance for inclusive, resilient development[28]

Accounting Approaches

Natural capital is the inventory of the planet's natural resources, including geology, plants, animals, minerals, and ecosystems that produce goods and services. A recent report[29] suggests that more than 55% of the world's GDP - equivalent to US$58 trillion - is highly or moderately dependent on nature, yet this "asset class" that makes all life possible is only now being integrated into accounting frameworks. Ecosystem services valuation and natural capital accounting are means for bringing nature into decision-making. At present, national reporting frameworks are only partially aligned with globally agreed biodiversity indicators and require further integration[30].

The System of Environmental Economic Accounting - Ecosystem Accounting (SEEA EA) provides a framework for quantifying and valuing ecosystem services in line with the System of National Accounts (SNA). The Ecosystem Services Valuation Database provides a comprehensive global collection of the results of economic valuation studies with details on the type of ecosystem, ecosystem services, location, valuation method and beneficiaries[31].

As businesses seek to measure, manage and disclose their nature-related risks and opportunities, they need high-quality information regarding their dependencies and impacts on nature. Natural capital accounting (NCA)[32] can support business data and information needs related to nature, including disclosures aligned with the Taskforce on Nature-related Financial Disclosures recommendations[33]. The International Sustainability Standards Board (ISSB), having completed standards for climate and general sustainability disclosures has likewise decided to press ahead on a global baseline to guide investments in natural capital.

Market-based mechanisms

As the High-Level Expert Group[34] notes, for many countries carbon markets may not provide a solution to help channel sustainable finance flows to nature protection and preservation. The growing area of biodiversity finance can offer the needed alternative financing mechanisms for biodiversity-beneficial projects. In this respect, biodiversity credits have the potential to encourage investments in natural capital, building on a land and sea-scape approach.

The blue carbon sector is being transformed through High Quality Principles[35] and aligned valuation and financing pathways for marine natural capital[36]. Adaptive valuation[37] could also help bridge the disconnect of blue carbon research and accreditation processes.

Piloting a Maritime Book and Claim System for tracking and decoupling greenhouse gas emissions from ocean transport services[38] can help support early movers to more sustainable fuels. Other proposals aim to develop a framework for a digitally native class of marine ecosystem credits[39]. Overall, nature-based credit markets[40] need to shift from "ex-ante over crediting" to appropriate financing with science-based accreditation ex-post in regulated markets based on the concept of net gain.

27 See the Cartagena Ocean Action Declaration here: financeincommon2023.com/final-communique
28 wwf.panda.org/?11134466/Multilateral-development-banks-must-supercharge-nature-positive-finance
29 pwc.com/gx/en/news-room/press-releases/2023/pwcboosts-global-nature-and-biodiversity-capabilities.html
30 for the Uk see: data.jncc.gov.uk/data/14a9265b-2d7f-437d-82fe-87e192d34ef2/jncc-report-762.pdf
31 Brander LM, Schägner JP, de Groot R (2022) On the potential use of the Ecosystem Services Valuation Database for valuation in the System of Environmental Economic Accounting. One Ecosystem 7: e85085. doi.org/10.3897/oneeco.7.e85085
32 Ingram JC et al 2024 Leveraging natural capital accounting to support businesses with nature-related risk assessments and disclosuresPhil. Trans. R. Soc. B37920220328
33 tnfd.global/publication/recommendations-of-the-taskforce-on-nature-related-financial-disclosures
34 High-Level Expert Group on scaling up sustainable finance in low- and middle-income countries, EU 2024 international-partnerships.ec.europa.eu/document/download/8ee7b538-68b1-47a5-9b48-81c6495d8b96_en?filename=hleg-final-recommendations-april-2024-executive-summary_en.pdf
35 High-Quality Blue Carbon Principles and Guidance (2024) oceanriskalliance.org/project/practitioners-guide-for-high-quality-blue-carbon
36 Blue Marine Foundation, Crown Estate, Finance Earth, Pollination et al (2023) Developing high-integrity marine natural capital markets in the UK. Report for Consultation.
37 Sheehy, J et al (2024) Redefining blue carbon with adaptive valuation for global policy. Science of the Total Environment 908: 168253
38 rmi.org/press-release/maritime-book-and-claim-system-advances-pilot-study-to-support-first-movers-in-zero-emissions-shipping
39 Filippi, M et al (2022) Advanced Marine Ecosystem Credits OpenEarth Foundation
40 naturefinance.net/wp-content/uploads/2023/02/TheFutureOfBiodiversityCreditMarkets.pdf

THE OPPORTUNITY

Investing in natural capital solutions, including ocean use change, is key to alignment with climate targets as well as delivering co-benefits for biodiversity[41]. Environmental economics[42] supports this case. To deliver desired outcomes, such as clean water, efficiently, the entity best placed to do so, such as a private sector business, needs to be able to engage in transactional bargaining as well as being assured that costs will be recovered, for instance through enforced polluter pay measures or adequate collective taxation, this can be facilitated through effective measurement. Strategies for corporates to nature positive alignment are already being proposed[43]. Addressing multiple forms of misalignment, such as those based on differences in corporate and public/investor time horizons, and those resulting from divergent stakeholder goals throughout the value chain, requires alignment of financial incentives.

This paper suggests that blue natural capital as an asset could help to integrate these information challenges and will fit into a sleeve of a diversified allocation into infrastructure or real estate, or alternatively stand alone as its own separate allocation within a well-diversified institutional investment portfolio. Stratification of varying investable opportunities has created the present segmented asset classes such as private equity, private credit, infrastructure, real estate and hedge funds, commonly referred to as 'alternatives'. By applying NCA at the business level and GOAP at the public sector level, commonality of accounting approaches can serve as the basis for future market-based methods based on granular data. As investor preferences change, driving the diversification and expansion of finance, the interest of investors in express inclusion of nature assets in portfolios is becoming evident. Precise and ongoing measurement of the consumption and/or restoring of natural capital at granular level is key to put this into practice. It will also help to address the continued need for scrutiny on financial resources allocated to the blue economy to ensure an equitable distribution of costs, benefits, and risks of blue economy projects[44]. Blended finance approaches[45] can help to address set-up challenges and thus enable non-blended investment.

Natural capital to date is significantly underinvested across institutional investment portfolios, just based on material mismatch between its contribution to global GDP at 4 - 5% and its composition of institutional capital allocations at around 0.2%[46]. Once data coverage is more comprehensive and available at asset level transaction costs should fall, with more transparency across value chains. Investors will be able to make a better-informed transition with less reliance on complex and time-bound corporate disclosure processes. The emergence of new markets and payments for ecosystems services (PES), such as biodiversity and peatland restoration, could be providing additional revenue streams for companies. Natural capital offers investors the opportunity not only to generate long-term value supporting the finite and essential resources for life on our planet, but also to manage them in a way that ensures the prosperity of those assets for future generations.

41 bfinance.com/insights/natural-capital-investing#:~:text=While natural capital investing is,resource management and/or extraction
42 Coase, R.H., 1960. The Problem of Social Cost'(1960). Journal of Law and Economics, 3, p.1.
43 pollinationgroup.com/wp-content/uploads/2024/03/Nature_Strategy_for_Corporates_Report.pdf
44 Schutter, MS (2024) Mapping flows of blue economy finance: ambitious narratives, opaque actions, and social equity risks. One Earth, vol 7, i4, p638-649 doi.org/10.1016/j.oneear.2024.02.009
45 see: Convergence, State of Blended Finance 2024. Report
46 environmental-finance.com/content/analysis/natural-capital-will-become-a-fundamental-component-of-investors-portfolios.html

This is of particular relevance in the blue natural capital space, where innovation is facilitating impact investment and nature-based solutions are increasingly being integrated into infrastructure projects[47]. Total disclosed investments in the EU blue economy have already more than tripled from €4 billion to more than €13 billion, the three most dynamic sectors in terms of deals activity are blue renewable energy, blue tech & ocean observation, and aquaculture[48]. Accelerating commitments toward net zero emissions from governments and organisations represent structural tailwinds which are increasingly driving investment into nature-based solutions, including in compliance markets. Efforts to enhance the Capital Markets Union in Europe[49] could include express integration of nature assets. Under Invest EU, a dedicated natural capital and circular economy initiative will be established to mobilise at least €10 billion over the next 10 years, based on public/private blended finance[50].

Blue impact investments that target one specific ecosystem service, such as water quality, blue carbon or blue foods, can deploy additional nature-positive criteria and commonly deliver multiple co-benefits. Whilst these may initially not be monetised, including on these companies' balance sheets as nature assets contributes to credit quality and business maturity and facilitate future funding.

Blue bonds are likewise emerging as efficient instruments to finance the sustainable blue economy, based on recent guidance[51]. Blue natural capital assets could then serve as security for such issuance, improving terms and incentivising nature protection[52].

Whilst we are facing significant odds in achieving the blue transformation these initiatives can and should be mutually reinforcing. As investors focus increasingly on impacts and look for robust data, understanding of blue regeneration improves and transaction cost fall, facilitating solutions and delivering economic value.

Blue natural capital is the critical building block in delivering climate solutions and nature positive outcomes. The translation of this optionality into tangible benefits, or, to put it into financial language, the recognition of the latent value already ex-ante in the balance sheets of companies as blue natural capital asset, provides significant potential upside for investors, people and the planet as it finally aligns corporate and societal ambitions, integrating externalities, re-allocating risk and facilitating investment.

47 Thiele, T, Alleng, G, Biermann, A et al. (2020) Blue Infrastructure Finance: A new approach. integrating Nature-based Solutions for coastal resilience. IUCN bluenaturalcapital.org/wp2018/wp-content/uploads/2020/03/Blue-Infrastructure-Finance.pdf

48 blueinvest-community.converve.io/upload/fck/file/Report_Blue_Invest_FINAL_7march-compressed.pdf

49 ecb.europa.eu/press/pr/date/2024/html/ecb.pr240307~76c2ab2747.en.html

50 ec.europa.eu/environment/nature/biodiversity/financing_en.htm

51 icmagroup.org/assets/ documents/Sustainable-finance/Bonds-to-Finance-the-Sustainable-Blue-Economy-a- Practitioners-Guide-September-2023.pdf

52 Roth, N, Thiele, T & von Unger, M (2019) Blue Bonds: Financing Resilience of Coastal Ecosystems: A technical guideline prepared for IUCN GMPP

OCEAN14 CAPITAL

ocean14capital.com
contact@ocean14capital.com
+44 (0)20 3941 2900

1 Knightsbridge Green
London, SW1X 7QA
United Kingdom