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Policy Brief

BBNJ Economics and Finance

Summary

Addressing the enormous ocean climate¹ and governance challenges requires fresh thinking for the High Seas. This policy brief suggests practicable finance options to deliver key aspects of the required ambitious implementation of the proposed BBNJ Agreement² such as a dedicated finance institution. This brief draws on academic literature³ and recent developments in climate and development finance to make the case for an integrated High Seas finance approach. The policy brief argues that appropriate finance mechanisms are not only required to deliver conservation outcomes based on the precautionary principle but they can also offer effective tools to support stakeholder engagement and public-private partnerships, thereby facilitating investment in a range of key ocean solutions. We need a comprehensive ocean finance architecture that delivers in particular adequate finance for the high seas⁴, the largest and least protected and funded space on our planet.

Applying an economic approach to valuing ocean biodiversity and quantifying blue

natural capital in the context of a potential financing mechanism for the proposed BBNJ treaty can help to develop a practical High Seas ocean governance financing model. As P. Dasgupta⁵ noted in his recent review: “For ecosystems that lie outside national boundaries (for example, the oceans beyond exclusive economic zones), imposing charges, or rents, for their use (for example, ocean traffic and ocean fisheries) and prohibiting their use in ecologically sensitive areas should be instituted.” Drawing on recent examples and technological options the paper then summarises the scientific, management and social Infrastructure required for robust BBNJ implementation, suggesting a focus on cost estimates both for capital expenditure needs and the operating budgets. By identifying multiple benefits and specific efficiencies in infrastructure design to deliver not just conservation needs but also to facilitate sustainable development, for instance by offering data that helps shipping to improve routings and operations and to deliver cost-effective finance for an appropriate High Seas management architecture.

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- 1 Laffoley D, Baxter JM, Amon DJ, Claudet J, Downs CA, Earle SA, Gjerde KM, Hall-Spencer JM, Koldewey HJ, Levin LA, Reid PC, Roberts CM, Sumaila UR, Taylor M, Thiele T, Woodall LC (2021). The forgotten ocean - why COP26 must call for vastly greater ambition and urgency to address ocean change. *Aquatic Conservation: Marine and Freshwater Ecosystems*.
 - 2 UN, 2020. Textual proposals submitted by delegations by 20 February 2020, for consideration at the fourth session of the Intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (the Conference), in response to the invitation by the President of the Conference in her Note of 18 November 2019 (A/CONF.232/2020/3)
 - 3 Thiele T. & Gerber L.R. (2017) Innovative financing for the High Seas. *Aquatic Conserv: Mar Freshw Ecosyst.*; 27(S1):89–99. <https://doi.org/10.1002/aqc.2794>
 - 4 Turley, C, Racault, M-F, Roberts, M, Sharples, J, Scott, BE, Thiele, T et al (2021). Why the Ocean Matters in Climate Negotiations. *COP26 Universities Network Briefing*. (<https://www.iass-potsdam.de/sites/default/files/2021-06/COP26%20Ocean%20Briefing.pdf>)
 - 5 Dasgupta, P. (2021) The Economics of Biodiversity: The Dasgupta Review – Headline Messages

Main Message of this Policy Brief: Financing is key to effective BBNJ conservation management

A BBNJ agreement without adequate consideration of finance risks insufficient speed and scale of implementation. A constructive approach to BBNJ finance is supported by 4 critical considerations described below:

Message 1:

Finance offers a way to reflect natural capital economics

The ocean is a complex environment that provides numerous ecosystem services. A holistic accounting system based on true cost and natural wealth can help to capture impacts on ecosystem resilience of human activities and identify potential economic benefits of protection measures. Its application shows that an upfront investment into marine conservation in the High Seas is not only urgently required but also cost-effective. The cost of inaction and of the resulting further degradation vastly exceed the cost of intervention, as biodiversity and abundance are critical to ecosystem services.

Message 2:

Finance is key to deliver the infrastructure required for robust BBNJ implementation

Targeted BBNJ finance is critical to help put in place the physical and institutional infrastructure that can help deliver the ambition required of the BBNJ treaty. By designing this infrastructure in a way to deliver comprehensive coverage of sea-basins, operational benefits for multiple users and solid opportunities for capacity building, a robust, forward-looking system can be put in place that engages a broad range of stakeholders. The resulting efficiencies in infrastructure design can not only defray costs but also lead to a range of potential future revenue streams, that can help raise additional funding and repay some of the infrastructure cost over time.

Message 3:**Generating benefits to all**

The BBNJ regime should deliver on a mandate that generates benefits to all, with foresight and be responsive to the concerns and priorities of all stakeholders, including indigenous and civil society actors as well as future generations. A holistic approach to the finance challenge can help to support this ambition. The critical aspect of capacity building can thus be addressed for the benefit of an ambitious roll-out of the future treaty instrument. The technology transfer/knowledge sharing can be significantly facilitated as a result of this infrastructure.

Message 4:**A tailored BBNJ finance mechanism such as an Ocean Sustainability Bank should be considered**

This policy brief argues that a financing approach can be designed to help efficiently deliver the required high seas ecosystem-based marine protection measures. This can be achieved by proactively engaging a wide range of partners and stakeholders so as deliver a broad range of benefits and thus potential revenues. A new structure such as an Ocean Sustainability Bank could be an effective means to implementation.

Reflecting the natural capital economics of the high seas

The proposed treaty on biodiversity beyond national jurisdiction (“BBNJ”) serves as an implementation agreement of the United Nations Convention on the Law of the Sea (“UNCLOS”) in areas beyond national jurisdiction (“ABNJ”), including the high seas and the international seabed. An analysis of the natural capital economics of ABNJ confirms not only their vast value to nature and people but also suggests that their effective protection through a properly implemented BBNJ Agreement delivers value far in excess of cost. High Seas are a crucial part of the global natural capital. Economists have made progress in developing methodologies for assessing this natural capital⁶ and suggested tentatively overall numbers based on assessing the total bundle of ecosystem services that can potentially be provided annually by an ‘average’ hectare of open ocean⁷. Such an ecosystem services framework links the biophysical structures, processes and functions to social and economic benefits for humans⁸ and provides a possible approach to identify specific provisioning, regulatory,

cultural and supporting services. Economists have also proposed methodologies to deal with some of the deep ocean challenges, such as remote locations and complex marine value chains⁹. Some countries such as Ireland have estimated the quantity and value of the ecosystem services of their waters, using the Common International Classification of Ecosystem Services (CICES) classification system as a guide¹⁰.

Even more saliently, these economic assets in the ocean today are at substantial risk. In terms of provisioning services, the FAO notes that 34 percent of assessed fish stocks are fished at levels that exceed biological sustainability¹¹. In terms of regulatory services, bottom trawling and proposed deep sea mining can create significant disturbance to the carbon stored in ocean sediments¹² and to nutrient cycling. In terms of cultural services the benefits to people and science of undisturbed habitats are vast. All of these impacts can be economically assessed, as the recent Navigating Ocean Risk study¹³ shows, with most uncertainty remaining

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- 6 Thiele, T. (2019) Deep-sea natural capital. In: Sharma, R. (ed) Environmental Issues of Deep-Sea Mining, Springer.
 - 7 De Groot, R., Brander, L., van der Ploeg, S., et al. (2013) Global estimates of the value of ecosystems and their services in monetary units. *Ecosystem Services* 1: 50–61
 - 8 Austen M.C., Anderson P., Armstrong C., et al. (2019) Valuing Marine Ecosystems - Taking into account the value of ecosystem benefits in the Blue Economy, Coopman, J., Heymans, JJ., Kellett, P., Muñiz Piniella, A., French, V., Alexander, B. [Eds.] Future Science Brief 5 of the European Marine Board, Ostend, Belgium. 32pp. DOI: 10.5281/zenodo.2602732
 - 9 Drakou, E.G., Pendleton, L., Efron, M., Ingram, C., Teneva, L. (2017) When ecosystems and their services are not co-located: oceans and coasts, *ICES Journal of Marine Science*
 - 10 EPA Research Report No 239: Valuing Ireland’s Coastal, Marine and Estuarine Ecosystem Services, EPA Publications, Wexford, is available to download at: <http://www.epa.ie/pubs/reports/research/water/research239.html>.
 - 11 FAO. 2020. The State of World Fisheries and Aquaculture 2020. Sustainability in action. Rome. <https://doi.org/10.4060/ca9229en>
 - 12 Laffoley, D., Baxter, J. M., Thevenon, F., & Oliver, J. (2014). The significance and management of natural carbon stores in the open ocean. Gland, Switzerland: IUCN.
 - 13 https://www.fint.awsassets.panda.org/downloads/embargoed_navigating_ocean_risk_value_at_risk_in_the_global_blue_economy_oct21.pdf

around valuing supporting services given the multiple interactions implied¹⁴. It has on the other hand been calculated that conserving 20–30% of global oceans in marine protected areas could create 1 million jobs, sustain fish catch worth US\$70–80 billion/year and provide ecosystem services with a gross value of roughly US\$4.5–6.7 trillion/year¹⁵. There's still a lot of uncertainty/unknowns around high seas and deep ocean ecosystem services values since as they are hard to measure and as they do not lend themselves to offsetting approaches¹⁶.

This policy brief argues that embedding natural capital assessment and accounting into BBNJ decision-making is critical and should be based on solid scientific approaches such as monitoring of species populations including vertebrates, so that signals of changes in trends in lower levels of the food web or even systemic change in ecosystem health¹⁷ will not be missed. This includes the biogeochemical processes that drive ocean chemistry and ocean ecological function, such as primary production and trace metal fixation by chemosynthetic organisms beyond the photic zone.¹⁸ In order to effectively regulate activities it is therefore not sufficient to address each impact independently of each other; but consider their interaction to prevent the deterioration of its natural capital. As the High Level Expert Group on Sustainable Finance noted, the risk

is exploitation beyond the rate of renewal, not least due to policies that do not value natural capital sufficiently¹⁹.

The BBNJ Agreement provides a unique opportunity to address this existing misalignment. By applying a holistic assessment covering the state, pressures, impacts and responses across the marine environment and implementing appropriate economic valuation approaches this governance regime can not only contribute to conservation and sustainable use but support tackling the global climate crisis and help facilitate a green and sustainable recovery from the global pandemic. Whilst a significant focus of an economic approach has been so far on coastal systems, such as mangroves, seagrasses and coral reefs²⁰, we can draw lessons from such efforts, as well as for instance from the EU Marine Strategy Framework Directive (MSFD)²¹ and address the cost of inaction, including the social cost in the High Seas. Intact ecosystems provide a renewable natural capital stock that can continue to provide ecosystem services and benefits indefinitely. By identifying and reducing quantifiable local impacts as well understanding the cumulative cost of ongoing ocean change and its potential to contribute to tipping points and earth system changes we can target those additional conservation activities that provide net benefits overall.

14 Deloitte Access Economics (2020) Economic contribution of Ningaloo: one of Australia's best kept secrets

15 UNEP-WCMC and IUCN. (2016). Protected planet report 2016. UNEP-WCMC and IUCN: Cambridge UK and Gland, Switzerland.

16 Niner, H.J., Ardron, J.A., Escobar, E. G. et al. (2018)= Deep-Sea Mining With No Net Loss of Biodiversity—An Impossible Aim. *Front. Mar. Sci.*

17 Vaughan D., Korpinen S., Nygård H. et al. (2019), Biodiversity in Europe's seas. ETC/ICM Technical Report 3/2019: European Topic Centre on Inland and Marine Waters, 92pp.

18 Fauna & Flora International (FFI). 2020. An Assessment of the Risks and Impacts of Seabed Mining on Marine Ecosystems. FFI: Cambridge U.K. Available from: www.fauna-flora.org

19 HLEG (2018) Final Report 2018 by the High-Level Expert Group on Sustainable Finance. European Commission.

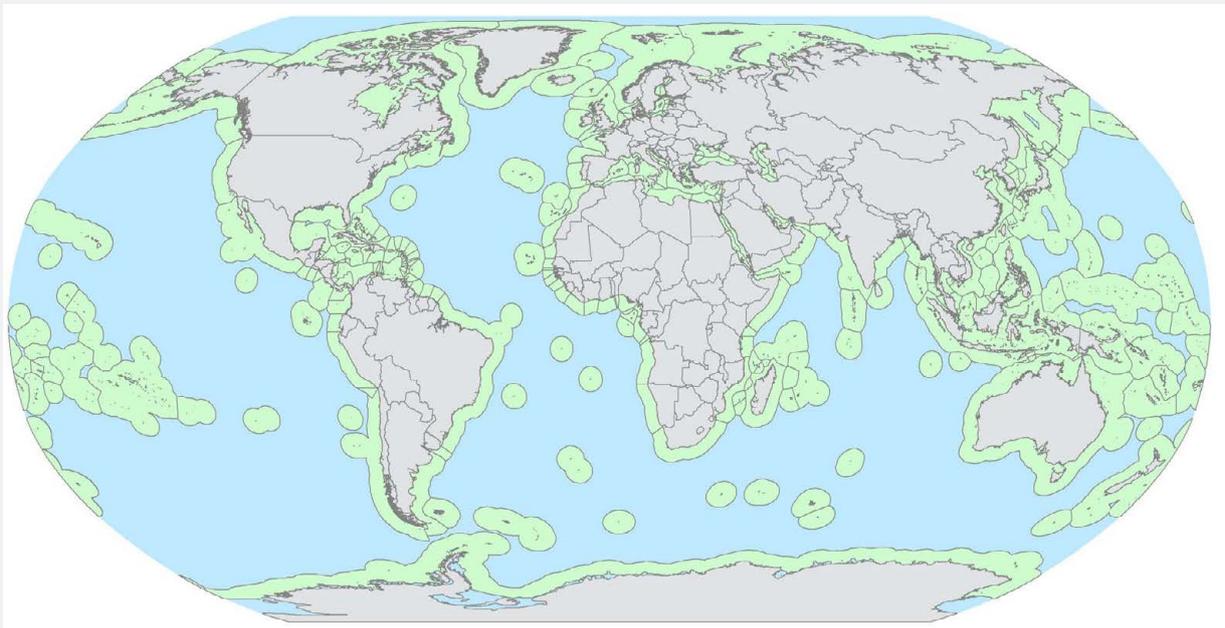
20 Reguero, B.G., Storlazzi, C.D. Gibbs, A.E. et al (2021) The value of US coral reefs for flood risk reduction. *Nature sustainability*. <https://www.nature.com/articles/s41893-021-00706-6.pdf>

21 Oinonen, S, Boerger, T, Heynes, S et al (2016) The Role of Economics in Ecosystem Based Management: The Case of the EU Marine Strategy Framework Directive; First Lessons Learnt and Way Forward. *J of Ocean and Coastal Econ* Vol2:3

BOX 1: **AGREEMENT TO PREVENT UNREGULATED HIGH SEAS FISHERIES IN THE CENTRAL ARCTIC OCEAN** ²²

The AGREEMENT TO PREVENT UNREGULATED HIGH SEAS FISHERIES IN THE CENTRAL ARCTIC OCEAN which entered into force on 21 June 2021 expressly refers to the fact that commercial fishing is unlikely to become viable in the high seas portion of the central Arctic Ocean in the near future and applies the precautionary approach to prevent the start of unregulated fishing in the high seas portion of the central Arctic Ocean. It recognises the interests of Arctic residents, including Arctic indigenous peoples, in the long-term conservation and sustainable use of living marine resources and in healthy marine ecosystems.

It is an example of an application of the economic assessment approach suggested in this policy brief, including taking into account cultural ecosystem services in the form of the social values of effected communities. The choice of the outright ban not only correctly applies the precautionary approach, it also reduces transaction cost and probably improves fishing yields in national waters. An economic study in 2014 came to the conclusion that a similar agreement for the High Seas as a whole would provide overall benefits, including through improved fish stocks in EEZs²³.



Global map of exclusive economic zones (green) and high seas (blue) oceanic areas.
doi:10.1371/journal.pbio.1001826.g001

22 <https://www.mofa.go.jp/files/000449233.pdf>

23 White C, Costello C (2014) Close the High Seas to Fishing? PLoS Biol 12(3): e1001826. doi:10.1371/journal.pbio.1001826

Delivering the Infrastructure required for robust BBNJ implementation

For large-scale marine protection to be most effective it needs to reflect the complex pathways of marine life²⁴. Our current level of understanding of these complex pathways and ways of monitoring them are insufficient for effective BBNJ implementation. A comprehensive ocean data infrastructure, with a wide range of monitoring options would thus be best suited to implement BBNJ measures effectively. This infrastructure could at the same time serve other ocean users, thereby potentially defraying the upfront cost, and it could be delivered through public-private partnerships²⁵, thereby engaging technology partners and new investors and providing transparent ocean data²⁶. This goes beyond an ocean science approach to practical use cases for global business value chains and local communities alike, beyond core budget and basic administration support.

Technologies such as remote sensing via satellites, through subsea devices and eDNA represent mechanisms to monitor the High Seas, collect important data and enforce protected areas. Integrating SMART Subsea Cables for Observing the Ocean and Earth would offer the opportunity for real-time, vast data monitoring in combination with telecommunications capacity²⁷. At the same time a sea basin approach such as the one recently outlined for the Atlantic can be used to design an integrated observing system²⁸.

Recent advances in data availability, image-processing methodologies, optical sensing²⁹ and computing and information technology are already being deployed in coastal ecosystems on a regular basis³⁰. They present promising scalable, practical, and cost-efficient innovations that address current observational and technological challenges in the High Seas. Such tools would also offer the opportunity to help reflect in the design of measures of future climate change impacts³¹ which may otherwise to limit the

24 O'Leary, B. C., G. Hoppit, A. Townley, et al. (2020), 'Options for Managing Human Threats to High Seas Biodiversity', *Ocean and Coastal Management*, 187, 105110.

25 Thiele T. & Gerber L.R. (2017) Innovative financing for the High Seas. *Aquatic Conserv: Mar Freshw Ecosyst.*; 27(S1):89-99. <https://doi.org/10.1002/aqc.2794>

26 <https://globalfishingwatch.org/transparency/transparent-ocean-data-can-drive-digital-innovation-to-reveal-human-activity-at-sea/>

27 Howe, B et al. (2021) SMART Subsea Cables for Observing the Ocean and Earth. *Frontiers in Marine Science/ Special Issue: Advances in Ocean Bottom Seismology*. (forthcoming)

28 deYoung B, Visbeck M, de Araujo Filho MC, et al (2019) An Integrated All-Atlantic Ocean Observing System in 2030. *Front. Mar. Sci.* 6:428. doi: 10.3389/fmars.2019.00428

29 Chirayath V and Li A (2019) Next-Generation Optical Sensing Technologies for Exploring Ocean Worlds—NASA FluidCam, MiDAR, and NeMO-Net. *Front. Mar. Sci.* 6:521. doi: 10.3389/fmars.2019.00521

30 Giri, C. (2021) Recent Advancement in Mangrove Forests Mapping and Monitoring of the World Using Earth Observation Satellite Data. *Remote Sens.* 2021, 13, 563, doi:10.3390/rs13040563

31 Visalli, M.E. et al. (2020) Data-driven approach for highlighting priority areas for protection in marine areas beyond national jurisdiction *Marine Policy* Volume 122, 103927

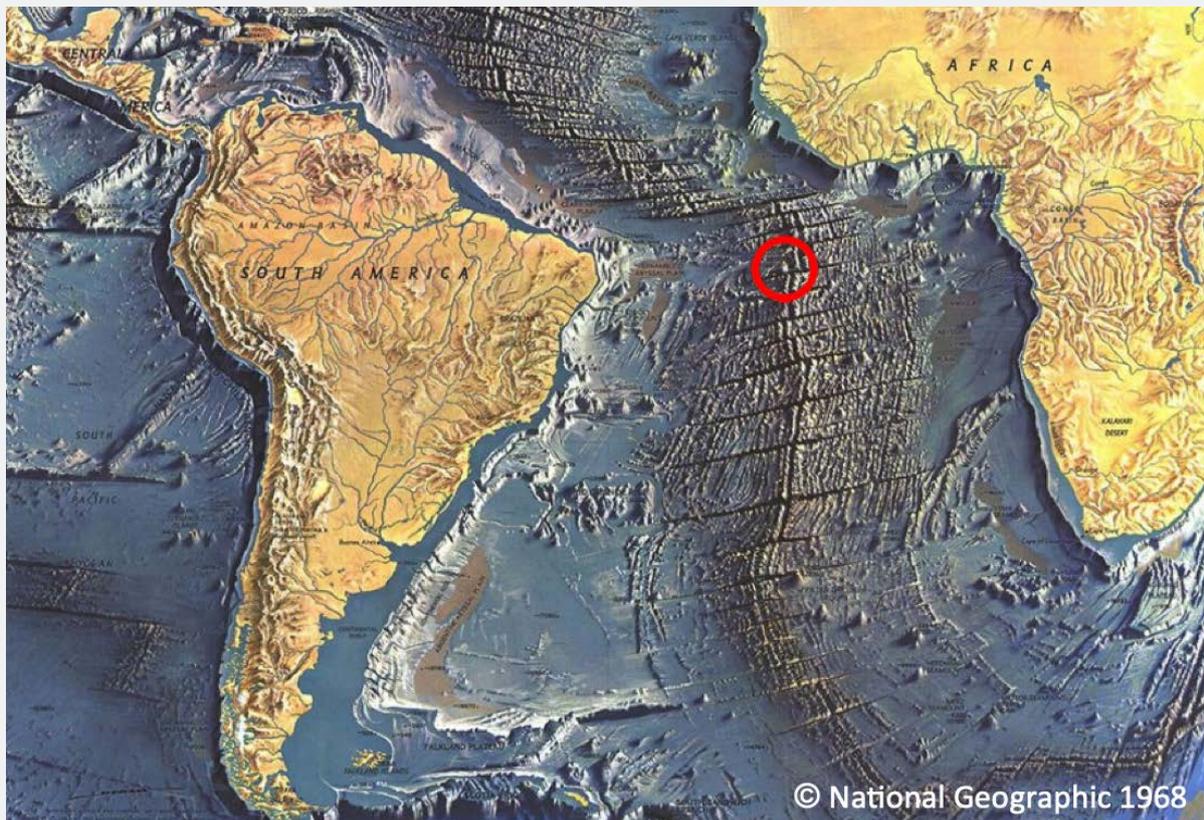
effectiveness of some ABMTs³². These can include a range of management options³³ to address climate-change challenges³⁴, focussing on functionality without overburdening institutional arrangements³⁵. Furthermore, the management of such infrastructure can be based on the principle of cooperation, with competences shared, offering relevant sectoral institutions and regional organisations the opportunity to work collectively and complementarily to ensure effective implementation of Agreement measures³⁶ using an ecosystem approach³⁷.

Furthermore, such an infrastructure can help to deliver other benefits and sustainable development goals. Examples would be real-time tsunami warnings and other disaster resilience and risk reduction methods³⁸. A combination of physical infrastructure with appropriate biological, chemical and social science as well as computational and data management skills that address all sea basins will be critical. There is also a need to address capacity shortfalls³⁹ in specific countries and regions. Promoting technology transfer and broader engagement in High Seas ABMT delivery⁴⁰ may help to build additional capacity that can be used to address these challenges. Earth observation tools can thus play an important and complementary part in biodiversity conservation.

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- 32 Johnson, D, Ferreira, MA and Kenchington, E (2018) Climate change is likely to severely limit the effectiveness of deep-sea ABMTs in the North Atlantic, *Mar Pol* 87: 111-122
- 33 Maxwell, S.M., Cjerde, K.M., Conners, M.G. & L.B.Crowder (2020) Mobile protected areas for biodiversity on the high seas. *Science* Vol 367, Issue 6475
- 34 De Santo, E (2018) Implementation challenges of area-based management tools (ABMTs) for biodiversity beyond national jurisdiction (BBNJ). *Mar Pol* 97: 34-43.
- 35 Clark, NA (2020) Institutional arrangements for the new BBNJ agreement: Moving beyond global, regional, and hybrid. *Mar Pol* 122:104143. doi: 10.1016/j.marpol.2020.104143
- 36 Berry, DS, (2021) Unity or Fragmentation in the Deep Blue: Choices in Institutional Design for Marine Biological Diversity in Areas Beyond National Jurisdiction. *Front. Mar. Sci.*, 26 October 2021 | <https://doi.org/10.3389/fmars.2021.761552>
- 37 O'Leary BC; Hoppit, G, Townley, A et al (2020) Options for managing human threats to high seas biodiversity. *Ocean and Coastal Management* 187: 105110
- 38 Sudmeier-Rieux, K. et al. (2021) Scientific evidence for ecosystem-based disaster risk reduction. *Nature sustainability* <https://doi.org/10.1038/s41893-021-00732-4>
- 39 Gill, D. A., M. B. Mascia, G. N. Ahmadi, et al (2017), 'Capacity Shortfalls Hinder the Performance of Marine Protected Areas Globally', *Nature*, 543(7647), 665– 669.
- 40 Bax, N., Harden-Davies, H., Thiele, T. et al. (2016). Open data: Enabling conservation and sustainable use of biodiversity in areas beyond national jurisdiction. *Nereus* policy brief.

BOX 2: Ascension Island⁴¹

The Ascension Island Marine Protected Area Management Plan 2021-2026⁴² has a clear vision to safeguard a unique natural ecosystem of 445,000km² of ocean at the heart of the Atlantic. The Government undertook a natural capital assessment including cultural ecosystem services as part of its baseline assessment⁴³. The plan now suggests using remote techniques for surveillance, enforcement and monitoring and suggests: “new capabilities allowing rapid, high resolution satellite images to be taken, or for unidentified vessels behaving suspiciously to be tracked to their next port are being developed. This coupled with the legal framework to act on the intelligence will provide the tools necessary for effective enforcement. Ascension needs to be an early-adopter of these new technologies and preferably play a part in developing them through collaborations with pioneers in the field.” Satellite services such as Global Fishing Watch⁴⁴ provide efficient and cost-effective tools to monitor vessels and can help to assess the activities undertaken.



- 41 Ascension Island Government (2021). The Ascension Island Marine Protected Area Management-plan 2021-26. Ascension Island Government Conservation and Fisheries Directorate.
- 42 <https://www.sainthelena.gov.sh/wp-content/uploads/2021/03/MPA-Management-Plan-2021-26-Final.pdf>
- 43 Canelas, J., Fish, R., Bormpoudakis, D. & Smith, N. (2019) Cultural Ecosystem Services in the Ascension Island Final Report. Natural Capital Assessment. South Atlantic Overseas Territories (SAERI/University of Kent)
- 44 <https://globalfishingwatch.org>

Generating Benefits for all

Capacity Building and Technology Transfer are an important component of the approach proposed here. They are not only a key part of the BBNJ Agreement in their own right but critical for the effective delivery of innovative finance mechanisms. The proposed Clearing house Mechanism could for instance act as a central point to identify financing needs and deliver funding approaches.

Low- and middle-income countries are in particular need of investment to benefit from the enhanced protection measures suggested but need support to help deliver the proposed global goal of at least 30% of effective marine protection, through increasing MPA coverage in their own waters and in high seas areas. Addressing this need through capacity building and financial support will be key for livelihoods, food security and resilience. This requires approaches that support procedural

equity and inclusivity and fully consider the rights and interests of future generations. Such an approach requires a commitment to give communities a voice in decision-making processes, and that planning and implementation are done through diverse and inclusive engagement processes. Likewise the rights of future generations are fundamentally linked to sustainability, and the provision of adequate finance upfront to maintain ecosystem services and provide opportunities for future choices are key to the preservation of next generation rights. Many economic assessments of the climate crisis “grossly undervalue the lives of young people and future generations”, argues for instance Lord Stern⁴⁵. A change of perspective, focussing on addressing ocean risk and delivering international ocean solutions that directly impact all populations is needed.

45 Stern N (2021) A time for action on climate change and a time for change in economics. Centre for Climate Change Economics and Policy Working Paper 397/Grantham Research Institute on Climate Change and the Environment Working Paper 370. London: London School of Economics and Political Science

BOX 3:

Galapagos-Cocos Corridor/ Sargasso Sea

Two High Seas areas with outstanding ecosystems and strong regional interactions that could benefit from the sort of protections discussed under a future BBNJ agreement are the Galapagos-Cocos Corridor and the Sargasso Sea. Both offer good examples in support of the arguments made in this policy brief. They deliver significant ecosystem services values that are at risk from exploitation, can effectively be monitored at scale with the form of remote sensing infrastructure proposed, which can be efficiently financed based on a model that delivers the appropriate capital expenditure up front. The benefits this would deliver to local communities, adjacent nations and the global commons will be vast.

Following an initial proposal to expand the Galapagos Marine Reserve⁴⁶ in November 2021 four Latin American countries announced that they will expand and unite their marine reserves to create a vast corridor in the Pacific Ocean in hopes of protecting sea turtles, tuna, squid, hammerhead sharks and other species⁴⁷. This Galapagos-Cocos Corridor could in future become a test case for a BBNJ ABMT measure.

The Sargasso Sea Commission⁴⁸ has for years been promoting regional measures to deliver better protection of this critical marine ecosystem. These examples can offer insights into how different approaches and cost models could emerge (such as the distinction between capital expenditure and running cost) and how new technologies as well as cooperation across sectors can help to deliver rapid outcomes effectively.

46 <https://marine-conservation.org/wp-content/uploads/2021/01/2021.-Summary-of-Galapagos-open-water-protection-proposal.pdf>

47 <https://phys.org/news/2021-11-latam-nations-fishing-free-corridor-east.html>

48 Freestone, D. (2021). The sargasso sea commission: an evolving new paradigm for high seas ecosystem governance? *Front. Mar. Sci.* 8:659. doi: 10.3389/fmars.2021.668253

Tailoring effective BBNJ finance: An Ocean Sustainability Bank

Finance enables investment in physical, natural and knowledge capital to facilitate the conservation and restoration of ecosystems⁴⁹ and their biodiversity⁵⁰. Today's investment in this area is limited, in particular in the marine space⁵¹, thus creating a biodiversity finance gap which a recent report puts at US\$ 598–824 billion per year⁵². This gap⁵³ can and needs to be filled. Designing BBNJ-supportive financing approaches that draw on development finance and climate finance can help to provide examples for relevant integrated pathways. Development banks invest more than US\$2 trillion per year⁵⁴ overall and have access to low cost, long term finance through capital market. These sources need to be directed towards the high seas and can serve as potential vehicles for ocean project finance to support blue infrastructure⁵⁵. The issuance of blue bonds such as recently by the Asian Development Bank (ADB)⁵⁶ can be a further means to raising capital for such projects.

A recent study of financing of large MPAs⁵⁷ found that public budget allocations, tourism fees, and donor-supported Conservation Trust Funds are among the most commonly employed financial mechanisms. They require robust business and financial planning and understanding of cost profiles over time to ensure adequate financing. Donor funds such as the benefit-sharing fund under the International Treaty on Plant Genetic Resources for Food⁵⁸ and the Global Fund⁵⁹ provide relevant examples on how grant funding can be used to engage in further innovative financing mechanisms, which could become an important component of broader financing approach for BBNJ.

This policy brief argues that we can and should be going significantly further, drawing both on the ability of multilateral finance institutions to develop large-scale blended finance approaches and on the interest of private sector investors in deploying capital into long-dated sustainable infrastructure assets. By matching these profiles to the

49 Duarte, C. M., S. Agusti, E. Barbier, G. L. et al. (2020), 'Rebuilding Marine Life', *Nature*, 580(7801), 39–51.

50 Seidl, A., K. Mulungu, M. Arlaud, O. van den Heuvel, and M. Riva, (2020), 'Finance for Nature: A Global Estimate of National Biodiversity Investments', *Ecosystem Services*, 46, 101216.

51 Sumaila, U.R. et al (2021) Financing a sustainable ocean economy. *Nature Comms* <https://www.nature.com/articles/s41467-021-23168-y.pdf>

52 Deutz, A., G. M. Heal, R. Niu, et al. (2020), *Financing Nature: Closing the Global Biodiversity Financing Gap*.

53 OECD (2020) *A Comprehensive Overview of Global Biodiversity Finance*.

54 AFD (Agence Française de Développement; French Development Agency). (2020). "Booklet Finance in Common Summit." Paris: AFD

55 Thiele, T et al. (2021). "MDB Engagement: Mainstreaming Blue Nature-based Solutions into Infrastructure Finance". Report by Silvestrum Climate Associates

56 <https://ens-newswire.com/asian-development-bank-issues-blue-bonds-for-asia-pacific-oceans/>

57 Conservation International, Starling Resources & Big Ocean. (2020). *Funding Marine Protection at Scale: The current status and future development of financing for Large-Scale Marine Protected Areas*. Pacific Islands Forum Fisheries Agency & World Bank

58 https://www.biodiversityinternational.org/fileadmin/user_upload/online_library/publications/pdfs/Plant_genetic_resources_and_food_security/19.Implementing_croprrelated_modality.pdf

59 <https://www.theglobalfund.org/en/>

needs of multiple users, potential revenue sources can be identified and matched with BBNJ management and monitoring needs.

Potential sources of repayment streams in the BBNJ context for any such financing delivered for upfront capital expenditures could fall into at least three categories:

- 1. Commitments by States Parties and Others:** Such commitments could be made both as part of the agreement or in addition. To give examples, the UN University was set up with the assistance of an US\$100million endowment provided by Japan⁶⁰.
- 2. Payments by infrastructure users for services provided:** An infrastructure service payment could for example be a fee for the provision of local ocean data to a ship which is used improve its operational routing through a particular area.
- 3. Sale of allocations of benefits of ecosystem services under international agreements:** A practical example of ecosystem benefits allocation would arise if for instance specific measures under BBNJ would lead to identifiable carbon benefits and the party that helps deliver this could be adding these to their enhanced NDC commitments. This would allow the ocean to be better reflected in the UNFCCC policy processes beyond COP26.⁶¹

This policy brief suggests that, whilst there may be significant scope to develop these options, adequate funding of potential BBNJ management is not only desirable but also can be cost-effective. Therefore a focus should be at this stage on how to develop a BBNJ text that will allow engagement of appropriate partners such as the international development banks to deliver the monies needed effectively.

Whilst existing institutions may have sufficient capacity to implement this approach their traditional focus has not been on the High Seas. It has therefore been proposed that a dedicated International ocean finance institution such as an Ocean Sustainability Bank could act as clearing-house partner and provide an effective way to deliver ocean solutions for BBNJ and beyond, as it could focus exclusively on the marine space, act as a knowledge hub and agent of change⁶². This approach would be complementary to using an institution such as the Global Environmental Facility (“GEF”) as the financial mechanism of the new BBNJ treaty itself. It recalls the approach taken with the launch of the European Bank for Reconstruction and Development and multiple institutions have since emerged with different regional and sectoral focus. The High Seas covering almost half of the planet and in serious need of investment for sustainability certainly merits a similar effort. As ocean governance and global climate solutions are entirely interconnected this proposal would also offer developed countries a significant opportunity to address some of the financing gap identified in the US\$100 billion Delivery Plan⁶³.

60 <https://unu.edu/about/unu/history#overview>

61 Laffoley D, Baxter JM, Amon DJ, Claudet J, Downs CA, Earle SA, Gjerde KM, Hall-Spencer JM, Koldewey HJ, Levin LA, Reid PC, Roberts CM, Sumaila UR, Taylor M, Thiele T, Woodall LC (in press). The forgotten ocean - why COP26 must call for vastly greater ambition and urgency to address ocean change. *Aquatic Conservation: Marine and Freshwater Ecosystems*

62 Thiele, T Accelerating Impact, The Promise of Blue Finance Cornerst JoSFB 2015

63 Delivery Plan on the US\$100 billion goal presented by Canada and Germany to UNFCCC COP26

BOX 4: Seychelles MPAs

In March 2020, Seychelles designated 30% of its territorial waters as MPAs, increasing the protection from less than 1% to 30% of national water territory. This enormous expansion requires significant additional investment and capacity to meet the conservation and sustainable use objectives. This ambitious project supported by donors will establish a governance system for the MPAs, leverage additional sustainable financing, and implement the building blocks of the MPA network. These building block include strengthening local capacity, bridging the financing gap, and engaging local stakeholders in ocean conservation.⁶⁴

Blue carbon⁶⁵ for instance in the form of vast seagrass beds make up a significant part of the Seychelles EEZ area and the country intends to protect all of these, allowing for further measures to enhance its blue natural capital value not only for carbon but also as biodiverse ecosystem and fish nurseries. By mapping⁶⁶ and quantifying these efforts and their impacts⁶⁷ it is hoped that over time the Seychelles will be able to secure additional financing to implement appropriate measures to protect and enhance their seagrass beds.



64 [https://seyccat.org/seyccat-secures-US\\$4.7-million-from-international-donors-for-sustainable-management-of-new-mpas/](https://seyccat.org/seyccat-secures-US$4.7-million-from-international-donors-for-sustainable-management-of-new-mpas/)

65 Bertram, C., Quaas, M., Reusch, B.H. et al., (2020) The blue carbon wealth of nations. Nature Climate Change

66 <https://www.pewtrusts.org/-/media/assets/2021/01/project-will-map-seagrass-in-seychelles-to-support-climate-action.pdf>

67 <https://seyccat.org/seagrass-earths-best-defence-against-climate-change-which-you-probably-havent-heard-of/>

Conclusions and BBNJ drafting suggestions

This policy brief suggests the need for a pragmatic approach to facilitate a rapid and ambitious implementation of the forthcoming BBNJ Agreement, based on effective management measures with adequate infrastructure and finance options. Such an approach is based on an understanding of the intrinsic value of the international ocean as precious biodiversity habitat and blue natural capital. It allows for the comprehensive management of human activities in the High Seas for the public good and in a manner that is transparent and ensures equity, based in the international commitment to the transition to sustainable development and a just transition that conserves nature and provides for livelihoods.

The cooperation within and beyond the confines of the new agreement, drawing on science, infrastructure and finance to deliver relevant support from those that are able to do so and integrating relevant existing international, public and private entities offers a forwards-looking, collaborative approach that reflects the complexity of modern global policy making, where common frameworks and coalitions of the willing need to be cohesively integrated.

What this policy brief has attempted to show is that this strategy is not only feasible but also economically and financially viable. It can be put in place quickly and effectively as it only requires a political decision of a coalition of the willing to proceed. It can thus support the necessary progress towards a rapid adoption and coming into force of the new agreement. Ocean, biodiversity and climate risk are entirely interrelated and unless we put in place an adequate governance framework with the needed management mechanisms for the almost 50% of the planet surface made up by the High Seas we will not be able to address these risks.

This approach acknowledges the progress made in the BBNJ negotiations and does not require significant changes to the draft text. As suggested by IUCN⁶⁸ Art.52 could be amended to support the creation of appropriate financing mechanisms. Implementation could be facilitated by the creation of a Standing Committee on Finance as exists under the UNFCCC to engage with potential finance partners on behalf of the BBNJ COP.

68 https://www.iucn.org/sites/dev/files/content/documents/iucn_comments_on_revised_bbnj_draft_text_february_2020.pdf

ABOUT THE AUTHOR

Torsten Thiele is Founder the Global Ocean Trust, an NGO focused on innovative and sustainable nature-based governance and finance solutions for the ocean (@gOceanTrust). Torsten studied law, economics and conservation and spent over two decades in financial institutions, working in project and infrastructure finance. He is a frequent conference speaker on ocean issues and has contributed to multiple publications on the subject.

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