# Investors and the Blue Economy

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# Foreword

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In addition to being the largest natural carbon sink on the planet, our ocean is a tremendous source of economic livelihoods for billions of people. The value of global ocean assets is estimated at over US$ 24 trillion[1] making it the 7th largest economy in the world in GDP terms. As a result of its integral role in the global financial and environmental ecosystems, the ocean is high on the international policy agenda[2].

And its importance continues to grow: The global ‘Blue Economy’ is expected to expand at twice the rate of the mainstream economy by 2030[3], and already contributes US$ 2.5 trillion a year in economic output. While the Blue Economy encompasses a wide variety of ocean-linked sectors and industries, fisheries and aquaculture alone provide direct or indirect employment to 10–12% of the world’s population, with more than 90% of those employed located in developing countries[4].

However, the Blue Economy relies on healthy ocean ecosystems for the abundance of resources that generate these incomes. Decades of harmful approaches, from industrial fishing depleting fish populations and destroying habitats, to the ocean being used as dumping grounds for chemical, plastic and human waste, coupled with the damaging effects of climate change have put the long-term survival of the ocean and therefore its investment potential at risk: over two-thirds of the ocean’s direct economic value relies on its good health.

While commercial fisheries, long a driver of ocean-related income and investment, are for the most part fully exploited or even overexploited, many other investible opportunities exist or are emerging in other sectors of the Blue Economy. These include amongst others renewable energy derived from ocean currents, biotechnology, more sustainable maritime transport, waste management and recycling, eco-tourism and investments which are targeted at rebuilding the resilience of marine ecosystems in the face of a changing climate. The transition from the current short-term, destructive approach to ocean assets towards a more sustainable, climate-secure Blue Economy presents a tremendous economic and sustainable investment opportunity.

Paradoxically, despite keen and growing investor interest in ocean-related opportunities, the ocean is today one of the least invested of all the UN Sustainable Development Goals, particularly from a private capital point of view. Only 21% of impact investors surveyed say they target SDG 14 – Life Below Water through their investments[5]. As one of the leading financial organizations globally, Credit Suisse recognized the urgency of deteriorating ocean health early on and began exploring the potential for investing in a sustainable Blue Economy. In 2018, Credit Suisse organized the first edition of an annual Impact Roundtable on Marine Conservation, alongside publishing thought-leading articles on this topic, all in an effort to raise awareness amongst the investment community.

Credit Suisse has joined forces with Responsible Investor, in order to produce a market-first assessment of asset owner and asset manager perceptions and interest globally in ocean-related investments. With further support of the UNEP FI, the European Commission and WWF, the project asked investors for their views on, and appetite for, investing in the sustainable Blue Economy.

We expect this emerging investment theme to increase significantly in importance for investors over the coming years. The following report provides a first overview and assessment of the perceived investment risks and challenges in this fast-moving field, in addition to showcasing some investible opportunities already providing solutions to ocean challenges.

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1. Hwoegh-Guldberg O., Beal D. and Chaudhry T. Reviving the Ocean Economy: the case for action. Gland, Geneva: WWF International 2015
2. Exploring the potential of the Blue Economy. UNDESA, 2017
3. The Ocean Economy in 2030. OECD, 2016
4. The EU Blue Economy Report. European Commission, 2019
5. Impact investing asset owner trend report. Phenix Capital, 2019

# Ocean risk or opportunity? Is the sustainable Blue Economy investible?

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# Executive summary

**Why is this study interesting?**

- Market-first evaluation of (institutional) investor awareness and interest in the Blue Economy and ocean-related investments
- A qualified and comprehensive cohort:
- Global coverage – 328 respondents from 34 countries – 53% come from Europe
- 59% of respondents are asset managers, compared with 41% asset owners
- There is a majority of listed equity, fixed income and multi-asset strategy investors with AUM of >€50 bn

**Main findings:**

- Interest in sustainable Blue Economy investments is high among investors but industry expertise is low.
- The sustainable Blue Economy is poised for an increase in importance over the coming decade, with over a third of investor respondents seeing it as amongst the most important topics in 2030.
- Three in four investor respondents have not assessed their portfolios for their impact on the ocean and 21% are completely unaware of ocean exposure and risk in an investment context. Assessing their portfolio and engaging with investee companies on ocean issues are impactful steps investors can already take, reducing risk to portfolios and the marine environment.
- Almost a third of asset owners do not address the sustainable Blue Economy at all in their current investments, highlighting the need to better inform investors of the importance of securing a healthy and resilient ocean and of the risks associated with business-as-usual to both business and society.
- The main barriers for investors are a lack of investment grade projects, no internal expertise and, for asset owners, that their managers do not offer any products, nor raise the topic with them.
- There are already opportunities in early stage, impact and fixed income investments (but sustainable Blue Economy infrastructure and listed equity allocations are on the horizon).
- The sectors believed to harbor the best investment opportunities are: climate change mitigation and adaptation (mostly via marine renewables), tackling marine plastic (and other) pollution, alongside supporting sustainable fisheries and aquaculture.
- There is an urgent need to strengthen enabling conditions and develop innovative finance approaches to reduce risk. The sustainable Blue Economy could be advanced significantly by creating more sustainable projects with track records, fostering Public Private Partnerships and scaling investment using innovative finance approaches, such as blended finance.

# Introduction

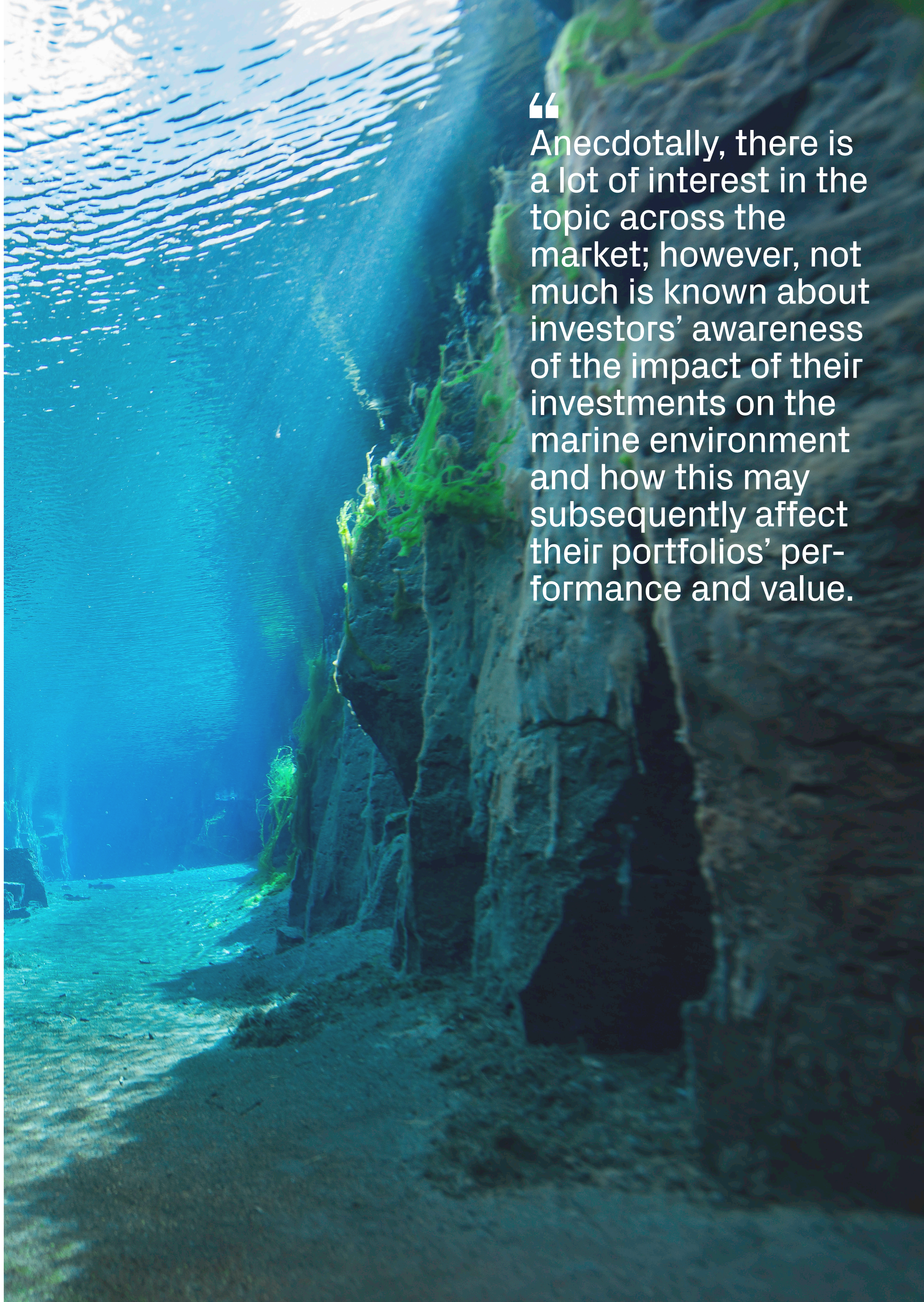
The aim of this study was to establish an assessment of investor perspectives on the ocean, bringing together views on and awareness of the sustainable Blue Economy across the global asset owner and asset manager communities.

At the international level, the governments of Canada, Kenya and the European Commission, alongside UNEP FI, WWF and others have articulated the importance of future capital being deployed towards a healthy and sustainable Blue (or ocean) Economy. However, investors have, up to now, been slow to react to the state of the ocean.

Despite a growing number of sustainability-themed global investment frameworks – such as the Principles for Responsible Investment, the Sustainable Blue Economy Finance Principles, and the Principles for Sustainable Insurance – investor views on the ocean as an investment theme are not clear.

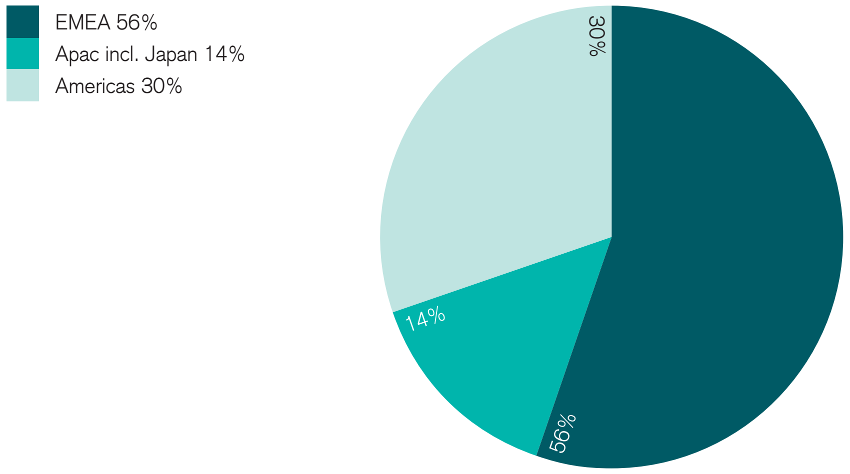
Anecdotally, there is a lot of interest in the topic across the market; however, not much is known about investors' awareness of the impact of their investments on the marine environment and how this may subsequently affect their portfolios' performance and value. There is also little discussion of shareholder engagement with companies that have negative impacts on the ocean, and the potential for using engagement as a tool to reduce these impacts. Responsible Investor and Credit Suisse therefore wanted to investigate how aware investors are of their impact on ocean health and the ability to deliver a sustainable Blue Economy.

Further, we wanted to question whether conditions exist for the private capital markets to provide much-needed funds to secure sustainable use and development of ocean resources. And if not, what needs to change.

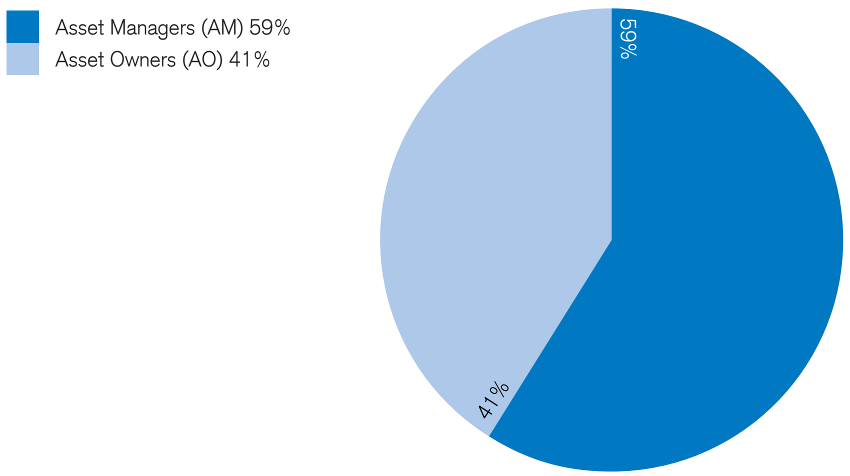


# Demographics

**Geographical coverage**
% of respondents. 328 respondents from 34 countries

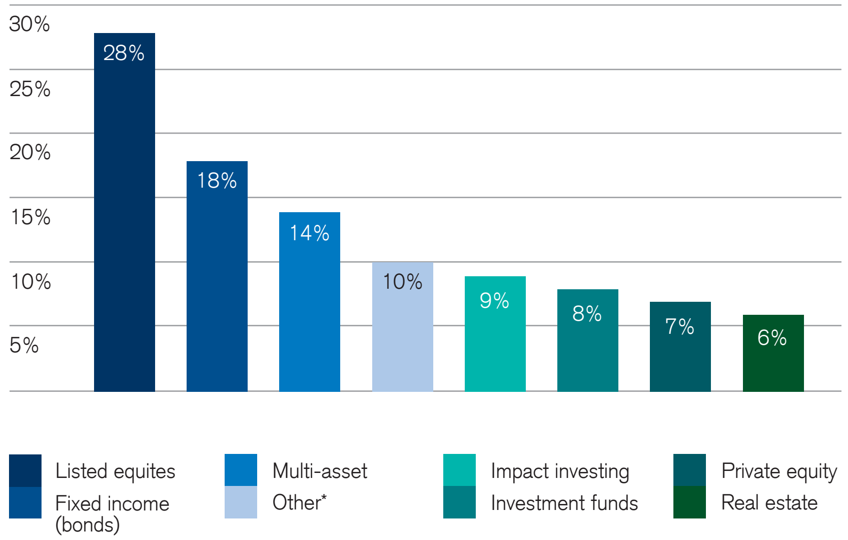



**Organisational distribution**
% of respondents. 328 respondents from 34 countries



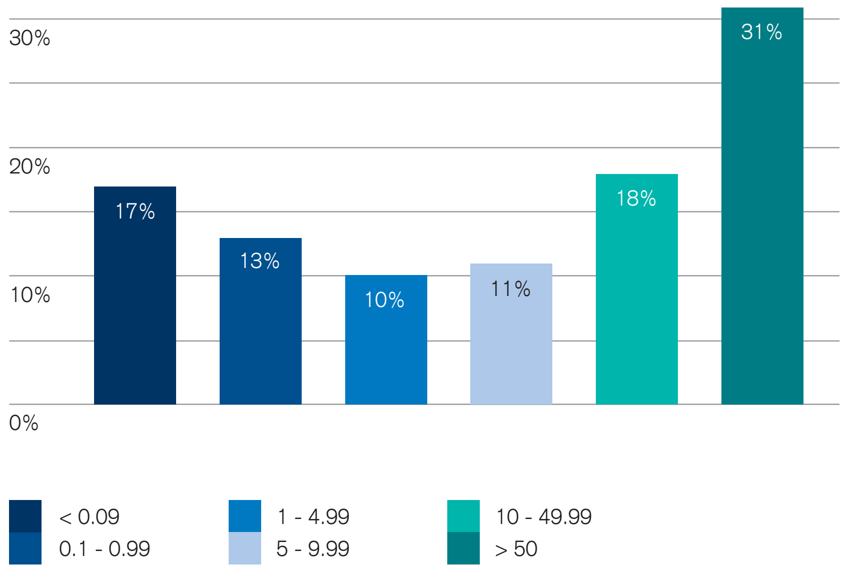

Asset owner participants made up 41% of respondents to this survey and were defined as respondents from the following organisation types: Corporate pension funds (6%), public pension funds (3%), industry-wide or union pension funds (3%), sovereign wealth funds (1%), insurance companies (5%), charities and foundations (13%), single- or multi-family offices (5%), High-net-worth-individuals (5%)

**What do you primarily invest in?**
% of respondents. 204 respondents

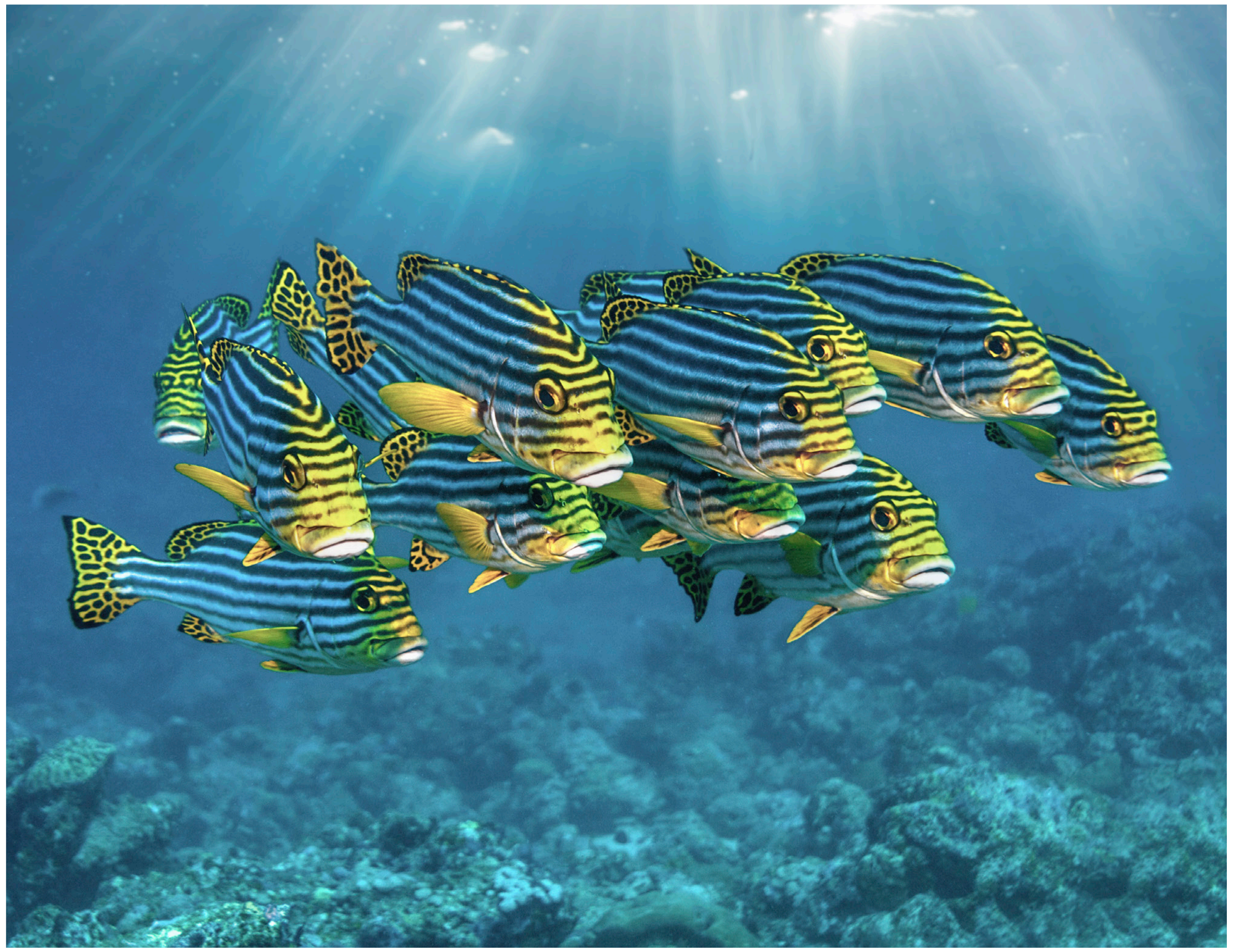



*Other = blended finance, early stage VC, infrastructure, real assets

**Respondents' assets under management (AUM, €bn)**
% of respondents. 203 respondents



# What is the Blue Economy – and are investors aware of its importance?



# What is the Blue Economy and which sectors are part of it?

This question may seem to have a fairly straightforward answer – and could be taken to mean any sector which derives its main source of value from the use of the marine environment or its resources. However, when considering the interconnectivity and impacts of various economic sectors on the ocean and the importance of the ocean's natural assets to the global economy, it is important to provide a more accurate definition which incorporates these values.

Two influential pioneers in the space have expressed the 'sustainable' Blue Economy as follows:

**"The Blue Economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health." (World Bank)**

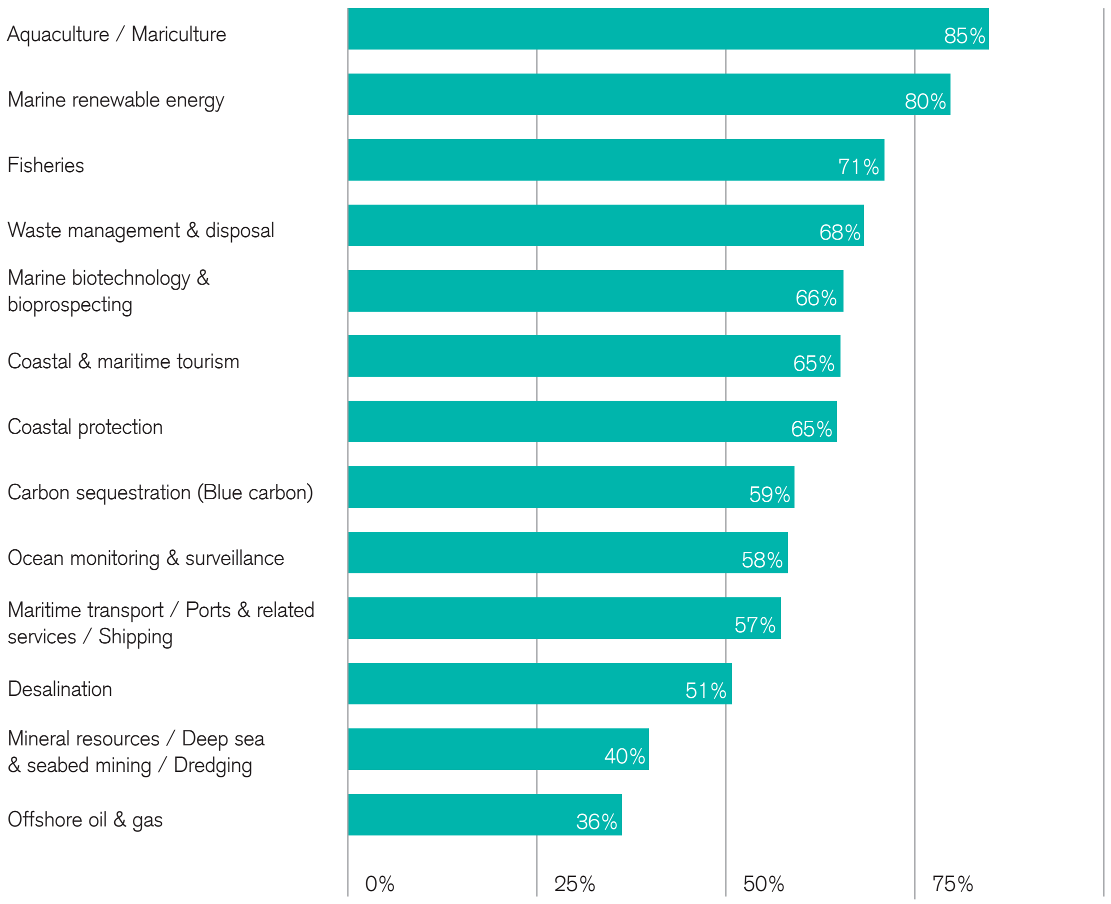
**"A sustainable Blue Economy is one which:**
- **provides social & economic benefits for current & future generations**
- **restores, protects & maintains diverse, productive & resilient ecosystems**
- **is based on clean technologies, renewable energy & circular material flows." (WWF)**

In terms of sectors and industries, some which come to mind immediately include fisheries, aquaculture and shipping. However, whilst the Blue Economy does include these industries, a sustainable Blue Economy requires them to change their current unsustainable business practices towards a more sustainable future. Additionally, the Blue Economy taxonomy is far more wide-reaching. It encompasses sectors as diverse as renewable energy, infrastructure, waste management and disposal, alongside – in the eyes of some experts – even touching on ecosystem preservation, bio-prospecting and land-based agriculture (which is inextricably linked to marine ecosystems via fertilizer and pesticide runoff to groundwater sources, as well as to rivers and into the ocean)[6].

In order to set the baseline for this study, we asked investor respondents which sectors they consider to be part of the Blue Economy. Aquaculture / mariculture (85%), as well as fisheries (71%) are in the Top 3 sectors according to investor respondents. The trio is completed by 'marine renewable energy' (80%). With the topic of marine plastic pollution being high on the public and policy agenda currently, it is not surprising to see the 'indirectly linked' sector of 'waste management & disposal' coming in fourth with 68% of respondents seeing it as a definite part of the Blue Economy.
Interestingly, environmentally damaging activities such as 'offshore oil & gas', as well as 'mineral resources / deep sea & seabed mining / dredging' were considered by over a third of respondents to be part of a Blue Economy.

6. In the context of this study, the Blue Economy was defined using a broad definition, including sectors indirectly linked to the ocean through either (current) negative impacts or risks associated to ocean health, in an effort to capture as broad a picture as possible of the opportunities and risks related to the ocean. The author acknowledges that a narrower definition of the Blue Economy, for example only including sectors which derive revenues directly from the ocean alongside marine conservation projects, will impact the size and availability of investment opportunities, as well as the range of instruments to address these.

**Which sectors make up the Blue Economy?**
% of respondents. 218 respondents




Based on the definition provided above, these sectors would not, however, be considered to be a part of a sustainable Blue Economy. Interestingly, they received less support from asset owners: only around a third of asset owners (35% and 33%, respectively) think that 'mining' and 'offshore oil & gas' should be part of the Blue Economy. This compares to 43% and 38% of asset managers, respectively.

It is imperative that all conversations around the ocean take into account sustainability. Apart from the importance of the ocean to human well-being and society[7], some two thirds of the ocean's economic value depends on its health and therefore maintaining and restoring ocean health is an essential prerequisite for any economic activities to succeed in the long run. Crucially, alongside governments and scientists, many investor respondents mention the need for caution for potentially damaging sectors and highlight the need for the sustainability of the Blue Economy above all else:

**"[There is a] Need for focus on environmental risk for all of the sectors, as most are very un-sustainable as is." (German AM)**

**"Any of these sectors can be part of the Blue Economy, provided they are sustainable." (South African Insurance company)**

**"All investible assets should be ones that enable sustainable and regenerative activities in the ocean – extractive/oil and gas carry huge financial risk." (UK-based foundation)**

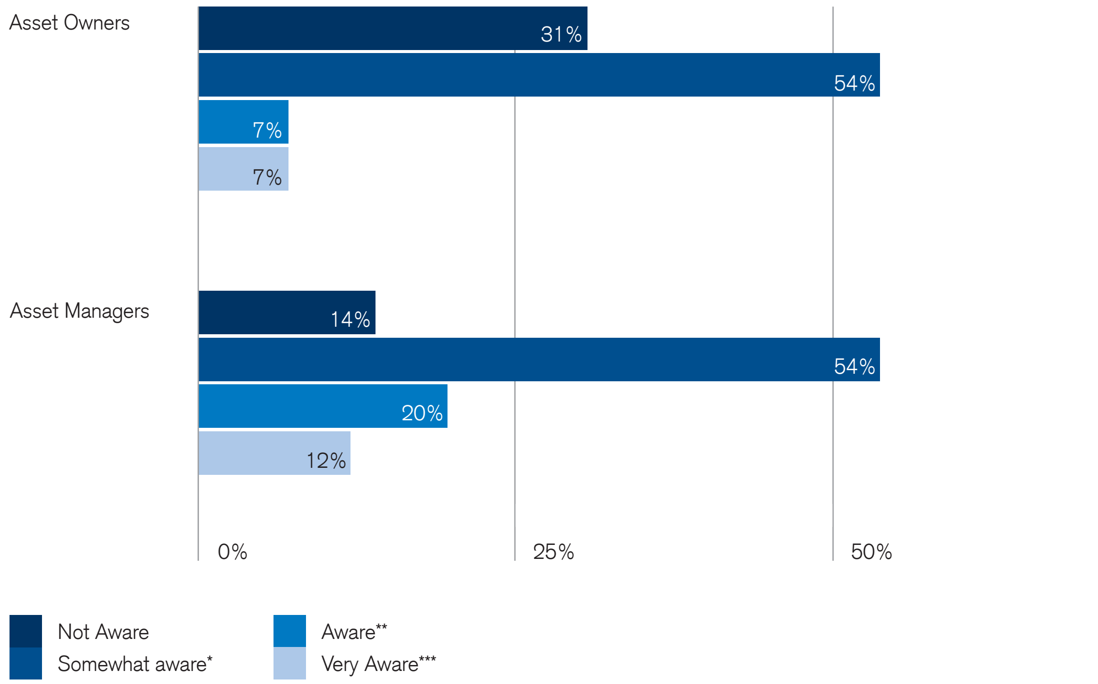
7. MacKerron G, and Mourato S, Happiness is greater in natural environments, Global Environmental Change, 2013

# How aware are investors of the impact of their investments on the ocean?

When first dipping their toes into the Blue Economy, a good place for any investor to start is to create a baseline assessment of their portfolio, or their products, to establish what impact on and exposure to the marine environment their investments have. This exercise is especially impactful for larger institutional investors with a considerable investment portfolio. Often such externalities are not taken into account and are therefore not revealed during traditional investment analysis and valuation.

In addition to raising awareness about the topic internally, this initial step can go a long way towards lessening an organization's negative impact on the ocean, as well as providing potential areas for engagement with portfolio companies. Assessing portfolio investments for ocean impacts may also uncover potential portfolio weak spots for ocean risk – where investments are at risk from a degrading ocean environment and processes. One example of such risk is looming over some of the major global industrial fishing companies. Examining the opaque networks of 41 Japanese fisheries and seafood companies (with a combined market cap of US$ 134bn in 2019), Planet Tracker found "serious financial and reputational risks,

**How aware are you of the ocean impacts of your investments?**
% of respondents. 218 respondents
**3 in 4 respondents have not assessed their investments for ocean impacts or risk exposure**




* not assessed (yet); ** we are currently assessing our products and investments portfolio-wide; *** we have assessed products and investments portfolio-wide and acted upon findings.

not just to Japanese wild-caught companies, but to the investors and credit lenders who finance them."[8] Due to a lack of transparency and traceability, investors currently have limited ability to tell whether the companies they finance are sourcing wild-caught fish sustainably or not.

Similarly, transparency and environmental risks can be found in the aquaculture sector, which – while currently exhibiting promising growth – threaten the success of the whole sector[9]. This is despite the fact that aquaculture and mariculture (referring to the cultivation of marine organisms in the open ocean in order to reduce negative environmental impacts on coastal waters) if undertaken sustainably can be considered to be some of the most promising sectors of a sustainable Blue Economy.

When asked about their awareness of the ocean impact of their portfolio investments, three quarters of investor respondents (75%) stated that they are either unaware, or at most 'somewhat aware' of these impacts but not having actively assessed their portfolios. Given the possible financial and reputational risk these investors are exposed to by not assessing their portfolio investments, these findings are surprising to say the least. Unless investors and credit lenders increase awareness and adopt policies on sustainable Blue Economy topics, such as sustainable seafood, current financial risks are poised to grow.

The lack of awareness of the impacts of the underlying companies within investor portfolios is also a missed opportunity for engagement with these companies. The great majority of these investors are now signatories to the UN Principles for Responsible Investment, Principle 2 of which calls on investors to be active owners, and to use their ownership to encourage proper management of ESG issues.

Across our cohort, asset managers seem to be more aware when it comes to ocean-related topics with a third of all asset manager respondents stating that they are aware of their portfolio impacts already and are actively assessing their investments. In contrast, only 14% of asset owner respondents do so.

8. Perfect Storm – Profits at Risk in the Japanese Seafood Industry Planet Tracker, 2019
9. Shallow returns? ESG risks and opportunities in aquaculture FAIRR, 2019

This reveals a disparity of knowledge and preparedness around ocean investments between asset managers and their clients. Given the level of interest in ocean topics in general and sustainable Blue Economy investments in particular, the former would do well in trying to see this knowledge imbalance as an opportunity to ramp up internal expertise and educate the latter. Asset owners and their beneficiaries / clients may be at risk from capital impacts on their investments' value brought about by a degrading ocean environment which they – unknowingly – help finance. Additionally, a general promotion of ocean-literacy and expertise around how ocean health affects all life on earth is one recommendation put forward by the UN in order to achieve SDG 14 – Life Below Water[10].

On the finance and investment side, there are networks and initiatives trying to improve this situation. The Sustainable Blue Economy Finance Principles, co-created by WWF, the European Commission, the European Investment Bank and the World Resources Institute[11], could help asset owners and managers alike in assessing their current portfolios, alongside improving their knowledge on this emerging topic. The Principles have become the guiding framework for UN Environment's new Sustainable Blue Economy Finance Initiative, launched in November 2019. Further, the newly created Ocean Risk and Resilience Action Alliance (ORRAA) led by global insurer AXA XL and ocean advocacy group Ocean Unite is supported by all G7 members, as well as Fiji, India, Mexico, and Norway. It focuses on addressing the risks occurring from ocean degradation and the need to invest in coastal natural capital[12].

10. sdg.iisd.org/news/unesco-meets-sdg-14-commitment-launches-ocean-literacy-portal/
11. ec.europa.eu/maritimeaffairs/befp
12. www.undercurrentnews.com/2019/08/27/canada-commits-close-to-2m-to-alliance-combating-ocean-threats/



# Investing in the Sustainable Blue Economy – what is already happening?

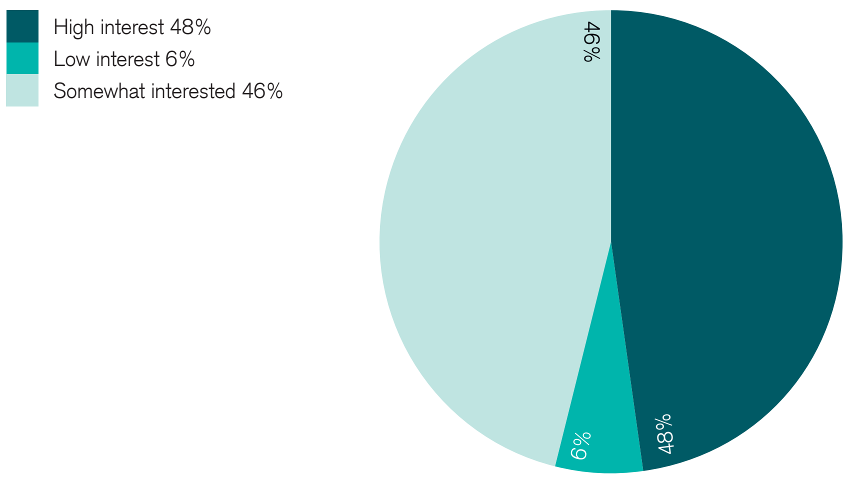
# Is there investor interest in the sustainable Blue Economy?

After assessing the awareness of investors around sustainable Blue Economy themes, it was crucial to evaluate the current 'state of affairs' for investors when it comes to sustainable Blue Economy investments. An overview of the ways in which financial and investment institutions are already investing into, and engaging with, ocean-related themes and projects is currently lacking.

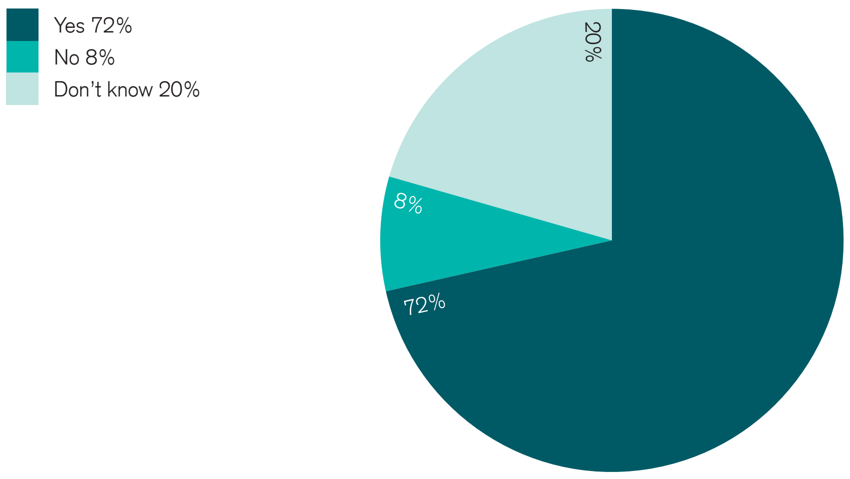
Until now, the bulk of capital deployment towards a sustainable Blue Economy comes from governmental commitments. The concept of the sustainable Blue Economy is actively promoted by many states such as Canada, the EU, as well as Kenya and several other African countries. In fact, the governments of Canada, Kenya and Japan co-hosted the first sustainable Blue Economy Conference in Nairobi in 2018. Nonetheless, if a truly sustainable Blue Economy is to be achieved in the future, the flow of private capital into the space is crucial.
**Nine out of ten investor respondents are interested in investments related to the sustainable Blue Economy, with almost half of respondents even citing 'high interest' in the topic.** In particular high-net-worth respondents, alongside foundations, public pension funds and family offices, as well as their asset managers, showed high interest in the investment topic. But not only is interest high: almost three out of four respondents deemed the sustainable Blue Economy to be 'investible'.

In view of the sustainable Blue Economy being tightly linked to the achievement of SDG 14 – Life Below Water, it is important to highlight that proponents of the sustainable Blue Economy globally are calling attention to the need for sustainability thinking to be front and center of any Blue Economy-related projects and investment, as the long-term success of any ocean-related economic activity is dependent on ocean health.

**How interested are you in investments related to the sustainable Blue Economy?**
% of respondents. 235 respondents




**Is the sustainable Blue Economy investible?**
% of respondents. 326 respondents



# In which asset classes does the sustainable Blue Economy fit?

**When asking respondents to back up the claim that the sustainable Blue Economy is investible by telling us where they see sustainable Blue Economy investments fit across different investment approaches, the majority see the impact investing field as most appropriate (81% of all respondents agreed), closely followed by thematic investment (75%)**[13]. While these relatively small fields currently only inhabit a niche within the wider investment world, their association with the sustainable Blue Economy makes sense at this point due to the relative recent emergence of the theme. In order to advance the concept and ocean-related investments, however, there is a need to integrate the sustainable Blue Economy into more mainstream asset classes. Therefore, a sign that investors' awareness is increasing may be that almost half of respondents (49%) already see the sustainable Blue Economy fit into fixed income and infrastructure investments.

**"Many asset classes might contain exposures to Blue Economy themes, but outside of related PE and dedicated water strategies claims would [currently] be more based in marketing / Bluewash than reflecting primary investment drivers" (UK-based AM)**

These results match closely with the overall trend observed when asking about investible opportunities. Early stage investments are currently considered the most promising financial products (55%), which often go hand-in-hand with impact and private equity investments.

Early-stage private equity investors often commit necessary initial capital to innovative start-ups, providing them with expertise and aiming to upscale promising solutions. By injecting risk-capital, they become partners in a firm's growth, helping unlisted dynamic companies to expand, create jobs and ultimately facilitate growth in their economies. Especially venture capital investors lay crucial groundwork for the sustainable Blue Economy in terms of innovations coming to market. A sign of how promising technology solutions are deemed to be to boost the sustainable Blue Economy is the recent establishment of the 'China-EU Blue Industry Park' located in China's 'Silicon Valley' Shenzhen[14]. The innovation hub, focusing on Bluetech and marine engineering, is the fruit of a partnership between the EU and China on developing a sustainable Blue Economy.

**"The Blue Economy fits all [asset classes], but to date [there are], only impact investing / private equity solutions. Need to scale!" (US-based AM)**

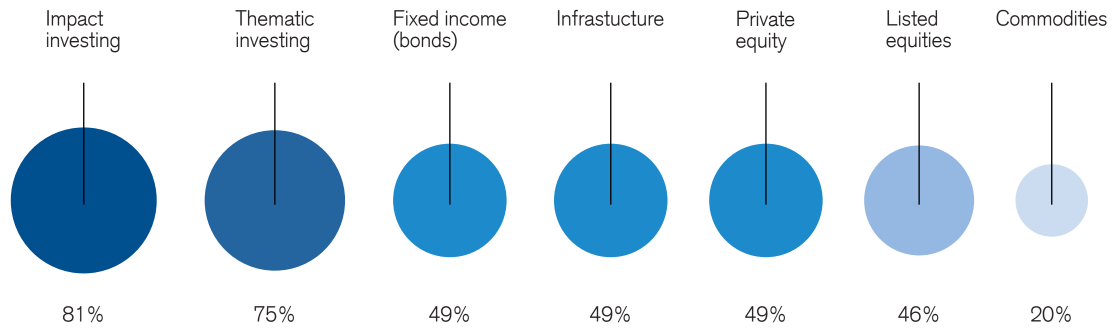
Although most of the opportunities are so far perceived to be in early stage investments and impact investing, debt and blended finance are also seen as viable pathways towards tapping into the 'ocean of opportunities' within the sustainable Blue Economy. More than a third of respondents see opportunities within more mature, low-risk equity investments, and a quarter can see highly liquid equity investments making a difference in the future.

13. Impact investing here describes those investments giving equal importance to the social or environmental benefit of a project / business and seeking a return.

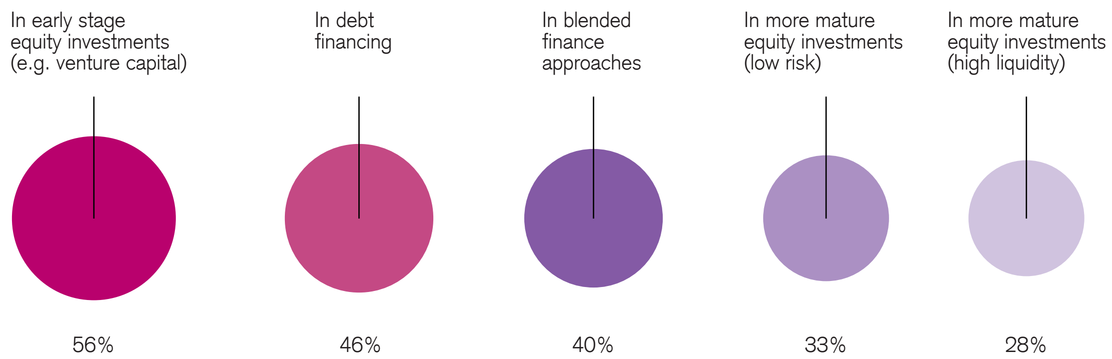
14. www.chinadaily.com.cn/a/201712/10/WS5a39081ca31008cf16da23da.html



**In which asset classes does the Blue Economy fit?**
% of respondents. 222 respondents




**Where do you mostly see investible opportunities in the sustainable Blue Economy?**
% of respondents. 214 respondents



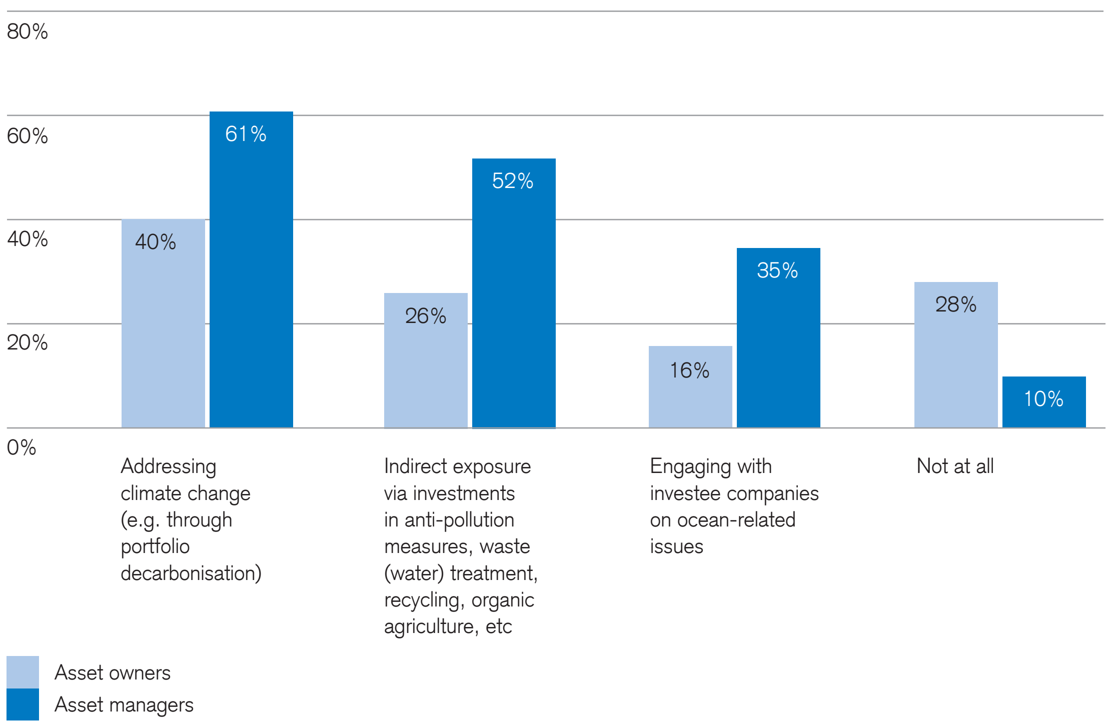

A promising step towards integrating sustainable Blue Economy themes into mainstream finance is the emergence of blue bonds, as recently successfully demonstrated in the Seychelles[15]. Further, the topic of blended finance is getting more traction in the market, as shown by NatureVest, which coordinate debt restructuring in small island states with the help of public-private partnerships[16].

By spreading investment risk across partner organizations and by pooling funds they allow catalyzing investments into innovative and higher-risk projects. In the absence of suitable opportunities within mainstream listed equity markets, supporting innovative financing and investment strategies, such as blended finance, alongside supporting and providing scale to smaller solutions-oriented businesses via private equity and venture capital investments, are already viable options for investors to take part in the sustainable Blue Economy.

15. www.worldbank.org/en/news/press-release/2018/10/29/seychelles-launches-worlds-first-sovereign-blue-bond
16. www.nature.org/en-us/about-us/who-we-are/how-we-work/finance-investing/naturevest/ocean-protection/

# How are investors already addressing sustainable Blue Economy themes in their investments?

**How are you currently addressing sustainable Blue Economy themes in your investments?**
% of respondents. 244 respondents




One of the big unanswered questions this report aimed to address is: Are there investments which are already supporting ocean health within current investor portfolios? And if so, what kind of investments are they?

**"[There are] Limited listed investment [opportunities] in direct impact companies – indirect impacts are manifold but spread over many different sectors." (UK-based AM)**

While the ocean face many threats which can be individually addressed, arguably the biggest one is the climate crisis, which has the potential to endanger most of the marine life we know and depend on. It also impacts the human use of the ocean environment for sectors as wide-ranging as shipping, fisheries and tourism, which may all be at risk from rising sea-levels, ecosystem degradation, coastal erosion and more frequent extreme weather events. An example of an asset class already experiencing the impact of the climate crisis is real estate, with properties exposed to sea-level rise already selling at a 7% discount compared to those with less exposure in the US[17]. Globally, Real Estate Investment Trusts (REITs) with the highest exposure to rising seas are based in Hong Kong and Singapore, while Japanese REITs are at high risk for severe weather events putting US$ 264.5bn of properties at risk across the country.

Addressing the climate crisis within a portfolio is directly contributing positively towards future ocean resilience. With the decarbonization of the world economy a major topic globally, most investors are actively addressing the climate crisis within their portfolios (61% of asset managers and 40% of asset owners do so).

**"Most real opportunities are in VC & PE. 'Blue' investments in current portfolios are not there for 'Blue' reasons (e.g. offshore renewables) and claiming otherwise other than in a dedicated thematic strategy would be Bluewash." (UK-based AM)**

There is a relatively stark difference in how investor respondents are already actively supporting a sustainable Blue Economy, depending on whether they represent an asset manager or asset owner organization. A frequent answer by asset manager respondents was that they have an indirect positive exposure to the ocean environment by for example investing into anti-pollution measures, waste (water) treatment, recycling or organic agriculture, as well as actively engaging with portfolio companies on ocean-related issues (52% and 35% of asset manager respondents, respectively). In contrast, amongst asset owners (while some are also indirectly supporting healthy oceans via their investments) more than a quarter (28%) revealed that they are not addressing ocean health at all in their investments. This number dropped to one in ten asset manager respondents.

17. Climate Risk, Real Estate, and the Bottom Line. GeoPhy & Four Twenty Seven, 2018

# The role of engagement

Engagement with investee companies can be a particularly impactful way to take account of ocean health risks to a portfolio. Over a third of asset managers (35%) but only 16% of asset owners do so already. In fact, investor engagement aiming to reduce a company's (negative) impact on the ocean can be especially impactful in the listed equity market, where dedicated investment opportunities are not yet plentiful. Successful engagement can deliver substantial change in company practices and performance, as well as lowering reputational risk for the company and its investors[18].

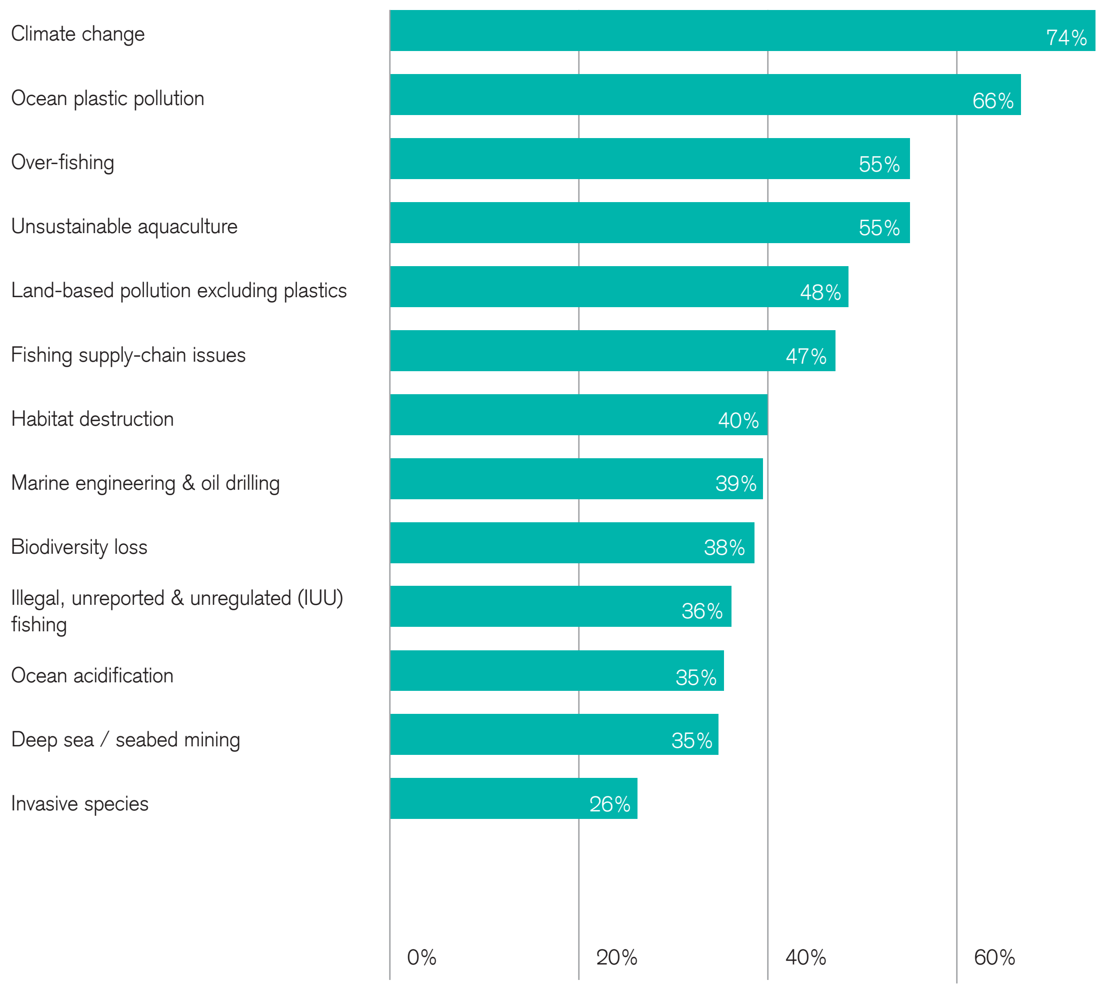
**"We're right at the beginning of serious and considered investor engagement around ocean related issues, whether it is plastics pollution, shipping, habitat loss or overfishing. We've seen the development of investment principles related to the ocean, setting down responsible fisheries management along with investor engagement led by groups such as Aviva Investors and Norges Bank in Europe and Rockefeller & Co in the US. Companies with operations in the ocean can expect considerably more scrutiny about their impacts." (Mark Campanale – Founder & Executive Director, Carbon Tracker)**

**Insight – Overfishing as an engagement topic**
Taking the issue of overfishing as an example, there are many points in the supply chain where engagement with different players is possible. In the first instance, the fishing companies active in overfishing are a direct target. However, these are often financed by banks or owned by private equity funds. Engaging with these financiers on, for example, introducing sustainable loan covenants or investment policies can have significant downstream influence on the extraction practices of fishing companies, which rely on the capital provided by these organizations.

At the end of the supply chain stand the large retailers purchasing fish and seafood from these providers. Already in 2011, a group of 20 investors (all signatories to the UN PRI) engaged with 40 global companies across the seafood value chain asking about their sustainable sourcing practices[19]. A more recent high-profile example of how investors can exert pressure on investees to promote sustainable fishing practices comes from UK supermarket chain Tesco. Its investors urged the retailer in 2016 to only sell fish and seafood certified as sustainable by the Marine Stewardship Council[20]. Tesco, the UK's biggest fishmonger, now has a sourcing policy in place aiming for 100% of their seafood coming from certified sustainable sources[21] and is involved in industry-initiatives promoting transparency such as the Ocean Disclosure Project[22].

18. ClientEarth: Responsibility should be a priority for seafood investors, Responsible Investor, 2017
19. www.responsible-investor.com/articles/the-future-of-fish
20. The Marine Stewardship Council (MSC) certifies fisheries as sustainable which comply with their Fisheries standards.
21. www.tescoplc.com/sustainability/downloads/seafood-policy/
22. oceandisclosureproject.org/news/2019/tesco-joins-ocean-disclosure-project

**Which ocean health risks are investors best placed to engage on?**
% of respondents. 220 respondents




For investors interested in becoming active in engagement, the most straightforward way to approach this is via increasing internal knowledge around issues affecting ocean health and the sectors involved. They can then begin assessing their investees' supply chains within these sectors, in order to identify points of leverage for engagement. Interestingly, when asked what ocean health risks investors are best positioned to engage with, the most frequent answers were climate change (74% agree), the issue of marine plastic pollution (66% agree), alongside overfishing and unsustainable aquaculture (55% agree).

Several NGOs produce reports on ocean health issues aimed at an investor audience, highlighting leverage points for investors to engage on with portfolio companies. Recent examples include Planet Tracker reporting on sustainability issues in the Japanese seafood industry[23], FAIRR Initiative's report on ESG risks in aquaculture[24] and a PRI-backed report from the Sustainable Fisheries Partnership highlighting ways in which investors can positively engage with companies steering them towards more sustainable sourcing strategies[25].

23. Perfect Storm – Profits at Risk in the Japanese Seafood Industry. Planet Tracker, 2019
24. Shallow returns? ESG risks and opportunities in aquaculture. FAIRR, 2019
25. Sustainable seafood and responsible investment, Sustainable Fisheries Partnership, 2016

# What are the barriers for sustainable Blue Economy investing?

**Over a quarter of asset owner and one in ten asset manager organizations in our cohort do not address any sustainable Blue Economy themes within their portfolio**[26]. This is a stark message to those who have been pushing for the development of the sustainable Blue Economy and for achieving SDG 14 – Life Below Water. It implies that there is a lack of capital flowing towards a sustainable use of ocean resources, painting a bleak outlook for ocean health in the future. Therefore, it was imperative to ask financial players globally what the barriers might be to invest in the sustainable Blue Economy.

In order to show the variety of responses, several quotes from investor respondents are included below:

**“[Internal] resource for engagement [with the topic] is constrained: other ESG topics have higher priority. [Additionally,] there are uncertain definitions for assessing exposure of risky or solution-oriented companies. [Further,] impact investing in this area requires a particular skill set.” (UK-based AM)**

**“Lack of quantifiable environmental benefits attributable to the investment.” (UK-based AM)**

**“Lack of specialist/thematic funds with sufficient track records.” (US-based AM)**

**“As emerging markets corporate debt investors, we have not seen blue-bonds of US$400m or bigger issued in our universe.” (Dutch AM)**

For asset manager and asset owner respondents alike, the two main barriers to investment in the sustainable Blue Economy are currently a lack of investment-grade projects (47%), and a lack of internal expertise on the topic (45%). On the one hand, investors are looking for (1) projects with a proven track record and a history of success, (2) innovative ways of de-risking projects, e.g. through PPPs, and (3) standards and guidelines / a taxonomy, directly addressing the need for a definition of the sustainable Blue Economy (named as a barrier by 37% of investor respondents). On the other hand, this suggests that there needs to be much more industry education, research and awareness-raising on this relatively recent investment topic. The aforementioned Sustainable Blue Economy Finance Principles could be a first step into the right direction, similarly to how the UN Principles for Responsible Investment (UN PRI) have supported and guided the general ESG and Sustainable Finance markets.

**A particular barrier to highlight for almost two thirds of asset owner respondents (63%) is that these types of investments are either not offered by their respective managers, and / or are not advised by their investment adviser**. Given that there is a high level of asset owner interest in the ocean topic in general and in sustainable Blue Economy investments in particular, it is surprising to see that a major hurdle for them to put their money on the table is that their managers are not offering suitable products or discussing this topic with them. To say it with the words of one US-based public pension fund respondent:

**“There has not been a critical mass. [The theme] will explode when our lives depend on Blue.” (US-based public PF)**

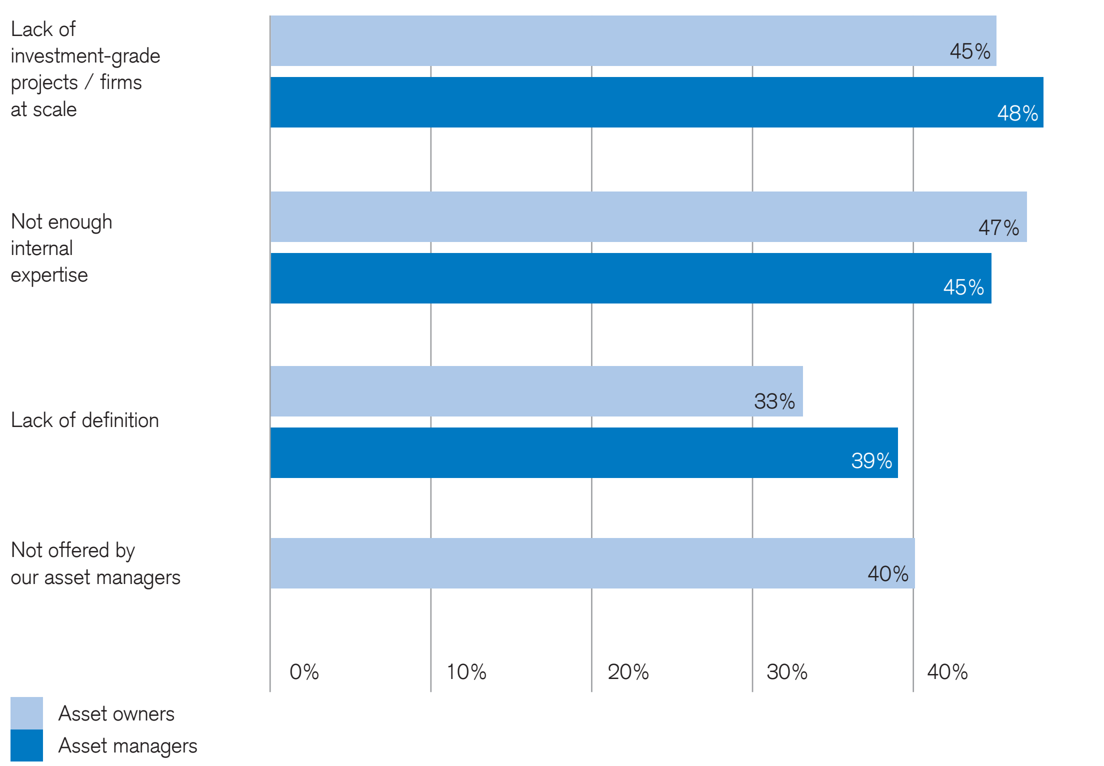
26. By nature of such surveys, this cohort comprises a group of investors who show at least a slight interest in the thematic of the Blue Economy and sustainable investment in general. There is likely a large number of investor organizations globally who are unaware of the topic, alongside its risks to and opportunities for portfolios.



## “Data. Effective investment strategy requires accurate, timely, transparent and robust data on key and material elements of the business. Working in remote and isolated environments, data collection for fisheries was and remains a large issue in designing solutions that work for industry, investors and the planet.

**Mark Campanale** – Founder & Executive Director, Carbon Tracker

**Main barriers to sustainable Blue Economy investment**
% of respondents. 218 respondents



# Opportunities and outlook – what is still to come?

# What are the drivers for sustainable Blue Economy investments?

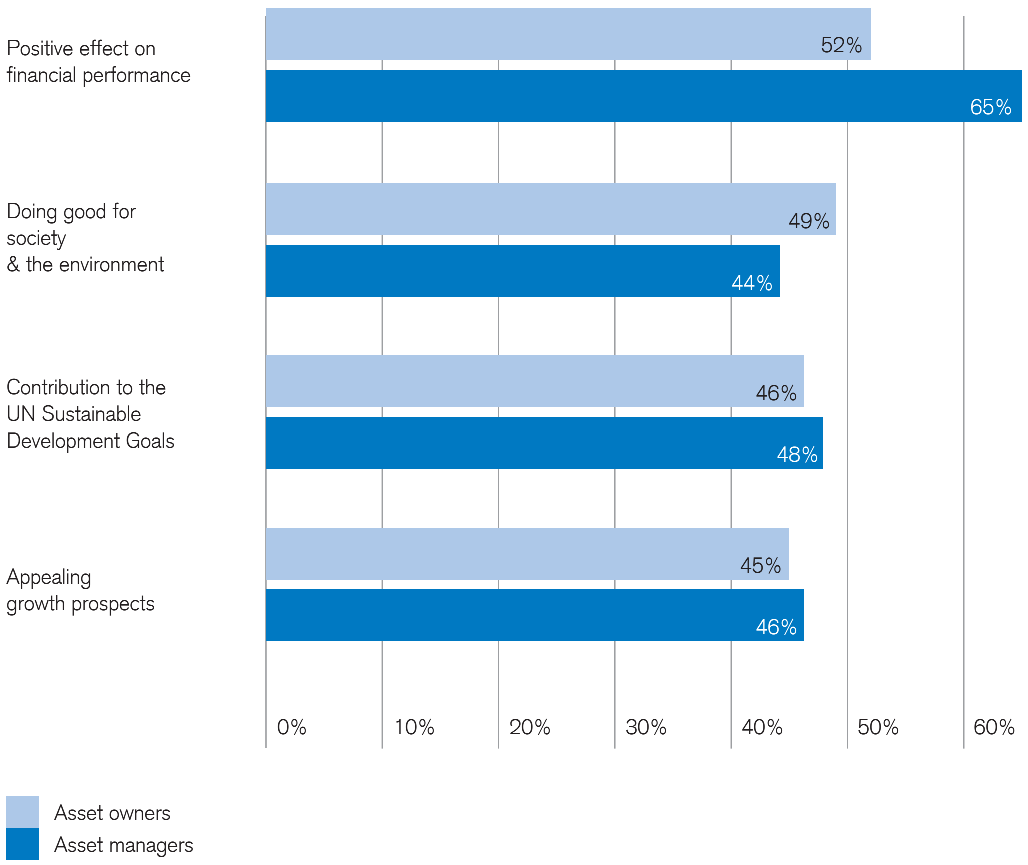
While various barriers are holding back significant scaling of the sustainable Blue Economy, there are several drivers for investor interest. **Over half of asset owners and almost two in three asset managers see their main driver to be a positive effect of sustainable Blue Economy investments on financial performance, showing that there is a confidence among investors in the business case for investing in the sustainable use of the ocean**. Additionally, investor respondents see appealing growth prospects in sustainable Blue Economy sectors. This is supported by a study by the OECD, estimating the growth prospects of the Blue Economy to be twice that of the land-based economy over the next decade[27].

On the non-financial side, many investor respondents see the achievement of the UN SDGs as driving their interest in the topic, alongside doing good for society and the environment. There is one topic, however, where asset manager and asset owner opinions on its impact seem to differ – just over a quarter (28%) of asset managers see the generational shift towards millennials demanding more sustainability in their investments as a main driver for their interest in the sustainable Blue Economy, compared to just 11% of asset owner respondents.
This 17 percentage point difference may suggest that, while more sustainability-aware millennials will certainly demand ESG and sustainability thinking to be part of the investment process, the sustainable Blue Economy is deemed interesting and important enough to be considered by asset owners in its own right, rather than something they are pushed to acknowledge by their younger beneficiaries / clients.

**In line with this and supporting earlier findings about the interest in ocean-related investments, almost half of asset managers (45%) mentioned that their asset owner clients ask for investments related to the sustainable Blue Economy**. This further highlights the need for industry education, as well as expertise, alongside projects to be scaled up, in order for private capital markets to fully embrace this investment theme.

27. The Ocean Economy in 2030. OECD, 2016

**Top drivers for sustainable Blue Economy investment**
% of respondents. 250 respondents




# How can the barriers be overcome?

In order to overcome the barriers mentioned by investor respondents, we asked them for the most important solutions and changes needed. Some might be intuitive, such as increasing ocean literacy across the finance and investment industry. Another might be to establish internal investment policies and investee guidance, as recently done by Norway's Government Pension Fund Global – with AUM of US$ 1.1trn the world's largest sovereign wealth fund, who presented a set of expectations towards investee companies around ocean issues[28].

Again, in order to capture as many different views as possible, the solutions suggested by investor respondents are presented below:

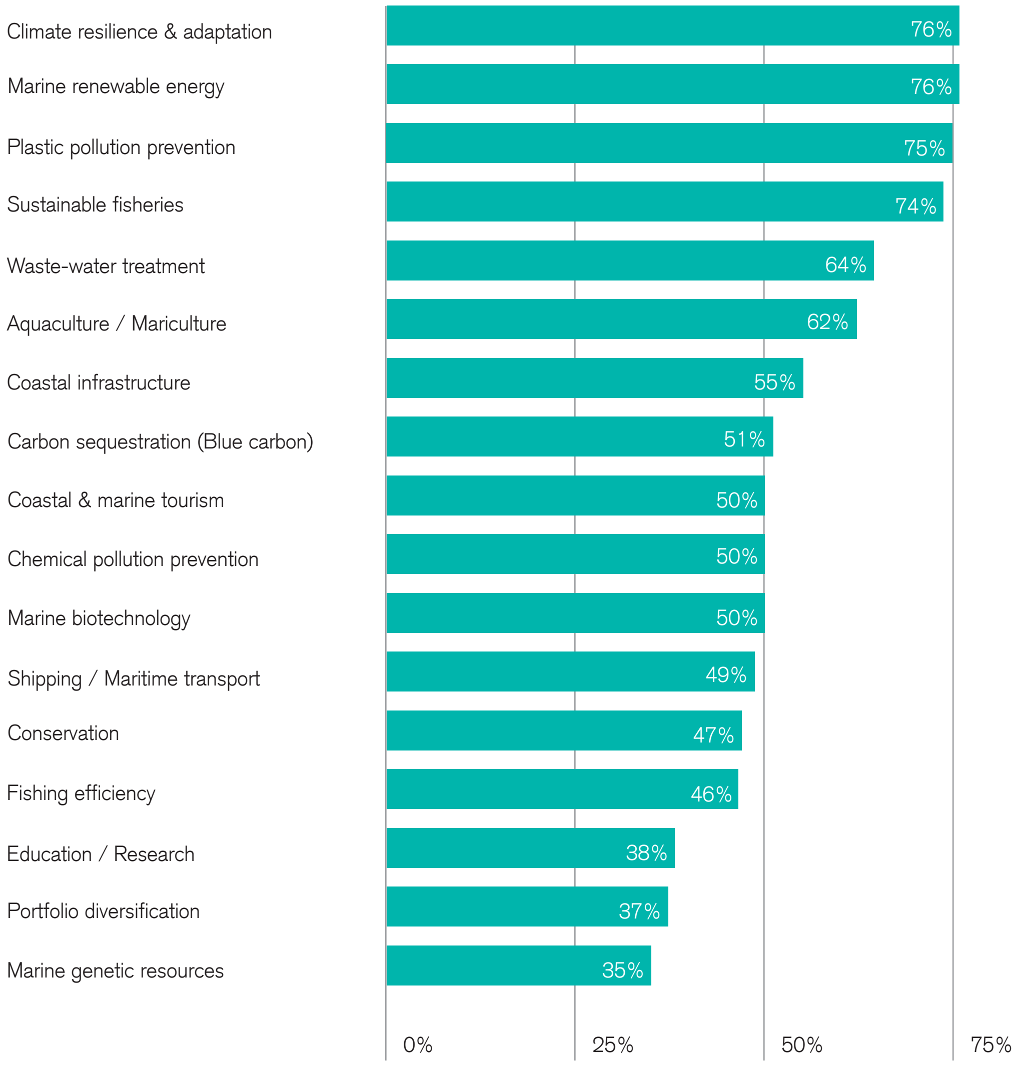
**Asset owners are calling for:**
- Sustainable Blue Economy investment criteria
- De-risking of investments
- Education / network of stakeholders
- Pooled funding opportunities
- Metrics for evaluating success
- General awareness raising

**Asset managers are calling for:**
- Long-term holding periods mandated by clients
- More expertise, knowledge sharing and awareness raising, especially around the investment case for the sustainable Blue Economy
- Taxonomy
- Case studies and reports
- Creation of banks focusing on the ocean
- Investments with track record
- Public-private-partnerships
- Show risk to investments of not taking action

28. www.nbim.no/contentassets17ed97a1a9f845ad8e847a51 bc4b8141/nbim_expectations_ocean.pdf

# Where do the opportunities for investors lie?

**Investor opportunities in the sustainable Blue Economy**
% of respondents. 218 respondents




Investors are interested in sustainable Blue Economy investments and see the potential for growth and positive financial impacts in the sector. But where exactly are the investment opportunities within a sustainable Blue Economy?

This question is two-fold for investors: On the one hand, there are ocean risks where investors are well placed to intervene and engage with leverage and capital, being able to bring about real impactful change. As shown above, doing good for society and the environment is one of the main drivers for investors to invest in the sustainable Blue Economy. On the other hand, there are also tremendous business opportunities in a growing and prosperous sustainable Blue Economy. Ideally, the sustainable Blue Economy combines both of these opportunities in an investment context.
Four sectors stand out as the most promising within the sustainable Blue Economy, each receiving support from three in four investor respondents:

**1. Climate resilience and adaptation + marine renewable energy (76% of respondents see both as an investment opportunity)**

The appearance of climate resilience and adaptation investments among the most promising opportunities is not surprising. The ocean is among the largest carbon sinks of the planet: it absorbs 93% of the heat trapped by rising anthropogenic $CO_2$, as well as approximately 25-30% of anthropogenic $CO_2$ emissions that would otherwise remain in the atmosphere and increase global warming[29].

A recent report published by the High-Level Panel for a Sustainable Ocean Economy found that ocean-based mitigation options could reduce global greenhouse gas emissions by nearly 4bn tons of $CO_2$-equivalent per year in 2030 and by even 11bn tons per annum in 2050, relative to the projected 'business-as-usual' scenario[30].

This would close the 'emissions gap' by up to 21% on a 1.5 deg pathway and by about a quarter on a 2.0 deg pathway. Hence, 68% of asset owner and asset manager respondents to this survey see the huge potential in sustainable Blue Economy investments to address the climate crisis and many investors are already actively investing with this in mind[31].

The High-Level Panel, as well as our investor cohort, predict that the main areas where this potential can be realized will certainly contain ocean-based renewable energy (76% of respondents agree), alongside decarbonizing ocean-based transport (49% of respondents agree). Both sectors are already sizeable and experiencing considerable growth with the offshore wind energy market estimated to increase in capacity from 23.14GW in 2018 to 94.24GW in 2026, at a CAGR of 19.2%[32]. The growth rate of wave and tidal energy is estimated to be even higher at 40.08% between 2017 and 2025[33], being valued at US$ 3bn globally in 2017. In contrast, the global marine transport market is more established at US$ 66.3bn in 2018 and projected to grow at a more modest 2.5% to US$ 80.7bn in 2025[34].

**1.1 Blue carbon (51% of respondents see this as an investment opportunity)**

Another option to tackle the climate crisis highlighted by the High-Level Panel for a Sustainable Ocean Economy is blue carbon. It emphasizes nature-based interventions such as protecting coastal and marine ecosystems, for example seagrass meadows, mangroves and kelp forests, enabling them to act as a carbon sink. Mangroves can store four times the amount of carbon compared to terrestrial forests and at a 40-times faster rate[35]. Healthy mangrove forests further act as natural flood and storm protection, prevent coastal erosion, act as a nursery habitat for fish and crustacean species, thereby supporting the food security of local populations[36].

29. Special Report on the Ocean and Cryosphere in a Changing Climate, Intergovernmental Panel on Climate Change, 2019
30. The ocean as a solution to climate change: Five opportunities for action. High Level Panel for a Sustainable Ocean Economy, 2019
31. Fritsch, D. ESG – Do you or don't you? Responsible Investor & UBS Asset Management, 2019
32. www.fortunebusinessinsights.com/industry-reports/offshore-wind-power-market-100148
33. www.globenewswire.com/news-release/2018/10/03/1600798/0/en/Global-Wave-and-Tidal-Energy-Market-Will-Reach-USD-2-975-48-Million-By-2024-Zion-Market-Research.html
34. www.marketwatch.com/press-release/sea-freight-forwarding-market-2019-global-analysis-oppor tunities-and-forecast-to-2024-2019-02-18
35. Blue carbon also includes the option of storing carbon in the seabed, albeit its viability is currently only of theoretical nature.
36. Saderne, Vincent, et al. "Role of carbonate burial in Blue Carbon budgets." Nature communications 10.1 (2019):1106

Hence, the conservation of these crucial coastal and marine ecosystems has enormous potential for climate change mitigation, as well as for the protection of biodiversity and advancing sustainable development[37]. As carbon pricing and trading becomes increasingly used globally (with the World Bank listing 50 active carbon pricing initiatives in 2019 across 46 national jurisdictions, up from only 24 in 2012[38]) blue carbon has the potential to match its economic value to the immense value it has for ecosystems and climate resilience.

**"Habitat destruction, especially mangroves where shrimps are often farmed in impoundments, are frequently situated within the confines of coastal mangrove forests. According to some estimates, mangroves absorb about 25 million tons of carbon every year, but about 35% of mangrove ecosystems have been lost over the last two decades. We therefore invested in a company making an alternative to shrimp, to alleviate pressure from mangroves. The company is targeting the Asian market which is witnessing about 60% of new seafood consumption globally. The company, led by two brilliant women scientists, plans to enter the Asian consumer market with minced shrimp as early as 2021." Shally Shanker – Founder and Managing Partner, AIIM Partners.**

Notably, 51% of investor respondents mentioned conservation-linked blue carbon as an investment opportunity. Conservation projects do not tend to attract capital investment at a significant rate, due to in part, limited data on financial performance alongside poor industry knowledge of opportunities and success stories. In addition, many conservation projects are located in developing countries, often increasing operational and political risks for investors. Nonetheless, over half of asset managers (but only 37% of asset owners) see investment opportunities in conservation and habitat protection. Therefore, the development of a financial infrastructure around blue carbon systems is crucial for investors, ecosystems and society in general to reap the fruit of this emerging topic.

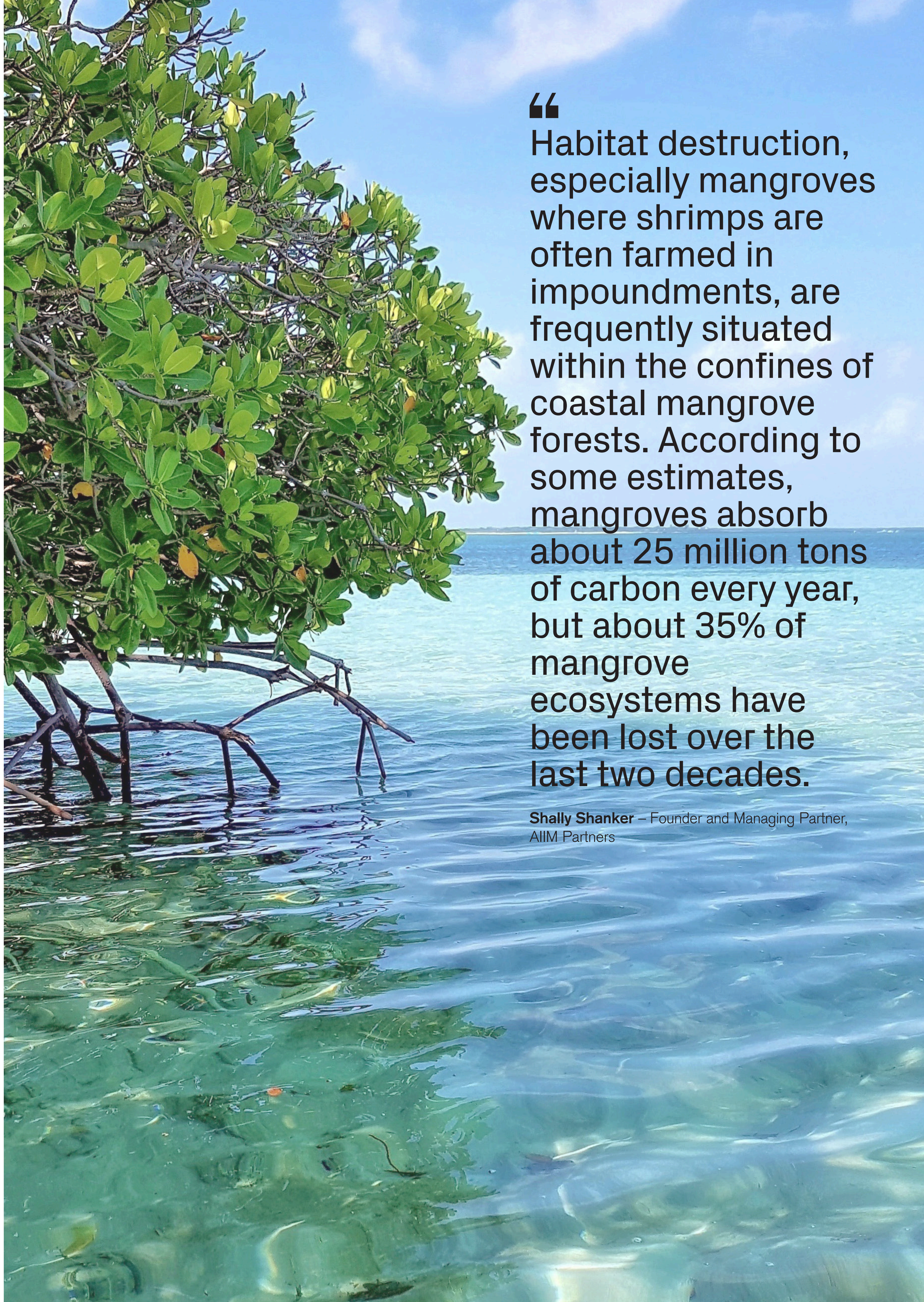
**Insight – Mangrove restoration by Dendra Systems**
Dendra Systems provides technology-enabled restoration services to environmental managers to improve restoration of natural ecosystems globally. Their drone-based automation, and AI-powered intelligence platform, SK.AI, are used in conjunction to scale up restoration, improve outcomes, and improve efficiency.

One of the specific challenges in mangrove restoration is the rate of manual planting on mud flats. In many cases, direct seeding alone would succumb to the challenge of strong tides washing away the seeds from areas to be restored. Using Dendra's drone-based approach, seeds are shot into the ground, penetrating the soil, minimizing the risk of seeds being washed away by strong tides. The rate at which it can plant seeds is over 100x faster than using manual hand planting methods due to the pace of ground-based operations over mud, enabling dramatic scaling of projects based on local resources available.

Another challenge that faces successful restoration of an ecosystem is the quality of data available for management. Ensuring a biodiverse ecosystem is restored, free from competing invasive species, with good vegetation coverage, overcoming local challenges of predation, requires high resolution monitoring data. Dendra collects ultra-high-resolution data on each area of restoration that is analyzed, collates it for reporting and trends are monitored over time. Initial projects have been conducted in the coastal areas of Myanmar restoring mangrove ecosystems that face these challenges.

37. Serrano et al. Australian vegetated coastal ecosystems as global hotspots for climate change mitigation. Nature Communications, 2019 10:4313
38. carbonpricingdashboard.worldbank.org/





**2. Sustainable fisheries (74% of respondents see this as an investment opportunity)**

In addition to direct climate resilience investments, a sustainable ocean-based food system, including sustainable fisheries (supported by 74% of respondents) and aquaculture (supported by 62% of respondents), can go a long way in facilitating a lower carbon diet by sustainably managing and farming fish and seafood populations, alongside abolishing harmful practices and restoring ecosystems. In a business as usual scenario, the fisheries sector in particular faces troubles ahead. Recent research from Florida State University, taking into account not only ocean warming due to climate change, but also salinity and sea surface levels, points to diminishing habitats and a fish population decline[39]. Crucial for fisheries in the US Northeast, the model rendered Atlantic cod essentially absent in the future. Additionally, industrial fishing is one of the biggest drivers of marine biodiversity and fish population decline, linked to habitat destruction, overfishing and the issue of bycatch, among others[40]. Paired with opaque ownership structures of many major fishing companies, human rights violations, a lack of laws to guide fishing on the high seas, as well as the difficulty of enforcing these within coastal waters, one might argue that investments in the traditional fisheries sector currently represent the opposite of sustainable Blue Economy investments.

**"Ineffective stock management fundamentally undermines revenue potential in the long-term. Innovation at the company level consistently provides results of lower overheads, higher safety rates and brighter revenue generation potential over the lifetime of tangible assets, such as fishing boats. In short, working with the environment increases stability, flexibility and resilience into fishery corporate sustainability." (Mark Campanale – Founder & Executive Director, Carbon Tracker)**

However, investors are well placed to tackle these issues head-on by promoting sustainable practices across these industries and by pushing for the catch of healthy fish- and seafood populations, alongside focusing on the farming of species with a lower trophic level (i.e. herbivores, rather than carnivore species like tuna and salmon). The World Bank estimates that if fisheries were to be managed sustainably, the global industry could earn an extra US$ 51 bn-US$ 83 bn every year[41]. The market for sustainable seafood globally is currently estimated to grow from US$ 12.7bn in 2017 to US$ 18.6bn with a CAGR of 4.97%[42]. Especially within the fast-growing aquaculture sector, a move towards more sustainability is required. Global aquaculture is posed to grow at 5.3% to a size of US$ 242bn by 2022[43]. One step will be to change practices from using wild-caught fish as feed to focusing on more ecosystem-friendly seaweed- and insect-based feed solutions. Another step will be putting a stop to open-pen coastal aquaculture in favor of land-based, open-ocean and closed-loop systems which significantly reduce pressure on wild populations.

**3. Plastic pollution prevention (75% of respondents see this as an investment opportunity)**

**"The two best [ocean] investments that can be made are cleaning it up and making sure it stays that way ... profits will follow after that." (Canadian AM)**

Ocean plastic pollution has been square in the public eye over the last couple of years after the BBC's powerful Blue Planet documentary series presented by Sir David Attenborough highlighted the issue to a large global audience. But not only the public has caught on to the topic, governments around the world have woken up to the threat of plastic pollution to the ocean and have been implementing policies aimed at reducing the use of single-use plastic, as well as promoting the transition away from a linear towards a circular economy. There has been a multitude of governmental action globally, most notably nationwide bans on single-use plastic bags in over 90 countries including Kenya, Panama and New Zealand[44]. Many more countries have introduced levies on plastic bags, leading to a reduction in their use globally. Further, the EU alongside the government of Canada have announced bans of certain single-use plastic goods such as plastic straws and cutlery to be implemented by 2021[45]. A multitude of companies have also jumped on the bandwagon now offering consumer goods made from recycled plastic.

39. Jennifer McHenry, et al. Projecting marine species range shifts from only temperature can mask climate vulnerability. Global Change Biology, 2019
40. wwf.panda.org/our_work/oceans/problems/fisheries_management/
41. The Sunken Billions Revisited: Progress and Challenges in Global Marine Fisheries. World Bank, 2017
42. www.globenewswire.com/news-release/2018/05/24/1511642/0/en/Global-Sustainable-Seafood-Market-to-Surpass-US-18-63-Billion-by-2025-Coherent-Market-Insights.html
43. www.alliedmarketresearch.com/aquaculture-market
44. www.economist.com/graphic-detail/2019/07/24/ever-more-countries-are-banning-plastic-bags



Plastic pollution is high on the agenda for asset managers who see it as a win-win investment – investing into the prevention of plastic pollution will tackle one of the big environmental problems of our times, as well as making sense financially. Supporting this development is the fact that it makes economic sense to provide more efficient and successful recycling and collection facilities, making use of the versatility of plastic and working towards a comprehensive circular economy[46].

The plastic recycling market was already valued at US$ 25.6bn in 2018 and is projected to grow at 6.1% to reach US$ 41.2bn in 2025[47]. A case in point is Aquafil, a global producer of synthetic fibers from 100% regenerated waste material used in the textile, flooring, and clothing industries. Its strong financial performance over the last decade has led initial investor Three Hills Capital Partners to retain an equity stake in the company after financing it's ECONYL initiative until Aquafil's IPO in 2017[48]. A further recent high-profile example is the launch of a fund by Credit Suisse, supporting business models that target a more environmentally-friendly, ethical approach to business including the transition away from single-use plastics and the growth of alternative packaging materials[49]. With more innovations around the reclaiming and recycling of plastic on the horizon, alongside the development of alternative (bio-)materials for packaging, the investment theme of tackling ocean plastic pollution has a promising future.

**"Plastic waste has brought the world's attention to the crisis in the ocean and it's encouraging to see so many great innovations and businesses trying to address the plastics problem and help to clean the ocean. We need more capital to invest in companies that are restoring the ocean back to health and in doing so protecting our planet for future generations." (Chris Gorell Barnes – Co-Founder, Blue Marine Foundation)**

45. www.europarl.europa.eu/news/en/press-room/20181018IPR16524/plastic-oceans-meps-back-eu-ban-on-throwaway-plastics-by-2021
46. The New Plastics Economy Global Commitment 2019 Progress Report, Ellen MacArthur Foundation, 2019
47. www.globenewswire.com/news-release/2019/06/11/1866654/0/en/Plastic-Recycling-Market-to-grow-at-6-1-CAGR-to-hit-41-2-Bn-by-2025-Industry-Analysis-by-2019-Trends-Size-Cost-Structure-Sales-Revenue-Growth-Drivers-Price-and-Gross-Margin.html
48. www.thcp.eu/news/three-hills-capital-partners-funds-realise-investments-aquafil
49. www.credit-suisse.com/about-us-news/en/articles/media-releases/credit-suisse-launches-a-responsible-consumer-fund-tracking-sust-201911.html?t=412_0.6522223619414125

# The role of investing in solutions-oriented business and innovative PPPs

In addition to investment opportunities in the sectors mentioned above, there are two key components for establishing a successful and sustainable Blue Economy at scale: Providing early-stage capital for businesses working on solutions to challenges around ocean health, technology and restoration, and innovative financing and investment products.

**“We believe that Bluetech today is where Cleantech was 20 years ago.” (Mark Huang – Co-founder, SeaAhead Inc)**

As mentioned earlier, investing in early stage solutions-oriented businesses is one of the key opportunities within the sustainable Blue Economy for investors at the moment. The areas of VC and private equity seem to be especially prolific with the establishment of several sustainable Blue Economy-focused funds and accelerators over the last couple of years. There are VC investors like Norway-based Katapult Ocean and US-based SeaAhead which both heavily focus on Bluetech solutions to overcome ocean issues[50,51], as well as Netherland-based AquaSpark, investing solely into sustainable aquaculture SMEs and AUM of currently €80 million[52]. Further, US-based Pescador (a holding company founded by Encourage Capital) made their first investment in sustainable seafood company Geomar[53], aiming to recover lost economic value in coastal fisheries through good fisheries management and by restoring ocean ecosystems. Encourage Capital focus especially on businesses targeting stock stabilization and restoration:

**“This is not microfinance for fishers. There are very profitable lower and middle-market seafood companies, which could be sustainable if they get the right investment capital.” (Jason Scott – Co-managing Partner, Encourage Capital)**

These private equity approaches are centered around the common conviction that technological and impact-focused innovation in the sustainable Blue Economy space can deliver on shaping a healthier future for the marine environment while reaping revenue from the scalability of ventures which tackle major ocean challenges. And while this suggests that many actionable opportunities within the sustainable Blue Economy are still rather early-stage, private equity investments nonetheless present scope for investors interested in supporting solutions-oriented businesses and innovations within the sustainable Blue Economy.

50. katapultocean.com/portfolio/
51. sea-ahead.com/what-we-do/
52. www.aqua-spark.nl/the-approach/our-strategy/
53. impactalpha.com/pescador-holdings-first-investment-offers-a-blueprint-for-sustainable-seafood-2/



**“Our target return is 15% net to investors, in line with traditional private equity funds. We believe the Blue Economy is diverse and we see an exciting number of companies and technologies which offer scale, impact and a potentially meaningful financial return to investors. With increased interest in impact investing, it is an exciting time to be investing in the Blue Economy.” (Max Gottschalk – Founding Partner, Ocean 14 Capital)**

Further, innovative approaches for financing conservation efforts using blended finance solutions are increasing in frequency and viability. One example is investment in conservation efforts, such as the creation of Marine Protected Areas (MPAs). These have proven benefits for local fisheries and tourism sectors (among others), alongside preserving crucial ecosystem functions such as efficient carbon sequestration, coastal protection from storms and replenishment of local fisheries. If managed well, they can act like financial investments with a principal set aside that produces interest: Empirical data show that the economic benefit of implementing MPAs can offset the costs of fisheries closure in as little as five years and in some cases even double the income via tourism access fees, ecosystem service payments and seafood market development and certification schemes. Further, MPAs usually cause an increase in fishing revenue from a ‘spillover effect’: Fish and other marine fauna flourish within the protected zone, leading to an increase in the availability of fish and seafood in areas around the MPA[54].

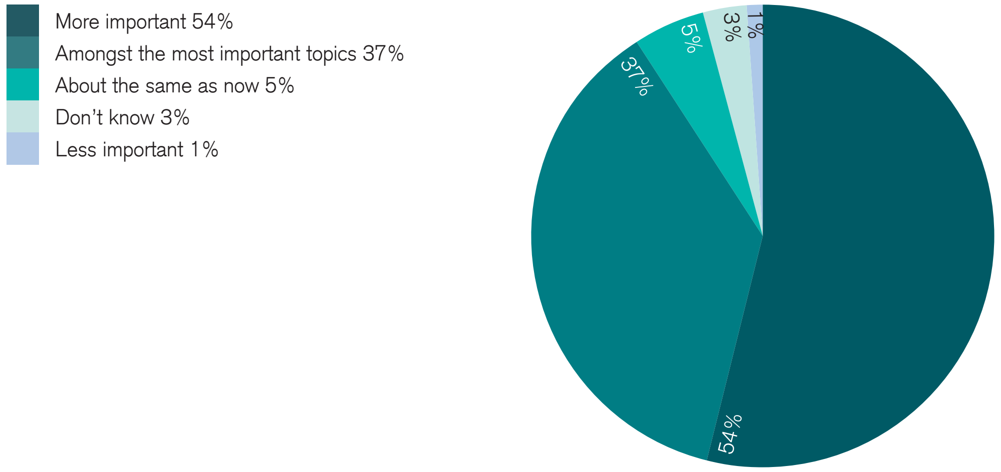
Public Private Partnerships (PPPs) where investors provide the capital and governments or public finance institutions reduce the risk of the transaction, are a proven way of financing MPAs[55]. One innovative way of doing this is via debt-conversions. A successful recent example of such a PPP is the 2016 Seychelles ‘debt for nature swap’. NatureVest, the Nature Conservancy’s investment arm, together with several European governments and foundations worked towards a US$ 22 million debt conversion for the Seychelles. The proceeds of the transaction were used to expand the country’s MPA to 30% of its exclusive economic zone[56]. And while the Seychelles deal was made possible by grants from various foundations and a loan from NatureVest itself, for further projects, NatureVest is looking to raise mainly impact capital and is looking at the World Bank to guarantee loans.

For the private sector, partnering with governments and non-profits on such conservation projects can be an attractive proposition. Investing in natural coastal infrastructure, such as mangroves and coral reefs, offer less costly defenses against natural disasters compared to spending on less effective man-made structures. Sharing the savings these projects create in addition to sharing revenue created by the protected area itself through visitor fees and other mechanisms can make providing an initial investment (or reimbursing near-term income lost) seem attractive to investors.

54. Sala et al., A general business model for marine reserves, PLoS One, April 2013
55. Sala et al., Fish Banks: An economic model to scale marine conservation, Marine Policy, August 2016
56. www.euromoney.com/article/b18hg7vjwmy9hn/blue-finance-why-marine-ppps-could-be-a-win-win-win?copyrightInfo=true

# Conclusion

**Where do you see the sustainable Blue Economy in 2030?**
% of respondents. 328 respondents from 34 countries




It is easy to paint a bleak future for the ocean, on in which its health and resources keep rapidly declining and investors, being unaware of their investments' impact on the marine environment, are helping to fund its degradation – if unknowingly. Yet, it seems that asset owners and managers are slowly waking up to the dire state of the ocean and the major portfolio risks looming in a business as usual scenario. Many are recognizing the crucial role they can – and some say must – play in the transformation of ocean-linked sectors and industries towards a more sustainable and climate-secure future.

Investors are highly interested in sustainable Blue Economy investments, albeit mostly still lacking the internal expertise to fully engage with the topic. With the majority of sustainable Blue Economy investments at the moment coming from the impact and early stage investment space, especially institutional investors are looking for larger and low-risk investments with a proven track-record.

Notwithstanding, many asset owner and asset manager organizations are already beginning to explore the opportunities lying within a sustainable Blue Economy, aiming to restore ocean health and thus ensuring to be able to reap its benefits going forward. Many opportunities have been identified where investors can – and already are – making a difference, most notably within sustainable aquaculture, marine renewable energy and plastic pollution prevention, all rapidly growing sectors with huge investment potential. But also within the more established sectors, such as fisheries and shipping, there is scope for investors to engage with portfolio companies on changing current practices towards more sustainable approaches.

Building more knowledge and expertise on the topic internally will be especially beneficial as the sustainable Blue Economy stands to become more and more important for investors in the future: 93% of respondents see the sustainable Blue Economy increasing in importance for investors until 2030. This is especially true for public pension funds, high-net-worth individuals and foundations, a majority of whom predict it to be among the most important topics for investors in 2030.

Developing an ocean finance infrastructure that promotes the sustainable use of the ocean will be crucial in scaling sustainable Blue Economy investments to be attractive for the broader capital market. Innovative approaches, including blended finance, PPPs and impact investing, can play – and are already playing – an important role in this evolution going forward. Further, public policy and company engagement on issues affecting ocean health, as well as support towards developing sustainable Blue Economy finance and investment approaches, are significant actions investors can take while large scale listed equity investment opportunities are limited.

With this much potential around its development, as well as urgent calls for international collaboration on the sustainable Blue Economy, pioneers are already showing that investing in solutions to degrading ocean health can work. Investors, it seems, are listening. The future of the ocean might not be so bleak after all.

# Significance of the findings

"In demonstrating how the vast resources of our ocean are currently perceived by the investment community, this much needed survey and report highlights that whilst there is increasing interest in ocean-based, or Blue Economy, investment, there is much to be done – and at pace – if we are to achieve our ambitions for a truly sustainable Blue Economy. With 28% of asset owners indicating that they are not addressing sustainable Blue Economy themes at all, the results provide invaluable feedback on the need to better inform investors on the critical importance of securing a healthy and resilient ocean and on the risks associated with business-as-usual to both business and society. It also highlights the importance of co-creating tools and criteria to assess these risks and identify sustainable Blue Economy business prospects, as well as the need to strengthen enabling conditions and develop innovative finance approaches to reduce risk. These priorities need to be addressed urgently if we are to redirect future mainstream investments towards the most sustainable development pathways possible.

Certainly, if managed effectively, the ocean can continue to provide enormous benefits to both business and society. But that will require a genuine sea change in the way that future mainstream investments are targeted. The Sustainable Blue Economy Finance Principles provide a well-needed framework for all sectors of the public and private finance community. The next steps will be to work with investors and other mainstream finance actors to develop the granular guidance needed to underpin the implementation of the Principles and to ensure that the ocean's health and resilience is at the heart of future investment decisions."

**Louise Heaps**
Head of Blue Economy, WWF

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