

KEYNOTE INTERVIEW

Tuning into nature



Protecting natural habitats and biodiversity will require a huge amount of investment in the years ahead, says [Dr Barbara Weber](#), founder of B Capital Partners, presenting a big opportunity for private capital

Q What are nature-based solutions in the context of infrastructure?

Nature-based solutions are quite simply any actions that protect, manage or restore natural ecosystems, at the same time as providing benefits for people, protecting habitats and enhancing biodiversity. Infrastructure is the obvious means to safeguard vulnerable places where people live and work, such as building defences that protect the areas by coasts and rivers from flooding. Climate change has increased the need for sustainable and resilient infrastructure.

The added challenge is to create resilient protection in a natural way, which doesn't generate additional damage to the environment or have unintended consequences for communities

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and natural ecosystems. To get there, a change in mindset is required – accompanied by suitable regulation and legal frameworks – to set the right incentives and thereby align interests, which in turn allows private capital to enter this space and to help address the issues while ensuring a viable economic return for investors.

Q Why are you drawing attention to this area?

It is of utmost importance in the context of climate change and supporting the SDGs. On an international level, the World Economic Forum formed a council focused on nature-based

solutions. The World Conservation Congress in Marseille looked at issues like marine biodiversity and realigning economies with conservation aims. They have been raising awareness and discussing the benefits of nature-based solutions for communities – often indigenous peoples – that have been negatively impacted by climate change.

B Capital has been looking at ways to support nature-based solutions by bringing private capital into this space, as the public sector cannot meet the challenge on its own. Approached by the international dredging industry, we got Swiss Re to join forces. Together, we've organised workshops that have brought together people from the marine industry – such as dredging companies – with insurers, international

development banks, thinktanks, and private capital that possess that sustainability gene. Our aim is to understand the opportunities, set goals and ultimately to find investable, resilient, sustainable solutions that work for all stakeholders. To this end, we need critical mass and international, cross-sectoral co-operation to get there.

Q How big is the opportunity?

There is no real data that ties together the size of this market. But there is plenty of evidence that shows current levels of investment in marine and coastal infrastructure, and the funding gap that exists to meet annual investment needs. For instance, across nine flood-prone economies in Asia, \$33.6 billion was invested in river and coastal flood protection, which is roughly one-third of the annual projected \$98.4 billion investment requirement – so essentially a \$65 billion annual shortfall.

Dredging activity sheds some additional light on the spread of marine and freshwater works globally to protect and clear rivers and coasts. Asia accounted for 28 percent of dredging activity in 2019, with Europe also accounting for around one-quarter of activity, and the Middle East, the Americas and Africa the remainder. There is not only an urgent global need for investment given the rapid pace of climate change, which exacerbates the situation, but for sustainable investment not to make matters worse.

Q What are the main areas of marine and freshwater development?

The main areas are port development and maintenance, flood barriers, like dams and dykes, river flood defences, and breakwater constructions. There is also land reclamation, dredging that makes rivers and other waterways navigable for shipping. These are the traditional areas for coastal and river infrastructure investment.

Q How do nature-based solutions vary and why are they essential?

Nature-based solutions address many of the same themes as traditional infrastructure. The main difference is they do so in a sustainable way – for example, mangrove restoration and forestry, wetland restoration, coral reef regeneration, eco-friendly breakwaters and river protection, or the re-use of materials dredged from rivers and ports for sustainable uses.

The impetus comes from climate change. Around the world, we are dealing with rising sea levels and more unpredictable and violent weather conditions. We're seeing more floods, even in Europe, such as the catastrophic flooding witnessed in Germany over the summer, which cost many lives and affected the livelihoods of many people in the region. Estimates put the size of the recovery fund needed for rebuilding at €13 billion for the Rhineland-Palatinate region alone, and €30 billion across Germany.

The primary aim of nature-based solutions in marine and freshwater infrastructure is to tackle the issue head-on and prevent these kinds of disasters in the future, but also to do it in a sustainable way that doesn't add to climate change through the kinds of solutions or materials used, or sacrifice biodiversity and local habitats.

Q How active is private capital in this space at the moment?

Nature-based solutions are a new area for private investors. Existing solutions have been funded with public money and sometimes foundations. It is also worth pointing out that there are relatively few truly nature-based solutions. Quite often the existing solutions could be termed hybrid, meaning that they combine some sustainable elements with more traditional materials and methods.

Pure solutions are, for instance, mangrove plantings in Asia, Africa

and Latin America. These can reduce coastal erosion and the threat of flooding, while also increasing biodiversity and providing new employment and food sources for local communities through fishing and aquaculture.

Amazing pioneering projects across the broader field of nature-based solutions exist. For instance, Swiss Re designed a reef insurance policy with Mexican regional governments that insures the coral reef off the Yucatan peninsula. The policy pays out funds to restore the reef after damage – for example, from a hurricane. That's important because the reef is home to a vast ecosystem and protects the coastline, but also generates tourism income for local communities.

There is a huge opportunity for private capital to get involved more widely. This requires truly sustainable solutions, including economic sustainability. The challenge is to work towards creating a sustainable business model and, hence, an investment case, which is good for all stakeholders.

Q What are the barriers to private capital involvement?

One of the main issues is carbon pricing today. Quite simply, the business case doesn't fly because nature-based solutions cannot compete with traditional solutions.

The carbon price doesn't reflect carbon's true cost, making nature-based solutions (look) more expensive. Because of that, governments, which procure those projects and traditionally pay the bills, have no incentive to require sustainable solutions. Naturally, the private sector will not offer them. Hence, sustainable solutions need to get the right focus from governments. Tender processes must ensure that projects are outlined as nature-based – or, at the very least, hybrid and sustainable.

Development banks and private capital can push this development by jointly making their financing conditional on sustainable or even nature-based

Marine biodiversity: one of many spaces where infra investors can support vital solutions

solutions. First initiatives of this kind exist, for instance, in Mexico with FONADIN, supported by the German development organisation GIZ, and also the G20 Solutions Lab through its ‘Scalability of sustainable infrastructure’ initiative, where I was one of the 25 international experts invited to get together in three one-week meetings.

Another issue raised at our workshops is that positive externalities of projects do not flow through to the sponsor. If you think about a new train line going through a country, the land around that line becomes more valuable, particularly where you have a station. There the public sponsor shares its additional revenue stream from increased real estate tax income (the positive externality) with private capital.

In the case of nature-based marine infrastructure solutions, natural defences protect the coastline and make the land behind more valuable as a result. The benefit for business and communities flows back to the public stakeholder and is not shared with the private investor.

A potential way forward is to quantify the future revenue stream generated by protecting that coastline, followed by an open conversation with all stakeholders. Once we figure out what that protection is worth, we can agree how this value should be shared between the public and private sector. Further, one can develop ideas to capture positive externalities – such as touristic nature reserves.

Q Which financing models can help make the nature-based solutions space investible?

Once capital providers join forces and all demand sustainable nature-based solutions from governments – essentially, solving the collective action problem – blended finance would be one way to attract private capital.



How will this work? Development banks will partner with private capital taking the first hit in case of project default. Private capital follows behind at a lower level of risk. Examples of this model are already successfully at work internationally and have been discussed in our workshops. For instance, the Danish development bank invited Danish pension funds into a structure to finance sustainable renewable infrastructure in Africa. While this is not a nature-based solution, it proves that a blended finance model can work for all parties.

Public-private partnerships are also a way forward to bring investment into this space as long as sustainability or nature-based solutions are a hard condition in the procurement. For that, a sound legal framework is needed, which also provides capital providers with a safety net with regards to proper business conduct during the asset’s lifetime.

Q What are the next steps for infrastructure capital to support nature-based solutions?

Co-operation among capital sources is key. To this end, B Capital Partners,

together with Swiss Re, is talking with other asset owners and fund managers to broaden our discussions to a wider group of stakeholders. Development banks are important and influential players as they need to put this on the agenda with governments.

In late September, we helped organise and participated in the Central Dredging Association Dredging Days conference. This brought the topic of financing sustainable marine and freshwater infrastructure to more parties interested in – and committed to – developing nature-based solutions.

Ultimately, we need to determine project by project who the beneficiaries of the respective nature-based solutions will be. In doing that, we can work out by whom – and how – these solutions should be paid for. Yes, it is early stages, but the need is pressing, the investment requirement is enormous, and the opportunity for private capital is sizeable. There is an increasing number of construction industries, asset owners, fund managers, insurers and other parties looking for sustainable, nature-based solutions. I am certain that through our co-operation and like-minded initiatives we will get there. ■