Financing of Green Port, Waterway and Coastal infrastructure

Key lessons on deploying private capital to accelerate the green transition

By Dr. Arjan Hijdra, April 2022

1 Introduction

Ports, waterways and coastal protection are often situated in, or surrounded by, vulnerable ecosystems. These locations are exposed to the direct effects of climate change and intensive human activity. Many projects are planned in such locations to adapt to changing circumstances and fulfill local needs. State-of-the art sustainable and nature-based solutions are available to fulfill those needs but are no common practice yet. From investment side, limitations in public budgets mean there is a bigger role for private capital to play to finance such projects. And increasingly this private capital is seeking such green opportunities. However, deploying this private capital to accelerate the uptake of mentioned green solutions is far from a beaten path.

The above situation is the focus of the report 'Financing of Sustainable Marine and Freshwater Infrastructure: A joint study by Vital Ports, Central Dredging Association (CEDA), International Association of Dredging Companies (IADC), Swiss Re and BCapital Partners to explore financing of green coastal, river and port projects. The report is based on the findings of a broad international team of experts and provides six key lessons to enhance the uptake of green investment in this sector. In a series of webinars following the publication of this report, further learnings have been gathered. This paper discusses the key lessons and the further reflections on these lessons from a wider audience.

2 About Green Port and Waterway Infrastructure

Before diving deeper into the role of private capital, it is perhaps useful to describe what is meant by Green[1] Port, Waterway and Coastal infrastructure and how this differs from classic solutions. The collection of works at coastlines, rivers, canals and port areas are generally required to enable or provide flood protection, urban development, port development, navigable waterways and upgrade of recreational areas. Perhaps most telling is a summary of project types which describe the field. Classic examples, not necessarily green, are;

[1] Terms like green, sustainable and NbS are used interchangeably in this paper. For specifics of definitions and associated solutions reference is made to the pianc and ecoshape website and publications of the EC, UN and other organisations.

- land reclamation
- flood barriers like dams, dykes, dunes
- beach nourishment
- integrated coastal zone management
- riverbank protection
- dredging of navigable waterways
- port development
- breakwater construction

Green variants of these assets can be seen as ranging from 'more sustainable than a classic solution' up to nature-based solutions where benefits of natural processes from ecosystems help to deliver upon project needs. In general, the sustainable concepts are not only technically different, but also rely on early and extensive stakeholder involvement, and execution methodologies with minimised ecological impact. Such green examples are;

- Wetland restoration
- Mangrove forestry
- Coral reef restoration
- Hybrid land reclamation including habitat improvement and expansion
- Circular use of materials, use of local materials
- Eco-friendly river protection
- Eco-friendly breakwaters
- Bird islands from dredged materials
- Integrated river system development

These green solutions are readily available to be applied on the precondition of a suitable financial structure. Important to mention is that all these described concepts are mature solutions and have been applied in real world situations. For many cases monitoring and evaluations took place and showed the effectiveness both in terms of services provided as well as ecological quality.

3 Key lessons from the report

Experts from BCapital Partners, Swiss Re, CEDA, IADC and Vital Ports explored what is needed in order to improve the connection between green-labelled funds and sustainable waterborne infrastructure projects. One main conclusion is the need to clarify sustainable concepts and associated financial structures in order to introduce the topic to both the financial sector and the dredging community. But also, to develop ideas on how to bring this to mainstream infrastructure investment asset classes. The report provides content for further dialogue to foster the uptake of green marine and freshwater concepts by private investors. This dialogue, with the webinar series as part of it, concentrates around the key lessons as identified in the report. These key lessons are;

1. To improve the availability of private capital in this segment, a joint screening by sponsors and private capital suppliers is strongly encouraged. Working jointly early on may avoid following leads, which may be attractive from a mere construction capex size but are unviable for investors economically and/or sustainability wise. A joint selection effort based on sustainability and contractual solutions can focus scarce resources on the most promising opportunities, with a snowball effect of projects' private funding.
2. Since 2021, the EU-Commission requires institutional investors, financial intermediaries, lenders and asset managers to comply with a stringent investment process as well as transparent reporting regarding with respect to the sustainability and SDGs impact of their investments ("Sustainable Finance Disclosure Regulation"

or “SFDR”). These mandatory requirements urge financial investors of all kinds to adopt a pre- and post-investment ESG risk management and controlling system. Certification of green projects might be instrumental in moving forward.
3. Develop standard frameworks that allow private capital to enter Sustainable Marine and Freshwater Infrastructure market – including e.g. updating concession-type legal frameworks that allow public-private partnerships;
4. Reporting tools and harmonised methodologies still need to be built to capture some of the associated benefits which are often overlooked as they are difficult to quantify, particularly in relation to future savings.
5. The insurance industry as a “de-risker” can be transformational in establishing a longer-term investment framework. It can create new types of insurance offerings that make infrastructure projects more standardized, cashflows more predictable and infrastructure as an asset class more attractive to investors – thus unlocking financing.
6. Green solutions require a more holistic approach and greater coordination and cooperation. They will also need to be incentivised through policy frameworks that increase their uptake and allow rerouting or unlocking new funds to support them.

Given the size and attractiveness of the sustainable marine and freshwater works segment, and the growing appetite for sustainable infrastructure projects, it is expected that in due time more avenues will open up to pursue the kind of projects featured in the report and more private capital can be put to work.

4 Further lessons from the follow-up webinar series

Following the launch of the report in September 2021, a series of three webinars were held to disseminate the results and stimulate mutual learning on the basis of the findings. These sessions were organised jointly with PIANC, CEDA and IADC. A total audience of around 330 persons was reached. The majority of the audience came from the public sector, engineering firms, contractors, infrastructure finance/investment sector and insurance industry. In all sessions the key lessons from the report were discussed and used to spur interaction with the public. The reflections from the audience have been anonymized, sorted and grouped together. These results are summarized below around three main questions.

Question 1) Do you agree on the key lessons to address as mentioned in the report?

This question gave a wide variety of responses. The key lessons were generally recognized but triggered other reflections. Many comments were made with regard to determination and uncertainty of the benefits of green solutions. More transparency and knowledge is needed about NbS and the benefits of NbS should be made clear to counter discussions on higher costs. A holistic assessment of projects is lacking, resulting in exclusion of externalities which would tilt the balance more towards NbS. Costs was also an issue as costs of NbS are perceived higher than traditional grey solutions. Uncertainty about the costs of carbon credits was seen as an important issue to resolve.

Certification and a common legal framework were also addressed. The legal framework is insufficiently developed to fit the needs of green projects. The expectation was that some of the hindrances around certification and the legal framework would diminish when the EU-taxonomy is in place.

A lack of a proper business model for green infrastructure in the sector was one of the major talking points with the audience. Commercial investors need a proper business model, this is often lacking in NbS-projects. Revenue streams can be quantified easily for

energy transitions projects, like windfarms, not so much for integrated coastal or river projects. Working with carbon credits and habitat banking is one of the potential solutions. Climate adaptation and coastal protection projects don't generate a cash flow which is an important barrier for investors. Blended finance is presented as a potential solution in the report but it takes a long time to organise. This makes it of less interest for tendering parties.

Improving awareness was one of the additional issues that came forward. The financial world is often not aware of waterborne infrastructure projects. Green alternatives in this sector are often considered to be more expensive than classic solutions which is not necessarily the case. Very often a green solution is not more expensive than a grey one. The coastal protection project Hondsbossche and Pettemer Sea defence in the Netherlands were considered to be clear examples to prove 'green' can be more cost effective than 'grey'.

Question 2, How can mentioned key lessons be put to practice?

The most important steps coming forth from the audience were building awareness, develop proper business models and strengthen policy incentives.

Awareness and communication are certainly issues to work on. This counts for the broader public as well as specialised sectors including the diversified group of investors and financiers. Currently many stakeholders are so called 'sea blind'. What happens outside our usual direct view, like what happens outside on the seas, does not feel very common. Activities of the dredging sector for instance, are well known in the sector itself, but to a lesser extend to the general public. Raising awareness of all the work that needs to be done, and which can be done in a sustainable way, was therefore seen as helpful.

Again, the absence of clear business model was a major talking point. A potential solution was seen in establishing support from international organisations to develop a classification/certificate system to determine value of project. This would however be a long-term exercise. Public private partnerships could also be of help. Realise a dialogue early in the process between private investors and public sector to give the private sector detailed information. Also creating platforms where investors have access to positive externalities was considered helpful to support the sustainable variants of projects. Involvement of contractors on board at an early stage, without limiting them in tendering, could also spur the uptake. And perhaps the focus on a subset of projects (e.g. ports), could help driving momentum.

Policy incentives and government backing are also a field where progress can be made. Distinction for these kinds of projects can be made between social goods and commercial goods. Usually, governments pay for social goods. But only countries with a well-developed tax structure are able to do so. By clearly determining all benefits coming from NbS and providing a clear social CBA the specific benefits could be allocated to either the public and/or commercial stakeholders. This might enable the possibility that both sectors will jointly finance when both private and public sector benefit.

Question 3, How can we build momentum to assure steady progress in this field?

This question gave rise to a rich spectrum of suggestions. Broadly these comments fell into two groups: communication and instrumentation.

On communication it was mentioned that financiers and the dredging community need to speak the same language. Contact persons at financial institutions are often unknown

because they don't talk to corporates. Team-up with other NGO's like IAPH, FIDIC could be helpful. An initiative like Ecoshape can spread the message. Make distinction to different parts of the world and come up with tailor-made solutions. Develop part 2 of the report with tailor-made solutions for a selection of barriers mentioned in part 1. Establishing a special platform to assure steady progress came also forward from the audience. Make the purpose of this forum clear to the outside world as the waterborne infrastructure sector needs a voice.

The other group of comments related to all sorts of instrumentation. This provided a myriad of suggestions. The financial actor is very transactional which means agreements play a central role and should therefore receive special emphasis to accelerate the uptake of green projects in this sector. Define what such 'green projects' are and demonstrate the additional values of the sustainable solutions. It brings more than only the primary aim of the project. At the same time the EIB is bound by the EU-taxonomy, determining what might be called green or not. On the financial side new instruments like blue bonds, insurance products are considered to be useful to build further momentum.

5 Conclusions and recommendations

The main conclusion of the report and the follow-up webinars is that sustainable waterborne infrastructure solutions are available, have been tested and have proven to be working. The potential of these kind of solutions was widely recognized and seen as the way forward.

As clear as this conclusion may stand, the picture becomes far more nuanced when deployment of private capital is brought into the conversation. One of the key issues that comes with this is the necessity of generating cash flows to ensure paying off those loans and investments. Rich discussions took place around appropriate business models, identifying beneficiaries of the wide benefits of sustainable solutions, converting benefits into revenue streams and the roles of the public and private sectors in this. A first general conclusion is that work needs to be done to establish, widely acknowledged, business models for green port, waterway and coastal projects. Such business models should include clear ways to determine the additional, holistic, benefits of sustainable solutions and ways to monetize these.

Directly following this conclusion is the debate around the definition of 'green'. Although a diffuse concept in the wider infrastructure sector itself, it is a sensitive and important topic for investors and bankers as well. Defining what is green and sustainable is key considering a large influx of green labelled capital and potential reputational and financial damage when mislabeling investments. At the same time regulations for utilizing these labels and associated benefits, like the green taxonomy in the EU, is growing. However, this is still work in progress in the sector itself and needs further maturing. The conclusion from the report that certification could be helpful was supported by the wider audience and seems like a no-regret step to take.

In terms of recommendations, it was clear that much work is still to be done. First, awareness of the possibilities to apply sustainable solutions in the port, waterway and coastal infrastructure sector is to be strengthened. Particularly strengthening outreach to the private capital sector would be helpful. A dedicated platform to keep building such awareness was seen as useful.

Developing further instrumentation came also forth as a reflection on the report. Proper instrumentation to assess the wider societal benefits of sustainable infrastructure was

mentioned in this light. The transactional nature of the entire sector, both developers and investors alike, calls for fitting frameworks and agreements.

In general, the webinars, as learning opportunities based on the earlier report, provided further nuanced insights for the sector. The topic of deploying private capital to accelerate the green transition in this sector has gotten more visible on the agenda of major players in development and financing of such projects. In many aspects it remains a long journey, but support and progress appeared to be strong and feeds a positive outlook.

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More information

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