

Private businesses lack awareness of market opportunities and appropriate business models for deploying nature-based solutions.

GREEN MARKET OPPORTUNITIES AND BUSINESS POLICIES FOR URBAN NATURE-BASED SOLUTIONS

Engaging the private sector in NBS uptake and implementation: Opportunities and challenges

Engaging businesses in the process of mainstreaming NBS is critical to ensuring their widespread uptake and to fully unlocking their potential to deliver ecosystem services. Currently, the private sector is the largest source of climate finance; working with businesses to deliver NBS could help to leverage further contributions as well as lead to broader changes in business practices as well as expectations, responsibilities and norms. Engaging the private sector in delivering NBS can also highlight the economic value of such solutions for society as a whole, and therewith increase the visibility and awareness of the benefits of investing in and implementing NBS. Finally, the private sector has a unique knowledge of markets and brings management experience and the ability to respond to advanced research for improved NBS delivery.

Investing in NBS is, however, not a charity case. Businesses can themselves reap diverse benefits by integrating NBS into their operations, such as saving money and adding value to commercial and private property. NBS can also provide commercial opportunities for businesses to sell their NBS planning, design and management expertise, or be a potential investment opportunity for banks, insurance companies, etc. By contributing to a growing green economy, increased business activity will result in higher contributions to city tax revenues.

However, a broad range of barriers exist to the implementation and up-scaling of NBS. Understanding these barriers and the interconnected factors that reinforce them is essential to gather appropriate evidence and knowledge and identify opportunities to overcome them.

BARRIERS TO UPSCALING NATURE-BASED SOLUTIONS

1. Difficulty in capturing the (economic) value of NBS and integrating this in business cases
2. Lack of understanding of NBS benefits and insufficient confidence in investing in such solutions
3. Uncertainty created by the disconnect between short-term actions/policies and long-term goals

Difficulty in Capturing NBS Value

Urban nature-based solutions face a key challenge in obtaining long-term (private) financing. This is due in part to the currently insufficient means and approaches to capture the value of their benefits for businesses and society alike, including from the delivery of ecosystem services. The challenge is to identify and then create a business model which encompasses these multiple values; this difficulty is linked to:

- **The public nature of the payoffs produced**
- **The absence of a clear accounting framework for ecosystem services and non-monetary values**
- **Difficulty with public-private cooperation due to disconnect of central stakeholders**
- **Valuation customs of private investors such as the tendency to discount/depreciate assets**
- **Volatility of value, i.e. it varies in time, context and between stakeholders and social groups**
- **The focus in most assessments lies on the advantages of NBS and not on potential trade-offs or limitations**
- **Some technologies are still in an innovation stage, increasing the perceived uncertainty of investment value**
- **Existing uncertainty with respect to public-private contracting and commitments**

Lack of Understanding and Confidence in NBS

The potential to explore and exploit commercial opportunities is affected by a general lack of understanding across various stakeholder groups in relation to NBS value, cooperative arrangements and expectations of different stakeholders surrounding these solutions, and tools to support specific interventions or performance monitoring.

The “fear of the unknown” within the private sector considers both the uncertainties and risks of implementing NBS in cities, as well as the resulting changes this may induce in city planning. Due to their characteristics, NBS need to be handled differently than other traditional grey infrastructure solutions and require new protocols, standards and frameworks to guide implementation and maintenance.

Furthermore, while awareness of the benefits which can be provided by multifunctional urban NBS is increasing amongst the general public as well as decision-makers and the private sector, limited long-term evidence on the costs versus benefits as well as a lack of a clear return on investment in commercial terms reduces the willingness of companies to ‘take

the risk’ and readily invest in NBS. The result is a hesitation from private businesses to move beyond the ‘status quo’ and traditional grey infrastructure solutions. A reduced risk framework is therefore needed to increase the willingness of private sector actors to invest.

There is also a lack of awareness about the different types of NBS and their cost-effectiveness or suitability to help achieve specific objectives that private companies may have. The multifunctional nature of many NBS can compound this challenge, as many of the benefits they provide are not of direct interest to the private sector investor. Even in cases where these ‘co-benefits’ could be interesting for businesses, limited and scattered evidence of long-term NBS successes limit private sector confidence. The novelty of NBS thus often limit their appeal to more entrepreneurial or venture capitalist-type investors willing to take a risk given their focus on environmental or ethical considerations.



Uncertainty Created by the Disconnect between Short-Term Actions and Long-Term Goals

Businesses require sufficient time to design new approaches and undertake long-term planning in response to changes in public policy. Investing in novel approaches or ideas, such as NBS, thus requires some certainty about the long-term direction of policy to ensure that, for example, supply chains are established to provide suitable products or services, or sub-contractors have sufficient skills to accommodate such new ideas. While frameworks for green infrastructure policies generally concern long-term visions, these often have to be modified when policy objectives change during new political cycles. Overall, these factors result in a disconnect between policy receptiveness and ready-to-apply scientific results and concepts.

In parallel, there is also disconnect between short-term actions and how they relate to long-term plans and goals. A number of projects researching NBS only have a limited duration in which they run; there is, however, the need for long-term projects to increase the evidence base but also to identify NBS models which can be maintained and monitored through ongoing funding in the long-term. With increased evidence and long-term thinking, businesses could increase their confidence in investing in NBS independently of policy cycles and ensure continual funding for much needed maintenance of NBS.

How Can these Challenges Best Be Addressed to Foster Increased Uptake of NBS by Businesses?

There are several solutions discussed in the literature for coping with the outlined challenges, relating to both the business model and finance sides. Firstly, financing should come from diverse groups of public and private actors and investors in order to balance incentives and improve the ability to value different types of payoff. Secondly, innovation in accounting and valuation/monetisation methodology can allow for the integration of NBS value delivery and benefits into decision-making processes by governments, businesses, investors and citizens. Citizens' willingness to pay (such as for urban trees,

green roofs or urban agriculture) could be captured using innovative business models and financing arrangements. Furthermore, other technological and financial innovations (such as 'Social Impact Bonds' or blockchain-based funding arrangements) can facilitate collective bottom-up and public-private funding as well as offering potential for remote monitoring of natural assets which can improve contractual commitments. These potential solutions are outlined in more detail in the following chapter.



Green Market Opportunities and Supporting Business Policies to Foster NBS Uptake

Increasing the role of the business community in implementing NBS is critical to successfully mainstreaming them as valid solutions to societal challenges on a global scale. The private sector possesses the necessary resources for up-scaling NBS, not least to its numerous opportunities within the global green market. As is the case in many markets, there is no single solution to fostering the uptake of NBS, but rather a range of potential instruments that could be adapted to respond to local circumstances.

Revealing the economic value of NBS is essential to demonstrate green market opportunities and identify relevant business policies including NBS as a component. By assessing the economic benefits of e.g. quality of life, job creation, health improvements,

and climate resilience through methodologies such as natural capital accounting and ecosystem services valuation, the case for investment can be made more compelling. Green market opportunities that could appeal to private investment include the provision of a high-quality business environment, for example to attract a skilled labor force, increasing return on investment such as through livability and property values, as well as efficient use of land and space saving strategies which optimise quality and multi-functionality of NBS.

The following chapter provides an overview of some of the various instruments, policies and opportunities in place to facilitate a streamlining and increased uptake of NBS.





Subsidies

New subsidy regimes providing public payments to the private sector for public goods are steadily appearing. One example is the proposal to better align the agricultural subsidy regime in the UK with companies' environmental spending by shifting from production subsidy to an environmental and climate adaptation subsidy, and also enabling public and private co-investment. Subsidies have also been found to be effective in increasing the returns on investment and to trigger larger NBS adoption, e.g. with green roof adoption.

Natural capital accounting

Natural capital accounting (NCA) is a new approach to accounting that can be used to reveal the wider economic value of implementing NBS, recognizing the wider value to society and the environment. By incorporating this information in formal accounts that recognised by those involved in financial and management decision-making, NCA can investment decisions in terms of construction and management as well as mitigating the loss of existing assets.

Green bonds for long-term financing

A green bond is a voluntary debt instrument which can help ease the apprehensiveness of many businesses by offering a fixed return on an investment and a promise to use the proceeds to finance or re-finance new or existing sustainable projects. The bond serves to raise funds for a defined period, with the issuer ensuring that the proceeds are invested in green projects. It is a 'win-win' as the issuer and investor contribute towards a sustainable future while showcasing themselves as being environmentally responsible.

Public-private partnerships

Public-private partnerships (PPP) are collaborative arrangements between diverse stakeholders from the private and public sectors, which enable the pooling of resources, skills, knowledge and institutional capacities and a sharing of the financial burden. This can support delivery of NBS, particularly where a NBS is too costly or complex for one party to bear, or help to overcome the risks associated with investing in an innovative NBS versus traditional grey solutions. Many good examples of PPP for NBS exist, such as Greener Grangetown for managing rainwater in Wales and Twenty 4 Twenty for delivering sustainable drainage in London.

Sustainable business models for NBS

Sustainable business model archetypes can be found in the literature for most types of NBS, serving to help understand the different types of value propositions, delivery and capture approaches that could be provided and that drive private sector investment decisions. They seem indeed to be able to capture the 'private' business model better than the 'public' business model (i.e. delivering the rationale why governments should engage in certain types of NBS).

LESSONS LEARNED FOR THE CLEVER CITIES APPROACH

- Barriers to the commercial exploitation of urban nature-based solutions mostly lie in the socio-economic and political spheres, rather than being biophysical barriers.
- The level of finance and business models needed for different types of NBS varies and need to be considered on an individual basis given the surrounding conditions. Here, interventions can come in a range of forms, including technical, social and organisation innovations or market opportunities, as well as for specific types of NBS (e.g. street trees or sustainable urban drainage systems).
- Accounting for the multifunctional value of NBS, including non-monetary values, is necessary in order to holistically capture indirect benefits. The great challenge of green economy is to integrate natural assets which have previously not been included into economic calculations and price systems.
- There is a need to forge new networks and develop trans-disciplinary and inclusive partnerships and governance approaches in order to foster the wider uptake of nature-based solutions.
- Differences in financing strategies vary alongside the extent to which private value can be captured from the NBS approach and the scale (investment amount and longevity) of the investment.
- Multidisciplinary and inclusive partnerships can foster the uptake of NBS in response to climate-related challenges. They can create and catalyse synergies between different parts of society by pooling together resources skills and knowledge.

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