

# Financing and Business Models Guidebook



Bringing Cities to Life,  
Bringing Life into Cities

# Acknowledgments

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# 1 Introduction

## What are Nature Based Solutions?

The European Commission defines nature-based solutions as solutions to societal change that are:

*“inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.”*

Nature-Based Solutions benefit biodiversity and support the delivery of a range of ecosystem services.

## What is the Connecting Nature Framework?

Designing and implementing Nature-Based Solutions on a scale that delivers economic, environmental and social co-benefits, while also building resilience and benefiting biodiversity is complex with many different issues to consider.

Many questions arise and need answers.

What is the best solution for the area?

Who will manage it?

How will it be financed?

Who needs to be involved in the planning, delivery and stewardship?

Will it support innovation and generate jobs?

How to measure the economic, environmental and social impact?

How can we manage change?

Even identifying where to start can often be a challenge!

In response to this uncertainty, Connecting Nature has developed a process tool to help cities and other organisations navigate the path towards implementation of Nature-Based Solutions on a large scale: the **Connecting Nature Framework**. The Framework identifies **three distinct phases of development** for a nature-based solution: planning, delivery and stewardship.

Throughout each phase there are **seven separate elements** that cities and other entities need to consider when shaping their individual nature-based solution: **technical solutions, governance, impact assessment, finance, entrepreneurship, co-production** and **reflexive monitoring**.

Cities may choose to start with any element of the Framework process and consider the others in the order that suits their context. What emerges from the Framework process is a comprehensive 360° overview of each stage of development of the nature-based solution.

## Guidebooks

To assist you in developing your nature-based solution, Connecting Nature has produced a series of guidebooks. The overall Connecting Nature Framework Guidebook is a good starting point. There is also a guidebook for each element of the framework process describing the implementation steps and providing case studies to show how it works in practice. A step-by-step how-to manual on the Connecting Nature Framework process is also available.

All the Connecting Nature guidebooks and the manual may be downloaded from [www.connectingnature.eu](http://www.connectingnature.eu).

## Connecting Nature Framework



# Glossary

## PES:

Payment for Ecosystem Services is an innovative approach which encourages the maintenance of natural ecosystems through environmentally friendly practices that avoid damage to other users of the natural resources. (Source: WWF, World Wildlife Fund)

## Stewardship:

The stewardship of a nature-based solution describes the ongoing participatory management and maintenance of the nature-based solution.

Stewardship includes the monitoring and evaluation of the nature-based solutions, which enables the making of adaptations that ensure long-term sustainability and resilience. (Source: Connecting Nature Framework Guidebook)

## Concessional financing:

Non-repayable finance from public institutions (such as grants from EU programmes, national or city programmes) or private institutions (eg philanthropists, NGOs etc) (Source: EIB, 2020).

## Commercial financing:

Financing from public development banks (eg the European Investment Bank) or private financial institutions (eg local banks or equity funds). (Source: EIB, 2020)

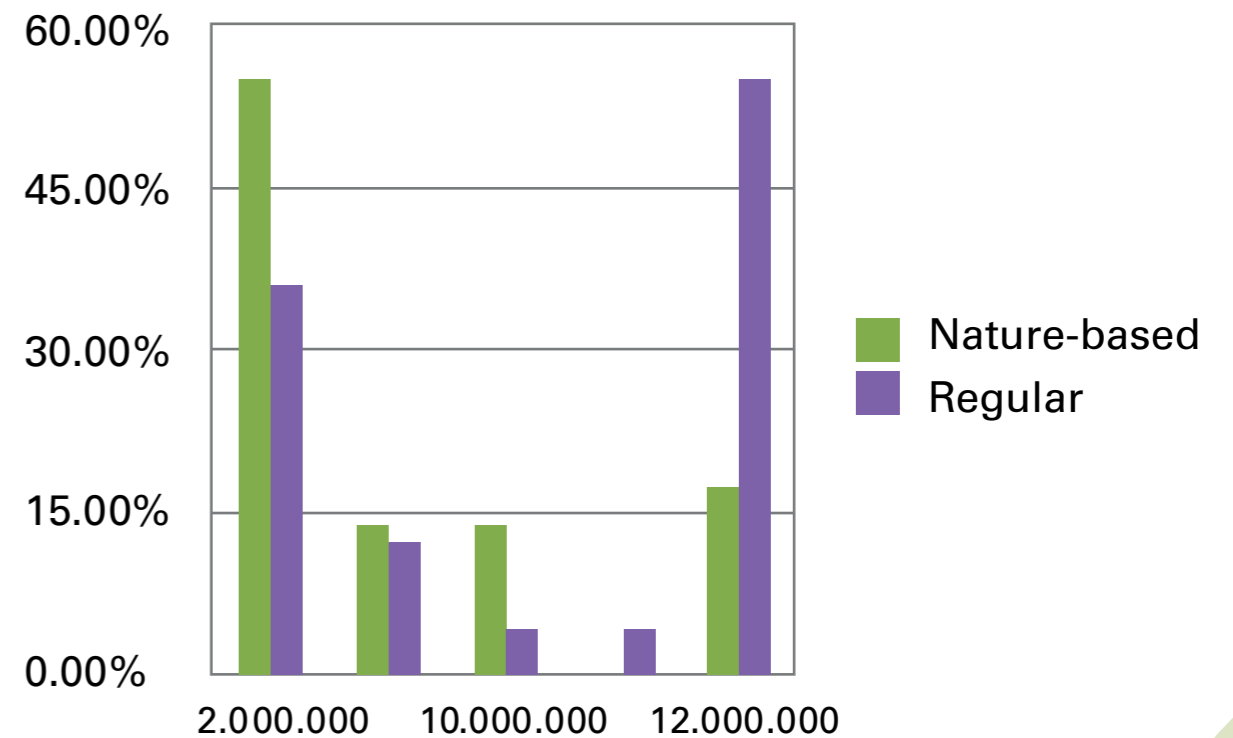
## Hybrid financing:

Refers to financing from different sources of concessional finance. Blended financing: Refers to a mix of concessional financing and commercial financing. (Source: EIB, 2020)

# 2 | What do we mean by 'Financing'?

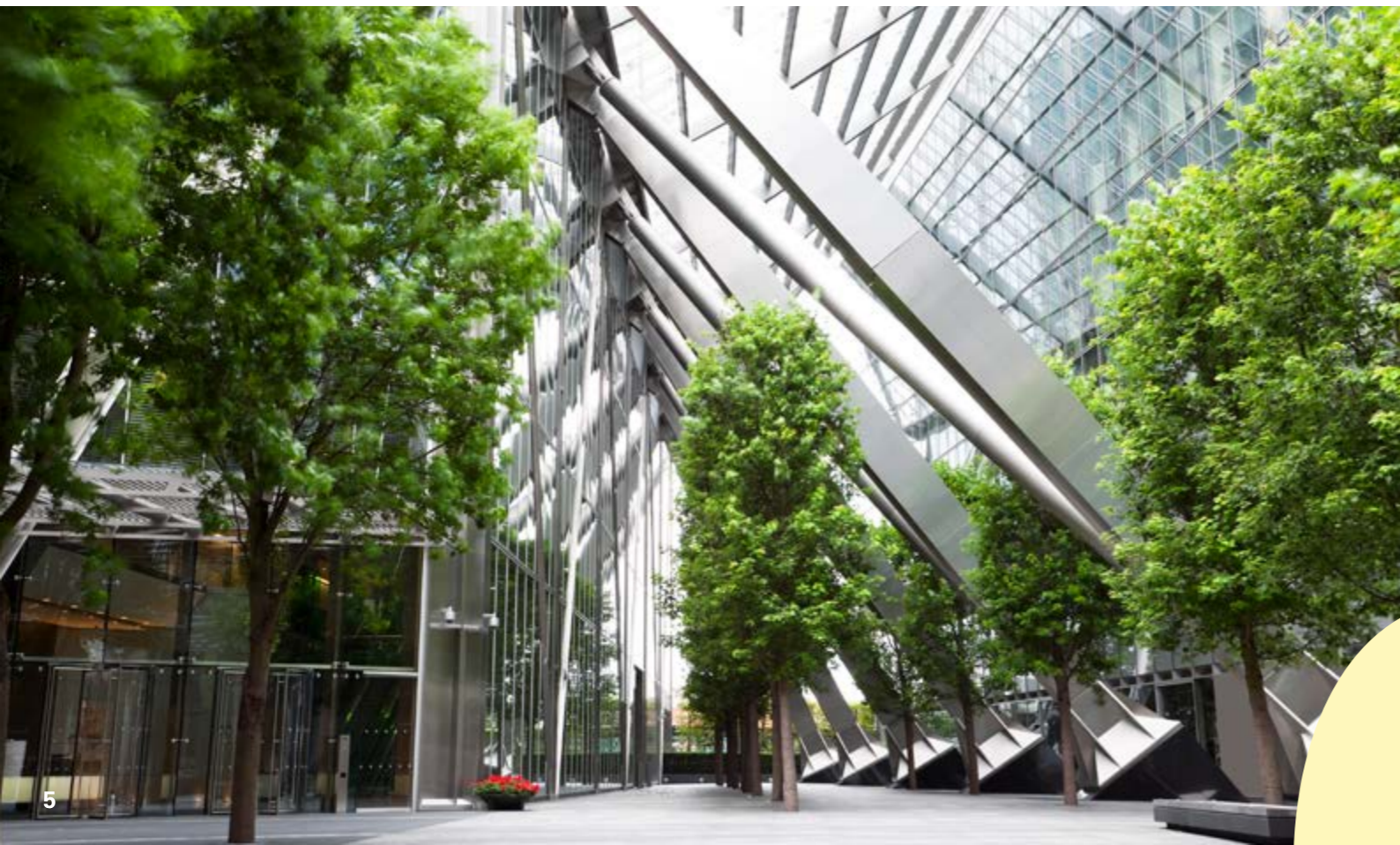
*Nature-based solutions are increasingly recognised as a cost-effective way of addressing climate change and biodiversity challenges that results in economic, social as well as environmental benefits.*

Sometimes nature-based solutions are small-scale interventions like small community gardens or allotments. Other times they are very large infrastructure-type investments such as sustainable urban drainage schemes (SUDS), wastewater phytoremediation treatment plants or ecological restoration projects such as riverbank rehabilitation. Financing refers to sourcing the funds to create and sustainably maintain a nature-based solution.



**Figure 1:** Nature-Based Solutions projects vary in scale. Data based on a sample of over 300 nature-based solutions.

**Source:** Connecting Nature, Diana Dushkova & Dagmar Haase, Humboldt University Berlin, 2018



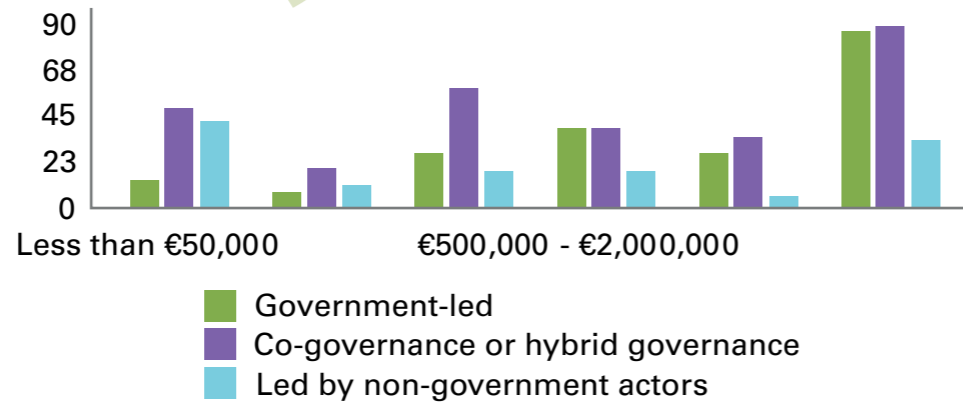
## Who pays for nature-based solutions?

Nature-based solutions may be paid for in many ways and are often financed by a blend of different sources of finance.

For example, small-scale projects such as community gardens may be financed by government grants (also known as concessional financing, see glossary), through community fund-raising events or through crowd-funding platforms.

## The sources of financing of nature-based solutions

44% of the identified nature-based solutions (428 projects) were implemented jointly by governmental and non-governmental actors. 289 (30%) were managed solely by governmental bodies and 259 (26.5%) by non-governmental bodies.



**Figure 2.** Hybrid governance and finance is common practice for urban Nature-Based Solutions, at all investment sizes.

**Source:** Almassy, D., Pinter, L., Rocha, S., Naumann, S., Davis, M., Abhold, K., Bulkeley, H. (2018) Urban Nature Atlas: A Database of Nature-Based Solutions Across 100 European Cities

## Challenges to financing nature-based solutions:

### Unclear return on investment:

The business model for securing a return on investment in nature-based solutions is not as clear as it is for other 'pay-as-you-go' type investments such as sustainable transport or renewable energy where a fee for usage can be charged.

With some types of nature-based solutions, such as a public park or flood management system, the benefits are shared by many users and it may be difficult to levy specific charges for individual use. Some successful pay-as-you-go models do exist such as National Trust properties in the UK where a fee is charged to enter specific gardens and parks.

Sustainable business models may also exist for nature-based solutions in the forestry and eco-tourism sectors where nature is 'harvested' in a sustainable way.

In general, however there is a perception that nature-based solutions investment is higher risk and there is a longer timeframe for return on investment than other types of investment. The good news is that with more successful nature-based solutions business models being used and shared, this perception is likely to change.

## USEFUL RESOURCE!

### Naturvation Business Model Catalogue

The Business Models Catalogue for urban nature-based solutions, developed by the Naturvation project, presents a more detailed guide to eight different business models for urban nature-based solutions. Details in Section 4 – Additional Resources.



### It's difficult to quantify the benefits of nature-based solutions:

We often hear about the multiple benefits that nature-based solutions bring to the environment, to the health and well-being of local communities and even to local economies.

However, financing decisions are often made based on a cost-benefit analysis and it is sometimes difficult to quantify and communicate the monetary and non-monetary benefits of nature-based solutions without an appropriately planned evaluation. How do you put a monetary value on well-being, for example?

Environmental Impact Bonds (EIBs) are one solution to such challenges. For example, in the US, some water companies are prepared to pay for the benefits of nature-based solutions, that is they use EIBs to pay for a reduction in run-off rainwater clogging up sewage overflow systems.

### The scale is too big or too small:

Individual nature-based solutions projects at city level are often considered too small for direct financing by large financial institutions. For large-scale projects, cities often lack either the appetite to take on large-scale debt financing or the knowledge to make a business case for scaled-up implementation.

### We don't know how to collaborate with different agencies and organisations to achieve hybrid or blended financing:

Public sector financing remains one of the most important sources of financing for nature-based solutions and there is often a dependency on the same sources of grant financing year on year, making the projects vulnerable.

It would be preferable for nature-based solutions to have multiple funding partners, however the lack of experience of the actors in collaborating with non-public sources of financing is compounded in some communities by the absence of a suitable legal and regulatory framework to support such partnerships.

### Enablers to securing financing:

Having high-level political and public administration support is a key success factor in ensuring long-term sustainable financing for nature-based solutions. Cross-party political support can help to secure public-sector financing and top-level support from public administrators can help to secure the cross-departmental collaboration required to achieve the full impact of nature-based solutions.

### To secure political support, nature-based solutions should be clearly aligned:

at a top-down level with city vision, strategies and planning policies and programmes at a bottom-up level with citizen and stakeholder needs through a clear process of engagement and co-production.

Developing sustainable business models for nature-based solutions. Research has shown that too often there is a focus on financing the capital investment costs of nature-based solutions and not enough consideration goes into planning long-term sustainable business models to secure a return on investment. Connecting Nature, Naturvation and several other European projects have developed tools and methodologies to help with the planning of sustainable business models.



### Case study: Crowdfunding parks – workable or wishful thinking?

Crowdfunding has grown in popularity as an alternative way of raising finance. Crowdfunding enables a large number of people to contribute a relatively small amount towards a project.

The funds are usually committed through an online platform and the donations are then pooled together to fund a project. MyParkScotland is a civic crowdfunding platform to raise finance for public parks or green spaces.

The experience of MyPark Scotland is that crowd-funding is most often used to raise small amounts (typically less than €5000) and is often used in conjunction with other sources of financing. Planning and promotion are key factors contributing to crowd-funding success.

Increased awareness and the 'buy-in' of citizens to local community projects are important spin-off benefits of crowd-funding. MyPark Scotland has produced a resource kit on using crowdfunding to fund nature-based solutions. Details are in the Resources section.

# 3 | How Do You Finance Nature-Based Solutions?

Three major phases of financing nature-based solutions have been identified. These phases may reoccur multiple times over the lifetime of a nature-based solution. The three phases are:

## 1. Financing the planning of nature-based solutions:

The planning and design of nature-based solutions, and of large-scale infrastructure-type projects in particular, can take a long time, involve many organisations in lengthy co-production processes and can often be very expensive.

## 2. Financing capital investment in nature-based solutions:

Usually the highest costs associated with nature-based solutions projects are the capital costs associated with initial implementation. These costs are usually incurred over a short period of time.

## 3. Financing ongoing operational costs:

The costs of maintaining and operating nature-based solutions (sometimes known as the stewardship phase) are often considerable and occur over a long period of time.

The ongoing costs of nature-based solutions and revenue generation opportunities are core elements to be considered in planning the nature-based solutions business model.

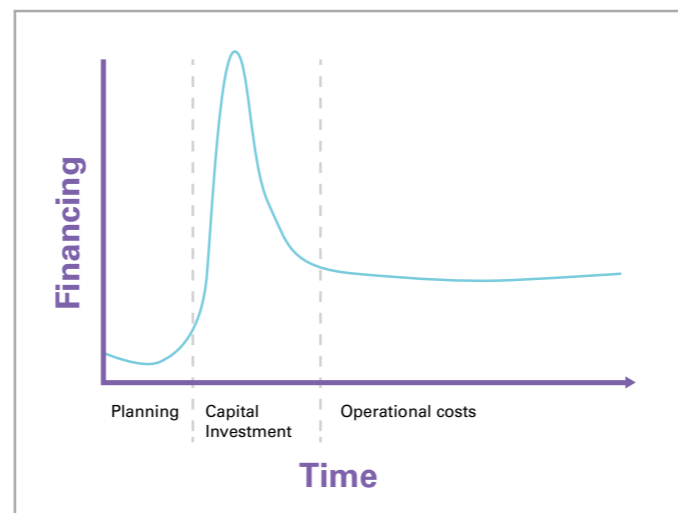


Figure 3. The phases of nature based solutions financing.

Source: Connecting Nature, 2019.

## Case Study: Labiomista public-private partnership

Labiomista, which means ‘mix of life’, is a good example of a mix of financing. It is a 24-hectare park located on the grounds of a former coalmine in the Flanders region of Belgium.

Labiomista explores biocultural diversity – the connection between humans and nature.

Financing for capital investment was delivered through an innovative public-private sector partnership: Koen Van Mechelen, a conceptual artist, whose studio is located on site, invested approximately €8 million in the project, which was matched with public sector funding of €12.6 million.

The business model to finance ongoing costs is based primarily on pay-per-use income from tourists visiting the open-air exhibition of many (living) artworks spread throughout the park.



## Connecting Nature recommends four steps in securing financing for all three phases of nature-based solutions.

### Step 1: Securing a solid support base for nature-based solutions

Raising awareness and securing the support of cross-party political leaders and public administrators for nature-based solutions is a critically important first step to securing public sector finance and using it to leverage financing from other sources.

### The Connecting Nature Governance Guidebook

explains how to align nature-based solutions with city visions, strategies, planning policies and programmes in order to secure political support. Securing political support is closely intertwined with better awareness, engagement and support for nature-based solutions from citizens and stakeholders (i.e. relevant participant groups such as conservation charities or community organisations).

The Connecting Nature Co-Production Guidebook explains how to engage citizens and stakeholders in the bottom-up co-production of nature-based solutions which respond equitably to community and stakeholder needs.



Wim Dries, the Mayor of the Belgian city of Genk (2009–2024) has been a vocal champion for nature-based solutions for many years.

He has been instrumental in raising awareness of the benefits of nature-based solutions at regional, national and international government levels. He has helped unlock regional government financing by securing recognition for nature-based solutions as important innovations for tackling climate change.

In Genk, he has been a leader in the use of public financing to leverage other sources of funding from charities, philanthropists and businesses.

Within the city council of Genk, he supports cross-departmental collaboration and governance structures to achieve the maximum impact of nature-based solutions and he has put in place a supportive environment for risk-taking and experimentation with new financing and governance models.

**Step 2:  
Planning sustainable business models and financing for nature-based solutions**

Connecting Nature has developed a customised business model canvas guidebook and workshop to help organisations plan a long-term business model for their nature-based solution.

The nature-based business model canvas has been used by all eleven cities in Connecting Nature and in many other projects and workshops and has been requested by over 100 organisations worldwide to help plan sustainable nature-based business models.

The nature-based business model canvas may be used in a stand-alone setting in one organisation such as a city council to build collaboration across multiple departments. It can be used to bring together many stakeholders from different institutions and sectors and can help to build consensus on a common vision for nature-based solutions.



**There are three major parts to planning a sustainable business model for your nature-based solution using the business model canvas.**

**1. Value proposition: what value or benefits does a nature-based solution offer?**

The environmental, social and economic benefits which could be generated by the nature-based solution should be considered individually. It is important to also consider trade-offs, for example, higher economic value creation, for example, increased economic revenue from tourists to an urban forest, may lead to decreased environmental value such as generating a negative impact on biodiversity.

**2. Value creation and delivery:**

In this part of the canvas we ask who are the main beneficiaries of nature-based solutions? These may be direct beneficiaries such as the end-users of a park or they may be indirect beneficiaries; for example, many citizens who don't live in the immediate surroundings of a park would benefit from better air quality.

Who are the key partners needed to deliver all the benefits of a nature-based solution? To achieve maximum impact, many partners beyond city councils may need to be involved from community groups to healthcare providers to local businesses. We look at potential co-governance structures for nature-based solutions in the long term.

What are the key activities and resources needed to deliver nature-based solutions? Depending on the type of nature-based solution, different expertise and resources may be required for delivery. **The Connecting Nature Technical Solutions Guidebook** provides cities with useful guidance on building a better understanding of the local context (in terms of both ecological and ecosystem service needs).

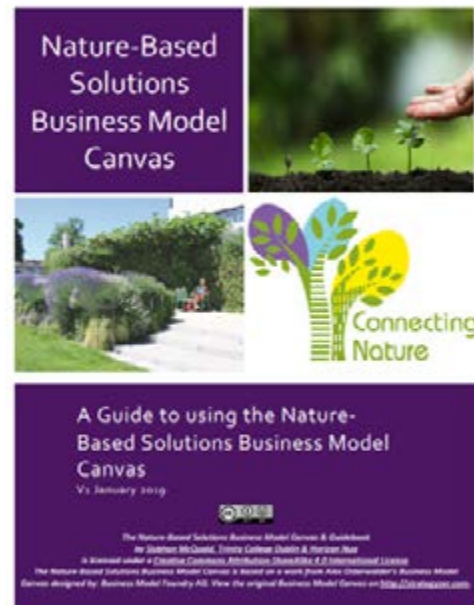
**3. Value capture:**

In this final part of the canvas, organisations are prompted to consider what are the costs associated with delivering the key activities of a nature-based solution?

Are there potential ways to reduce these costs – for example through collaboration with volunteers or the use of techniques such as permaculture?

How can the value of nature-based solutions be captured? This could be done directly, by charging end-users for green walls or roofs, for example, or indirectly, for example by capturing a reduction in health costs due to 'prescribing nature' for health problems, or ring-fencing increased property taxes due to higher house prices associated with proximity to high-quality green space.

**The Connecting Nature Impact Assessment Guidebook** provides valuable guidelines on capturing value.



Stakeholders engaged in a Nature-Based Solutions Business Model Canvas workshop for the Growchapel community garden, Glasgow, February 2020  
**Source:** Siobhan McQuaid.



Projects use the Nature-Based Solutions Business Model Canvas to explore business models.

**Source:** Eklipse



### Step 3: Secure Funding.

The Nature-Based Solutions Business Model Canvas is a planning tool which helps identify potential partners and sources of financing. The next step is to put in place an action plan to follow up and make contact with these partners and secure the sources of finance identified.

A key challenge at this stage is often finding personnel with knowledge of both nature-based solutions and financing. Often such knowledge is 'siloed' in departments or organisations, so it is important to build collaborations or develop the capacities internally in order to approach new partners and pitch for new sources of funding.

#### This step typically involves:

- Exploring opportunities for co-financing nature-based solutions with different public sector departments or agencies.
- Preparation of applications/bids for financing. This may include public sector financing e.g. local, national or EU grant financing opportunities or financing from charities and philanthropic organisations.
- Developing and putting in place new instruments to stimulate investment in nature-based solutions eg taxes and subsidies.
- Engaging with private sector and third sector investors to explore new sources of financing.

Research shows that many organisations are dependent on the same sources of financing. In line with the opportunities identified in the business model canvas it is important to explore new sources of finance relating to the different benefits of nature-based solutions.

For example, environmental financing opportunities may enable the delivery of nature-based solutions which tackle air pollution or increase biodiversity; health and well-being funding may be available in return for supporting vulnerable groups; corporate finance may be tapped into for nature-based solutions that fulfil corporate social responsibility obligations or carbon credit schemes, for example.



### Case study: Hybrid public sector financing model for nature-based playgrounds in Poznań (Poland)

A hybrid financing model was developed for the 40+ nature-oriented playgrounds developed in Poznań. It involves an agreement with pre-schools to make their grounds available as space for small-scale nature-based solutions.

The design, planning and upfront development costs of these nature-based solutions are financed through a combination of funding from different public sector departments and community budgets.

The costs of ongoing maintenance and management are then taken up by kindergarten managers who access direct and in-kind contributions from a variety of sources to cover ongoing stewardship costs.

The Connecting Nature team is now proactively looking for similar opportunities with other departments such as Health or the Department of Business Activity and Agriculture in relation to allotment gardens.

### USEFUL RESOURCE!

#### Catalogue of approaches to financing nature-based solutions in cities



The EU project GrowGreen has produced a useful summary of approaches to financing nature-based solutions.

This document includes case studies of various instruments which could generate financing for nature-based solutions such as 'green finance' (or debt-based) instruments; market-based instruments (e.g. user charges, taxes, subsidies, tax rebates, credit-trading systems, offsets for residual impacts on

biodiversity/green infrastructure (GI); and payments for ecosystem services (PES), Public-Private Partnerships, community asset transfers and many more.

**Source:** Trinomics and IUCN, 2019. Approaches to financing nature-based solutions in cities. Working document prepared in the framework of the Horizon 2020 project GrowGreen



#### Step 4: Measuring impact and return-on-investment

Measuring impact and return-on-investment from nature-based solutions is increasingly important for all types of investors – public sector grant funders, philanthropists and charities, and especially impact investors.

Failure to measure impact is commonly identified as one of the main weaknesses hindering wider take-up and financing of nature-based solutions. To address this challenge, organisations are strongly advised to refer to **The Connecting Nature Impact Assessment Framework** which supports cities in developing robust monitoring and evaluation plans for nature-based solutions from the planning stage right through to stewardship.

This guidebook helps cities and communities to reflect on what

impacts they should expect from nature-based solutions and in particular how to align expected impacts with a city or community's strategic objectives. Guidance is provided on how to select appropriate indicators and how to put together a data plan measuring outcomes against baseline data. Connecting Nature cities have found it extremely useful to reflect on what they have learned through the process of developing new financing, governance and business models for nature-based solutions.

This process is very new for many cities and often involves trial and error. Through a process of reflection, cities sometimes realise that what at first might appear as a failure, like an unsuccessful grant application bid, for example, might, over time, prove to be a valuable experience for building new strategic partnerships. **The Connecting Nature Guidebook**

**on Reflexive Monitoring** provides cities and communities with useful direction on how to reflect and adapt their financing and business model strategies to the ever-evolving local context and demands.

It should be noted, however, that when moving from a localised example of a nature-based solution to upscaling or out-scaling, it is important to tailor the solution to the new area and to the technical design and scale of that area rather than merely replicating a generic solution.

By sharing successes in relation to delivering bespoke benefits tailored to local needs, it is hoped that others involved in city-making or community development processes will adopt similar approaches, promoting widespread adoption of the **Connecting Nature Framework** building blocks across city or local government departments and external stakeholders.

## 4 | Additional Resources

**The research and practice of financing and business models for nature-based solutions is a relatively new area. In recent years, however, many useful introductory webinars and guidance tools have emerged:**

#### Introductory webinars:

- UrbanByNature webinar on financing and business models for nature-based solutions: <https://www.youtube.com/watch?v=guCvd1IWMVQ>
- EIB (2020), Investing in Nature – A Webinar Series. <https://www.eib.org/en/events/webinar-series-investing-in-nature-part-4>.

#### Catalogues of financing instruments:

- Trinomics and IUCN (2019), Approaches to financing nature-based solutions in cities. Working document prepared in the framework of the Horizon 2020 project GrowGreen. Available at: <http://growgreenproject.eu/approaches-financing-nature-based-solutions-cities/>
- UN-Habitat (2017), Finance for City Leaders Handbook 2nd Edition: Improving Municipal Finance to Deliver Better Services. Nairobi: United Nations Human Settlements Programme. Available at: <https://unhabitat.org/books/finance-for-city-leaders-handbook-2nd-edition/>

#### Business model toolkits and other resources:

- Connecting Nature's Nature-Based Solutions Business Model Canvas Guidebook: Available at <https://connectingnature.eu/financing-and-business-models>
- Naturvation's Taking Action for Urban Nature, a business model catalogue for urban nature-based Solutions and Business Model Puzzle dialogue tool. Available at <https://www.naturvation.eu/businessmodels>
- MyParkScotland Crowdfund Resource Kit: Available at <https://www.mypark.scot/get-involved/crowdfunding-resource/>

#### Other useful documentation:

- Almassy, D, Pinter, L, Rocha, S, Naumann, S, Davis, M, Abhold, K, Bulkeley, H (2018), Urban Nature Atlas: A Database of Nature-Based Solutions Across 100 European Cities. Available at [https://naturvation.eu/sites/default/files/result/files/urban\\_nature\\_atlas\\_a\\_database\\_of\\_nature-based\\_solutions\\_across\\_100\\_european\\_cities.pdf](https://naturvation.eu/sites/default/files/result/files/urban_nature_atlas_a_database_of_nature-based_solutions_across_100_european_cities.pdf)
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