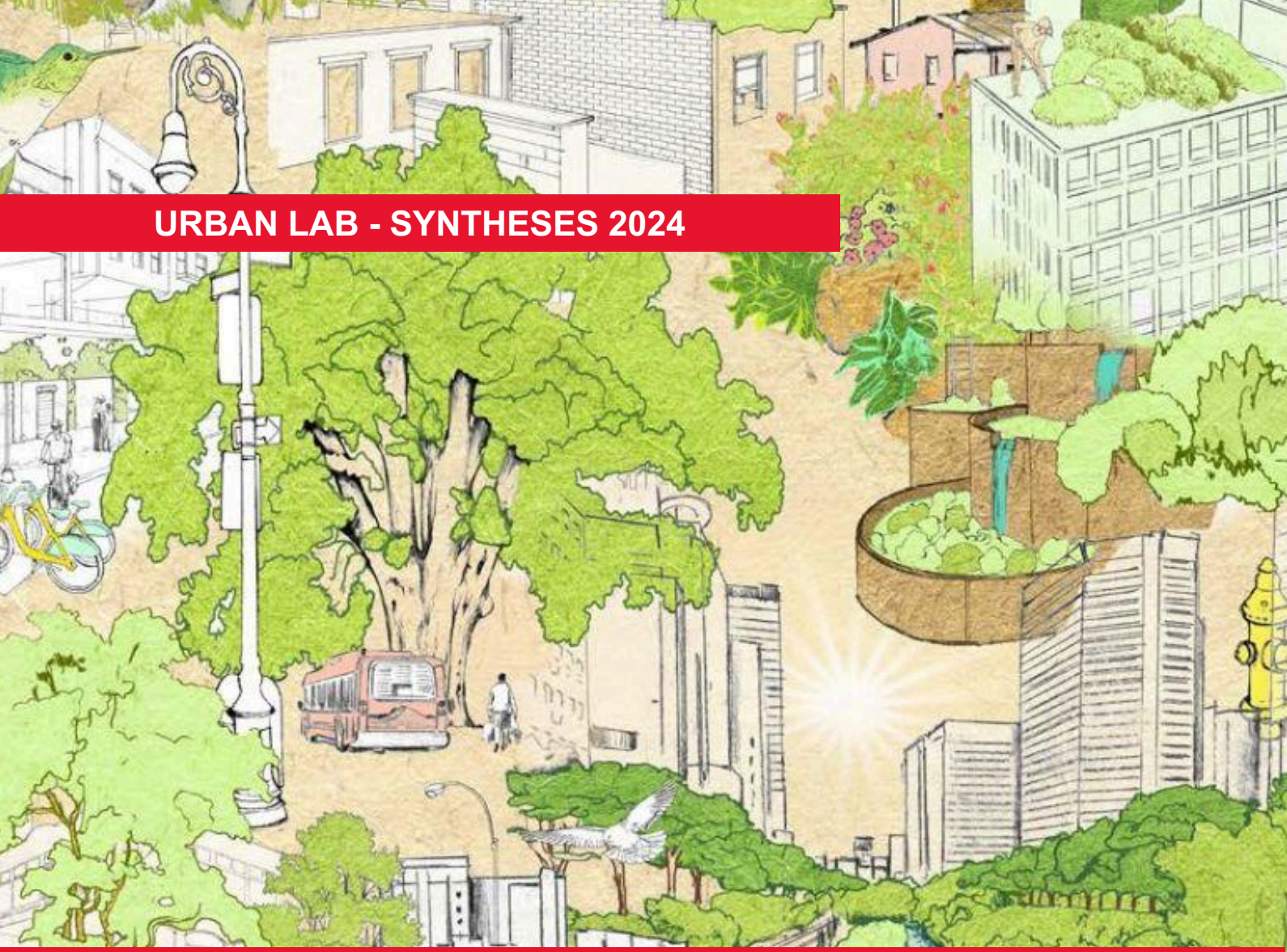

URBAN LAB - SYNTHESES 2024

The State of the Art of Urban Ecology: Biodiversity & Real Estate

Implementing biodiversity conservation and restoration measures in Germany, Portugal, and England

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OID
ŒUVRER POUR L'IMMOBILIER DURABLE

BIG
BIODIVERSITY IMPULSION GROUP

ESREI

SciencesPo
URBAN SCHOOL

PREFACE

The OID (Green Building Observatory) commissioned this *Capstone* to enhance their ongoing research on the state-of-the-art biodiversity regulations in Europe that constrain the real estate and urban development industry. As an independent association based in Paris, the OID aims to accelerate the ecological transition of the real estate sector in France and internationally. In 2021, the OID launched the European Sustainable Real Estate Initiative (ESREI) and a research program to develop biodiversity measurement tools, the Biodiversity Impulsion Group (BIG). Together with the biodiversity team of the OID, BIG develops methodologies to analyse the ecological risks caused by building and real estate assets. OID gathers and promotes exchange with over 140 members and partners, among them leaders of the real estate sector in France over the whole value chain, by sharing studies on their Taloen online resource centre and actively engaging in the field and with the public sector.

The coordinators of the project from the OID were Delphine Mourot, Marie Andrieux, Project Manager and Director (ESREI), Pauline Kajl, Senior Project Officer, Biodiversity and Water (BIG), and Mireille Khattar Zepf, Senior Project Manager and Director (BIG).

The research was conducted under the tutelage of Heliabel Bomstein, Climate and Nature Manager at UTOPIES, an independent and pioneering consulting firm and think tank established in 1993. UTOPIES specialises in integrating social and environmental issues into business strategies, with expertise spanning various sectors, including construction and urban planning. UTOPIES focuses on climate and nature expertise, having supported over 130 clients since 2020 in defining and implementing climate and biodiversity strategies and action plans.

THE PARTNERS

OID (the Green Building Observatory) is an independent association whose aim is to accelerate the ecological transition of the property sector in France and around the world. With more than one hundred members and partners, including the leaders of commercial real estate in France, OID is a reference at every stage of the value chain. The Observatory fosters collective intelligence to resolve ESG real estate issues, and produces resources and tools in the general interest.

The Biodiversity Impulsion Group is an applied research and collective action program, bringing together project owners, major users, public and private contractors and biodiversity experts, with the aim of integrating biodiversity into the design and management of real estate projects in France. BIG provides guides and educational materials to facilitate this transition. The program consists of twenty partner companies from the real estate and urban sectors.

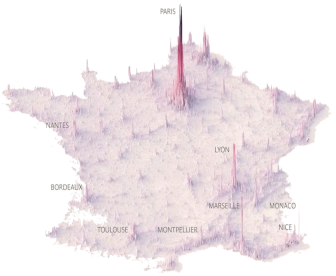
The European Sustainable Real Estate Initiative (ESREI) is a programme launched by OID to extend its work to study European countries. Due to their international development, real estate companies need to fully understand how their counterparts in European countries deal with ESG issues and what the regulations are for each of them. The ESREI programme launched during the second half of 2021 is tackling these issues.

METHODOLOGY

Our methodology combined data gathering, an in-depth literature review, and interviews. We studied academic articles, legal documents, reports, and government and specialised institutions' publications. Information about how regulations are implemented is not yet present in the literature due to the contemporary and dynamic nature of the field. To address this, we sought unpublished information and insights from field professionals. We conducted twenty-five semi-structured interviews with experts to deepen our understanding about implementing regulations to meet biodiversity targets. Whether in person or online, we usually shared a tailored, complementary, but comparable interview guide ahead of time. We made field trips in London and Lisbon to meet with public and private sector stakeholders. Our interviewees included public officials, asset managers, urban planners, environment consultants, scholars, and architects. These exchanges taught us more about the tools for enforcing national goals on the state and municipal levels and how the private sector deals with regulations. To ensure the data gathered was reliable, we fact-checked the information provided through additional research. To further verify the assembled data, we asked similar questions to different actors to cross and compare perspectives.

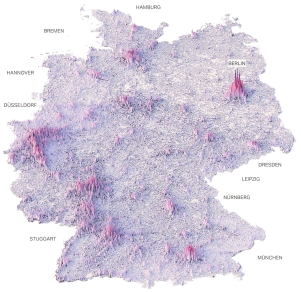
FIELDS STUDIED

FRANCE



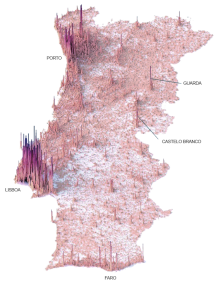
Highly centralised decision-making system
Concentrated, highly populated capital

GERMANY



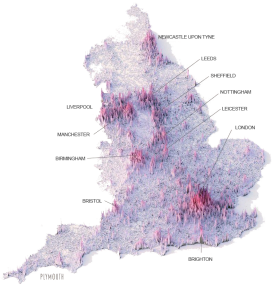
Federal → federal states' power
Polycentric structure → midsize cities

PORTUGAL



Centralised
Coastal cities
Leader in environmental topics among its Southern-European neigbours
Non-Western focus

UNITED KINGDOM, ENGLAND



Legacy of EU regulations

Focus on England:
the Union's most prominent country + the environment is a devolved competence

ISSUES

The biodiversity imperative in cities

A biologically diverse planet is fundamental for human survival. According to the IPBES Chair, Sir Robert Watson, “our economies, livelihoods, food security, health and quality of life” are dependent on the adequate functioning of the “web of life,” the symphony of all plants, animals, microorganisms, fungi, and the natural ecosystems and habitats that link them together (Secretariat of the CBD, 2000). The OECD confirms the imperative to maintain our rich biodiversity by quantifying the immense value of nature at $44 trillion, or half of the global GDP (OECD 2020). The European Commission estimated a return of between €4 and €38 for every euro invested in nature restoration (2024). Moreover, biodiversity delivers foundational social and environmental benefits – known as ecosystem services – that improve health, well-being, and happiness.

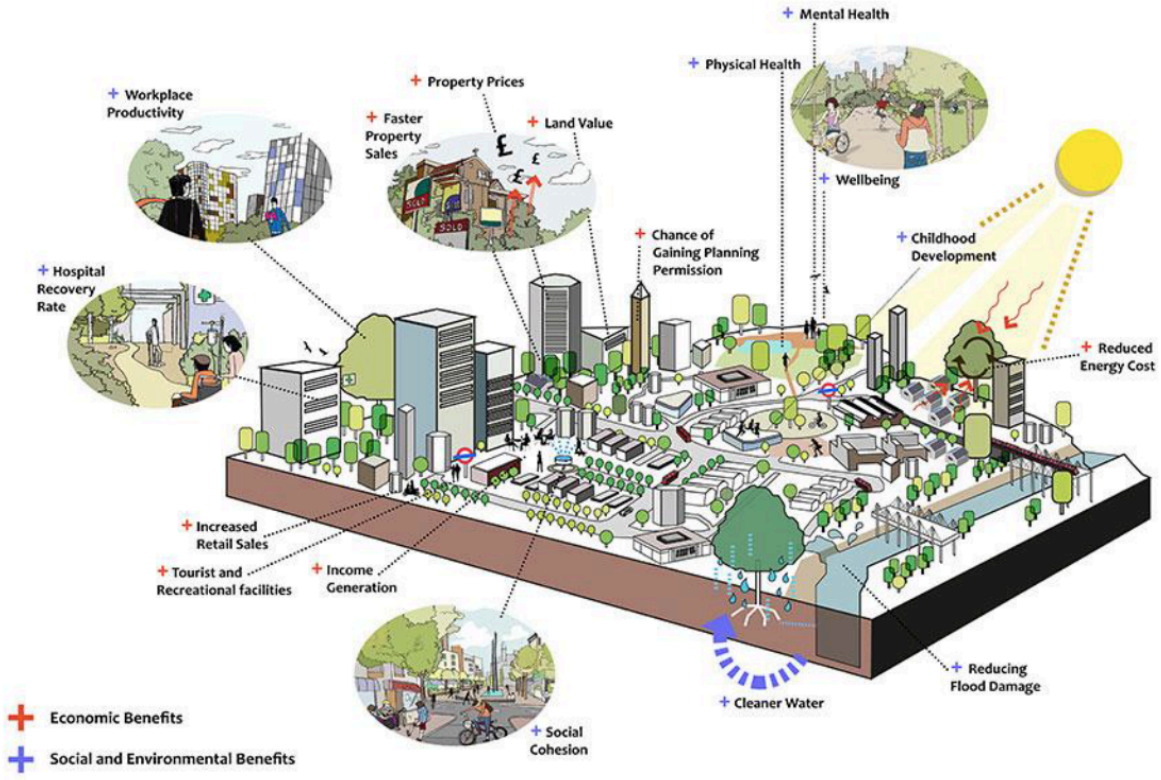


Figure 1. The wider benefits of nature for people
Source: ciwem.org

Population growth and urbanisation, especially since the mid-20th century, puts cities in the spotlight. Cities, as critical economic centres that host dense populations, are particularly reliant on ecosystem services yet there is often a dearth of biodiversity to provide such services. Without nature in cities, many facets of human well-being and our resilience to climate change are in jeopardy (C40 Cities Climate Leadership Group & C40 Knowledge Hub, 2023).

Biodiversity on the brink of collapse

Human activity has pushed nature to the brink; we are currently in the midst of the sixth mass extinction. Species disappearance is accelerating from between tens to hundreds of times the natural rate, 75% of the land surface has been significantly altered, and 25% of all species are endangered (Secretariat of the CBD, 2000; IPBES, 2019). The five drivers of

biodiversity loss are (1) changes in land and sea use, (2) the direct exploitation of organisms, (3) anthropogenic climate change, (4) pollution, and (5) the proliferation of alien species (IPBES, 2019, p. 5). The activity of the real estate (RE) sector has a major impact on all five drivers. The extraction of construction materials impacts living organisms, heavily pollutes the air and water and contributes to greenhouse gas emissions accelerating climate change. Change in land use - as the focus of this report - is especially relevant to the RE and property development industry. Urban sprawl and changes to the built environment put increased pressure on already scarce biodiversity in cities. However, consciousness is evolving and the public
and private sector actors are beginning to seize opportunities to contribute to the regeneration of urban ecology.

Figure 2: Drivers of biodiversity loss
Source: defenders.org

The emergence of international legal frameworks

In the last decades, international agreements to protect and restore nature set the stage for national regulations. The Kunming-Montreal Global Biodiversity Framework (GBF) established at the UN Biodiversity Conference COP15 (2022), obliges signatories to draft their own National Biodiversity Strategies and Action Plans (NBSAPs) and National Biodiversity Finance Strategies. The nature-positive policies of the European Union (EU) play a crucial role in requiring member states to protect local species and habitat, and adopt environmentally friendly principles for business.

As a result, European countries are facing double pressure on global and European levels to accelerate and strengthen the implementation of biodiversity regulations. This leads to a transitional, complex situation where public bodies are experimenting with new instruments and indicators, balancing binding laws and strategic frameworks. Cooperation between public and private actors to mainstream biodiversity preservation must also increase (Runhaar et al., 2024). The RE sector shapes the urban environment and has the responsibility, in some cases the legal obligation, and – most importantly – the opportunity to transition to more sustainable practices in advance of future regulations.

Figure 3: Timeline of international biodiversity legislations

Research framework

In the context where the real estate (RE) sector's activity negatively impacts the critical state of biodiversity, change in legislation and practice, especially in European countries, is already unfolding to address the crisis. However, there is a gap between aspirations and achievement because biodiversity is still in precipitous decline. The original commission aimed at reviewing the regulatory context of building and biodiversity in European countries and public policies. While the issue has been framed in the past as a trade off between the housing crisis and the need to increase green infrastructure in cities, practices balancing the two are emerging as well. Our research questions are: What public policies and normative and regulatory tools are being used to conserve and restore biodiversity in cities? How do these constraints apply to building, urban planning, and the protection of land?

As building regulations include a wide array of legislation from territorial to project scale and several drivers are impacting biodiversity loss, our initial challenge was to narrow down the topic and choose our focus point. We strove to select an informative range of countries and after careful consideration choose three: Germany, Portugal, and England. We settled on these countries in part due to their diverse historical background, political structure and geographic situation. We prioritised to consider the practice of the RE sector in its entirety, and to look at regulations affecting all stages of a real estate project. We have, however, limited our scope of regulations. Our two main focus areas of regulations are: (1) regulations on green infrastructure and (2) land use policies paying particular attention to regulations in the urban environment. We are aware that water regulations concerning urban flooding link solutions for biodiversity protection with water issues, but limited the depth of our research in this area. Similarly, although one of biodiversity's co-benefits, we chose to set aside air pollution. Moreover, our report does not delve into biodiversity benefits stemming from climate and energy efficiency regulations and the European Environmental Liability Directive. This research project is an in-depth study of diverse formal regulations including strategies, directives, laws, action plans, and certifications. We furthermore seek to shed light on best practices, which our project case studies were chosen to reflect. Our work spans all regulatory levels from the municipal context up to the regional, national, European, and international levels.

Our final main format is a report containing two parts: the first is dedicated to stand-alone monographs of Germany, Portugal, and England; the second is a comparative analysis to draw out the similarities and differences between the three countries as they compare to the French context. This report is accompanied by an executive summary and a public webinar organised by the OID on 14 June 2024.

MAIN RESULTS

OUR MONOGRAPHS

Germany

Germany is a large country whose diverse regions are dominated by agriculture, industry, managed forestry, and settlement, leaving only 0.7% of the land unmarked. The OECD considers Germany "one of the worst performers" among its members regarding species protection and for poor conservation of Natura 2000 sites. Nevertheless, the country has historically been a frontrunner in environmental protection. Germany pioneered initiatives such as green infrastructure, green roofs, and eco-districts. The biotope area factor developed in Berlin in the 1960s is an indicator that many countries are taking as an example today.

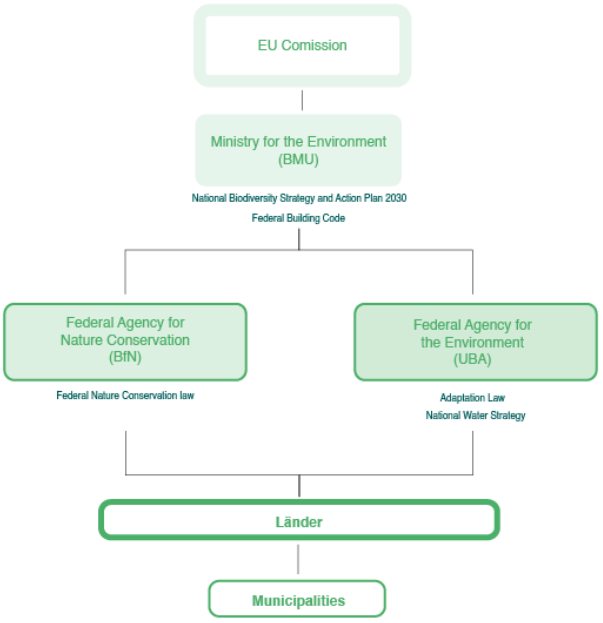


Figure 4. Environmental institutions in Germany

Germany links its vision to enhance biodiversity with the promotion of human well-being. The BfN defines three new orientation values for urban greening: climate adaptation, urban biodiversity, and public health. Germany seems to be ahead of the curve in integrating biodiversity considerations in various legislation (conservation, planning, climate). The national government is committed to three quantitative goals for 2030. First, new land consumption for settlement and transportation purposes should be reduced from around 55 hectares per day to less than 30 hectares per day; second, biotope networks should cover at least 10% of the Länder's area; and third, 150,000 trees should be planted nationwide. The federal government supports the Länder by developing land-use databases, creating a catalogue of measures to recycle land, and establishing a knowledge and communication

The Federal Environment Agency (UBA), a key national body for environmental protection, proposes the use of the biotope area factor and rainwater management factor. The Federal Soil Protection Act (BBodSchG, 1998) was also amended in 2021 to strengthen its provisions on soil sealing. The new regulations encourage soil monitoring surveys when the superficial soil layers are impacted (BBodSchG, §4 (5)). The BfN is responsible for developing and implementing Germany's biodiversity policies.

An emerging practice is the designation of climate-active areas and open spaces with cooling and rainwater storage functions. Paragraph 8 of the Climate Adaptation Law (KAnG, 2023) seeks to put this idea in the upcoming National Restoration Plan. German biodiversity regulations also presciently acknowledge the importance of noise and light pollution, invasive species management, and sustainable building materials as future policy targets.

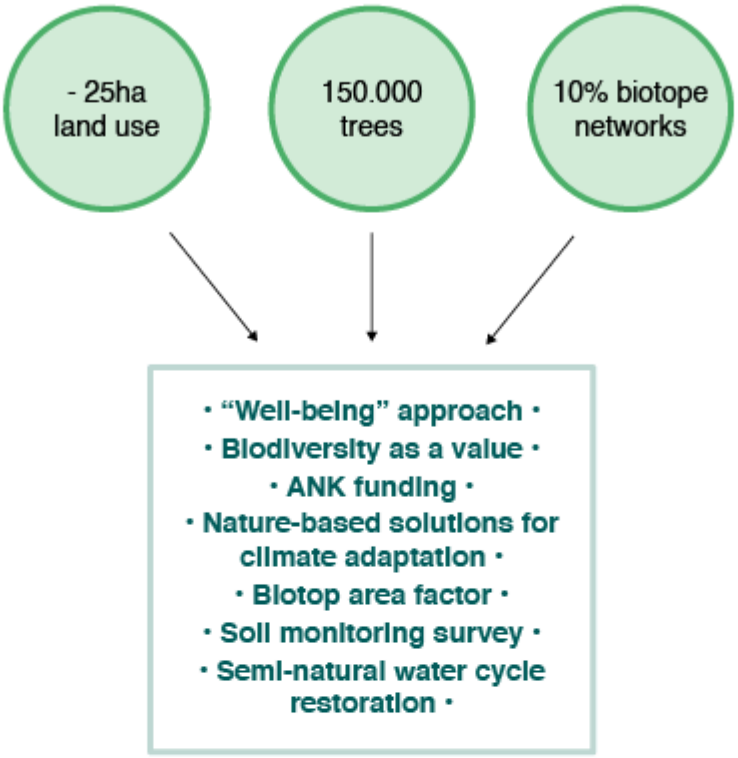


Figure 5. Germany's main biodiversity targets and strategies to achieve them.

While public policies recognize the co-benefits of nature-based solutions in several climate-related domains, private practices often perceive technocratic solutions as more successful. Obtaining certification is an important tool for development projects in Germany. For example, the German Association for Sustainable Construction (DGNB) has developed its own international certification system (DGNB certification) specifically for the building sector, targeting the entire life cycle of buildings. An impactful design method stemming from previous work of the BfN is Animal-Aided Design which requires first identifying the needs of the protected habitats and species of a site and then developing a design based on these needs (Apfelbeck et al., 2020). This planning method is the core strategy of the Schumacher Quartier, a prominent project developed on the site of the former Berlin's Tegel airport. Experts identified the existing animals of the site and chose fourteen appropriate additional species to diversify the local ecosystem. They will expand the list once the fourteen species are well established. Additionally, this new urban district aims to encourage residents to interact with nature. The 220 hectares of heathland adjoining the residential Schumacher Quartier will be turned into a nature conservation open for recreational amenities that will support rich biodiversity uplift.

Figure 6. Schumacher Quartier, Berlin TXL
Source: Tegel Projekt GmbH

Portugal

Continental Portugal has a Mediterranean climate and hosts diverse flora and fauna. Most cities and 45% of the population cluster along the Atlantic coast. Portugal also faces significant threats from fires, droughts, coastal erosion, earthquakes, and tsunamis. Portugal's delayed transition to democracy in 1974 slowed environmental policy development. The 1972 Stockholm Conference spurred the creation of the National Commission for the Environment (CNA) and the first environmental law (1971) (Law 9/70). Joining the EU in 1986, Portugal strengthened its laws, adopting the Birds and Habitats Directives and the Environment Assessment Directive. Portugal faced challenges in environmental protection due to weak state capacity and lack of expertise. Non-state actors and EU assistance have gradually improved implementation, though biodiversity policies remain emerging and uneven.

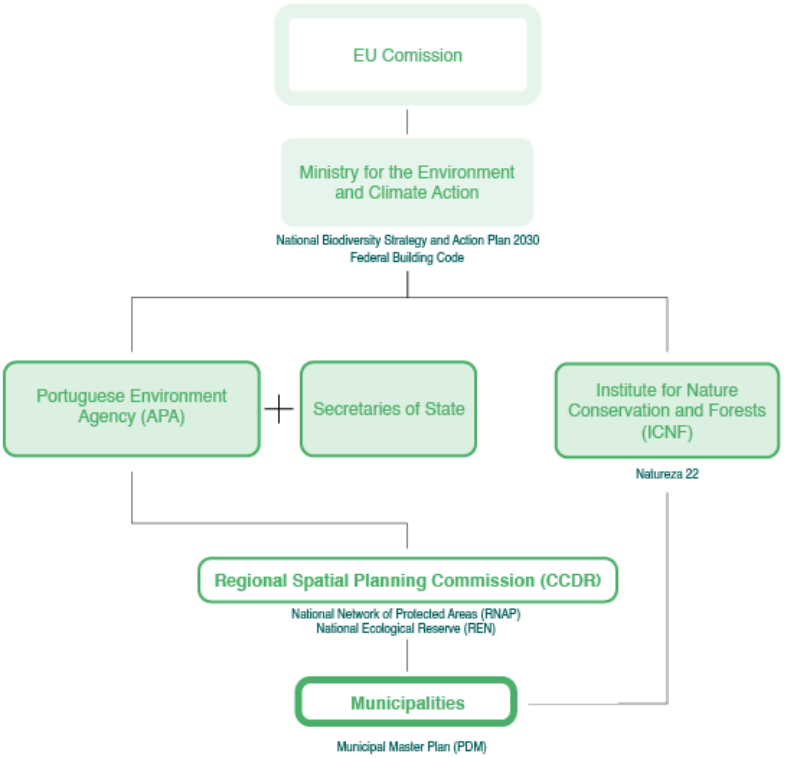


Figure 7. Environmental institutions in Portugal

Portugal's rich biodiversity is considered a national heritage, and traditional nature conservation plays an important role. Strategies such as the National Strategy for Nature Conservation and Biodiversity 2030 aim to reconnect urban populations with nature and improve habitat and species conservation. The Fundamental Nature Conservation Network (RFCN), National Network of Protected Areas (RNAP), and National Ecological Reserve (REN) establish ecological municipal networks and green corridors. A key guideline is the 'attractiveness' of green projects and the necessity to make biodiversity goals compatible with economic progress. The government aims to combine green growth with "responsible environmental behaviour" to pave the way for a resilient future (Decree-Law no. 75/2015). This combination is due mainly to the country's need and eagerness to attract foreign investment and further engage private actors to finance environmental projects. The Environmental Fund (Fundo Ambienta) also offered financial support in 2023, offering up to €750,000 per project with a co-financing rate of 85%. The Institute for Nature Conservation and Forests (ICNF) launched Natureza 22 to enhance conservation and engage citizens in biodiversity and climate change efforts, featuring seven thematic objectives. One of the emerging topics is the control of invasive species, which is further regulated through the Decree Law n°565/99, revised in 2019. While there are no eradication programs in place, efforts are directed towards control with varying success.

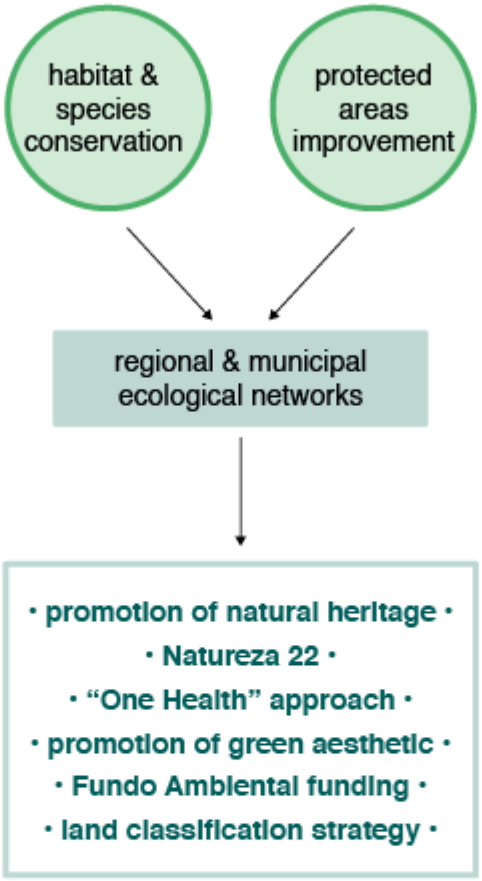


Figure 8. Portugal's main biodiversity targets and strategies to achieve them

The RE sector in Portugal enjoys a high degree of autonomy from the state and strongly prioritises decarbonization and human well-being in its sustainability strategy. Since Portugal's regulations to conserve and restore biodiversity in urban areas are less ambitious than European guidelines, RE actors attempt to align with EU targets to stay ahead of the curve. Biodiversity considerations are present in two main ways within the sector in Portugal: the interconnectivity of biodiversity and climate change, as well as the One Health approach. As the financial viability of projects remains the driver of the sector, financial incentives play a crucial role in determining a project's sustainability level. The private sector defends the necessity of more targeted financial incentives and points to the disadvantaged position experienced by small and medium projects/actors when adopting labels and certifications.

The city of Lisbon's Local Plan for Biodiversity 2020's main effort lies within their impressive dynamic of nine Green Corridors connecting the entire city, from the Monsanto Forest Park (900ha), through the city centre and into the riverine area. This network of green corridors brings added value to the land in two ways: (1) by mitigating potential climate change risks, which could have damaging consequences to

Figure 9. AEGAS Tejo building.
Source: Ageas Group Portugal

properties, and (2) by contributing towards the One Health approach. An example highlighted by interviewed RE actors is the AGEAS group's office in the Parque das Nações Expo. Connected to the *Cabeço das Rolas* Garden and the green corridor Ribeirinhos, the project displays the vision of the RE sector according to which biodiversity enhancement is not only materialised through rewilding a site, but through the indirect environmental impact of buildings.

England

Agriculture dominates, forest cover is low, and 84% of people live in cities, leaving the natural habitat fragmented. The 32% species loss rate in England is the worst of the G7. Compromised ecological resilience exacerbates climate change. In England, flooding, sea level rise, drought, and wildfires pose enormous threats (HMG, 2011; Sustainability West Midlands, 2022). NGOs, like The Wildlife Trusts, established in 1912, have been influential in policy-making, enforcement, and management of protected areas. The 1994 UK Biodiversity Action Plan motivated progress but was ineffective due to insufficient monitoring and enforcement. Environmental responsibilities devolved by the early 2000s (Tucker et al., 2023), and each UK country created a national strategy.

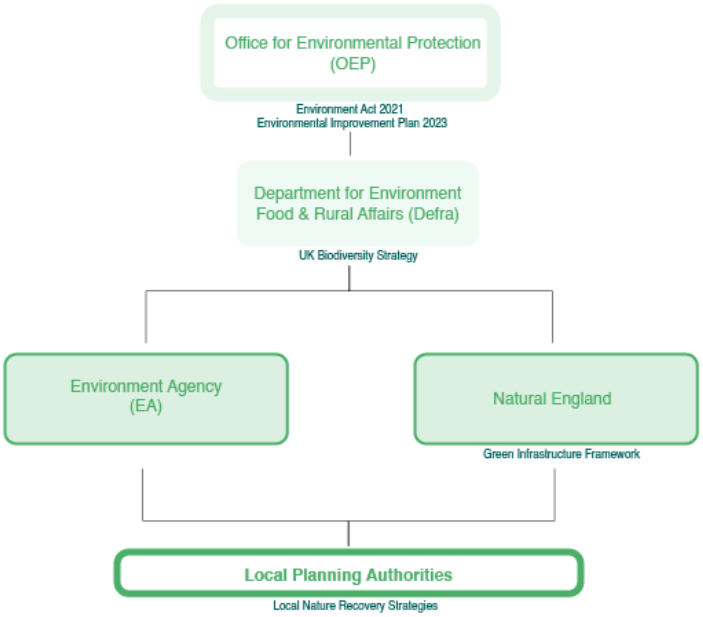


Figure 10. Environmental institutions in England

Post-2010 saw a shift to a 'green growth' perspective that framed nature in terms of ecosystem services to provide environmental, societal, and economic benefits (HM Government, 2011). Meanwhile, austerity, privatisation, and public sector cuts intensified, which undermined environmental authorities. Regulation was thin, and voluntary schemes fell short. Financing has risen since 2020, but there is still a gap. After Brexit, the 2018 25-Year Environment Plan and watchdog the Office for Environmental Protection (OEP) (OEP, 2021; Caine, 2023) were created to replace EU laws and institutions.

With the promise to deliver a "green Brexit", the 25-Year Environment Plan was followed by the Environment Act 2021 (EA21) which sets a suite of long-term targets to restore nature. The Act requires LPAs to institute Local Nature Recovery Strategies and legally mandated the aim to halt species decline by 2030 and reach a 10% species increase by 2047 (Defra & Natural England, 2022). Most of the targets laid out in the seven parts have yet to become binding, but some have notably Biodiversity Net Gain (BNG) in early 2024.

Statutory Biodiversity Net Gain (BNG) requires developers to show a 10% increase in natural habitat provision in a biodiversity gain plan to gain permission from local planning authorities (LPAs). The Biodiversity Metric must be used to evaluate the natural habitat in terms of 'units' using the information collected in the ecological impact assessment (EIA). The gain may be created and enhanced on-site, off-site, or in combination, and the developer is legally bound to maintain that gain for a minimum of 30 years. If a developer proves they cannot develop on-site or off-site improvements, they can turn to the private market to purchase off-site units. As a last resort, statutory biodiversity credits are for sale by the national government, through Natural England, but the cost is set artificially high.

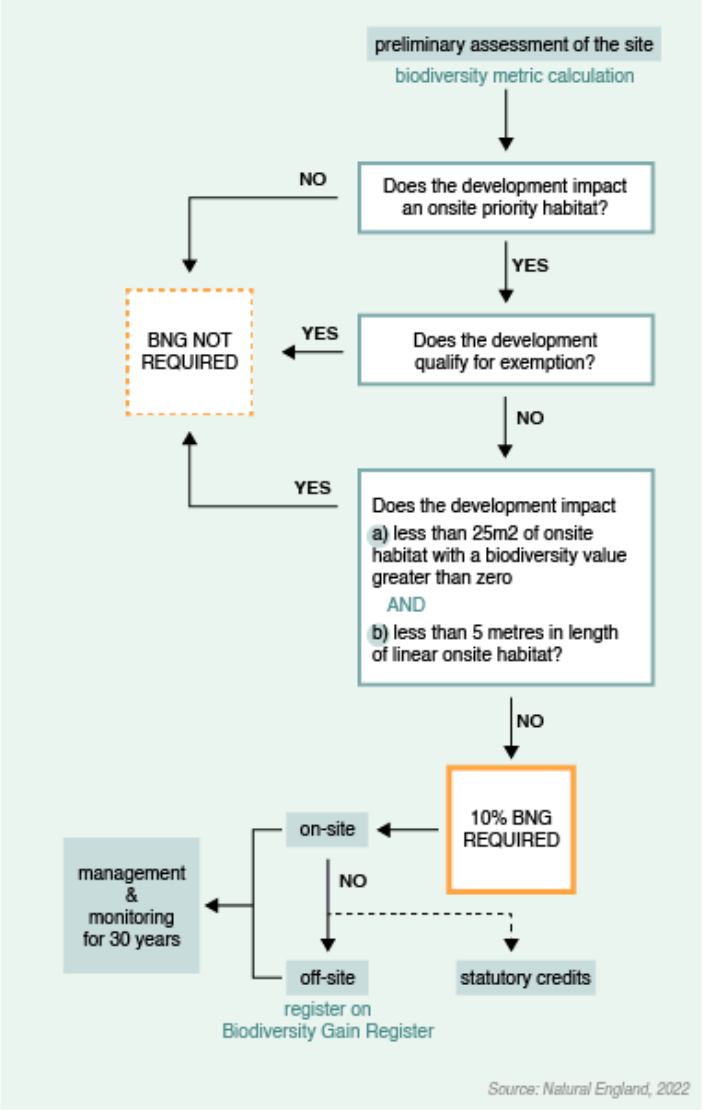


Figure 11. Biodiversity Net Gain Guide

Natural England's 2023 Green Infrastructure Framework (GIF) works synergistically with the BNG and Local Nature Recovery Strategies and proposes a set of five Green Infrastructure Standards. The Urban Greening Factor (UGF) Standard aims to achieve a minimum of 30% green cover in commercial developments and 40% green cover in urban residential zones (Natural England, 2024).

Experts at Berkeley Research Group (BRG) revealed that prominent players in the RE sector have moved to integrate biodiversity amenities into commercial, residential, and mixed-use projects ahead of government regulation to avoid the 'brown discount' rather than obtain a 'green premium' on property valuation. Across the board, in England, the market value of a property is affected negatively if it *does not* include nature. The penalty reflects the future costs of retrofit and decreased premium income streams. The industry is attentive to the changing regulatory landscape, and many firms prefer to integrate biodiversity cost-efficiently from the outset. However, for mainstream RE players, legislation is essential for compliance because avoiding costly sustainable investment has been the norm in the broader industry in

England. Small and medium-sized enterprises (SMEs) not used to integrating ecological matters must be supported in this transition.

The Greater London Authority (GLA) and its constituent boroughs' local Councils and Local Planning Authorities (LPAs) share responsibilities for environmental governance in London. The Mayor's London Plan 2021 is Greater London's spatial development framework. Before it became nationally mandatory, the London Plan included a broad biodiversity net gain requirement at the project level. A policy complementing the London Plan is the 2018 London Environment Strategy, which sets out several quantified targets, including a 10% tree canopy cover and an overall green cover increase to 50% by 2050.

Kidbrooke Village, by Berkeley Homes, is a residential regeneration project that will include 5,268 new homes by 2030 and community commercial amenities adjacent to 86 hectares of parkland on the outskirts of London. A re-wild and habitat-rich natural landscape was created that achieved 99% BNG in a portion of this greenspace called Cator Park, thanks to a collaboration with the Royal Borough of Greenwich, the London Wildlife Trust, and HTA Landscape Architecture. Total gains are expected to reach 258% when the grounds and species mature. According to the Department for Levelling Up, Housing and Communities, "the site is the best example of a large-scale nature recovery network in a UK city."

Figure 11. Kidbrooke Village and Cator Park
Source: Berkeley Homes

Criteria	France	Germany	Portugal	England
1. Key regulations addressed to enhance biodiversity	ZAN (Code d'urbanisme) rooftop greening (NBSAP) Biotope Area Factor	Green access (BNatSchG) Soil unsealing (Water Strategy, Adaptation Law) Biotope networks Biotope Area Factor	Protected areas (Natureza 22) "Buildable" land classification (failed) Biotope networks	10% biodiversity net gain – BNG (EA 2021) 40% green cover in urban residential zones (GIF) London only Urban Green Factor
2. Impact of regulations on the real estate sector	Binding Ambitious quantified targets Implementation difficulties	Non-binding Quantified targets Promotes a "vision" for biodiversity valuation	Non-binding Qualitative targets "vision" for biodiversity valuation	Binding Ambitious quantified targets Implementation difficulties
3. Key actors influencing biodiversity prioritise[1]	National power NGOs PPP	Länder power NGOs PPP	Municipal power NGOs PPP	LPA power NGOs PPP Citizen initiatives
4. Means of implementation	Binding definition of artificialisation (ZAN) Environmental Fund Fines (not implemented) EIA: ecologist required	National best practice guides EIA: limited Environmental Fund	Best practice projects EIA: limited Environmental Fund	Binding instrument (BNG) EIA: ecologist required Fines Environmental Fund
5. Expected trends going forward	Invasive species regulations Enforcement of sanctions	Invasive species regulations Noise and light pollution included Regulations for the use of sustainable building material	Invasive species regulations Binding zoning regulations Desire for tools financially favouring sustainable practices	Invasive species regulations Data sharing from private sector

The regulatory landscape in Europe and internationally is rapidly evolving to address biodiversity loss. A range of strategies, targets, best practices, and laws aim to foster biodiversity uplift by shaping urban planning and the built environment in novel ways and are increasingly linked with policies to ameliorate climate change. Our comparative cross-country analysis unveiled the shape of a new legal paradigm and real estate sector best practices. The shared goal of enhancing the quality and extent of greenery in cities is clear, with legal frameworks addressing specifically land use and urban greening. All types of green infrastructure are backed by public and private actors, from green roofs and parks to innovative green corridors and sustainable drainage systems (SuDS). Land use change is specifically targeted with a strong trend towards limiting or stopping artificialization (no net loss of biodiversity), with the ideal scenario being the net positive gain policy in England. This practice of leaving natural habitat in a better state than before is at the forefront of sustainable development, offering a potential resolution to the age-old conflict between nature and construction. Innovative tools and standardised indicators such as the biotope area factor (by any name) are maturing and are enabling the real estate actors to actually increase the proportion of vegetation on the project, neighbourhood, or district scales. Zoning and protected areas continue to be crucial, and quantified land protection targets, such as the 30% by 2030 goal, will hopefully be put into action to reverse the decline of nature.

[1] Under this criterion we highlight the main public actors in structuring biodiversity regulations, and nonstate actors or partnerships that influence the implementation process.

We observe a clear trend towards an increasing prioritisation of nature in real estate projects, from the initial site assessment to the long-term habitat management. For the first time, in a limited way in some countries, there is a growing awareness that in certain cases, it would be wiser not to build, as the biodiversity at risk is invaluable and irreplaceable. However, more needs to be done. The diverse policies and tools used in unique national contexts dictate how building and development should operate, but do so with varying degrees of force. It is still uncommon for biodiversity to be legally binding on the national level; typically, the planning system - and rightly so - responds to local needs at the municipal or metropolitan level and therefore carries the responsibility of incorporating national and international directives to address biodiversity loss. Graham Tucker in his comprehensive 2023 analysis of nature conservation in Europe, concluded that the gap between aspiration and achievement in biodiversity uplift is due to the lack of stringent laws. While leading private sector actors set a good example, Tucker firmly believes that the most effective approach to achieving positive outcomes rapidly and efficiently is through "strong and enforced legislation, adequate well-targeted funding and motivated people (Tucker, 2023, p, 137)." In this respect, it is to be hoped that the coming years will see a strengthening of existing legislation, as well as the associated tools and funding.

LESSONS LEARNED

1. This is only the beginning… biodiversity regulations are very recent but are constantly evolving and becoming more stringent. RE actors should not wait for binding regulations but must act before.

2. The specific nature of the real estate business, where the impact on biodiversity is significant due to the land use of buildings and the impact of construction, is, therefore, both one of the main pressures on biodiversity and associated ecological processes, but also one of the primary holders of the levers to make these spaces more favourable to living being. This is especially the case if the issues are prioritised and taken into account from the project design phase.

3. Lack of data to inform environmental impact assessments is a major obstacle. Real estate actors are invited to publish their ecological data and make it usable.

FIND OUT MORE

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The Capstone project: an original educational tool

Thanks to this original tool, students are placed in a work situation on a real problem posed by a public, private, or associative organisation. For all the Masters of the Urban School, the structure and management are identical: the project is jointly monitored by the the Urban School and the partners, at all phases of the project, and regular methodological supervision is provided by a professional or academic tutor specialised in the issue. The Capstone projects allow the partners to take advantage of the research and training acquired within the Urban School, to benefit from the production of studies and quality work, and to have a capacity for innovation.

Capstone projects are a great tool to study, diagnose, forecast, lead a comparative analysis, even to prepare for evaluation, and more generally to deal with any problem that can enlighten the organisation concerned in a logic of "R&D ". Each project mobilises a group of first-year students from one of the Urban School's Master’s. Students work between 1.5 days and 2 days per week on dedicated time slots, for a period of 6 to 9 months (depending on the Master’s concerned). In Executive education, collective projects concern the Executive Master “Territorial governance and urban development” and mobilize professionals for a period of 4 months.