



IUCN Urban Toolbox

A catalogue of knowledge products on urban biodiversity



About IUCN



IUCN is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together.

Created in 1948, IUCN is now the world's largest and most diverse environmental network, harnessing the knowledge, resources and reach of more than 1,400 Member organisations and around 15,000 experts. It is a leading provider of conservation data, assessments and analysis. Its broad membership enables IUCN to fill the role of incubator and trusted repository of best practices, tools and international standards.

IUCN provides a neutral space in which diverse stakeholders including governments, NGOs, scientists, businesses, local communities, Indigenous peoples organisations and others can work together to forge and implement solutions to environmental challenges and achieve sustainable development.

Working with many partners and supporters, IUCN implements a large and diverse portfolio of conservation projects worldwide. Combining the latest science with the traditional knowledge of local communities, these projects work to reverse habitat loss, restore ecosystems and improve people's well-being.

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IUCN Urban



Since its establishment in 1948, and for almost seven decades, IUCN has worked on biodiversity and nature conservation mainly in rural and peri-urban areas. However, in 2016, during the IUCN World Conservation Congress, the IUCN Council has requested to incorporate urban conservation into the work of the Union. It was acknowledged that the majority of the world’s population is urban, and that urban people are critical for nature conservation.

Overall, the importance of urban biodiversity has increased exponentially and has required the establishment of dedicated processes and bodies to ensure its mainstreaming within the work of the Union.

At the 2016 IUCN World Conservation Congress, IUCN Members adopted Resolution 29 on ‘Incorporating urban dimensions of nature conservation into the work of IUCN.’ To drive its implementation, the Members called on Council—IUCN’s highest decision-making body—“to establish an ‘IUCN Urban Alliance’, chaired by a member of Council and composed of Members and units of Commissions and the Secretariat concerned with urban dimensions of conservation...”. In addition, Resolution 67 ‘Call for Nature in Cities agendas and Strengthening the IUCN Urban Alliance’ (2020 IUCN World Conservation Congress), has mainstreamed urban conservation in IUCN’s programme of work.

From that moment, there has been increasing momentum around urban biodiversity both globally and within IUCN. For instance, in 2021 Subnational governments were included in IUCN’s membership; the [Nature 2030 IUCN Programme](#), guiding IUCN’s work, has a dedicated target on nature and people thriving in cities while addressing urban challenges; and finally, the [Marseille Manifesto](#) explicitly mentions the IUCN Urban Nature Indexes, IUCN’s flagship knowledge product on urban biodiversity, as part of an ambitious pledge to expand universal access to green spaces and enhance urban biodiversity in 100 cities.

To give structure to the plethora of IUCN tools and methodologies that can be applied in urban ecosystems, the IUCN Heritage and Culture Team, where the IUCN programme of work on urban sits, has developed the IUCN Urban Toolbox. It aims at guiding subnational governments, municipalities and urban professionals throughout their journey in nature-positive development in urban environments. Featured tools are intended to support conservation actions in different phases, such as assessment, planning, design, implementation and monitoring.

Urban Toolbox

Decision Key

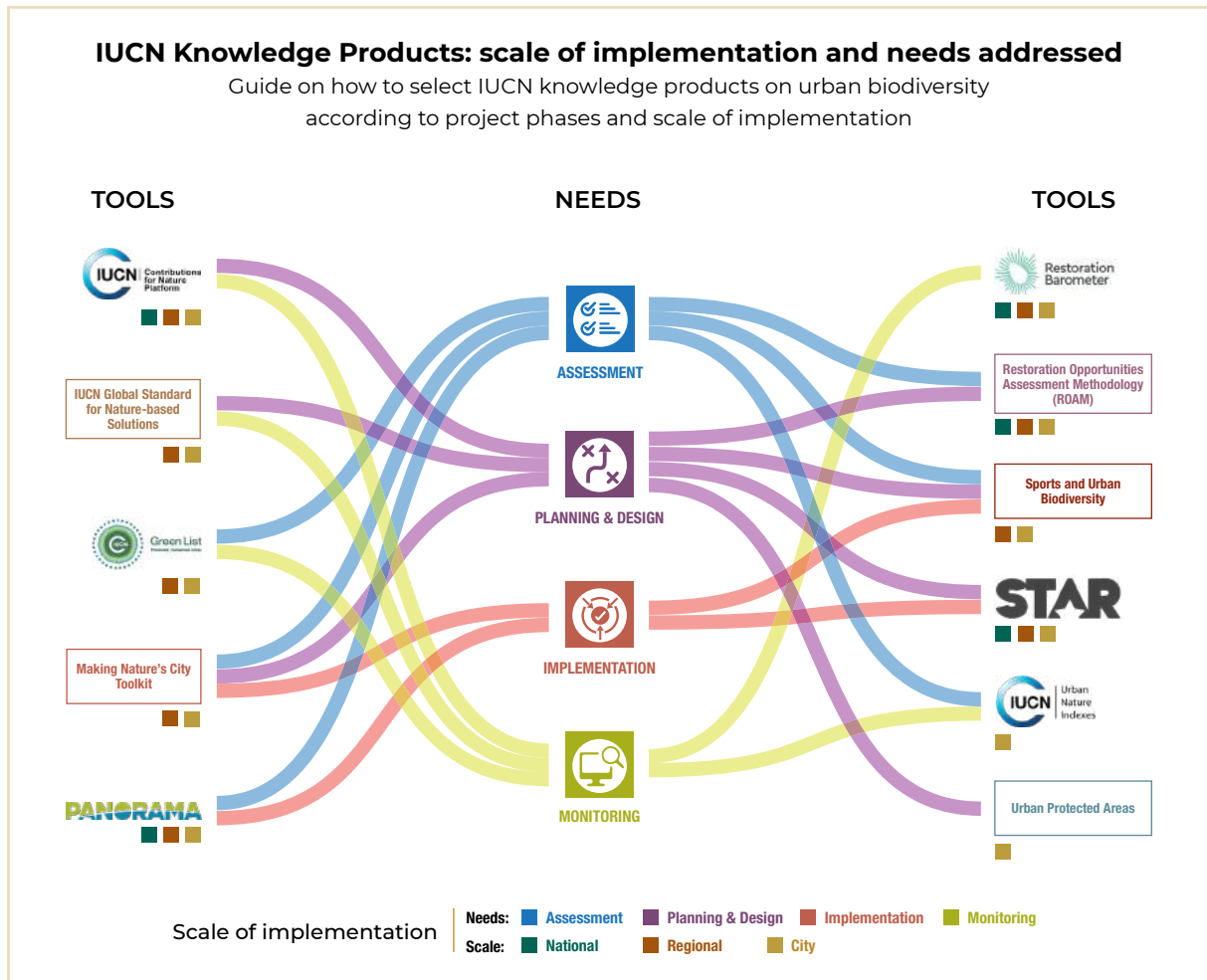


The IUCN Urban Toolbox is designed to respond to the needs of subnational governments, municipalities, practitioners and local organisations while designing and implementing projects, policies and solutions on urban biodiversity. The decision key below will support the identification of the most relevant IUCN knowledge products based on project phase and implementation scale.

The project phases covered throughout the Urban Toolbox are:

- **Assessment:** Tools associated with this phase may be used to assess cities' ecological performance to inform on key threats and pressure on biodiversity, potential for improvement, effective management of urban protected areas and/or similar case studies.
- **Planning and design:** Knowledge products connected to this phase assist developers in the provision of frameworks that aim at optimising the planning of urban biodiversity initiative to maximise conservation outcomes. Such support might relate to participatory approaches, integrated urban planning, or restoration opportunities assessment.
- **Implementation:** Related tools can be used in the execution of biodiversity conservation projects in cities. Examples might include the presentation of enabling conditions of similar projects or the identification of priority areas for species threat abatement.
- **Monitoring:** In this phase, knowledge products may support the monitoring of urban biodiversity projects and actions through the establishment of science-based targets and the analysis of trends over time.

Each of the featured tools can be applied in one or more phases. The document aims at helping practitioners select the most appropriate tool by outlining their value propositions, linked resources and scale. All the methodologies can be implemented either at a national, regional or municipal level, as presented in the infographic.



IUCN Urban Toolbox Decision Key

Which project phase are you currently working on?

ASSESSMENT OF

- Best practices to guide design and implementation
 - Green List
 - PANORAMA
- Current conditions, gaps and opportunities to enhance the urban elements that support biodiversity
 - Making Nature's City Toolkit
 - Sports and Urban Biodiversity
- City's ecological performance
 - IUCN Urban Nature Index
- Potential restoration opportunities through participatory planning
 - Restoration Opportunities Assessment Methodology (ROAM)

PLANNING & DESIGN

- According to identified opportunities to reduce threats for species and contribute to their restoration
 - STAR
 - Urban Protected Areas
 - Making Nature's City Toolkit
 - PANORAMA
 - Sports and Urban Biodiversity
- Urban planning design elements inspired by case studies
 - IUCN Contributions for Nature Platform
- In collaboration with IUCN Members to achieve bigger impacts in conservation
 - Restoration Opportunities Assessment Methodology (ROAM)
- How to deploy effective and sustainable Nature-based Solutions
 - IUCN Global Standard for Nature-based Solutions

IMPLEMENTATION

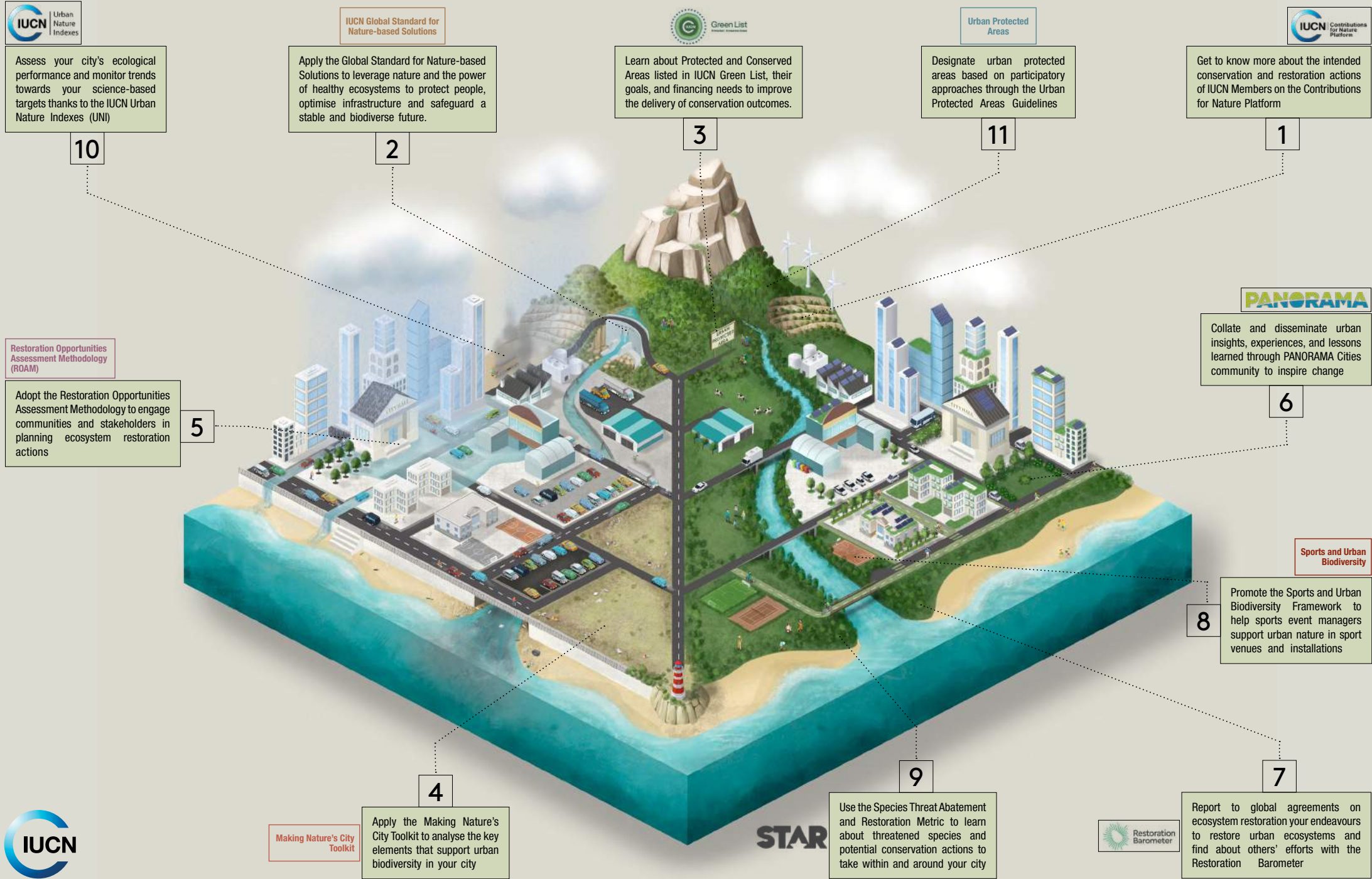
- Informed by urban planning elements contributing to biodiversity
 - Making Nature's City Toolkit
 - Sports and Urban Biodiversity
- Of adaptive approaches based on their effectiveness in reducing species' threats
 - STAR
- Informed by enabling conditions of similar solutions worldwide
 - PANORAMA

MONITORING

- Effectiveness of conservation actions improving your city's ecological performance
 - IUCN Urban Nature Index
- How your actions contribute to nature conservation and restoration
 - Restoration Barometer
 - IUCN Contributions for Nature Platform
- Protected and conserved areas performance
 - Green List
- Nature-based Solutions
 - IUCN Global Standard for Nature-based Solutions

CREATING NATURE-POSITIVE CITIES

Application of IUCN knowledge products in cities for the well-being of citizens and the protection of urban nature



01

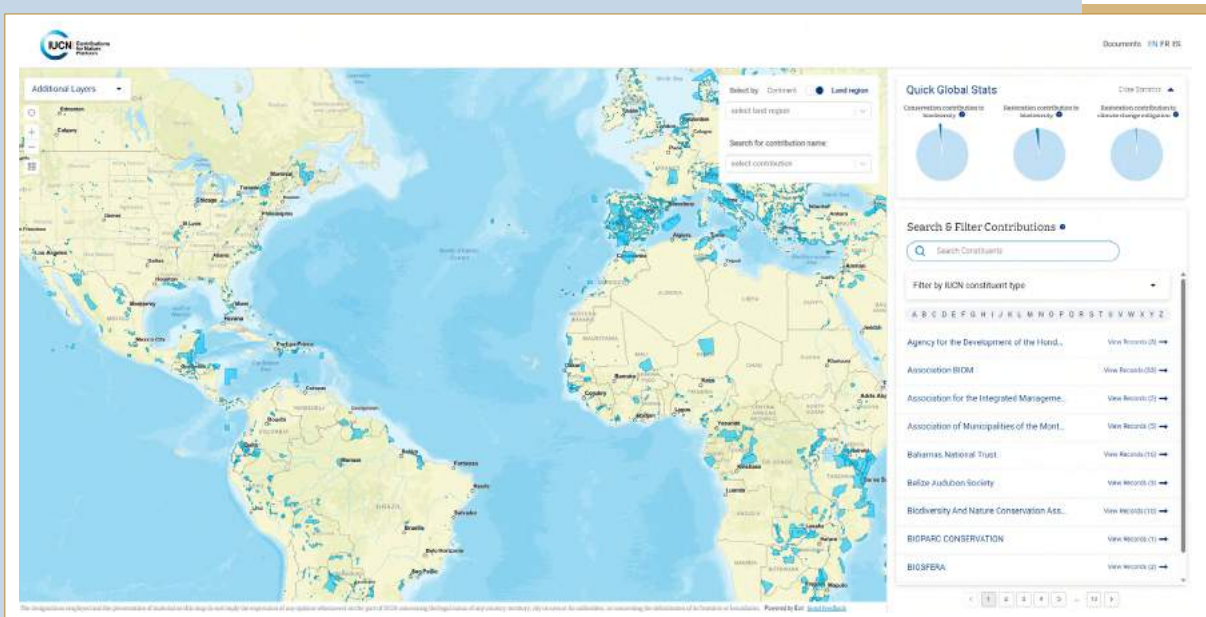


IUCN Contributions for Nature Platform

DESCRIPTION

IUCN Contributions for Nature Platform is a digital portal through which IUCN Members and other IUCN constituents can spatially document their intended conservation and restoration actions, to support the IUCN Nature

2030 Programme and contribute to global biodiversity targets such as the Sustainable Development Goals, the Kunming–Montreal Global Biodiversity Framework and the Paris Agreement.



Interface of the IUCN Contributions for Nature Platform

VALUE PROPOSITION

For IUCN Members

- Platform use and validation of contributions: once registered in the platform, spatial information related to contributions to nature conservation, biodiversity and climate change mitigation can be accessed by citizens, donors, civil society organizations and other stakeholders thus enhancing transparency and supporting the development of partnerships.
- Access to potential for Species Threat Abatement and Restoration based on validated contributions.

For general users

- Visualisation of validated contributions: users can view locations and potential impacts on biodiversity and climate change of contributions registered by IUCN constituents, therefore identifying synergies and opportunities for collaborating at landscape/national level with IUCN.
- Access to non-spatial documents (e.g. project reports, beneficiaries)

RESOURCES

- [Contributions for Nature platform](#)
- [The Nature 2030 IUCN Programme, section 8](#)
- [Marseille Manifesto \(IUCN\)](#)

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IUCN Secretariat

IUCN Members



02



IUCN Global Standard
for Nature-based
Solutions

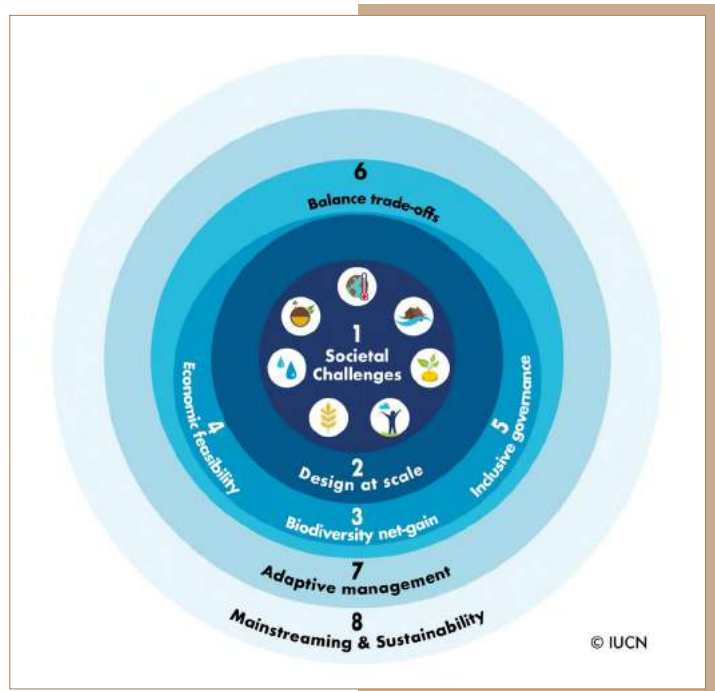
IUCN Global Standard for Nature-based Solutions

DESCRIPTION

The IUCN Global Standard for Nature-based Solutions™ provides clear parameters for defining Nature-based Solutions (NbS) and a common framework to help design, implement and monitor NbS actions in cities and urban areas.

Such a framework is essential to ensure high-integrity NbS approaches, prevent unanticipated negative outcomes or misuse, and help municipalities, landscape architects and project designers and other stakeholders design and implement effective interventions and assess impact towards the goal of sustainable cities. The Global Standard consists of 8 criteria and addresses the pillars of sustainable development (economy, environment and society) in a holistic manner and ensures the sustainability and impact of the intervention.

IUCN will partner with a wide range of institutions and entities on, among others, the development of sector-specific guidelines, the design of projects, the establishment of financial mechanisms, and the set-up of regional and national hubs.



The eight criteria that make up the IUCN Global Standard for Nature-based Solutions.

VALUE PROPOSITION

- Ensure high-quality and high-integrity actions for achieving sustainable urbanism through nature
- Guidance on how to design new Nature-based Solutions, upscale existing pilots by identifying gaps, and verify past projects and future proposals;
- Identifying the projects and proposals' strengths, weaknesses, opportunities, and threats;
- A framework to measure impact and prevent unanticipated negative outcomes.

RESOURCES

- [IUCN Global Standard on Nature-based Solutions™](#)
- [Guidance for using the IUCN Global Standard for Nature-based Solutions](#)
- [Nature-based Solutions for Cities](#)
- [Towards Nature-based Solutions at scale: 10 case studies from China](#)
- [Planning and delivering Nature-based Solutions in Mediterranean cities](#)

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- IUCN Secretariat
- Nature-based Solutions Management Hub

IUCN Commission on Ecosystem Management



03

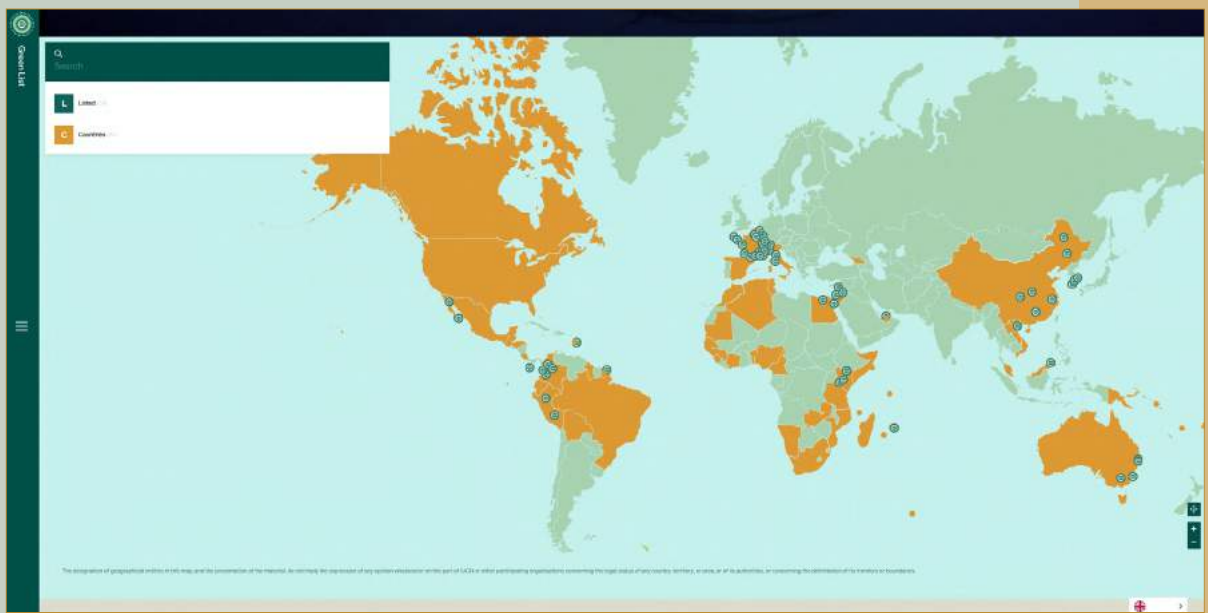


Green List for Protected and Conserved Areas

DESCRIPTION

The IUCN Green List offers locally relevant expert guidance to help achieve fair and effective nature conservation outcomes in protected and conserved areas. The Green List offers a benchmark against a consistent set of

criteria and targets for effectiveness, helping diagnose what investment is needed. It can help guarantee that wildlife and ecosystems can survive, thrive and bring value to communities everywhere.



Interface of the IUCN Green List for Protected and Conserved Areas.

VALUE PROPOSITION

- Benchmarking and validation of management performance of Protected Areas: learn about Protected and Conserved Areas listed in IUCN Green List, their goals, and financing needs to improve the delivery of conservation outcomes.
- Inscription in the IUCN Green List: Protected Areas managers, Other Effective Conservation Measures (OECMs) leaders, including managers of urban parks, community lands, private properties dedicated to conservation can formulate their commitment to apply the Green List to position their efforts and actions toward achieving conservation outcomes.

RESOURCES

- [IUCN Green List](#)
- [IUCN Green List Standard](#)
- [IUCN Governance of Protected Areas: From understanding to action](#)
- [IUCN Green List Van Long Nature Reserve – near Hanoi, Vietnam](#)
- [IUCN Green List Amara Kaeri Communal Reserve - IUCN Green List - near Cusco, Peru](#)
- [IUCN Green List Doñana Natural Space - IUCN Green List - near Sevilla, Spain](#)
- [IUCN Green List Al-Wathba Wetland Reserve - IUCN Green List - near Abu Dhabi, United Arab Emirates](#)

TAGS ASSOCIATED



IUCN CONSTITUENCY INVOLVED

- IUCN World Commission on Protected Areas
- IUCN Global Protected Areas Programme
- IUCN Regional offices

Expert Assessment Group for the Green List

04



Making Nature's City Toolkit

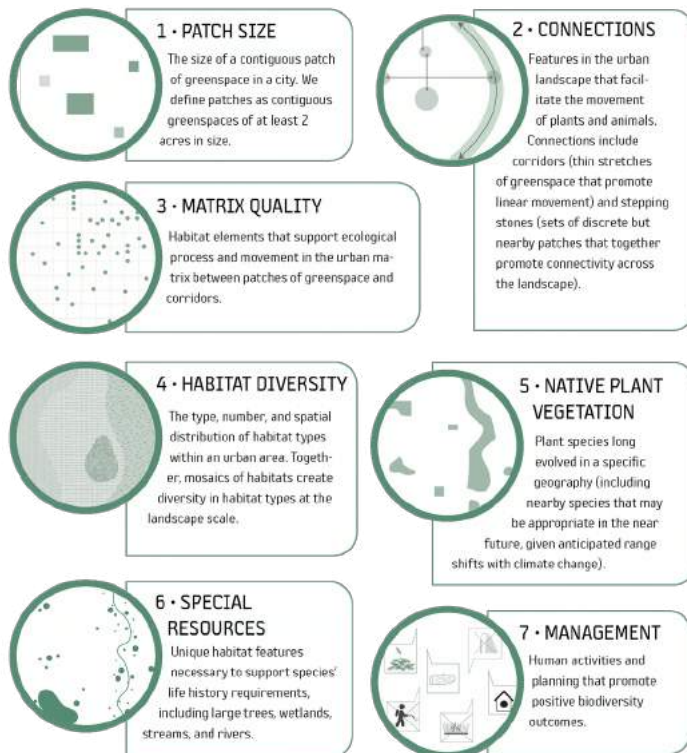
Making Nature's City Toolkit

DESCRIPTION

Making Nature's City synthesizes global research into a science-based approach for supporting nature in cities. The approach, called the Urban Biodiversity Framework, identifies seven landscape elements that work together to maximize biodiversity in cities. Together, these elements represent an integrated approach to meeting the diverse needs of both wildlife and plants.

These seven elements provide practical guidance for shaping healthier and more resilient cities of the future. Using the Urban Biodiversity Framework, local residents and urban designers can work together to link local parks, greenways, green roofs, street trees, stormwater basins, commercial landscaping, and backyards to support a cohesive, functioning urban ecosystem, while making cities better places to live.

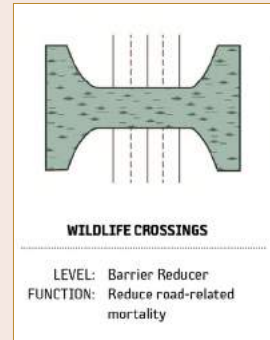
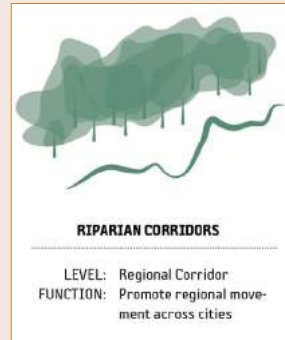
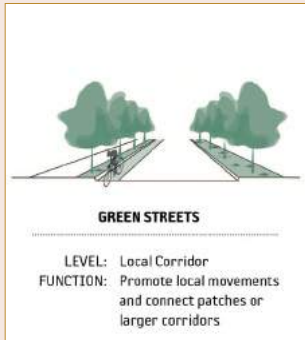
ELEMENTS THAT SUPPORT URBAN BIODIVERSITY



The seven elements that support urban biodiversity according to the Making Nature's City Toolkit

VALUE PROPOSITION

- Participation in workshops and virtual sessions;
- Ongoing expert advice and guidance on the development of strategies supporting urban biodiversity;
- Engagement in annual peer learning to drive continuous urban biodiversity progress.



RESOURCES

- [SFEI Making Nature's City Report](#)
- [Making Nature City Toolkit](#)
- [San Francisco Estuary Institute](#)

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- IUCN Secretariat
- IUCN Regional offices
- IUCN Commissions

KEY PARTNERS



05



PANORAMA Cities

DESCRIPTION

PANORAMA - Solutions for a Healthy Planet is a knowledge-sharing platform that identifies and promotes replicable solutions that demonstrate how well-protected biodiversity and well-managed ecosystems help address societal challenges and achieve development benefits. The platform hosts

different thematic communities, spanning from ecosystem restoration to agriculture and business engagement. The PANORAMA Cities Community, jointly coordinated by IUCN and the World Bank, seeks to inform and inspire action to strengthen the resilience and sustainability of our collective urban future.



The PANORAMA Cities Community.

VALUE PROPOSITION

- Access to an extensive database of inspiring solutions from a wide variety of geographical regions and challenges addressed
- Opportunity to share local solutions
- Involvement in cross-sectoral exchange opportunities
- Visibility acquired in the international arena

RESOURCES

- [PANORAMA Cities Community](#)

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KEY PARTNERS



06



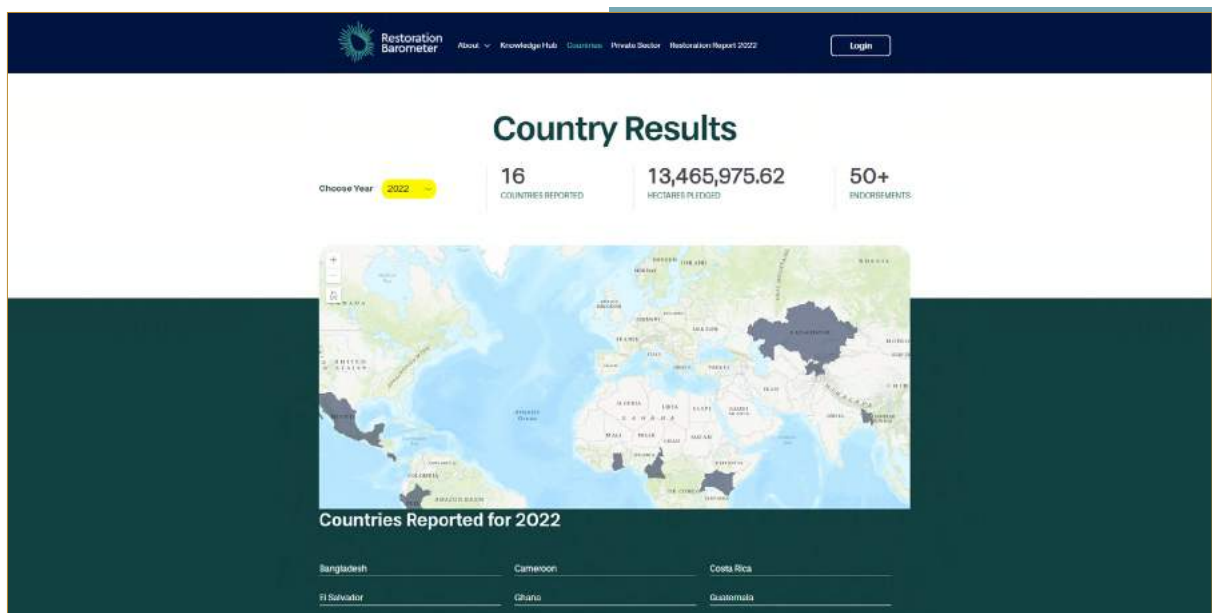
Restoration Barometer

DESCRIPTION

The Restoration Barometer was designed for countries that have committed to restore landscapes under international goals or agreements. It provides an opportunity for national and sub-national governments to simplify and streamline reporting on their restoration commitments and can help track and record progress towards global goals. These include the UN Decade on Ecosystem Restoration, the Bonn Challenge, the Post-2020 Global Biodiversity Framework, the Paris

Agreement, the Land Degradation Neutrality Target and 1t.org.

The relevance of urban environments in ecosystem restoration has emerged in the IUCN Restoration Barometer 2022 Report. Accordingly, 5% of total participating countries reported progress in urban ecosystems in 2022, and over 189,525 hectares were restored in urban areas.



Countries reporting to the Restoration Barometer

VALUE PROPOSITION

- Report on cities' progress on ecosystem restoration targets.
- Communication of cities' contribution to global goals.
- Visualization of cities' contribution as per targets set under the Bonn Challenge and other hectare-based restoration targets across all terrestrial ecosystem types.
- Networking and alignment with other local and subnational governments at national level.

RESOURCES

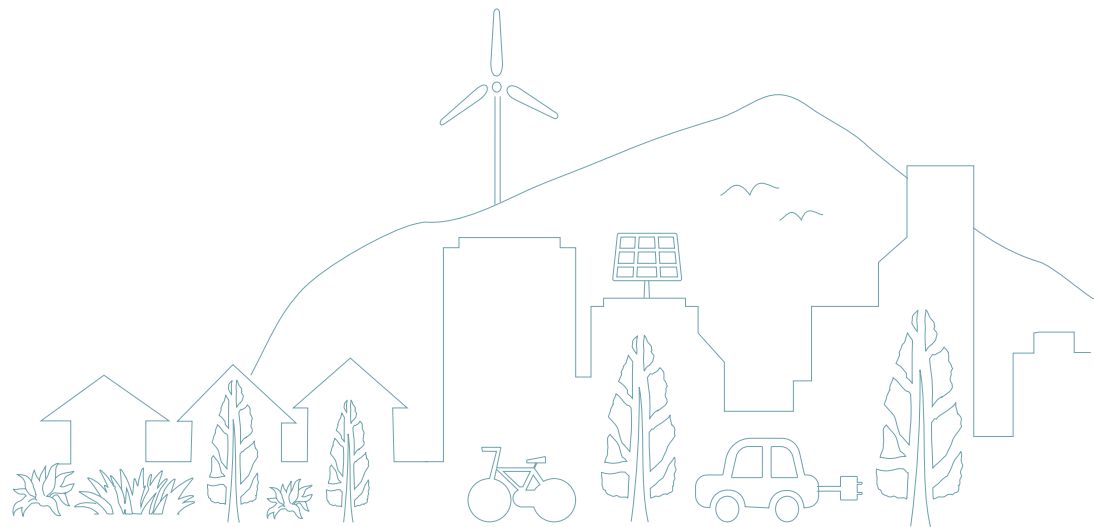
- [Restoration Barometer Platform](#)
- [Restoration Report 2022](#)
- [IUCN Restoration Intervention Typology for Terrestrial Ecosystems](#)
- [Restoration Barometer: a guide for governments](#)

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07

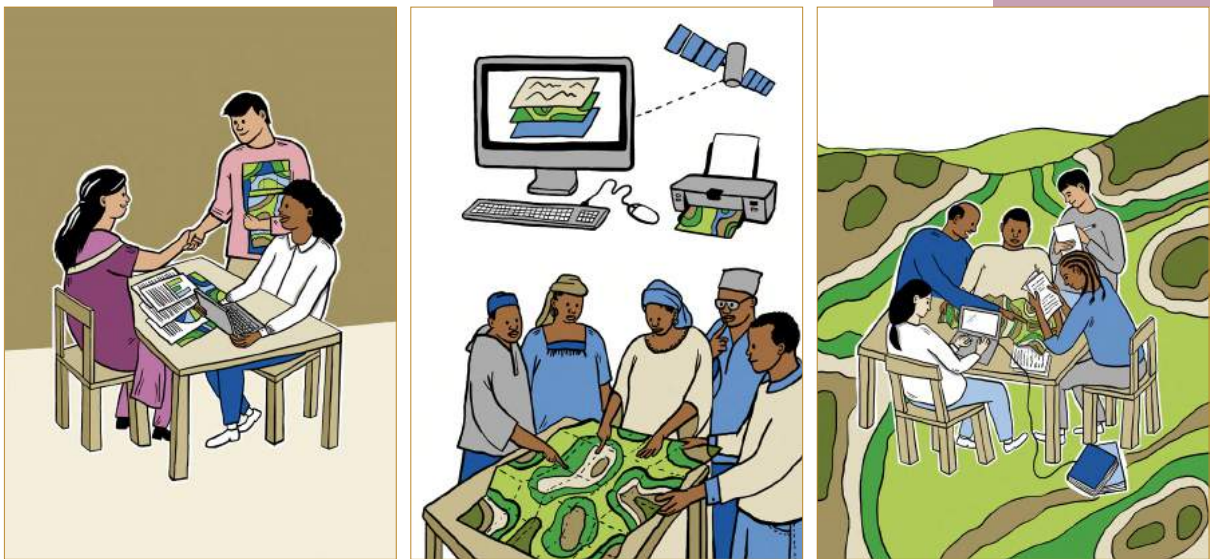


Restoration Opportunities
Assessment Methodology
(ROAM)

Restoration Opportunities Assessment Methodology (ROAM)

DESCRIPTION

ROAM is the go-to methodology globally, for stakeholder-led, evidence-based decision-making on forest landscape restoration (FLR). In an urban and peri-urban context, ROAM is an ideal methodological framework to identify and analyse restoration opportunities; through a multi-stakeholder participatory process, it can bring diverse stakeholders together to assess restoration potential of deforested and degraded areas and the status and threats, and effectively plan for the integrated management of urban and peri-urban landscapes. ROAM can facilitate inter- and intra- jurisdiction communication and provide a roadmap for federal, state, and local interagency coordination to improve restoration efforts in urban forests and other ecosystems in and around cities.



ROAM's multi-stakeholder participatory process.

VALUE PROPOSITION

Technical assistance for the adaptive and iterative process of ROAM implementation:

- Preparation/planning the ROAM assessment
- Data collection and analysis (ROAM implementation)
- Results to recommendations (results validation, engagement plan, finance options)

Depending on each city's needs, IUCN offers support for: GIS (Geographic information system) spatial multi-criteria analysis, costs

and benefits of restoration, stakeholder engagement, enabling policies and laws, and tools and knowledge products.

- IUCN would provide ongoing oversight and quality assurance (including, for example, ensuring high quality application of urban restoration opportunities assessment processes with regional and national IUCN offices and landscape stakeholders such as relevant levels of government, private sector, communities, research institutes and NGOs).

RESOURCES

- [A guide to the Restoration Opportunities Assessment Methodology \(ROAM\)](#)
- [Application of Restoration Opportunities Assessment Methodology \(ROAM\) in Asia](#)
- [Application of ROAM in Honduras](#)
- [Application of ROAM in the valley of Guatemala City \(in Spanish\)](#)

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KEY PARTNERS



08



Sports and Urban
Biodiversity

Sports and Urban Biodiversity

DESCRIPTION

In cities, sports and nature often occupy the same green spaces and can support each other to mutual benefit. This IUCN guide aims to provide a set of principles to help sports clubs, federations, sports infrastructure owners, operators, developers, investors and local authorities to contribute as stewards of urban nature. From setting up ecological monitoring systems to improving the management of habitats, there is a range of ways in which the sports sector can help urban nature flourish. Eleven case studies capture the biodiversity actions taken by a variety of sports, from Olympic city planning to local projects at stadiums and practice facilities, revealing ways in which improvements to urban biodiversity elements can offer a better sporting experience for participants and attendees.



The IUCN Sports and Urban Biodiversity Framework, released in 2020

VALUE PROPOSITION

- Exploring biodiversity impacts associated with urban sports events and venues.
- Guidance on how existing and new sport venues both indoors and outdoors, as well as sports events of all sizes, can contribute to the restoration and enhancement of biodiversity in cities;
- Presentation of eleven case studies from Europe, North America, Australia and South Africa.

RESOURCES

- [Sports and Urban Biodiversity: a framework for achieving mutual benefits for nature and sports in cities](#)
- [Mitigating biodiversity impacts of sports events](#)
- [Mitigating biodiversity impacts of new sports venues](#)
- [Sports for Nature: Setting a Baseline – Handbook](#)

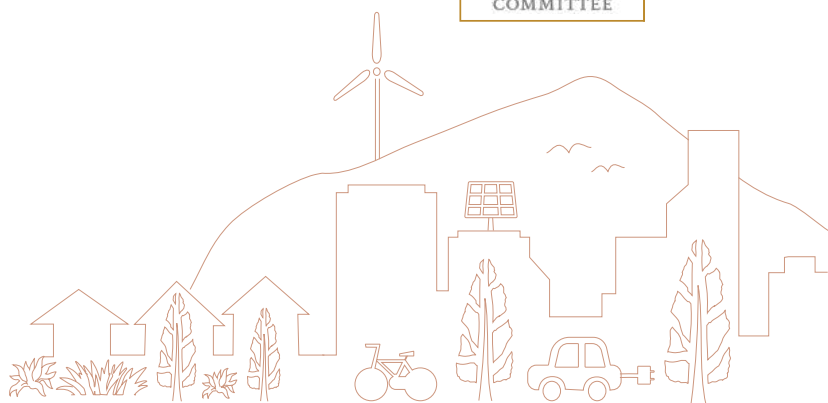
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- IUCN Regional Offices

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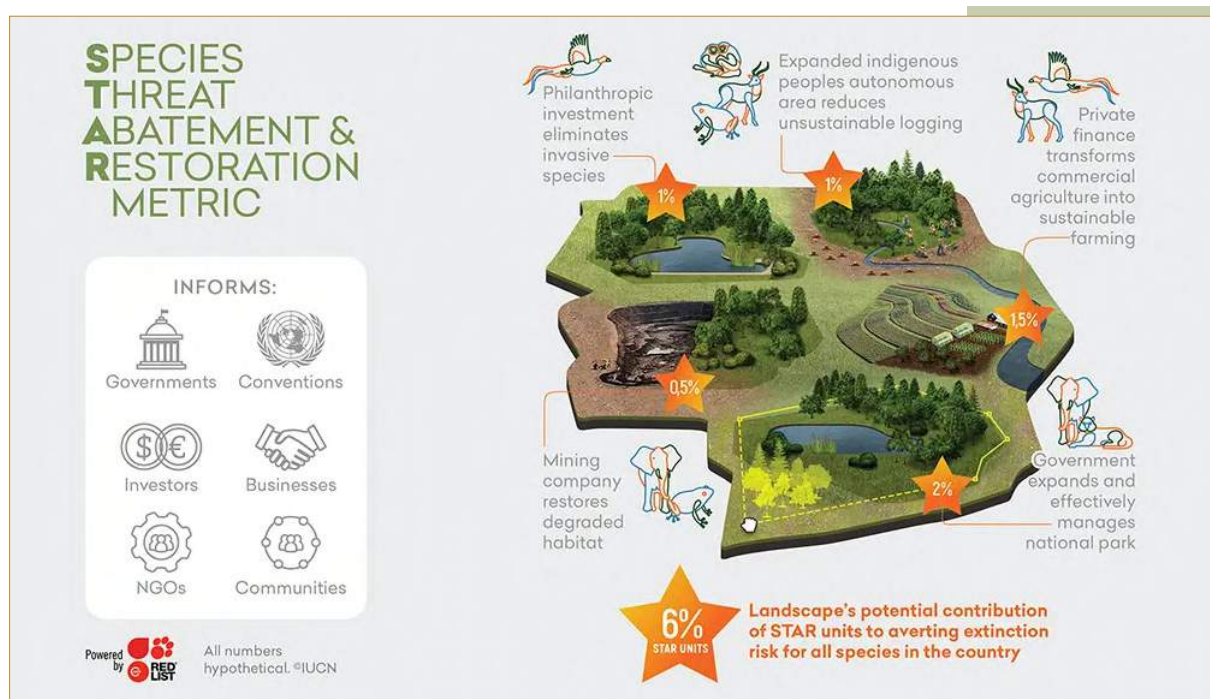
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Species Threat Abatement and Restoration Metric (STAR)

DESCRIPTION

The STAR metric quantifies the contribution that actors can make to the global persistence of species biodiversity through mitigating threats to species, or restoration of habitat, at a specific site. It can help cities and other institutions target their investments to achieve conservation outcomes and can measure the contributions these investments make to global targets such as the Sustainable Development Goals. It is based on the IUCN Red List of Threatened Species—the global standard for documenting species’ conservation status—and is fully additive and scalable.



The STAR Metric

VALUE PROPOSITION

- Measure cities' potential contribution to reduce species extinction risks
- Access to potential STAR through IBAT and the Contributions for Nature platform
- Track/Monitor progress towards conservation goals. By calibrating STAR with local information and measuring changes in threat intensity and the corresponding variation in STAR score, cities can quantify and communicate their contributions to restoring habitats and mitigating threats to endangered species.

RESOURCES

- [Species Threat Abatement and Restoration \(STAR\) metric](#)
- [Species Threat Abatement and Restoration \(STAR\) data layer – Business User Guidance](#)
- [Integrated Biodiversity Assessment Tool](#)

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IUCN Species Survival Commission



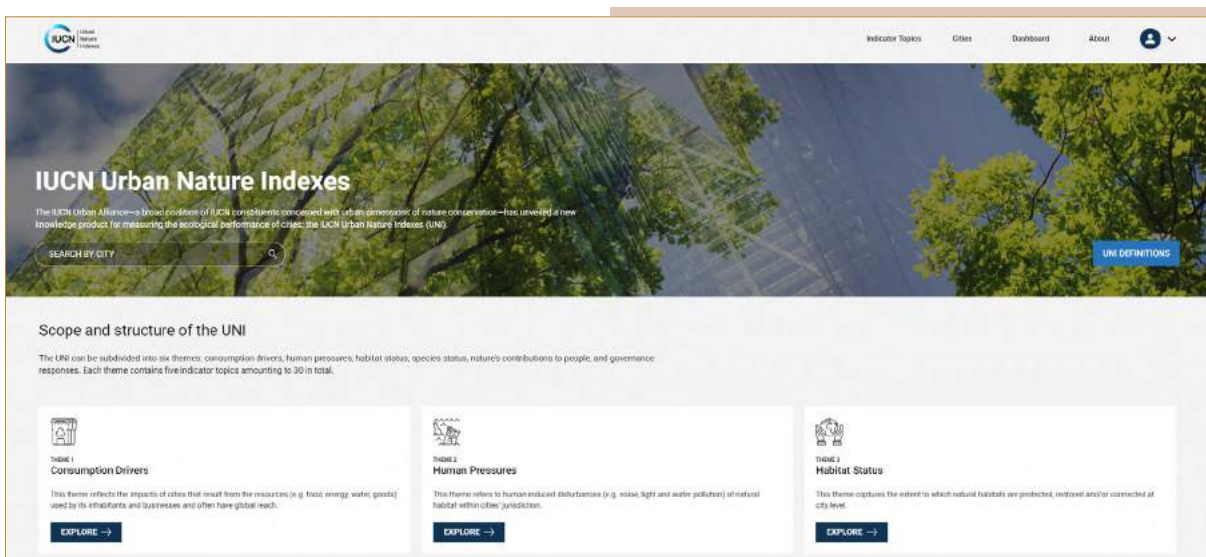
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IUCN Urban Nature Indexes (UNI)

DESCRIPTION

The IUCN Urban Nature Indexes (UNI) help cities measure their ecological performance, set science-based targets for improvement, and monitor progress accordingly. The UNI is structured around 30 indicator topics divided into 6 themes. The flexibility of the tool allows cities to undertake a Capacity Assessment Questionnaire in order to evaluate needs, capacities and resources and select the indicator topics that better address local challenges. The Indexes, together with the related web-platform, seek to enhance environmental transparency and accountability, facilitate goal setting, and catalyse conservation action.



The IUCN Urban Nature Indexes (UNI) web-platform.

VALUE PROPOSITION

- **Baseline assessment:** for a given set of indicators, IUCN could support the municipality in reporting to a given indicator (i.e. animal species)
- **Results & methodological validation:** IUCN secretariat to review adherence to UNI instructions once data are uploaded to UNI platform.
- **Target-setting:** based on results obtained, IUCN staff is to review and support cities in setting targets that respond to global conservation needs.
- **Publishing report:** after results are validated, cities can decide to have their results published.
- **Capacity building and implementation advice:** IUCN can train municipal staff to apply the UNI.
- **Platform use:** cities can use and upload results for internal use.

RESOURCES

- [IUCN Urban Nature Indexes](#)
- [IUCN Urban Nature Indexes web-platform](#)

TAGS ASSOCIATED

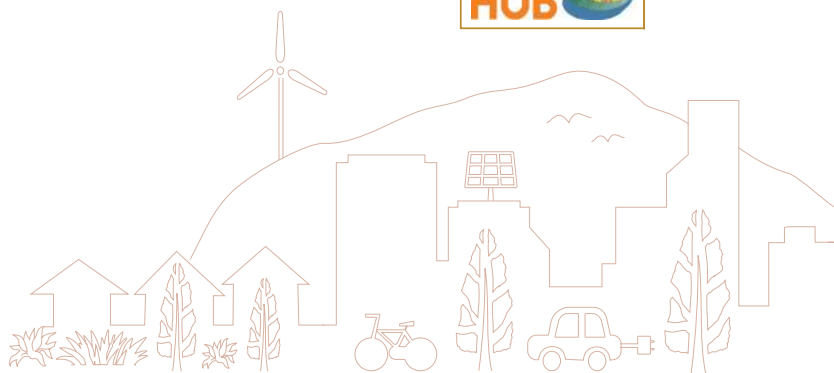


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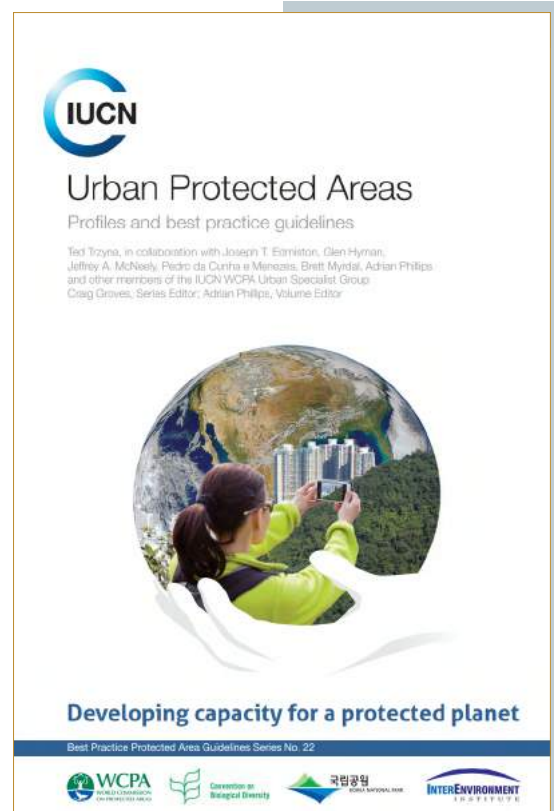


Urban Protected Areas

Urban Protected Areas

DESCRIPTION

The IUCN Urban Protected Areas Guidelines seek to help urban protected area managers address the challenges and opportunities associated with urbanisation. The document focuses on themes such as people, places, institutions and urban protected areas, and provides detailed case studies whose methodologies and principles can be replicated to address other Protected Areas' needs and challenges.



IUCN Urban Protected Areas, released in 2014.

VALUE PROPOSITION

- Plan the establishment, design of management plan and monitoring of Urban Protected Areas

RESOURCES

- [Urban protected areas: profiles and best practice guidelines](#)

TAGS ASSOCIATED

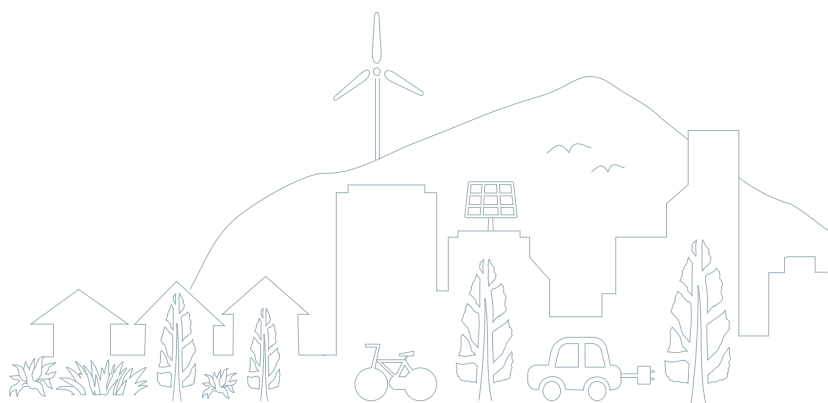


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IUCN Commission on World Protected Areas

Urban Conservation Strategies Specialist Groups





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