



Nature-based Solutions



INTERNATIONAL UNION FOR CONSERVATION OF NATURE



IUCN Vision Mission

A close-up photograph of an elephant's trunk, showing its textured, wrinkled skin in shades of brown and grey.

Our vision

A just world that values
and conserves nature.

70 years of impact

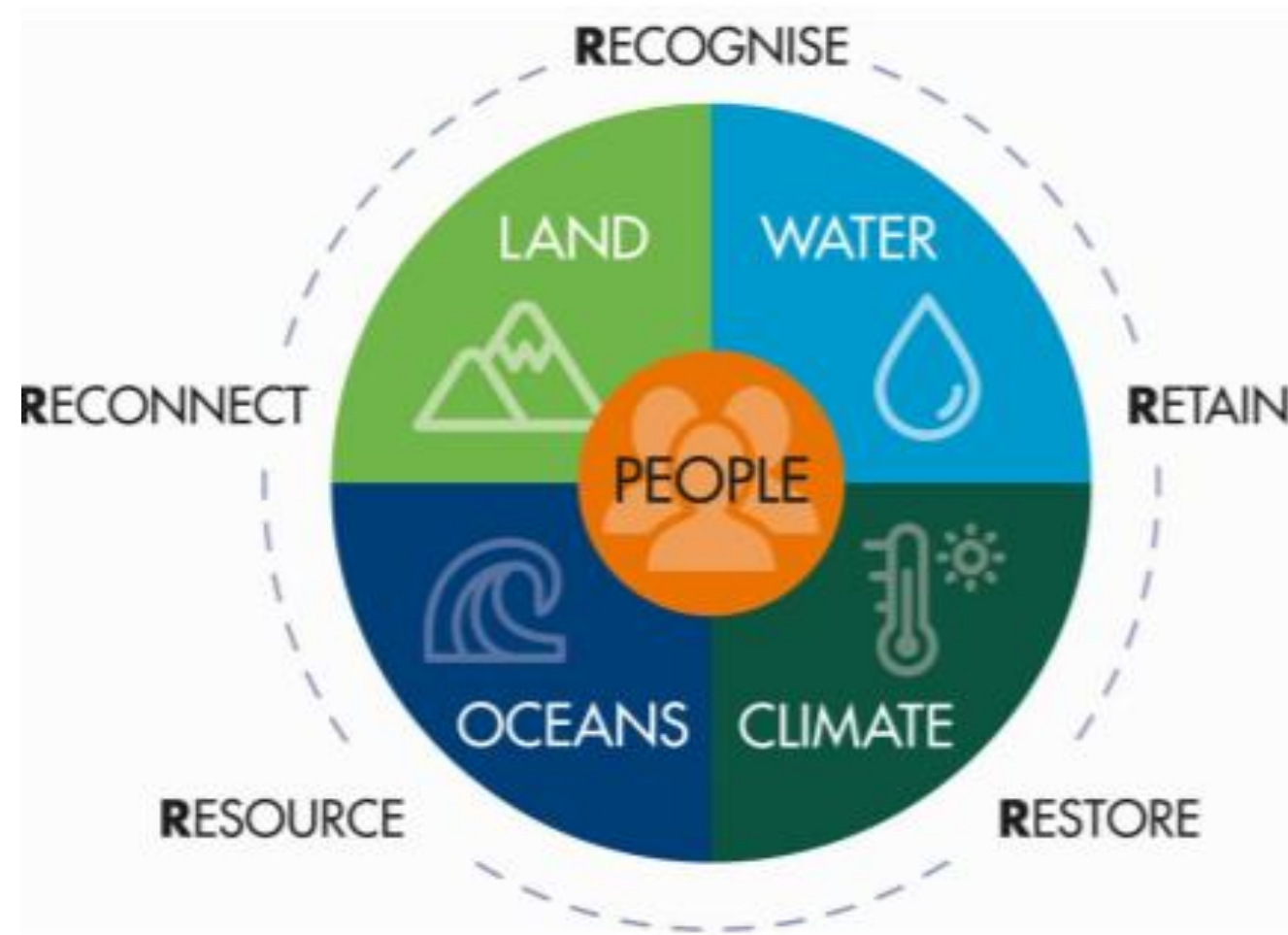
A close-up photograph of a vibrant green leaf, covered in numerous clear water droplets of varying sizes.

Our mission

Influence, encourage and assist societies
to conserve the integrity and diversity of nature
and ensure that any use of natural resources is
equitable and ecologically sustainable.



About IUCN

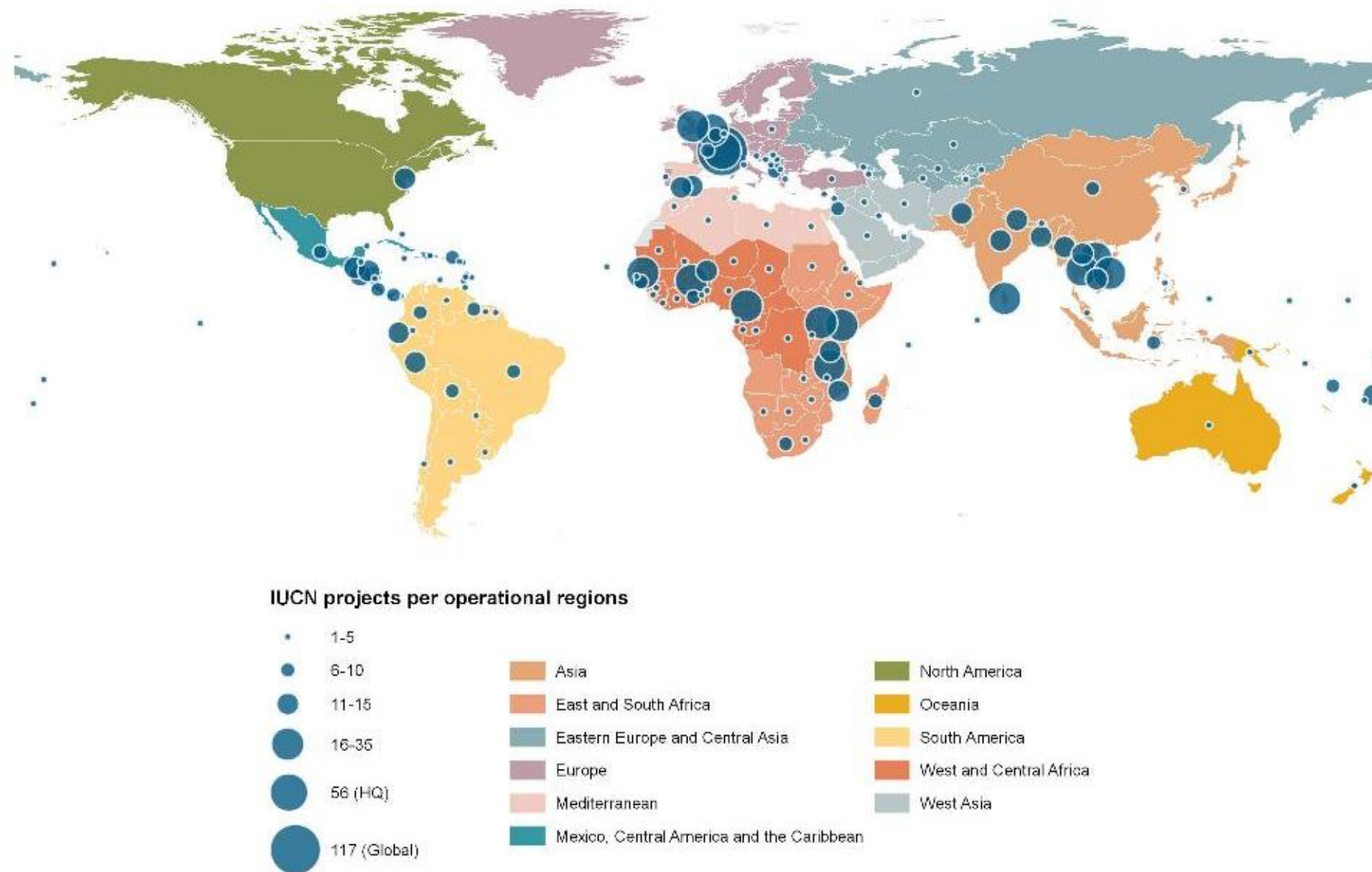


IUCN's 'Nature 2030' Programme framework

- IUCN is a membership Union composed of both government and civil society organisations. Set up in 1948
- It harnesses the experience, resources and reach of its more than [1,400 Member organisations](#) and the input of more than [17,000 experts](#).
- This diversity and vast expertise makes IUCN the global authority on the status of the natural world and the measures needed to safeguard it.
- **Six IUCN Commissions** made up of over ten thousands experts inform IUCN's knowledge and help produce its work. CEC | CEM | CEESP | WCPA | SSC | WCEL
- **Seventh IUCN Commission** on Climate Crisis
- The IUCN Secretariat focusses its work on key themes and is organised into 11 operational regions in order to anchor its knowledge locally and better serve Members' needs.

A global presence

- Headquarters in Gland, Switzerland
- 11 regional offices and more than 50 country offices
- Projects in over 160 countries





IUCN in India

- The Government of India is a State member of IUCN and is represented by the Ministry of Environment, Forest and Climate Change
- **India** became a State **Member of IUCN** in 1969
- The **IUCN India** Country Office was established in 2007 in New Delhi as a follow up of Memorandum of Understanding (MoU) with Government of India in 2004
- Currently, there are **42 IUCN members** in India
- **1003 commission members** in India





IUCN and International Conventions

- IUCN is International Organisation Partner (IOP) of RAMSAR Convention
- Technical Agency for World Heritage Convention- Natural Heritage Sites
- IUCN is the Accredited Implementing agency for GEF and GCF
- IUCN contributes to Post 2020 global biodiversity framework & targets under CBD and to the UNFCCC
- IUCN has a UN Observer status at UN General Assembly



NATURE 2030

One nature, One future

- It sets an ambition in a decadal timeframe (2021–2030) and is a call for mobilisation to the entire Union,
- It is a high-level, strategic document that includes and invites contributions from the IUCN Members, Commissions and Secretariat.
- This aligns with United Nations 2030 Agenda for Sustainable Development as well as the post-2020 global biodiversity framework.
- In 2024 and 2028, a revised Nature 2030 IUCN Programme, building in turn from what will then be the adopted post-2020 global biodiversity framework.





IUCN today

Setting the conservation agenda

IUCN World Conservation Congress 2021

- First major hybrid event after the onset of the COVID-19 pandemic with **over 9,000 in-person and virtual participants**
- **139 decisions** by IUCN Members
- Adopted the **Marseille Manifesto**
- **5 summits** held in parallel for world leaders, CEOs, youth, indigenous peoples and municipal leaders
- **Major commitments** from governments and businesses



IUCN World Conservation Congress 2016

- Over 10,000 participants
- **121 Decisions** by IUCN Members
- Adopted the **Hawai'i Commitments**
- **21,000 news articles, 75 million reached** on social media
- **Raised the bar** for hosting sustainable events

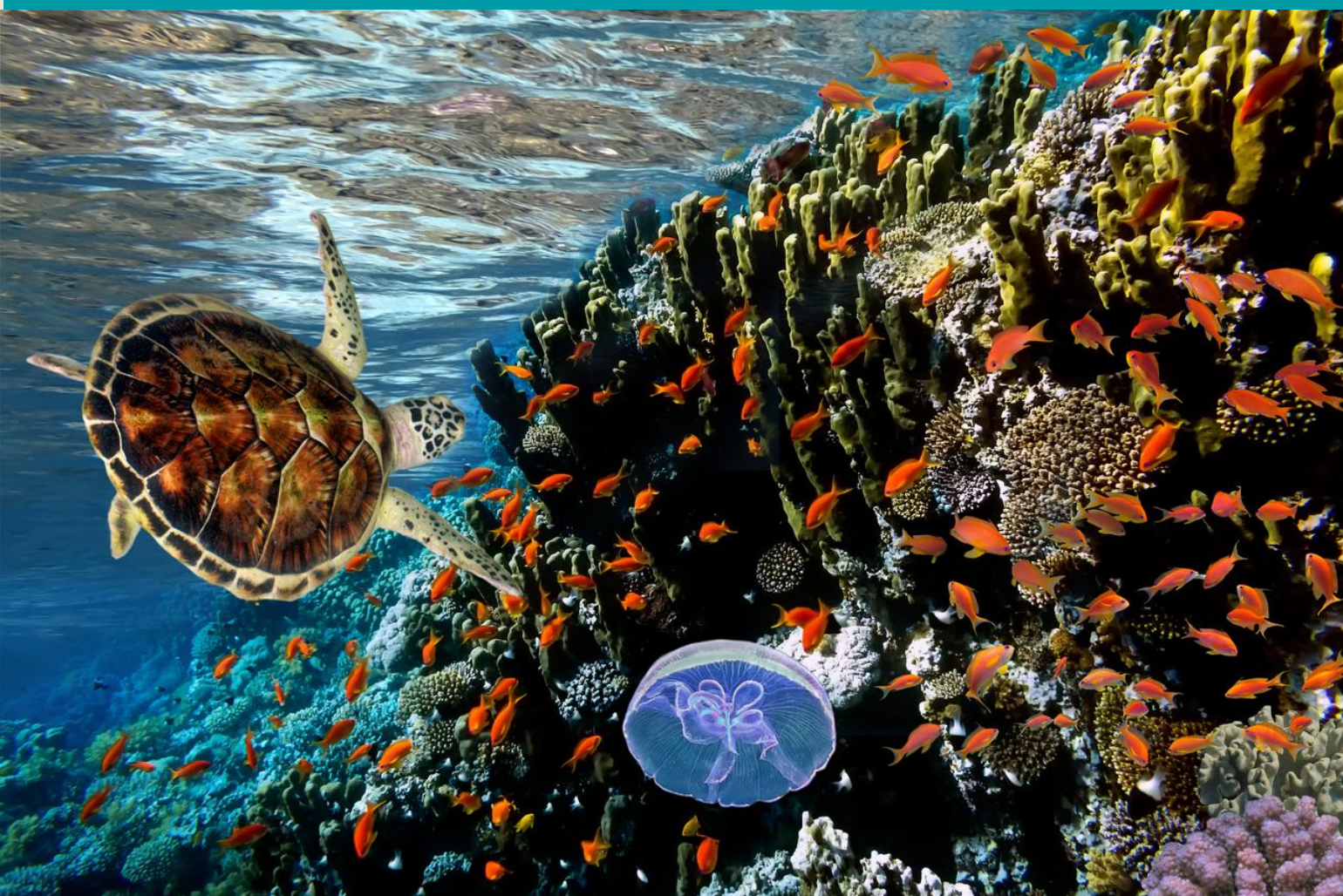




What are Nature-based Solutions

What are Nature-based Solutions (NbS)?

NbS are defined by IUCN as “actions to **address societal challenges** through the protection, sustainable management and restoration of ecosystems, benefiting both biodiversity and human well-being.” They use the power of nature and functioning ecosystems as infrastructure to provide natural services to benefit society and the environment.



Nature-based Solutions leverage nature and the power of healthy ecosystems to protect people, optimize infrastructure and safeguard a stable and biodiverse future.

We are facing complex challenges



Climate change mitigation and adaptation



Disaster risk reduction



Economic and social development



Human health



Food security



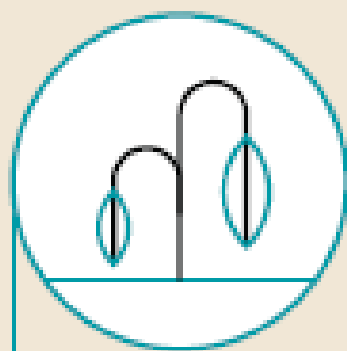
Water security



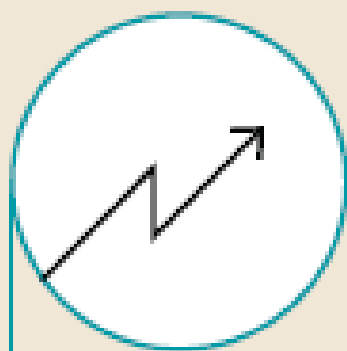
Environmental degradation and biodiversity loss

NbS's potential to address complex challenges

NbS have prime potential to help address global challenges such as:



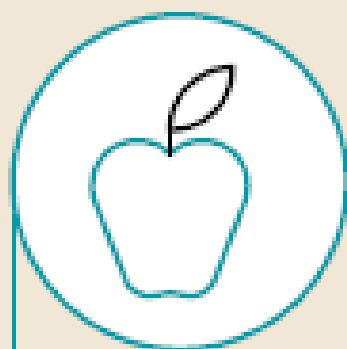
climate change



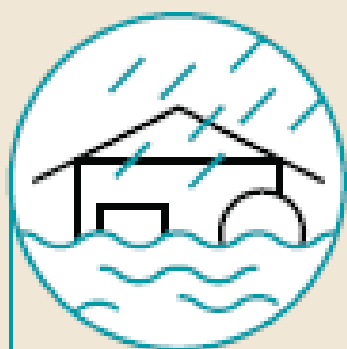
economic and social development



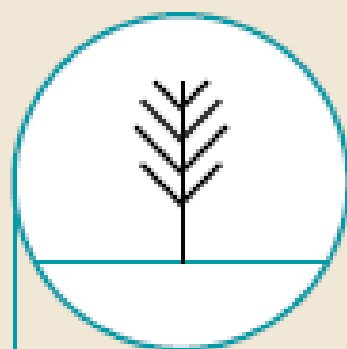
human health



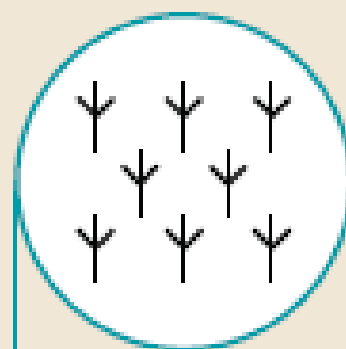
food and water security



disaster risk reduction



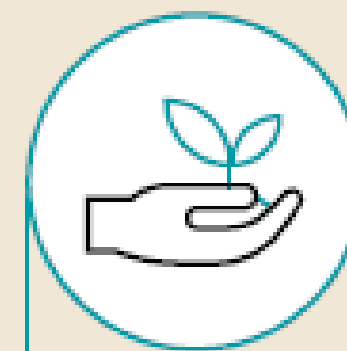
ecosystem degradation



biodiversity loss



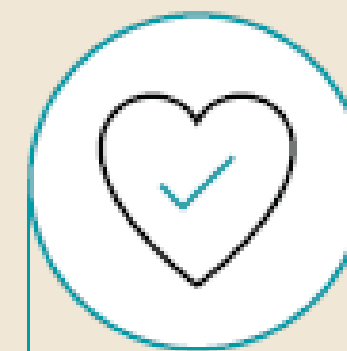
adaptation to climate change



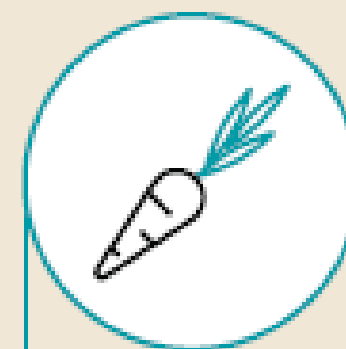
green jobs



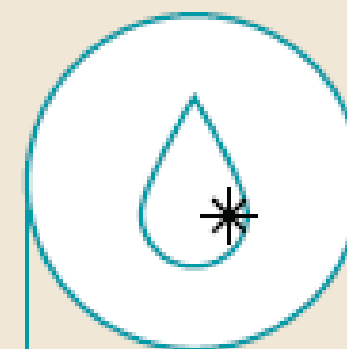
community resilience



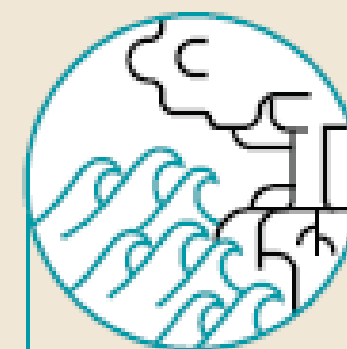
health benefits



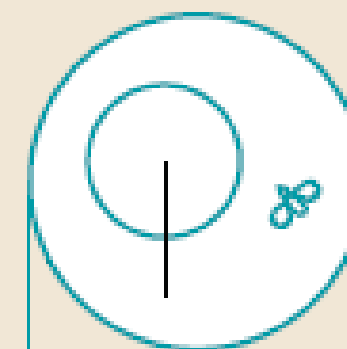
healthy and accessible food



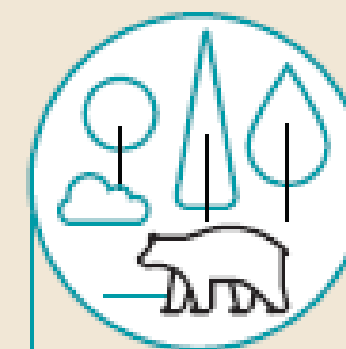
clean air and water



disaster risk reduction



ecosystem integrity



biodiversity net gain

What is the scope of Nature-based Solutions?



Nature-derived
solutions



Nature-inspired
solutions



Nature-based
solutions



Scope of Nature-based Solutions

USD 57 billion

in flooding damages averted by mangroves in China, India, Mexico, US and Viet Nam each year

One third

of climate mitigation needed to meet the goals of the Paris Agreement can be provided by Nature-based Solutions

USD 170 billion

estimated global benefits in ecosystem services from Nature-based Solutions focused on climate

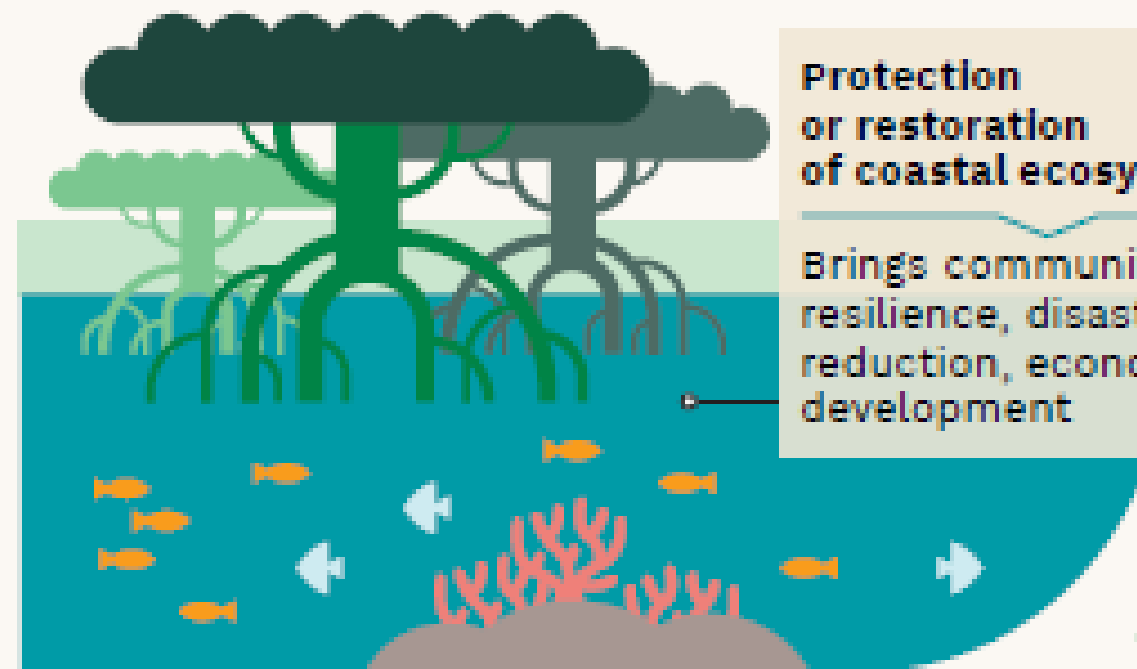
20 million

Green jobs could be generated worldwide if investment in NbS were tripled by 2030

Nature-based Solutions for.....

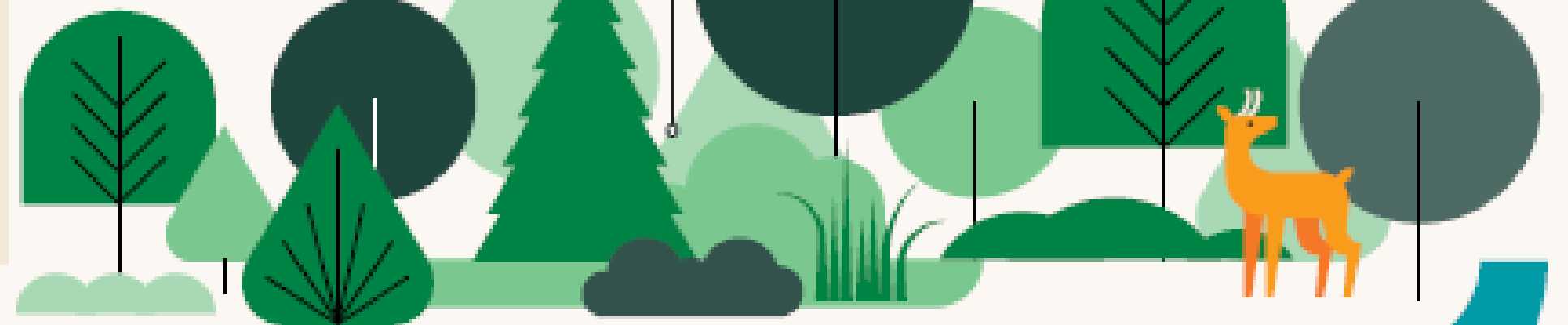


Examples of NbS application:



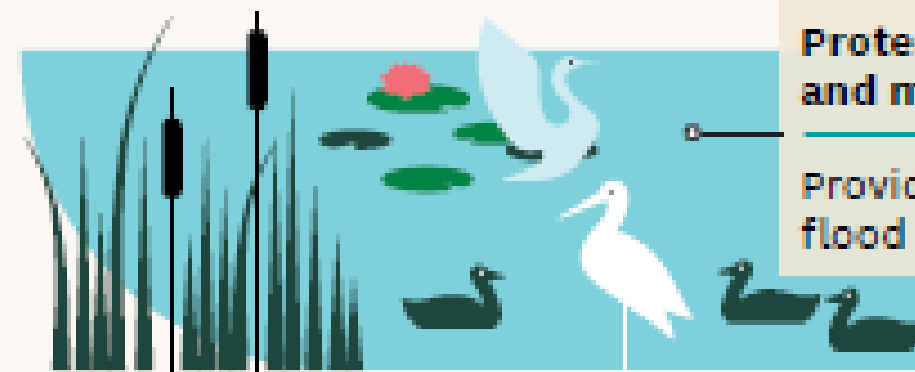
Protection or restoration of coastal ecosystems

Brings community resilience, disaster risk reduction, economic development



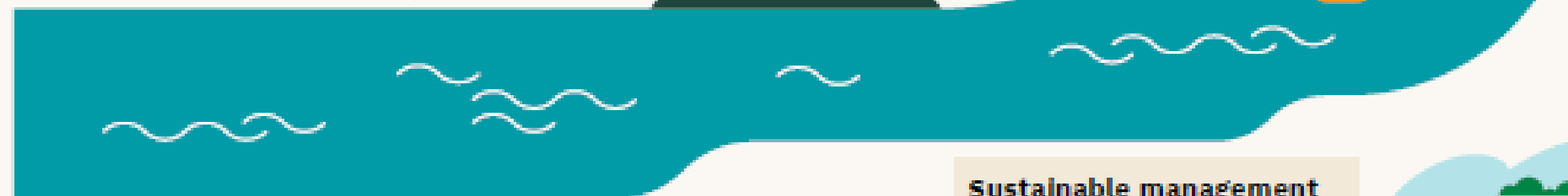
Protection, restoration and sustainable use of forest landscapes

Secures water supply, erosion control and risk reduction



Protection, restoration and management of wetlands

Provides water storage, flood protection, food production



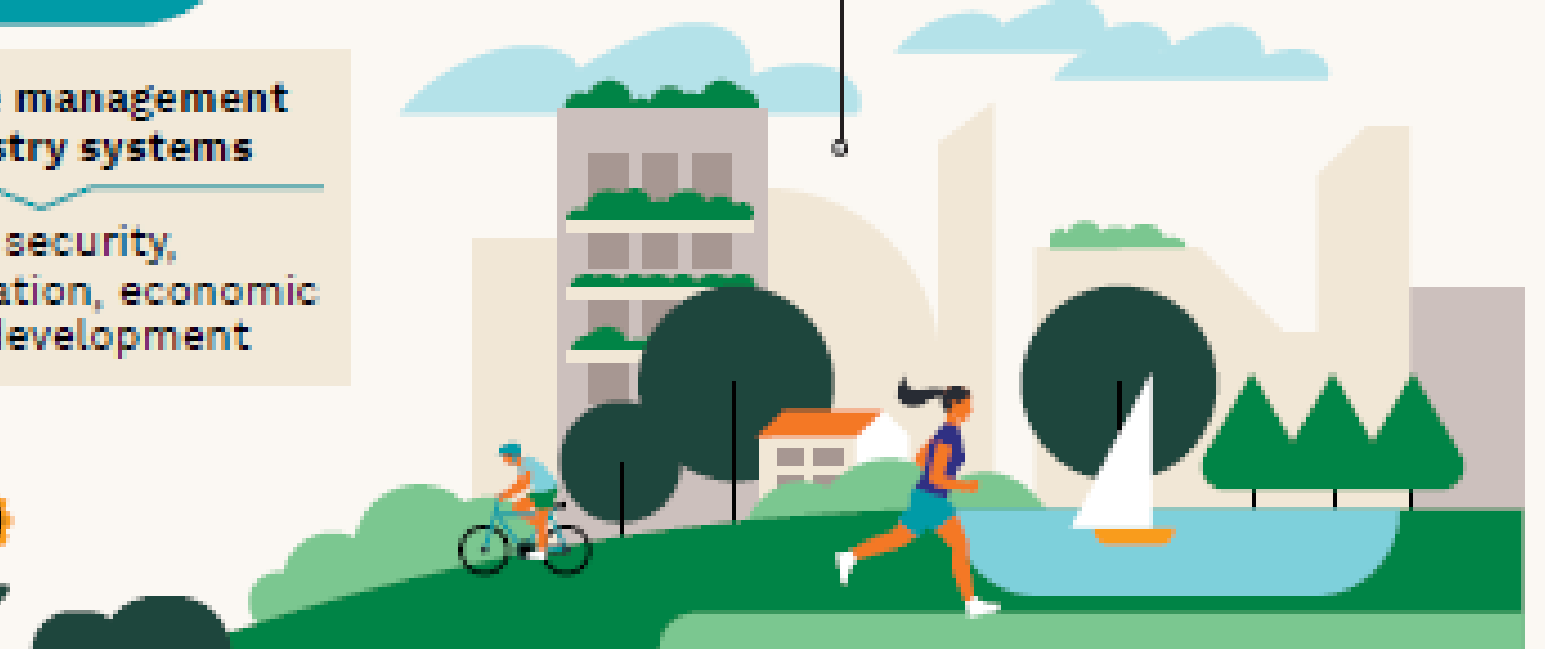
Providing space for rivers to naturally flow

Enables flood protection, water security



Sustainable management of agroforestry systems

Offers food security, water regulation, economic and social development



Urban green and blue spaces

Empowers climate regulation, better human health, social development, green jobs

NBS applications



Water supply for New York City

New York City saved US\$1.5 billion by investing in the protection of the upstream Catskills watershed to secure the water supply for the city, thereby avoiding expensive water treatment plants.



Sustainable farming in China

In China, thanks to the restoration of the degraded Loess Plateau, over 2.5 million people improved their economic outlook. Through the introduction of sustainable farming practices, farmers' incomes doubled, employment diversified and the degraded landscape was revitalized.



Mangroves in Senegal

In Senegal the world's largest mangrove reforestation project led investors to generate half a million tonnes of carbon offsets over its 30-year lifetime. In addition, the delta now protects arable land from salt contamination, rice paddies are restored, and fish stocks replenished by up to 18,000 additional tonnes per year.



Green spaces for health

In greater Manchester, an estimated £150million/year is saved in healthcare costs related to improved mental health and physical benefits thanks to Nature-based Solutions such as access to green spaces and tree planting activities.



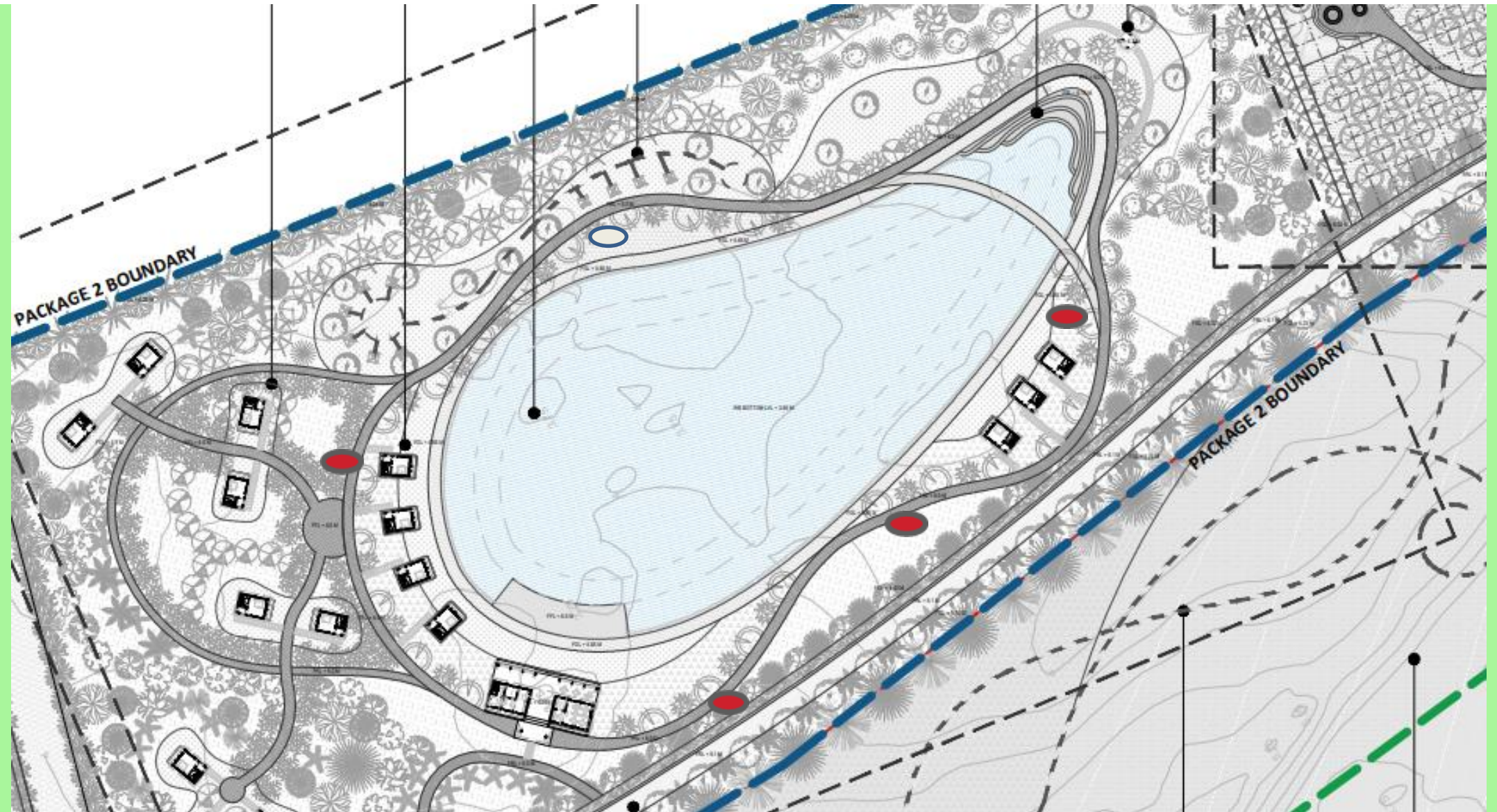
US\$ 9 trillion benefits from trees

Under the [Bonn Challenge](#), governments and businesses aim to restore 350 million hectares of deforested and degraded landscapes with the potential to generate US\$ 9 trillion in ecosystem services through improved soils, increased freshwater flows, and other benefits.

Floral Interventions

1. Bioswales

- Provided shelter for wildlife by provide the dwelling place for birds and insects
- They serve as water retainers and provide for early treatment of water to remove sediments and contaminants
- Bioswale minimizes overflow, improves the quality of surface water and helps recharge the groundwater. In an event of groundwater flooding, bioswales can serve as drainage systems
- Help reduce heat stress in the locality
- Requires very less maintenance



Native Shrub Species

Euphorbia nivulia

Ziziphus nummularia

Barleria prionitis

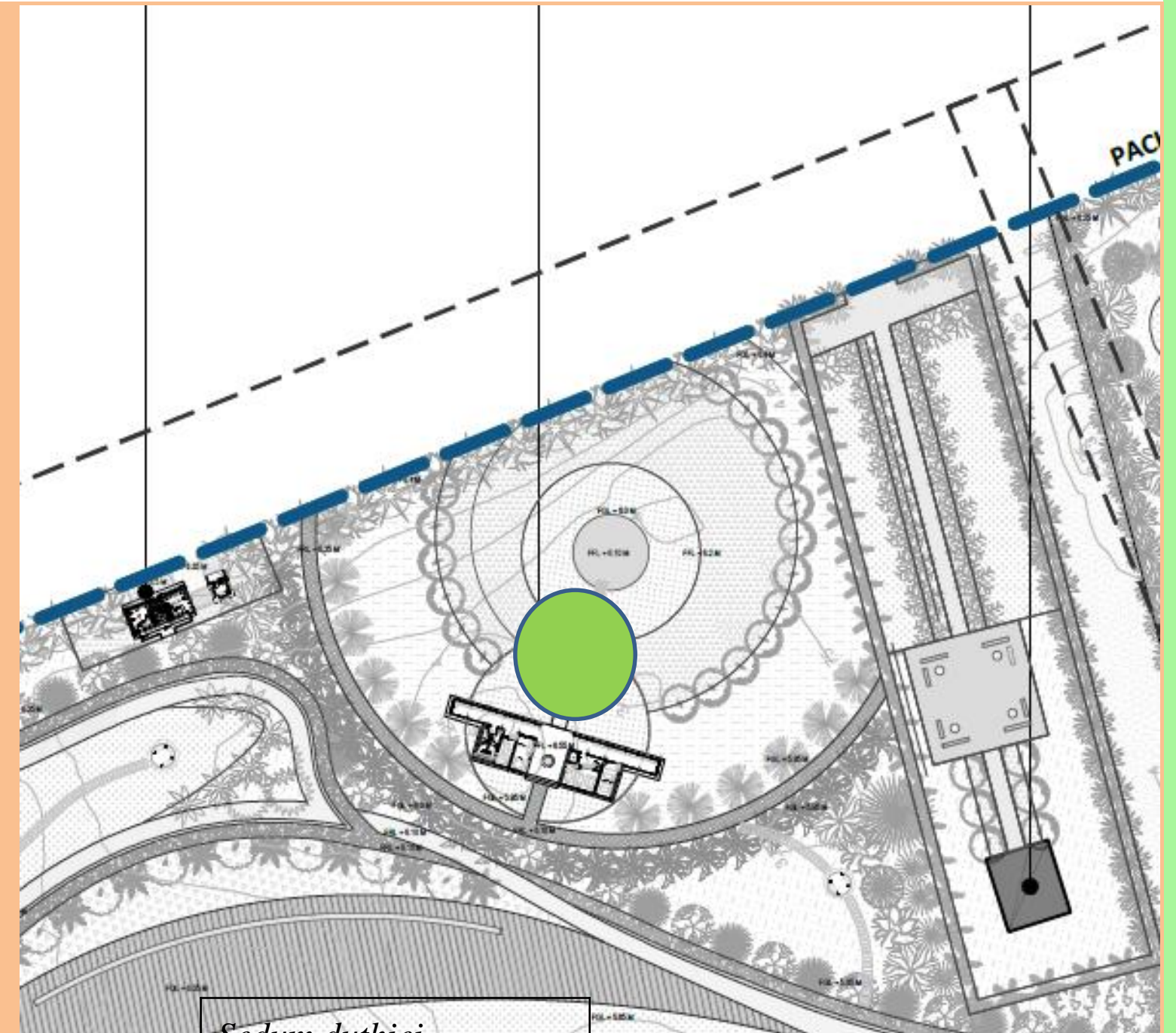
Cassia tora

Capparis decidua

Structural Interventions

1. Green Roofing

- Stormwater Management as the Green roofs can reduce the flow of stormwater from a roof by up to 65% and delay the flow rate by up to three hours.
- Energy: Green roofs reduce building energy use by cooling roofs and providing shading, thermal mass and insulation.
- Biodiversity and Habitat: Green roofs provide new urban habitat for plants and animals, like birds and insects, thereby increasing biodiversity.
- Reduce Urban Heat Island effect.

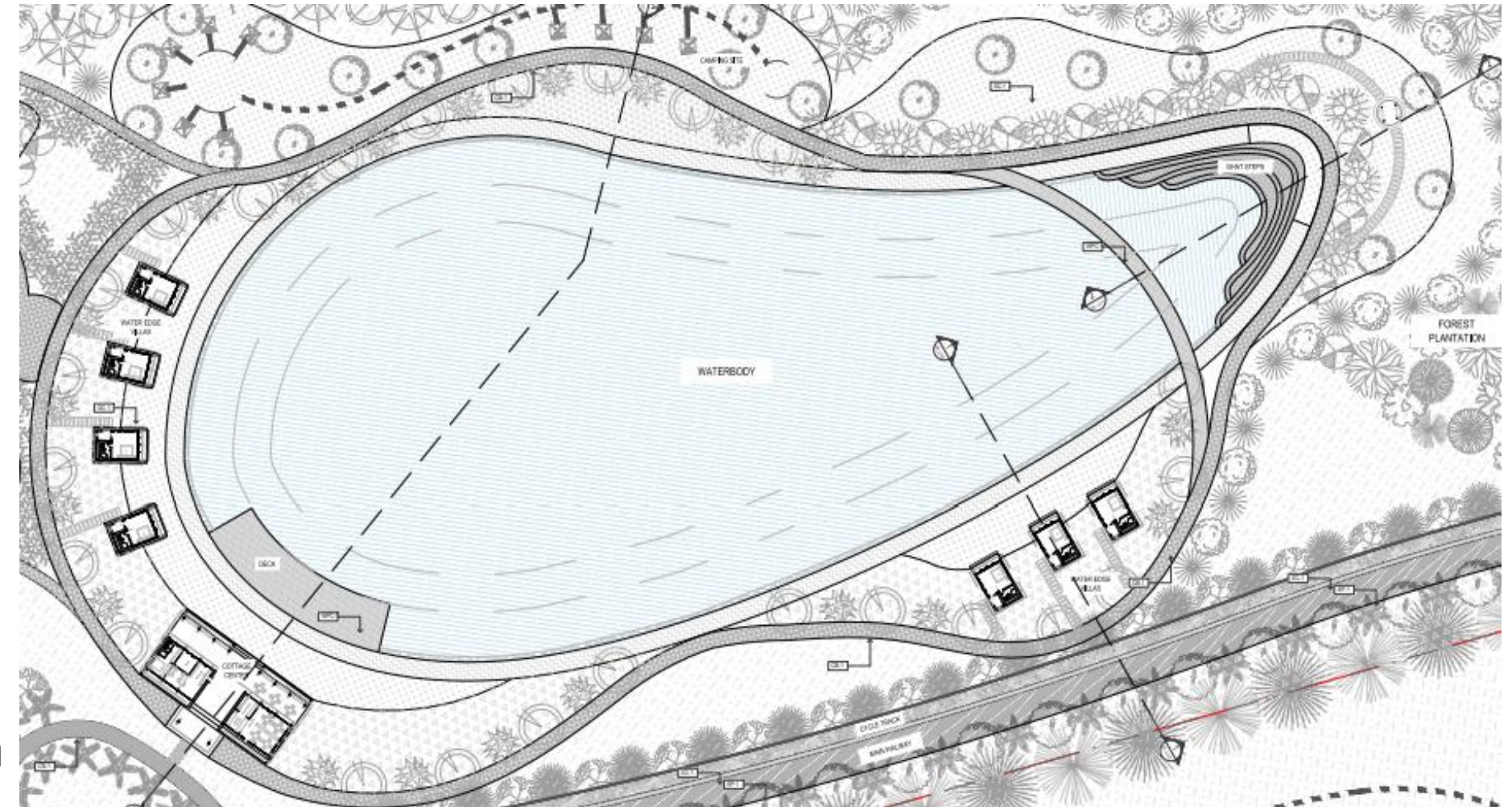


| |
|-------------------------|
| <i>Sedum duthiei</i> |
| <i>Sedum ewersii</i> |
| <i>Sedum gagei</i> |
| <i>Sedum holei</i> |
| <i>Sedum magae</i> |
| <i>Sedum multicaule</i> |

Wetland Interventions

1. Clay Line Floor bed

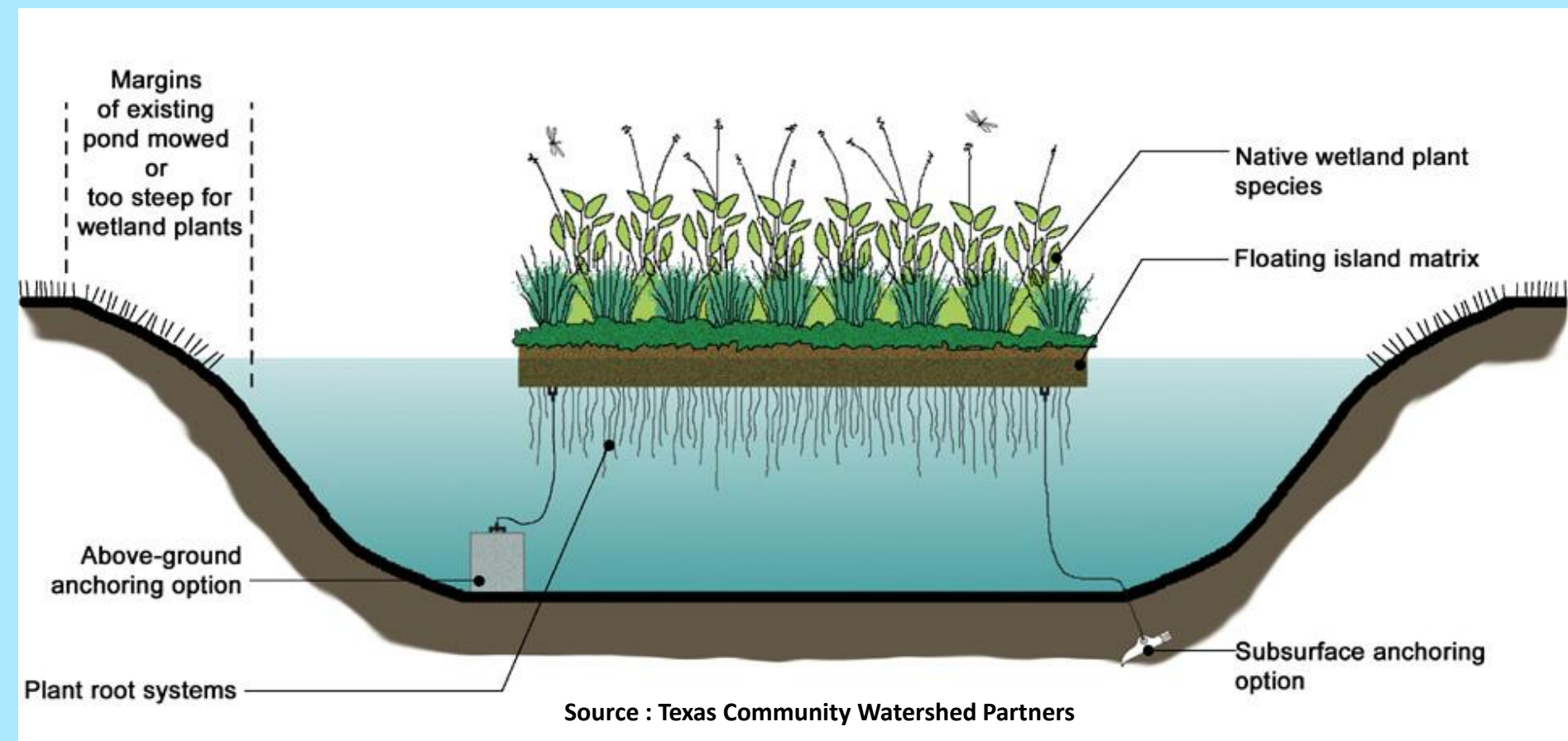
- Excellent biological water purification as they support biofilm growth
- High phosphate removal capacity compared to other water filtration systems, like carbon filters.
- When used as water filters, they drain well as part of a filter bed, and support plant rooting and biological water purification.



Wetland Interventions

2. Floating Wetland

- The base and roots of the floating wetlands allow microbes like bacteria to thrive where they carry out processes that break down or absorb pollutants, such as nitrogen and phosphorus, in the water.
- Provide habitat for fish below the water and insects, water birds, and others above the water.
- The suspended roots of the floating wetland plants traps particles that are suspended in the water column, decreasing the number of particles suspended in the water.





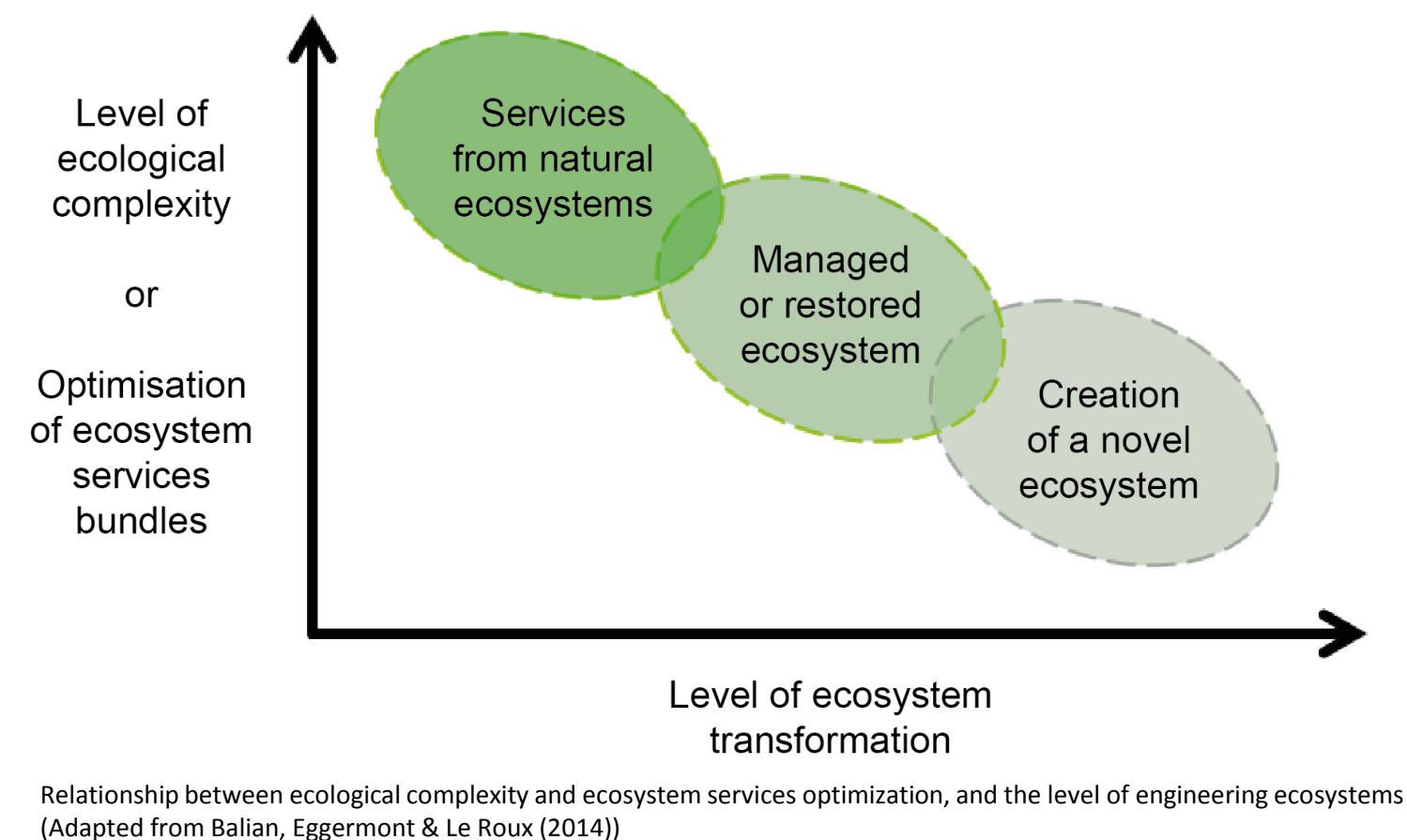
Case study from India: Enhanced capacity building of stakeholders and state governments on Forest landscape restoration and reporting mechanism on Bonn Challenge

As a part of India's commitment to bring **26 million hectares of deforested and degraded land** into restoration by 2030.

This case study is an example of the delicate balance that exists between and within ecosystems over centuries and additionally restoring the degraded land for societal needs- climate change mitigation, reduce disaster risk, economic and social development, human health, food security, water security and reduction in environmental degradation and biodiversity loss. As per the first report 9.8 million hectares have been restored enhancing ecosystem services in those regions.



Community engagement to discuss benefits of forest landscape restoration in Madhya Pradesh. © IUCN India



Capacity building of state government officials, researchers, local NGOs and other community stakeholders for Maharashtra, Karnataka, Madhya Pradesh, Haryana and Nagaland. The consultations enabled the stakeholders to understand the necessity of conserving the ecosystem and maintaining/ monitoring the reforested regions for the upliftment of the communities. Through restoration activities it addresses societal challenges, scale, biodiversity net gain, inclusive governance and balance trade-offs

The Global Standard for Nature-based Solutions:



- Is a facilitative standard for quality design, verification and scaling up of NbS;
- Safeguards nature from overexploitation;
- Engages (and ensures the involvement of all) stakeholders;
- Builds common language and understanding;
- Increases demand;
- Incentivizes positive sustainable change;
- Has 8 criteria and 28 indicators;
- Is based on knowledge co-creation: conservation science, social science, traditional knowledge.

Eight Nature-based solutions Criteria

Criterion 1: NbS effectively address societal challenges as a response that has been identified as a priority by those who are or will be directly affected by challenges.

Criterion 2: Design of NbS is informed by what stakeholders know about the interaction between different aspects of a land/seascape and it encourages to recognize complexities and uncertainty that might occur in the landscape. It not only applies to biophysical or geography but influence on economic systems too.

Criterion 3: NbS results in a net gain to biodiversity and ecosystem integrity proactively seek to enhance the functionality and connectivity of the ecosystem to ensure long- term resilience and durability of the NbS.

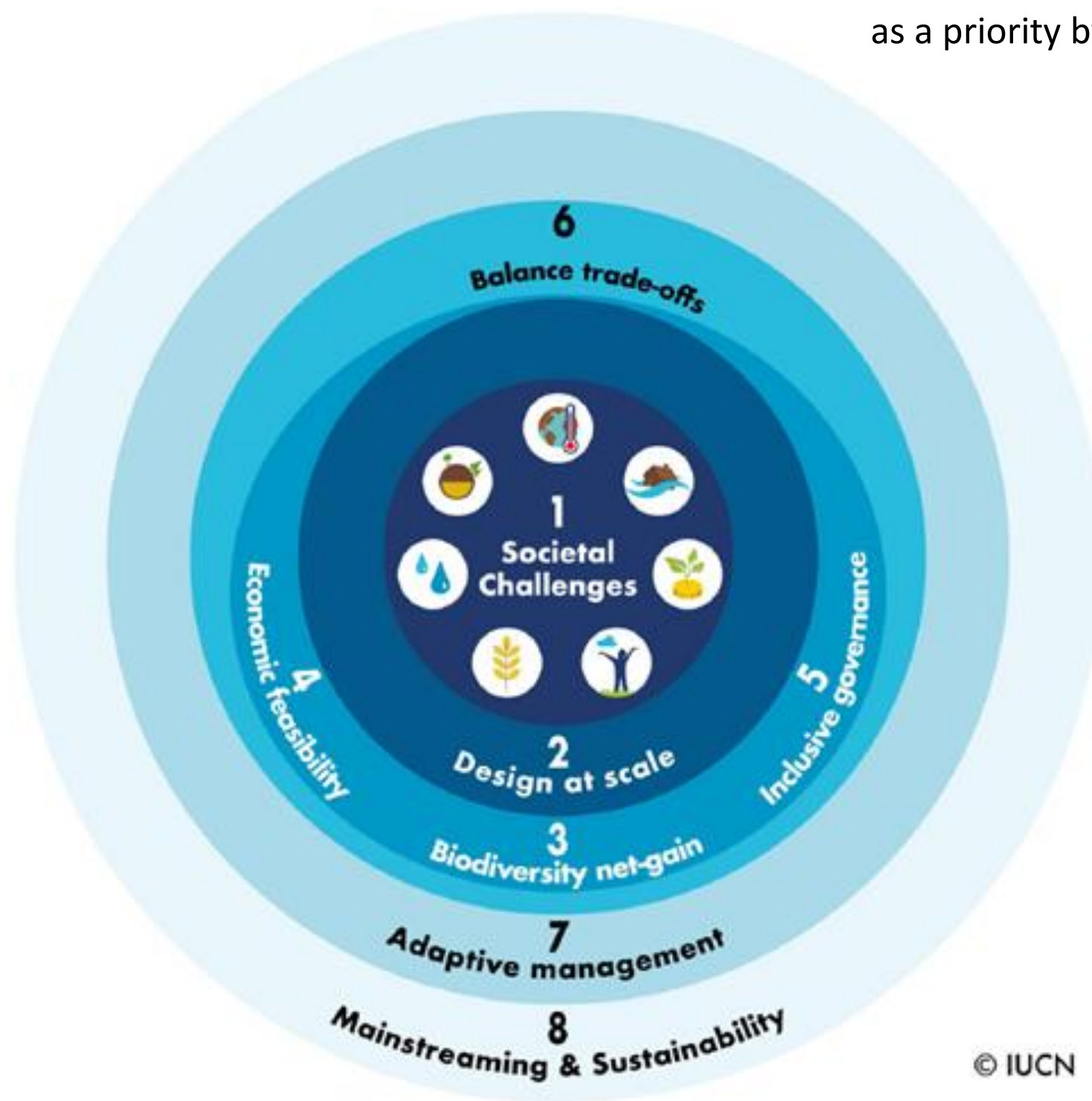
Criterion 4: Economic viability by return on investments, the efficiency and effectiveness of the intervention, and equity in the distribution of benefits and costs are key determinants of success for an NbS.

Criterion 5: NbS are based on inclusive, transparent and empowering governance processes which adhere to and align with prevailing legal and regulatory provisions, being clear on responsibilities and liabilities.

Criterion 6: Trade-offs in land and natural resource management are inevitable. This involves a credible assessment, full disclosure and agreement among the most affected stakeholders for equitable balance trade-offs between achievement of their primary

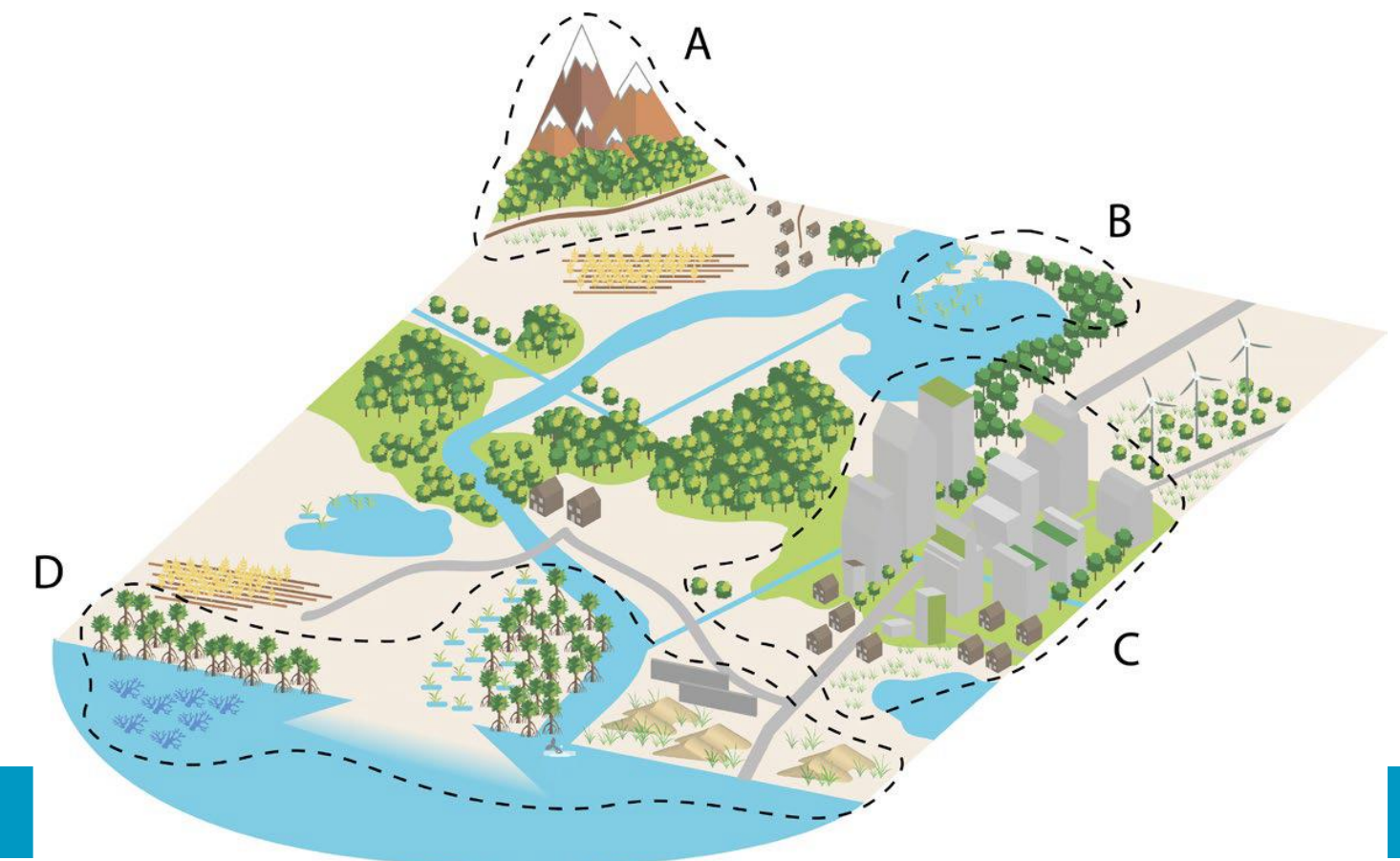
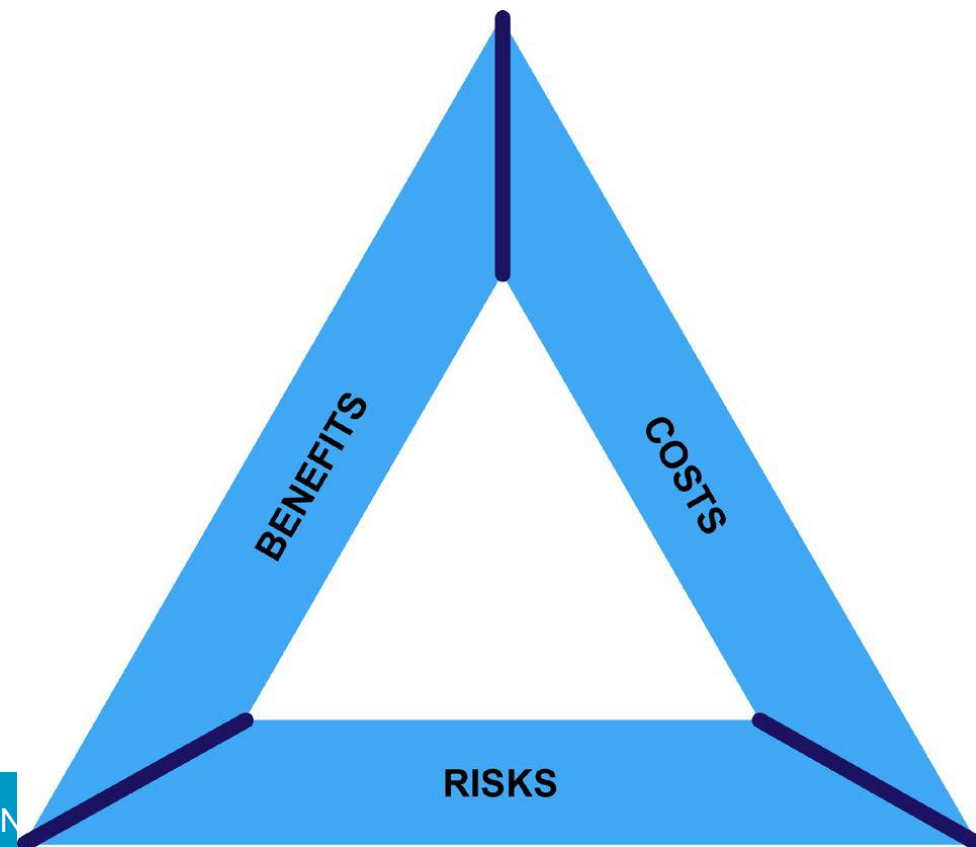
Criterion 7: NbS implementation plans include provisions to enable adaptive management as a response to uncertainty and as an option to effectively harness ecosystem resilience.

Criterion 8: NbS interventions are designed and managed with a view to long term sustainability and that they take account of, work with and align with sectoral, national and other policy framework.



Nature Based Recovery

- Nations are responding to economic impacts of Covid `19 through fiscal stimulus packages
- IUCN's Nature Based Recovery Initiative is guiding investments to a nature- based and nature- positive recovery supporting climate and biodiversity goals
- To ensure investments do no additional harm to nature and livelihoods
- That 10 % at least goes towards protecting and restoring nature



IUCN Academy: Training Conservation Leaders




IUCN PROFESSIONAL CERTIFICATE

Harnessing the potential of the IUCN Global Standard for Nature-based Solutions™

The concept of Nature-based Solutions (NbS) is drawing a lot of attention but few know what it means in practice and how to apply the IUCN Global Standard for NbS™, which is at the foundation of the concept. As the author of the Global Standard, IUCN is offering a Professional Certificate designed for its members, Commission members, and all stakeholders in the business and policy sector willing to explore the concept of Nature-based Solutions, its early applications, and to participate further to its development.

Who should attend?

Professionals from all sectors who wish to gain credentials on the IUCN Global Standard for Nature-based Solutions™ and to acquire skills to assess and design NbS.

Why take the certificate?

- Pave the way towards positive change as you gain expertise in using the assessment tool to evaluate NbS interventions.
- Explore new career paths as you become an IUCN-certified professional on the IUCN Global Standard for NbS™.
- Participate in the development of the Standard as you contribute to increasing collective knowledge and share your experience.
- Join a network of peers for continuous learning, build collaboration and develop alliances on NbS.



Programme Content

Module 1: Why NbS?
 Module 2: What are NbS (and what they are not)
 Module 3: The IUCN Global Standard for NbS™: Diving into the 8 criteria
 Module 4: The IUCN Global Standard for NbS™ and its assessment tool
 Module 5: Using the Standard for solution design or assessment

Certificate Duration and Format

Duration & Format 6 weeks, Self-Paced E-learning combined with regular Live Online Classes in English

Price For-profit Organizations: 3'950 CHF
 Not-for-profit Organisations: 2'950 CHF
 Extra 10% discount for IUCN Members
 Partial Scholarships available to participants from low income countries.

For more information, contact us at
Academy@iucn.org

- **PROFESSIONAL CERTIFICATE** on IUCN Global Standard for Nature-based Solutions™
- The programme format will be hybrid with self-paced e-learning modules (including regular group work and assignments) combined with regular live online classes.
- 6 weeks





IUCN Academy

The purpose of the IUCN Academy is to put nature conservation at the heart of the green transition and to build the capacities of citizens of the world -professionals and postgraduate students alike- eager to make their contribution in the field of nature conservation more efficient and meaningful.

Some of the current courses offered:

1. Nature- Based Solutions- Professional certificate on IUCN Global Standard
2. Nature's crown jewels: An introduction to natural World Heritage
3. The Red List of Ecosystems Assessors- Specialised Course
4. Eco-tourish Development in Protected Areas
5. An Introduction to IUCN Green List of protected areas.

Website link: <https://iucnacademy.org/>



LEARN FROM TOP PROFESSIONALS



Radhika Murti
Director for the Centre of
Society and Governance, IUCN



Veronica Ruiz Garcia
Programme Manager-
EcoDRR, IUCN



Stewart Maginnis
Deputy Director General,
IUCN



Marcos Valderrabano
Programme manager Red List
of Ecosystems



**Mihaela Dragan-
Lebovics**
Nature-based Solutions
Project Officer, Regional
Office for Eastern Europe and
Central Asia (ECARO), IUCN

FEATURED TRAININGS



**Nature-based Solutions -
PROFESSIONAL CERTIFICATE on
IUCN Global Standard™ - NbS #5
Spring 2023**



**Nature's crown jewels: An
introduction to natural World
Heritage.**



**The Red List of Ecosystems for
Assessors - Specialised Course**



**Ecotourism Development in
Protected Areas Following the
MEET Network Approach
(COMING SOON)**

Natural Infrastructure for Water Management

Investing in nature for multiple objectives



**Water
management—
An approach at
scale to address
societal
challenges**