



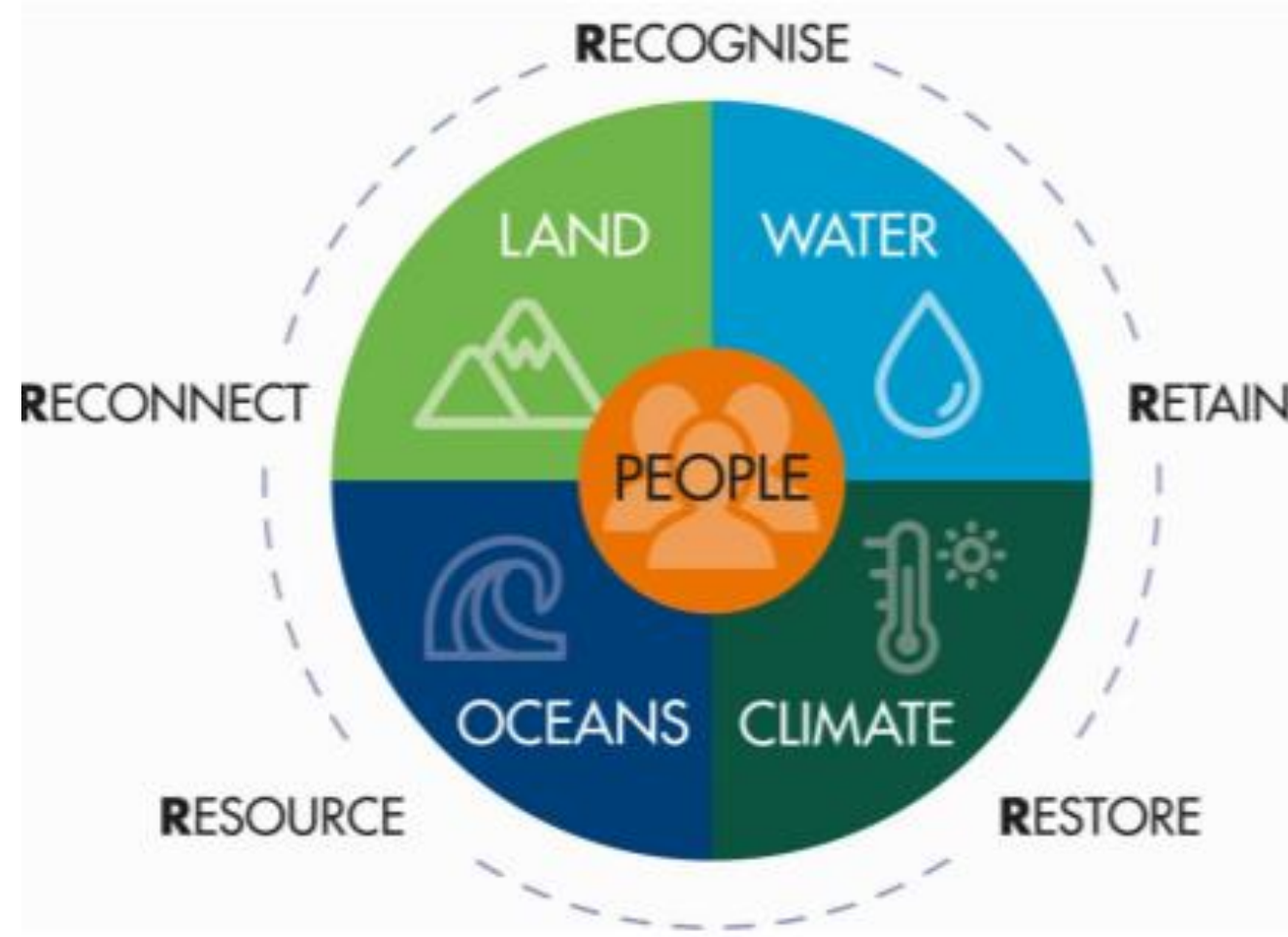
Nature-based Solutions

Building Urban Resilience





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.

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 MoU with Govt of India



IUCN Vision Mission



Our vision

A just world that values
and conserves nature.

70 years of impact



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.



Global Risks



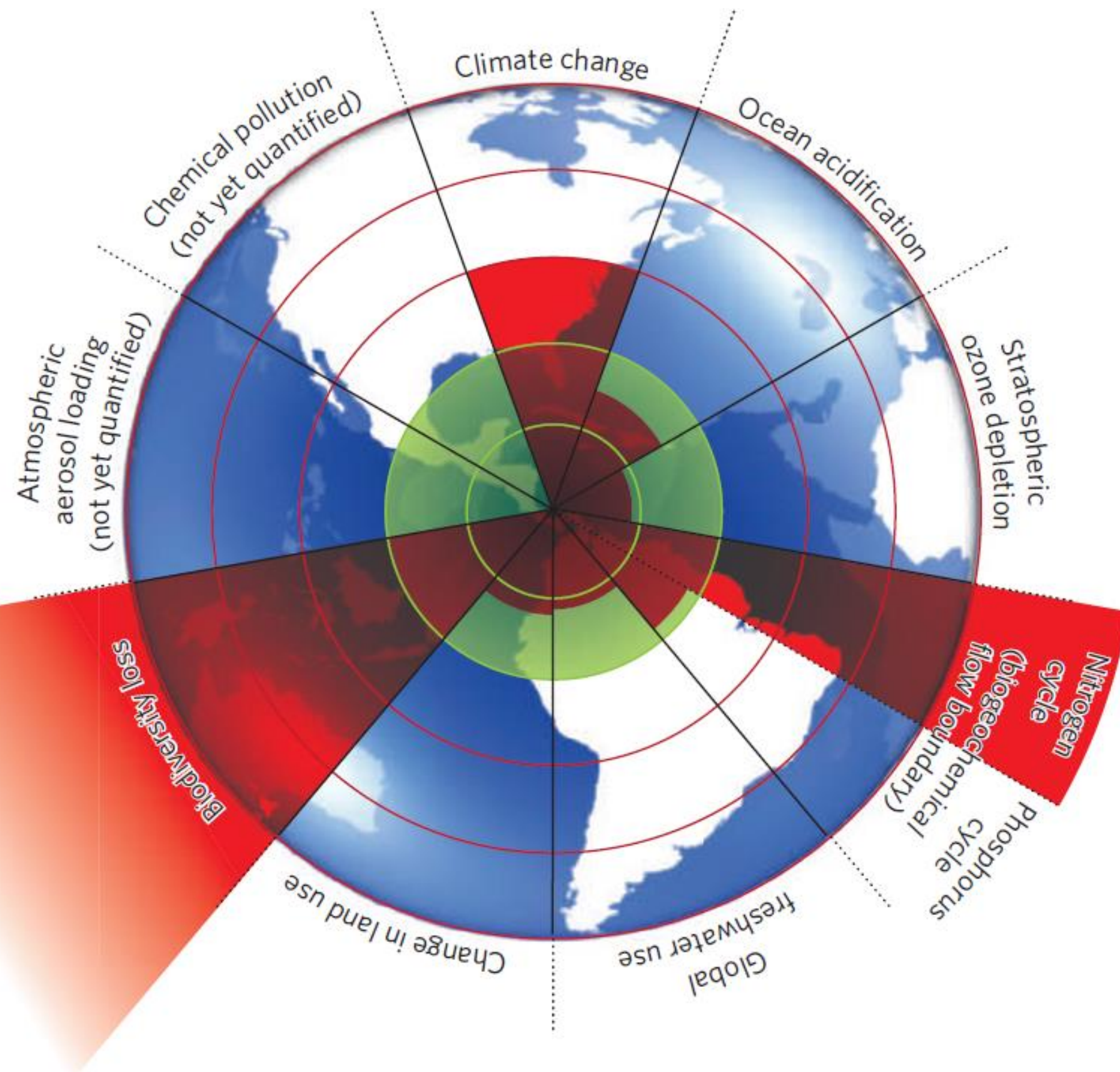
10 years



Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

Source: Compilation from World Economic Forum's Global Risks Report (2012-23)

Beyond the 'Boundaries'



Source: Rockström et al. (2009)

- We are moving from **Holocene to Anthropocene** since the Industrial Revolution
- **Human activities are damaging** the systems that keep earth in a desirable state.
- Rockström et al. (2009) proposed the '**Planetary Boundaries**' framework.
- Defined nine processes for which planetary boundaries were defined. The boundaries define the **safe operating space** for humanity with respect to the Earth system
- The **boundaries in three systems** (rate of biodiversity loss, climate change and human interference with the nitrogen cycle), have **already been exceeded**
- A new study claims **seven of nine 'safe limits'** have been breached.

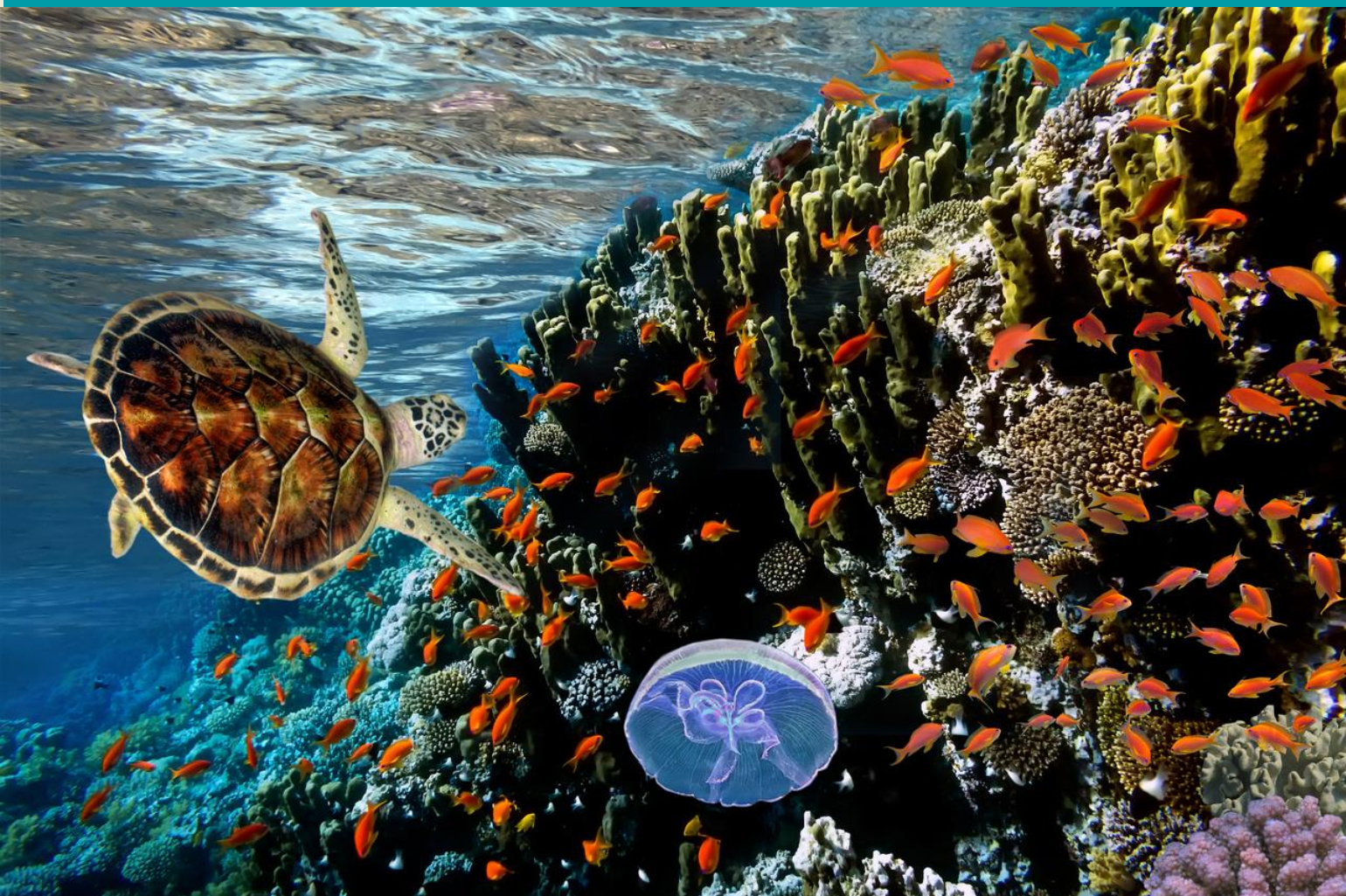
Increasing recognition that conservation of nature is not merely a peripheral agenda but nature can be deployed in helping resolve major societal challenges.



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

Nature-based Solutions Approaches

1. Ecosystem restoration approaches



2. Issue-specific ecosystem-related



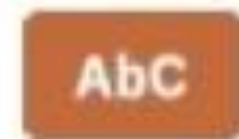
3. Infrastructure-related approaches



4. Ecosystem-based management

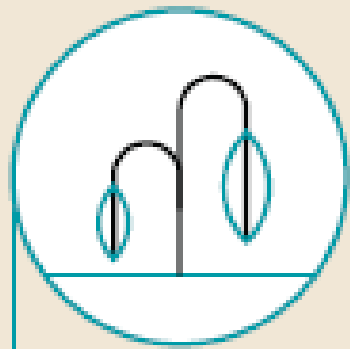


5. Ecosystem protection approaches

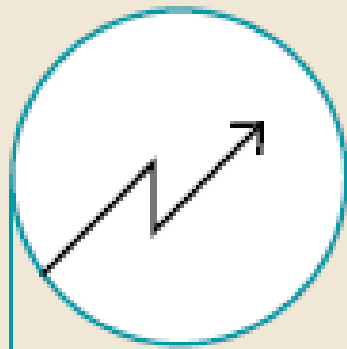


NbS's potential to address complex challenges

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



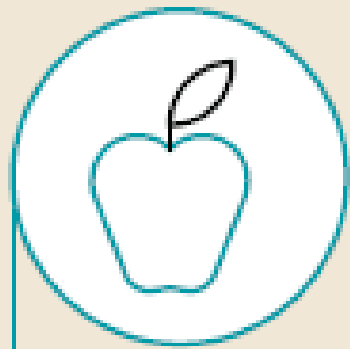
climate change



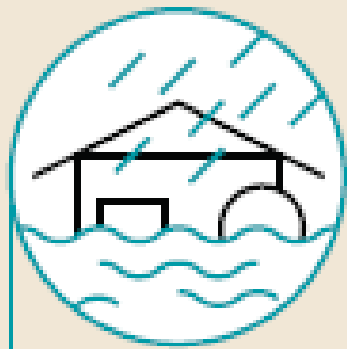
economic and social development



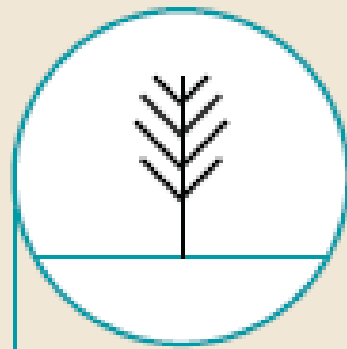
human health



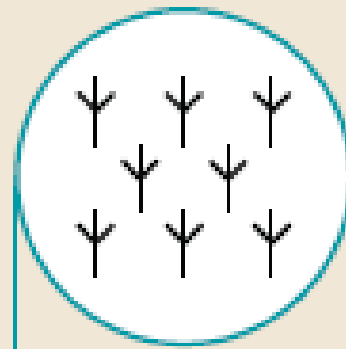
food and water security



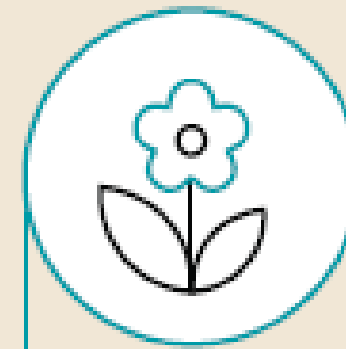
disaster risk reduction



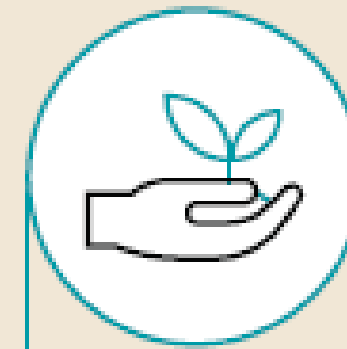
ecosystem degradation



biodiversity loss



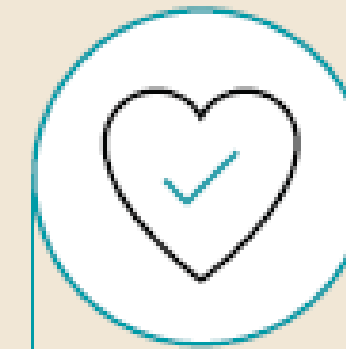
adaptation to climate change



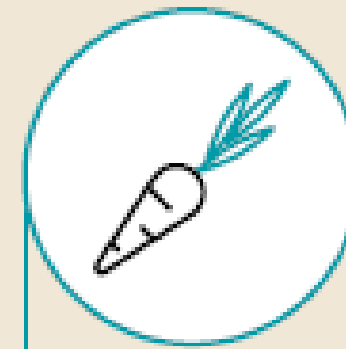
green jobs



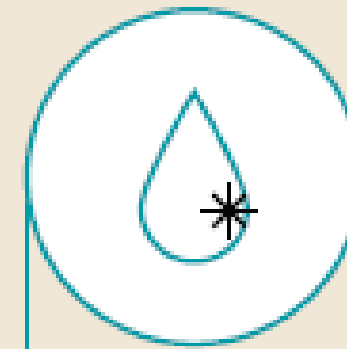
community resilience



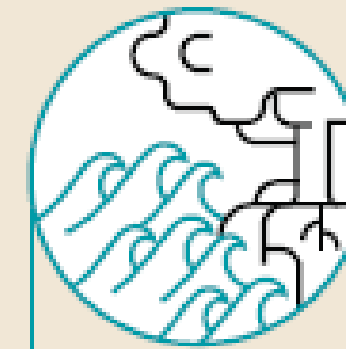
health benefits



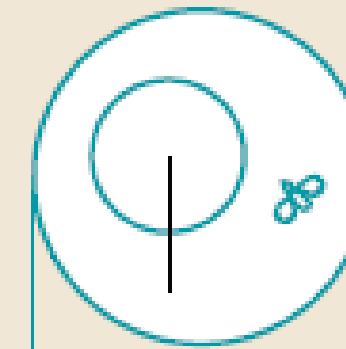
healthy and accessible food



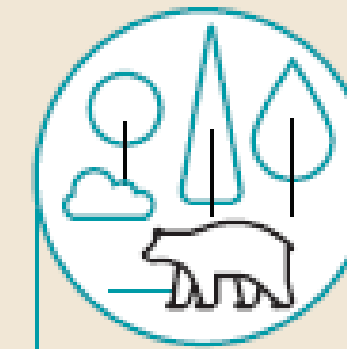
clean air and water



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

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

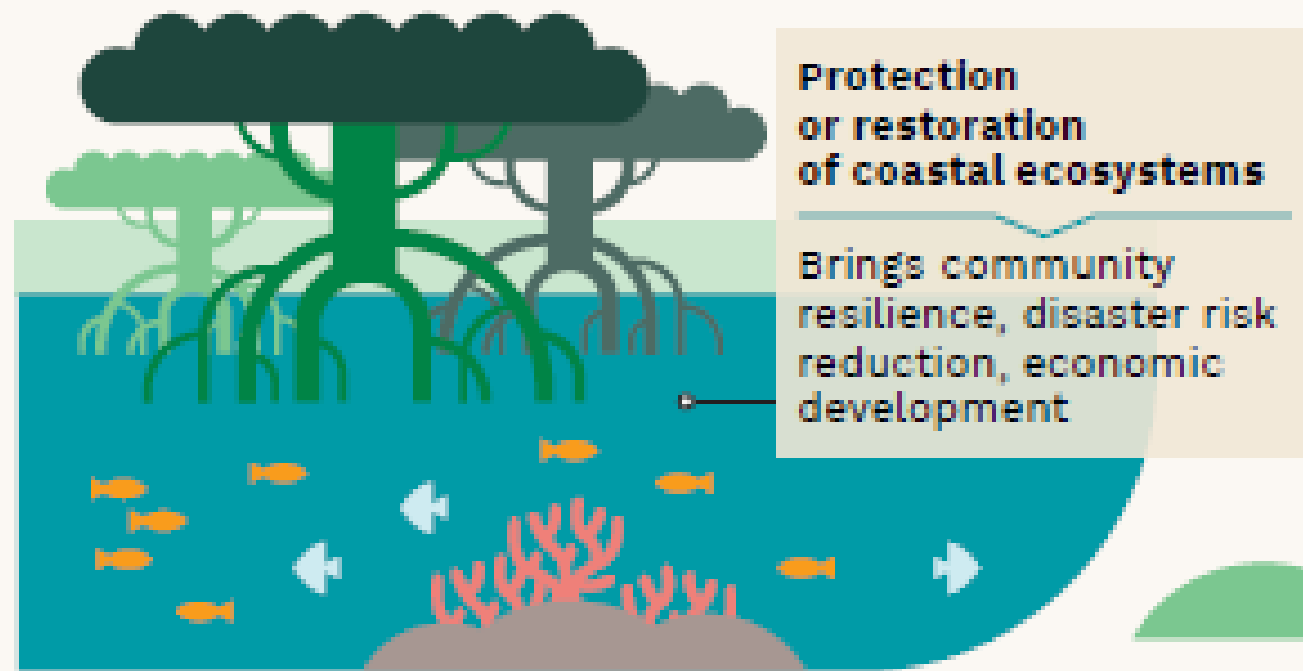


Nature-based Solutions for.....





Examples of NbS application:



Protection or restoration of coastal ecosystems
Brings community resilience, disaster risk reduction, economic development



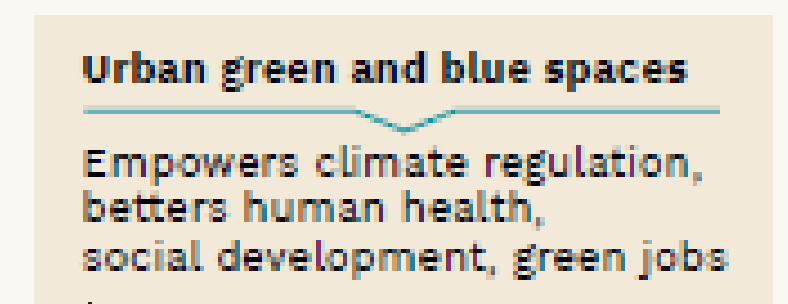
Protection, restoration and sustainable use of forest landscapes
Secures water supply, erosion control and risk reduction



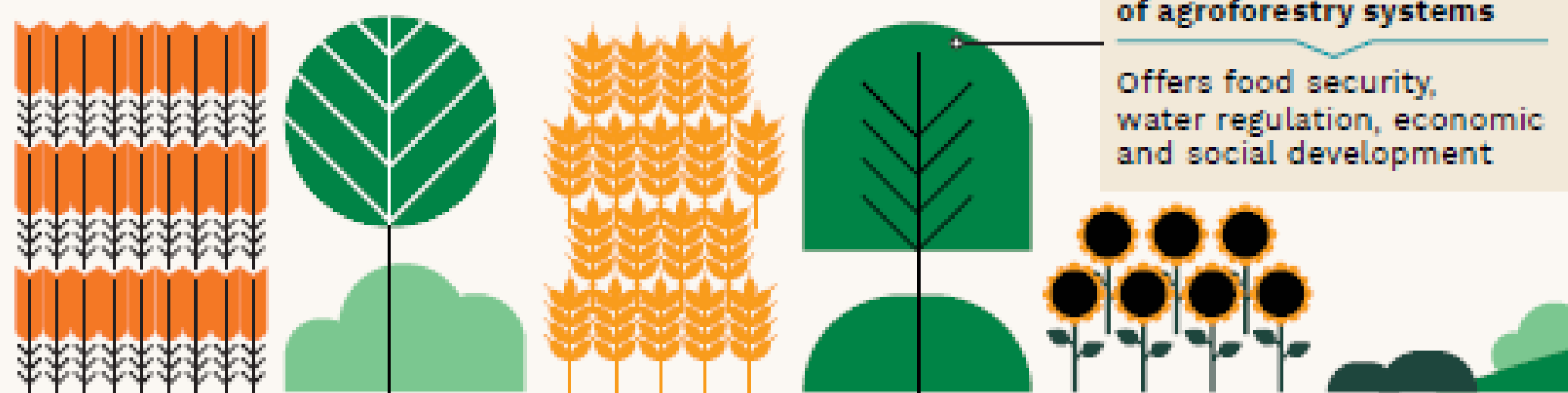
Protection, restoration and management of wetlands
Provides water storage, flood protection, food production



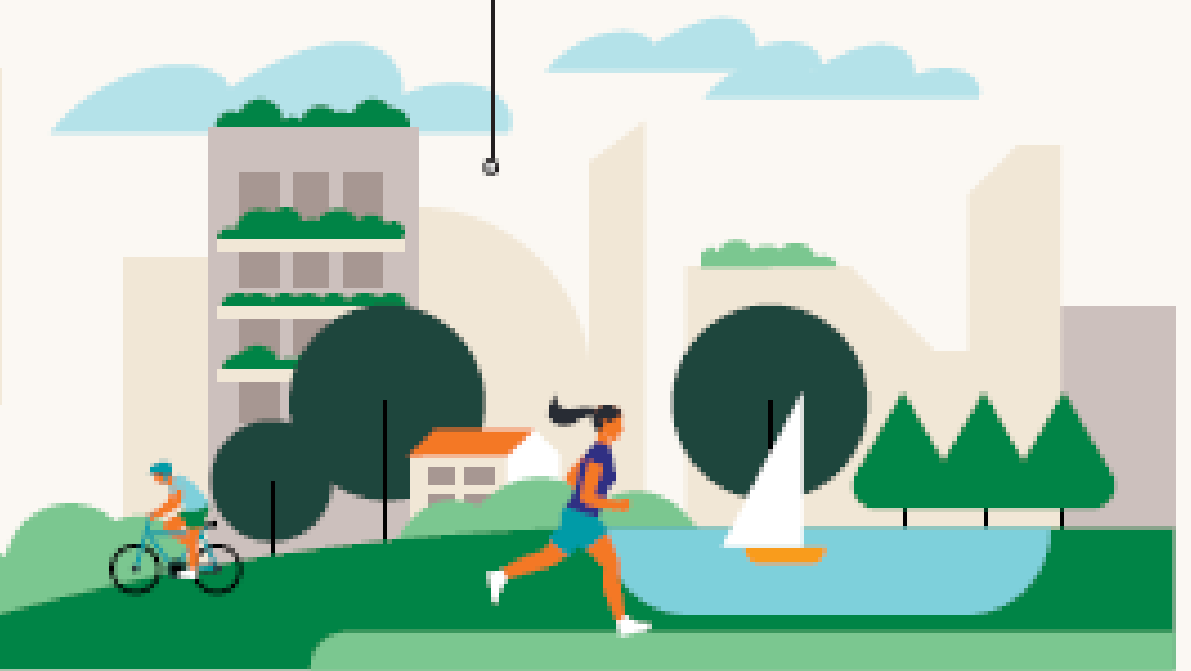
Providing space for rivers to naturally flow
Enables flood protection, water security



Urban green and blue spaces
Empowers climate regulation, better human health, social development, green jobs



Sustainable management of agroforestry systems
Offers food security, water regulation, economic and social development



Key strategies

- NbS in Cities must be seen as source of innovative solutions to address population density, the compactness of the buildings, the complexity of urban uses and functions, and the linkages upstream downstream
- Multi-level, multi-sector and multi-actor policy support for NbS are the strategic elements for sustainable integrated urban agendas
- Greening and re-naturing cities is a strategic NbS addressing multiple benefits: contribution to climate change adaptation, reduction of the heat-island effect, reduction of noise, improvement of health and well-being of residents, avifauna attraction, new visual and acoustic urban landscapes. Trees are key elements for re-naturing cities, paying attention to species selection is important though;
- “Superblocks ” are seen as an urban model to promote sustainable and healthy cities, by changing the mobility model and releasing new public spaces for uses such as green corridors, community gardens, social and cultural activities, leisure, environmental education, etc.

Key Tools

- **Awareness, education and communication tools:** Actions to promote empowerment of local population as drivers of change, taking advance of the sense of “community”
- **Regulatory tools:** Long-term NbS policy with compulsory rules, Promotion of more links health-green cities. Alignment of economic indicators to environmental and societal concerns.
- **Governance tools:** Stronger political commitment for breaking down silos and work across sectors.
- **Capacity-building tools:** Transdisciplinary knowledge about urban biodiversity. More policy-citizens-science integration, Training politicians and officials on NbS.
- **Economic and Financial tools:** Development of financial tools and tax incentives for the implementation of NbS. Encouragement of public-private investments in ecosystems. Development of more funding for eco-entrepreneurs and green SMEs.
- **Information & Knowledge exchange tools:** Development of prospective and information tools for identifying scenarios in support of NbS decision-making processes. More evidence-based and tailor-made information.



About the IUCN Global NbS Standard

Why is it needed?

- Need for greater clarity on NbS as projects start adopting it;
- Enhancing confidence in the concept among decision-makers;
- Realize its full potential towards addressing sustainability needs

What does it do?

- Equip users with robust framework to design and verify NbS that yield desired outcomes
- Support users to apply, learn and continuously strengthen and improve the effectiveness, sustainability and adaptability of their NbS interventions
- Provide for opportunity to link results to global goals

Who can use it?

- National governments, city and local governments, planners, businesses, donors, financial institutions
- Stakeholders working in range of settings, regions and scales

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.



Criteria



Societal challenges



Design at scale



Biodiversity net gain



Economic feasibility



Inclusive governance



Balance trade-offs



Adaptive management

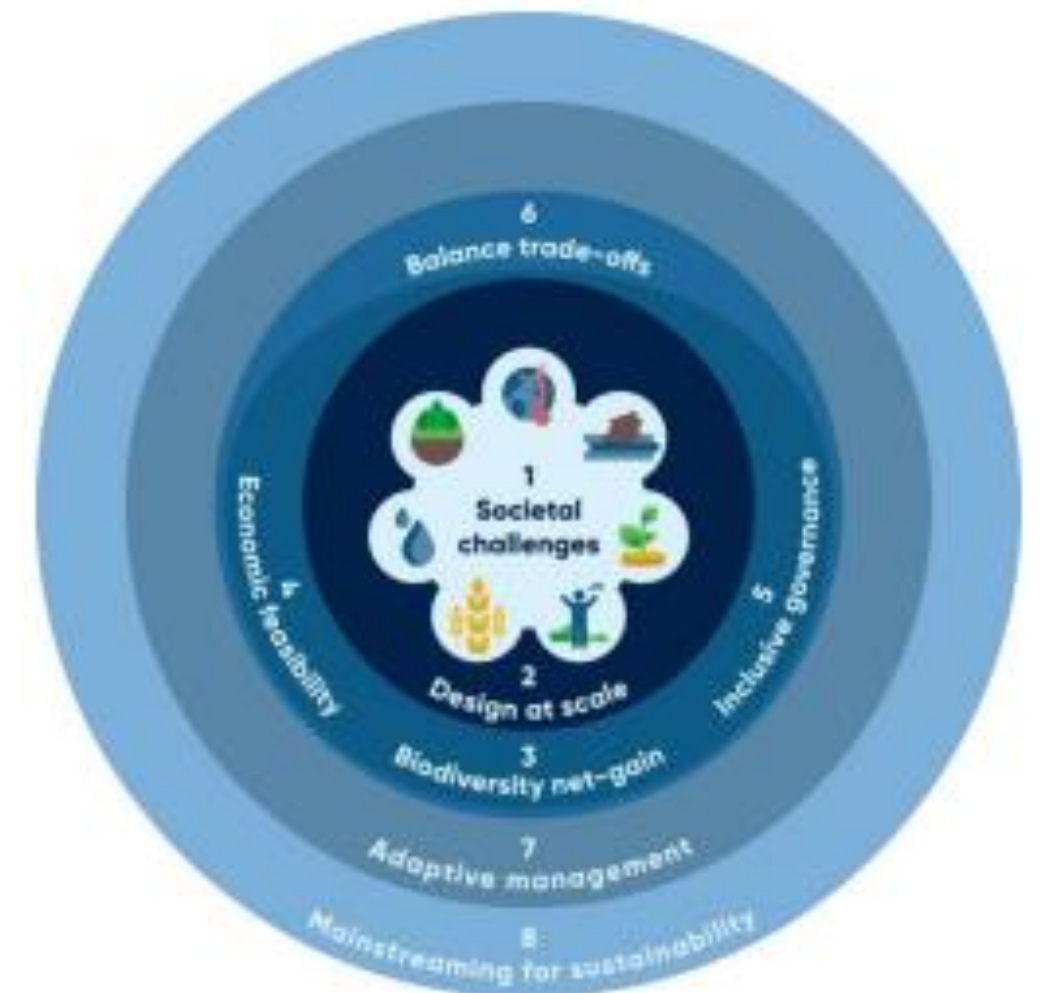


Mainstreaming for sustainability



Nature based Solutions

The nature of progress



How do you use the Standard?



Uses of the self-assessment sheet:

- Assess whether an intervention/proposal adheres to the Standard
- Inform internal and external stakeholders on the means of verification in place/used (or lack of) to measure the indicators
- Identify areas for improvement



In conclusion

A new model of ecosystem based urbanism is needed.

It should take into consideration not only the urbanistic planning at the surface level, but also at the underground and at the roof level for assuring a new model of re-natured and sustainable city and maximising, at the same time, the ecological efficiency of the urban space (enhancing urban biodiversity, the water cycle, and clean forms of energy).

Indicators to assess impacts for a new ecosystem urbanism. Indicators measuring intangible value in the urban space (qualitative assessment vs. quantitative economic indicators).



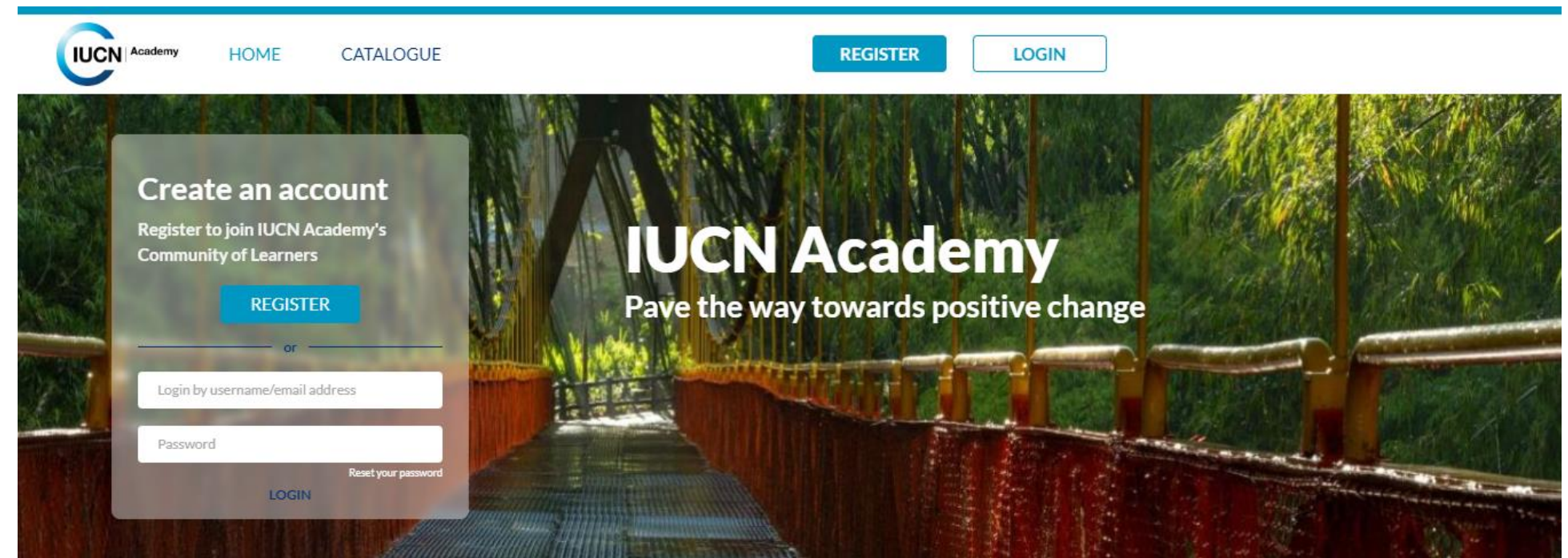
IUCN Academy

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.

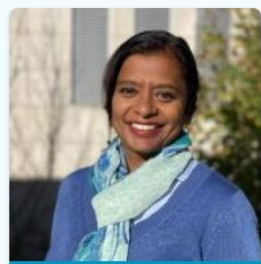
Some of the current courses offered:

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



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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)



**Thank you for your attention.
For more information:**



Learn more



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