



**International Union for
Conservation of Nature**

Nature-based Solutions for Societal Challenges

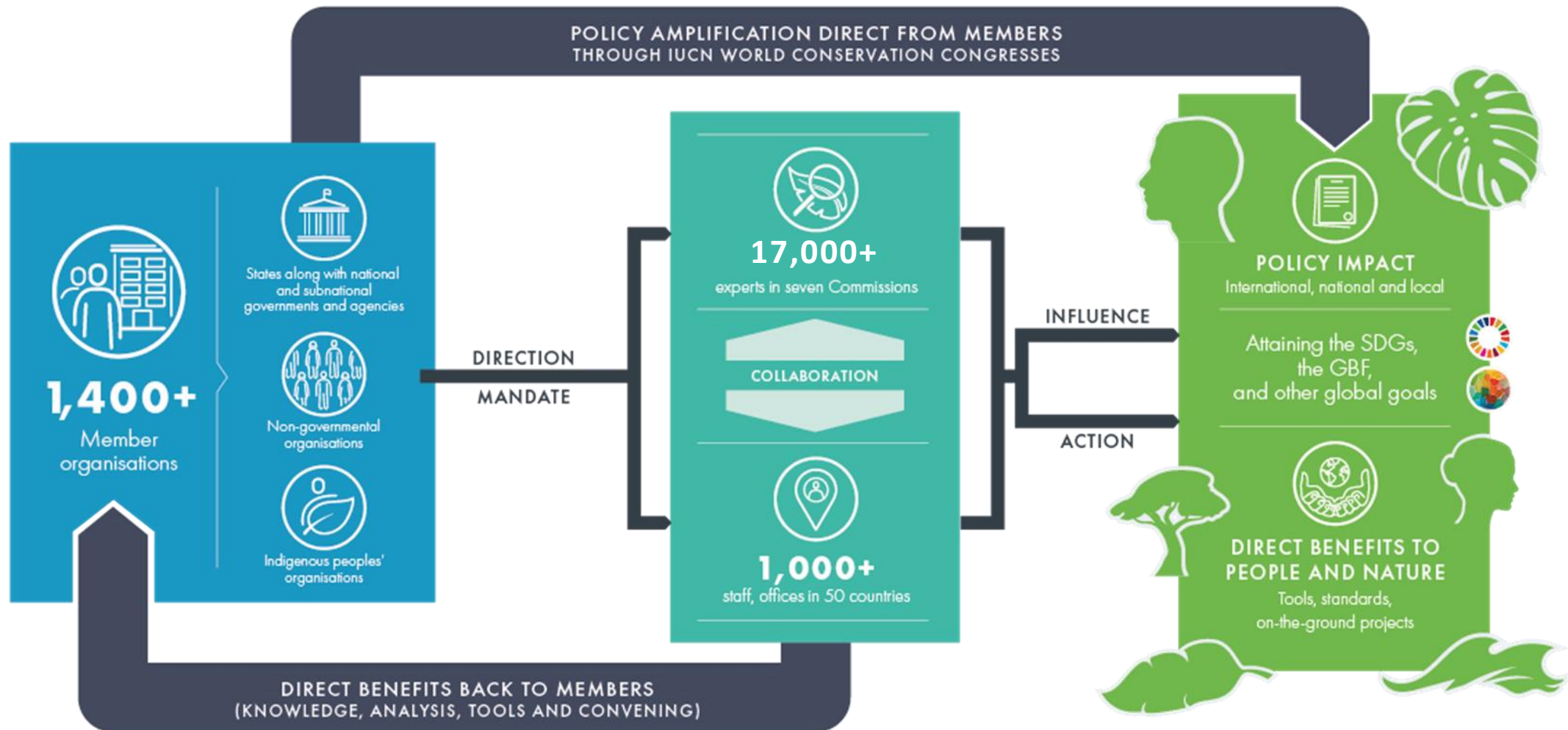
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INTERNATIONAL UNION FOR CONSERVATION OF NATURE

IUCN: The world's largest environmental network



A powerful Union

IUCN Members

- State and government agencies
- Non-governmental organisations
- Indigenous Peoples' organisations

IUCN Commissions

- Commission on Education and Communication (CEC)
- Commission on Environmental, Economic and Social Policy (CEESP)
- World Commission on Environmental Law (WCEL)
- Commission on Ecosystem Management (CEM)
- Species Survival Commission (SSC)
- World Commission on Protected Areas (WCPA)
- Climate Crisis commission

Secretariat

- Coordinates and collaborates with IUCN Members and Commissions to implement the IUCN Programme



IUCN as a provider of decision making tools



IUCN Nature
Positive approach

STAR



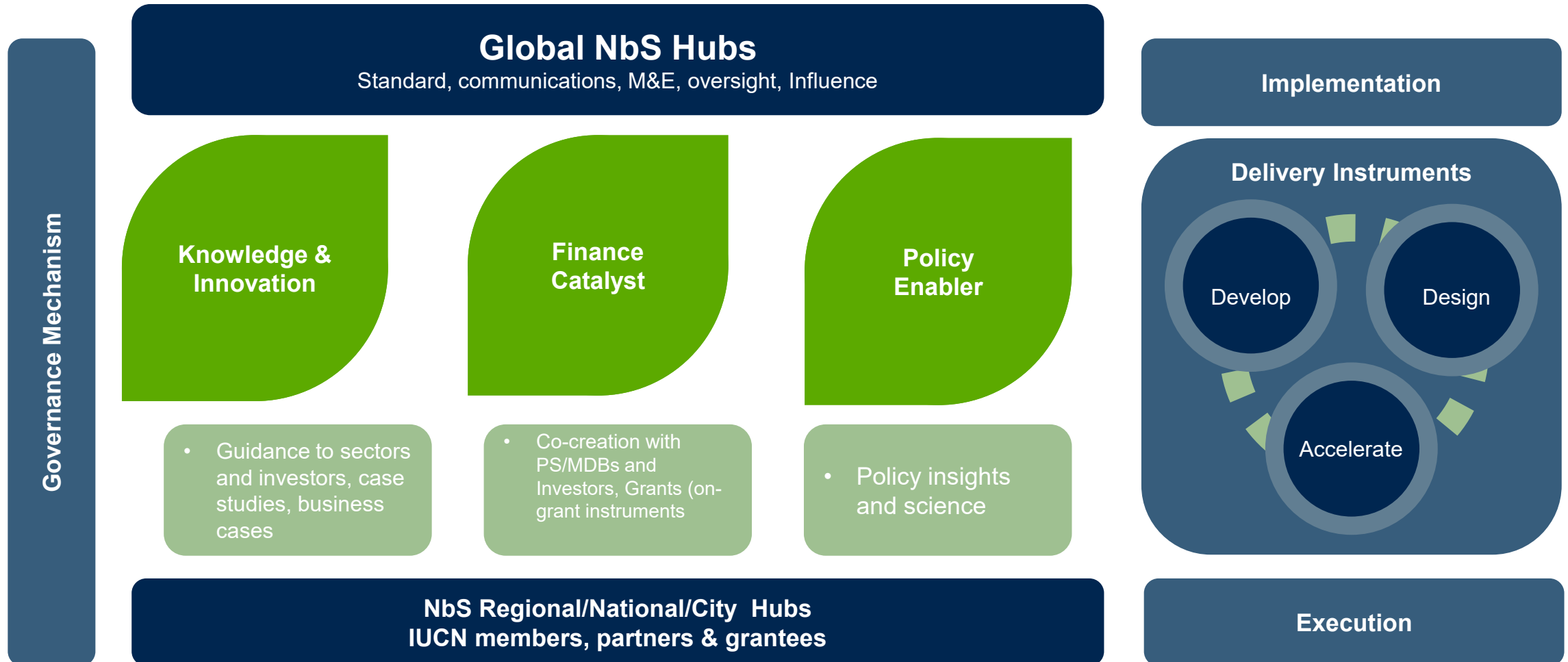
and more...

Linking Global and Regional Hubs to Scale up NbS



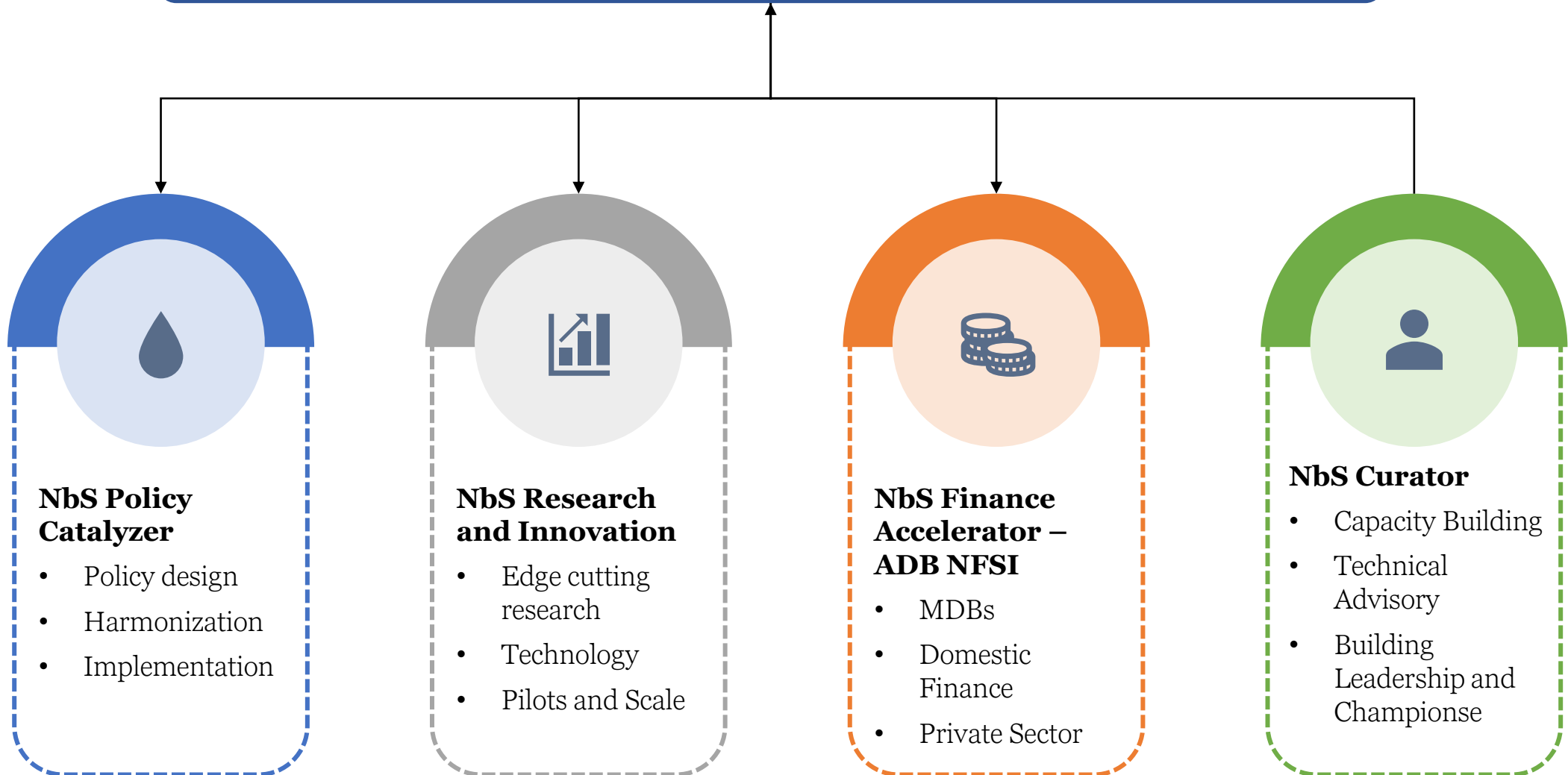
**Nature
based
Solutions**

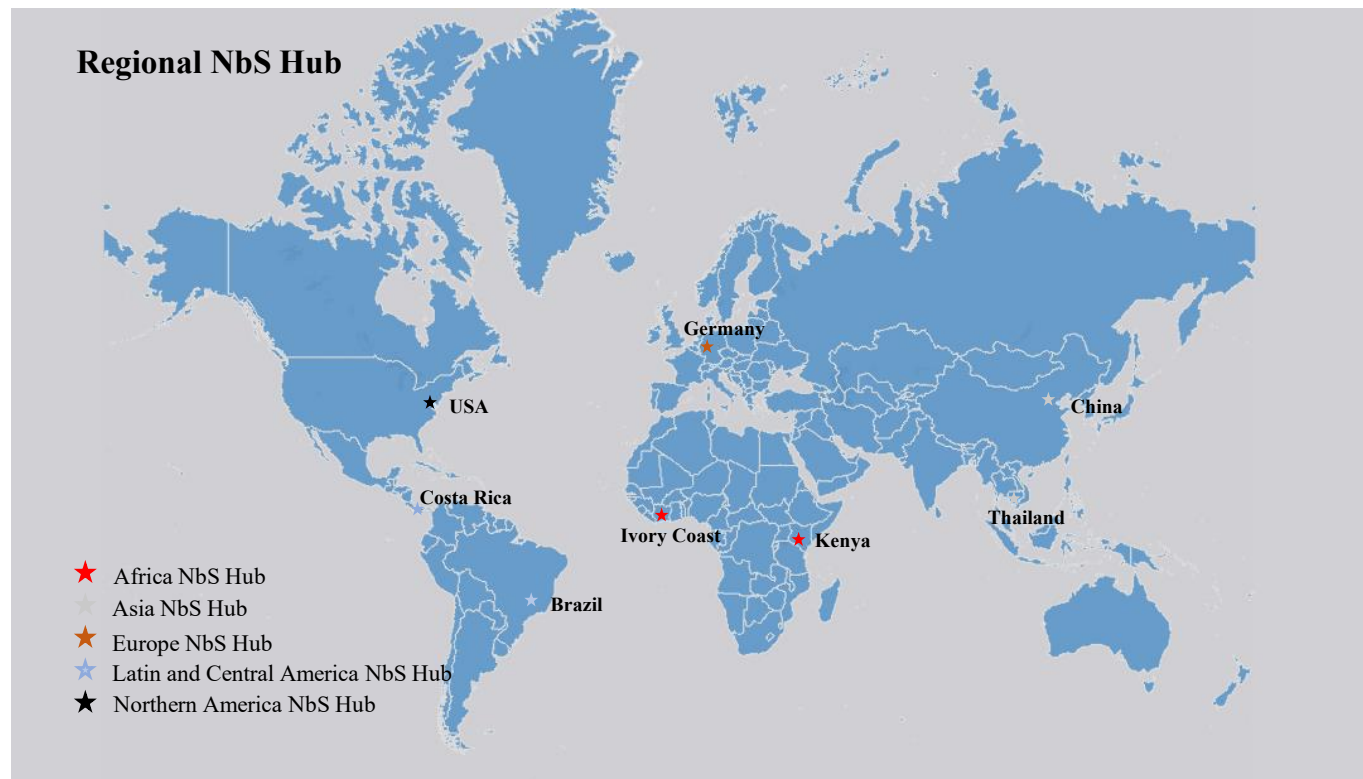
The nature of progress



NbS Regional Hubs will Support the Scale Up of NbS

Accelerating Implementation of Effective NbS to address
Climate, Biodiversity and other societal challenges



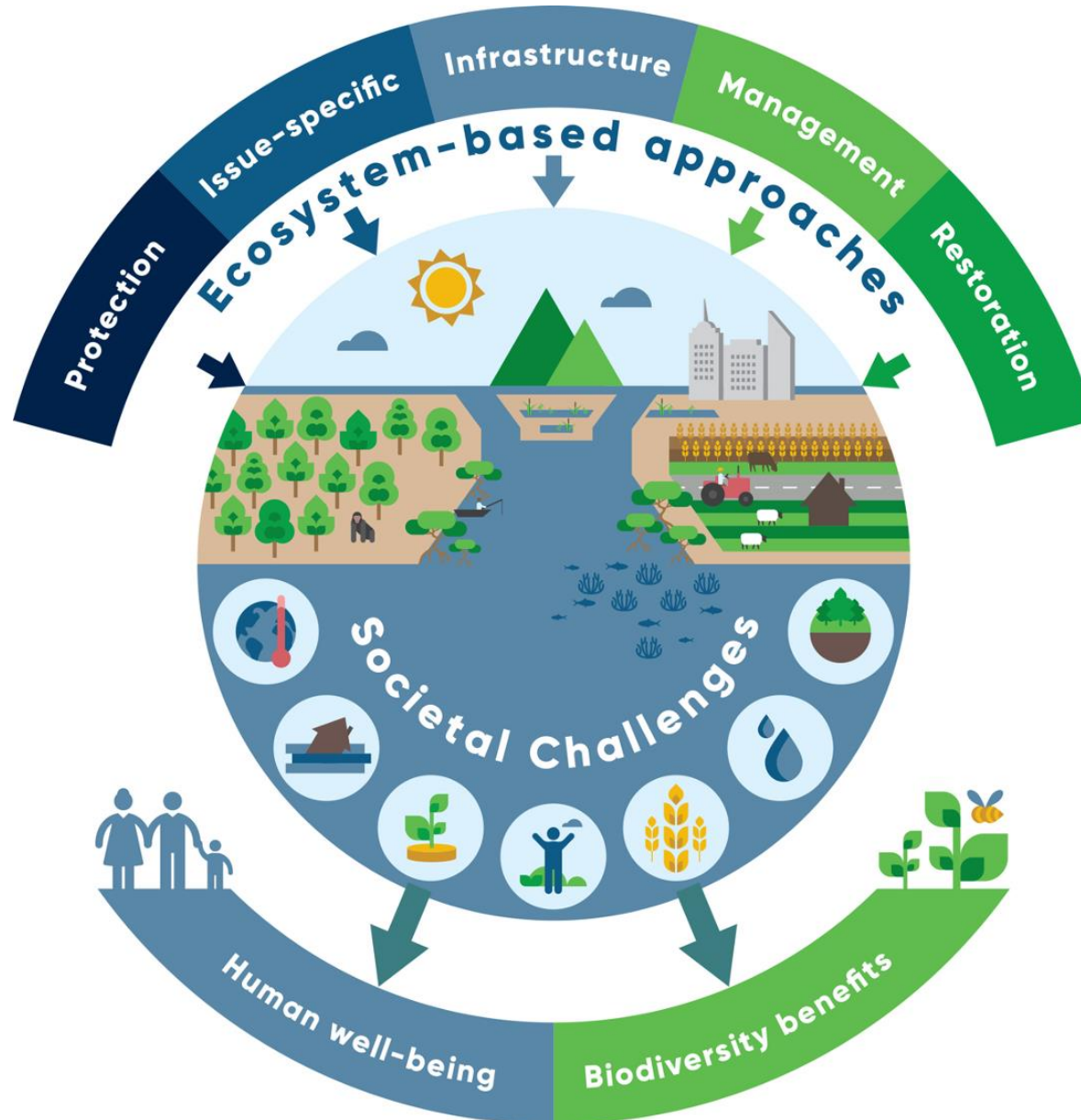


IUCN work on NbS



Nature-based Solutions in the global policy landscape





Defining NbS

NbS are defined as “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits.”

-WCC 2016, Resolution 069
 -UNEA-5 2020 Resolution

Building on decades of work

1. Ecosystem restoration approaches

ER

EE

FLR

2. Issue-specific ecosystem-related

EbA

EbM

Eco-DRR

CAS

3. Infrastructure-related approaches

GI

NI

4. Ecosystem-based management

EbMgt

5. Ecosystem protection approaches

AbC





NbS have significant potential to address our societal challenges



Climate change adaptation & mitigation



Disaster risk reduction



Economic & social development



Water security



Food security



Human health



Ecosystem degradation & biodiversity loss

US\$ 170 billion

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



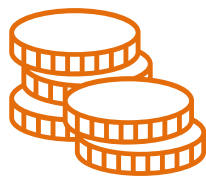
37%

Amount of climate mitigation Nature-based Solutions can contribute to meeting Paris climate goal

The Global Imperative to accelerate Nature-Based Solutions



Nature-based solutions could mitigate 10–12 gigatonnes of CO₂ annually—roughly one-third of required reductions to meet 1.5°C climate goals. This includes afforestation, reforestation, peatland restoration, and mangrove conservation.



Only ~3% of global climate finance goes to NbS, despite estimates showing \$1 invested can return \$4 in socio-economic and environmental benefits.



NbS provide multi-dimensional benefits: enhancing biodiversity, regulating water cycles, reducing urban heat, and supporting livelihoods, especially in vulnerable regions.



Recent COP decisions and IPCC guidance recognize NbS as vital. UNFCCC, UNCBD, UNCCD

Valuing Nature-Based Solutions

High return on investment - For every \$1 invested in NbS, there is an estimated return of \$4 in avoided costs, improved health, and economic co-benefits.

Job creation through restoration - NbS can generate more jobs per dollar than traditional infrastructure. Ecosystem restoration projects support both skilled and community-level employment.



Natural capital integration - Valuing ecosystems in economic and infrastructure planning ensures that NbS are treated as assets, not externalities.

Private sector mobilization needed - Investment in NbS remains dominated by public finance. Incentives, policy signals, and blended finance are needed to scale private involvement.

Asia's Untapped NbS Potential

Asia tropical forests, peatlands, and mangroves represents 30% of global NbS mitigation potential.

Rapid urbanization, deforestation, and wetland loss are degrading natural systems

Despite high potential, national climate strategies often underprioritize NbS. Limited domestic and international finance hampers large-scale deployment.

Integration of NbS into climate adaptation and biodiversity policies is increasing with over 130 countries include NbS in their NDCs, signalling a global push for ecosystem-based climate action.

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.

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



climate change



economic and social development



human health



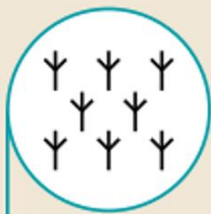
food and water security



disaster risk reduction



ecosystem degradation



biodiversity loss

NbS can provide long-term environmental, societal and economic benefits:



adaptation to climate change



green jobs



community resilience



health benefits



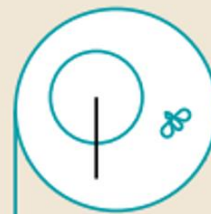
healthy and accessible food



clean air and water



disaster risk reduction



ecosystem integrity



biodiversity net gain

Risks and Integrity in Nature-Based Solutions

- NbS carbon claims can be overstated or non-permanent. Strong MRV systems and long-term stewardship are essential.
- Poorly designed NbS may involve monocultures or exotic species that harm local ecosystems. Ecological integrity must be central.
- NbS must respect indigenous land tenure and local governance to avoid displacement and inequitable outcomes.

IUCN GLOBAL STANDARD FOR NATURE-BASED SOLUTIONS

CRITERION 1 NbS effectively address societal challenges

CRITERION 2 Design of NbS is informed by scale

CRITERION 3 NbS result in a net gain to biodiversity and ecosystem integrity

CRITERION 4 NbS are economically viable

CRITERION 5 NbS are based on inclusive, transparent and empowering governance processes

CRITERION 6 NbS equitably balance trade-offs between achievement of their primary goal and continued provision of multiple benefits

CRITERION 7 NbS are managed adaptively, based on evidence

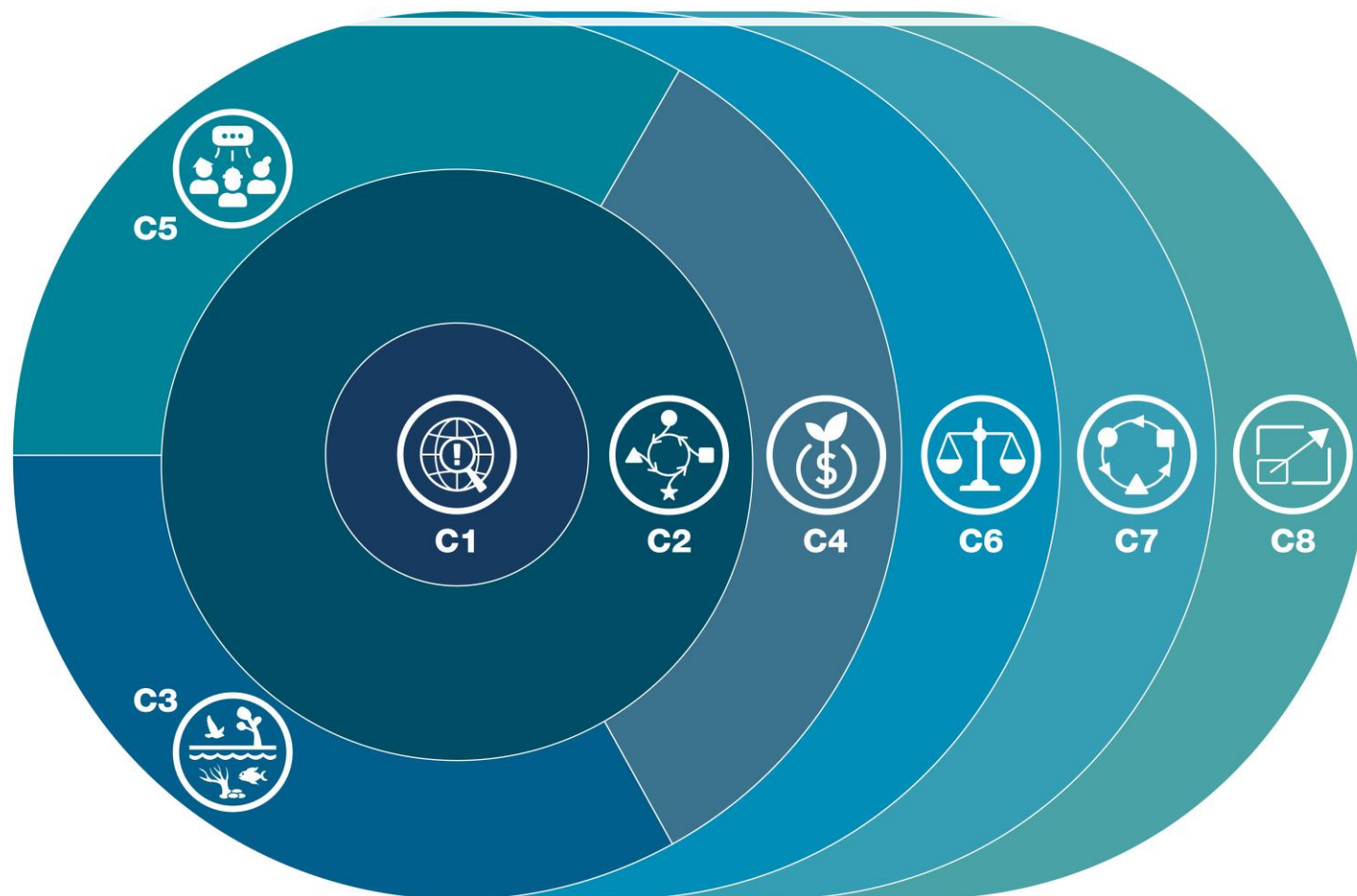
CRITERION 8 NbS are sustainable and mainstreamed within appropriate jurisdictional context



IUCN Global Standard on Nature-based Solutions™



8 Criteria and 28 indicators



C1	3 Indicators
C2	3 Indicators
C3	4 Indicators
C4	3 Indicators
C5	5 Indicators (one optional)
C6	3 Indicators
C7	3 Indicators
C8	3 Indicators



**C1. Societal
challenges**



**C2. Integrated systems
perspective**



**C3. Enhanced biodiversity,
ecosystem integrity
and connectivity**



**C4. Financial feasibility and
economic justification**



**C5. Inclusive governance
and equity**



C6. Balancing goals and impacts



C7. Adaptive management



**C8. Enhancing sustainability
and mainstreaming**



C1. Societal challenges

- 1.1 The societal challenges addressed are clearly identified, understood, and documented
- 1.2 Prioritise societal challenges
- 1.3 Identify, benchmark and assess NbS outcomes for people and nature



C4. Financial feasibility and economic justification

- 4.1 Understand and document the distribution of financial and societal costs and benefits to ensure distributional equity
- 4.2 NbS are economically and financially justifiable against alternative solutions
- 4.3 Identify and secure financial mechanisms to ensure NbS long-term viability



C7. Adaptive management

- 7.1 Define and make explicit the assumptions on how desired NbS outcomes are achieved
- 7.2 Periodically test the validity of the assumptions
- 7.3 Define and implement the necessary changes to the management of the NbS through an inclusive and participatory approach



C2. Integrated systems perspective

- 2.1 Recognise and respond to interactions between the economy, society, ecosystems, and cultural norms
- 2.2 Seek synergies across sectors and with complementary interventions
- 2.3 Incorporate risk identification and management



C5. Inclusive governance and equity

- 5.1 Identify and invite stakeholders, rights-holders, and Indigenous peoples to participate in all processes
- 5.2 Grievance and conflict resolution mechanism are available, accessible and implemented
- 5.3 NbS are based on inclusive participation, mutual respect, and equality
- 5.4 Decision-making processes document and respond to the rights and interests of affected stakeholders, rights-holders, and IPLCs
- 5.5 Establish mechanisms for joint decision-making beyond NbS jurisdictional boundaries (optional)



C3. Enhanced biodiversity, ecosystem integrity and connectivity

- 3.1 Identify, assess, and document the state of ecosystems, and drivers of ecosystem degradation and biodiversity loss
- 3.2 Identify, assess, and document opportunities to enhance ecosystem integrity
- 3.3 Identify, benchmark, assess, and review measurable biodiversity outcomes, according to evidence-based assessments
- 3.4 Periodically assess and address unintended consequences on nature arising from the NbS



C6. Balancing goals and impacts

- 6.1 Establish safeguards and associated corrective actions to address the intended and unintended negative social or environmental impacts of NbS
- 6.2 Document, make available and accessible, and implement safeguards and corrective actions
- 6.3 Periodically review safeguards and corrective action



C8. Enhancing sustainability and mainstreaming

- 8.1 Capture and document lessons learnt from NbS design and implementation
- 8.2 NbS inform and enhance the policy, finance and regulatory frameworks enabling their mainstreaming
- 8.3 NbS contribute to relevant jurisdictional environmental, economic, and social targets and frameworks participatory approach

IUCN Global Standard for Nature-based Solutions™ (Second edition)

8 Criteria and 27 Indicators
(including one optional indicator)

Updated Global Standard for NbS



Scaling Nature-Based Solutions

- **Act with urgency and integrity:** Delays reduce options. High-integrity, science-based NbS must be accelerated now to align with 2030 and 2050 climate goals.
- **Empower local communities:** Community-led NbS ensures cultural relevance, local buy-in, and long-term stewardship for lasting climate resilience.
- **Foster cross-sector collaboration:** Academia, government, business, and civil society must coordinate to align NbS with climate, biodiversity, and SDG frameworks.
- **Invest in education and youth leadership:** Build the next generation of climate and ecological stewards through training, mentorship, and hands-on projects.





Opportunities for Academic contributions to Nature-Based Solutions

Research on ecosystem services and valuation

Universities are advancing methods for quantifying climate, biodiversity, and economic benefits of NbS through interdisciplinary studies.

Curriculum integration

Environmental science, urban planning, and public policy programs are incorporating NbS into teaching, training future practitioners.

Student-led restoration projects

Campus greening, mangrove replanting, and biodiversity mapping initiatives are engaging students as active climate participants.

Policy advisory and global partnerships

Academics support government and international frameworks with evidence-based recommendations on NbS design and governance.



Thank you!

INTERNATIONAL UNION FOR CONSERVATION OF NATURE