# **Nature-based Solutions:** Don't forget their social dimension!



NbS are actions that work with or support nature. Through locally adapted interventions, they provide environmental, social and economic benefits which bring nature and natural features and processes into cities, landscapes and seascapes. NbS benefit biodiversity, human well-being and support the delivery of ecosystem services (Cohen-Shacham et al. (2016); European Commission (2015)). NbS have effects in two dimensions:

**Ecological dimension:** protect, sustainably manage, and restore natural or modified ecosystems

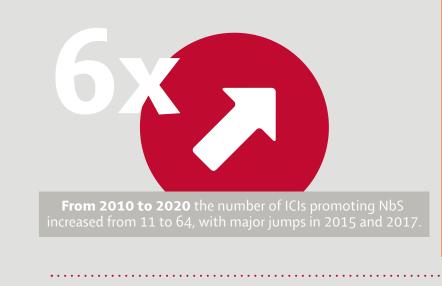


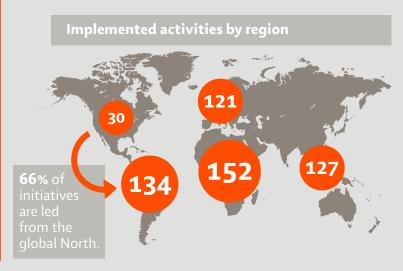
Social dimension: address societal challenges effectively and adaptively

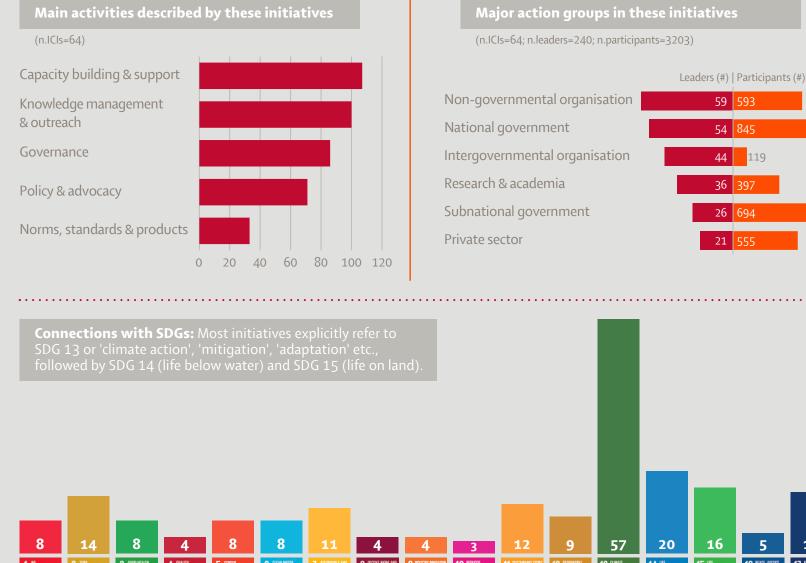
Proponents claim that NbS have transformative potential towards a more resilient and sustainable world with benefits for... biodiversity climate human well-being ecosystems

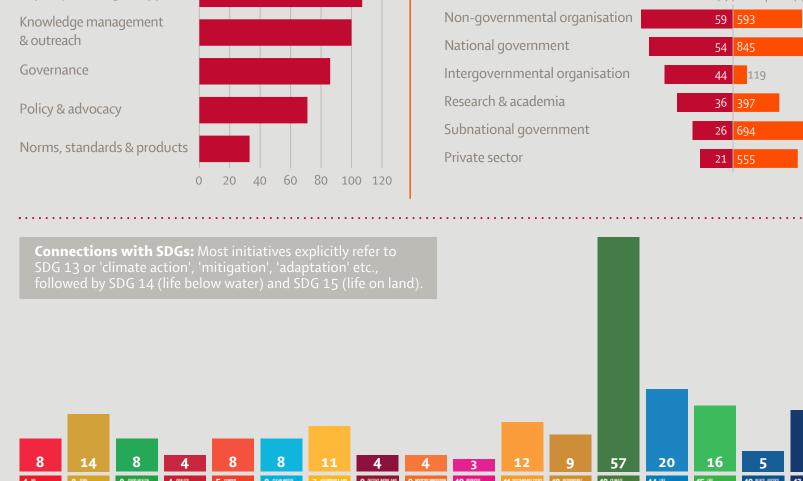
**Empirical insights** 

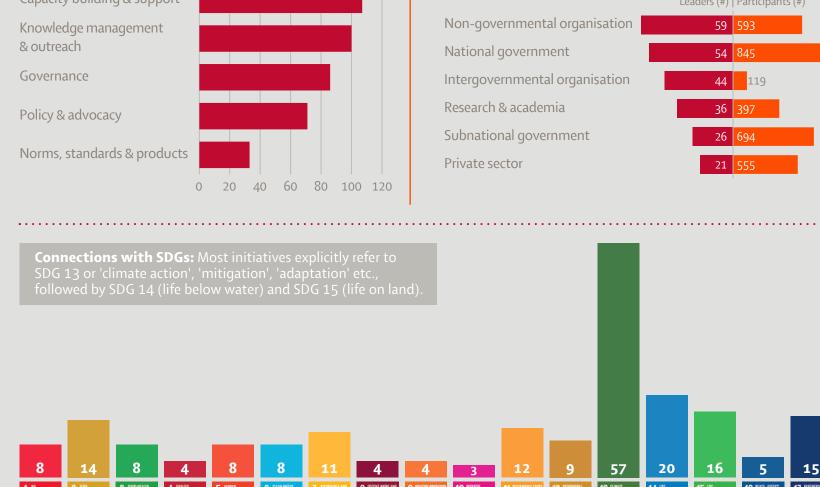
into international cooperative initiatives (ICIs)\* that promote NbS or activities related to NbS:











\* An ICI is a partnership between two or more actors, at least one being a non-state or subnational actor (city, region, business, etc.), who either cooperate or implement across two or more countries. The analysis comprises 64 ICIs. It excludes individual actions by actors or actions within a single country. Data collection is limited to initiatives with an online presence. The high amount of NbS-focused initiatives exists because many conduct NbS activities in addition to climate mitigation/adaptation activities. An initiative is considered 'aligned' with an SDG if its website or documents explicitly refer to the SDG or its related terms, e.g. SDG 13, climate action, emissions reduction, SDG 15, life on land, protecting biodiversity, etc.

Though international cooperation on NbS is increasing, their transformative potential remains unclear. And though NbS are broadly perceived as beneficial, they may also do harm.

## Social analysis of NbS



DIE carries out research to understand the socio-economic impacts of NbS on Indigenous Peoples & Local Communities (IPLCs). Qualitative research was conducted in Latin America and Southeast Asia on several cases of NbS: Ecosystem-based Mitigation (EbM), Ecosystem-based Adaptation (EbA), Ecosystem-based Management (EbMnt) and Area-based Conservation (AbC). Rather than aiming at representativeness, we sought to gain insights into the real-life impacts of NbS.



### **Recommendations and limits**

# NbS can have a lot of positive impacts. They can...

- ... reduce monetary poverty
- ... diversify income
- ... improve social capital
- ... connect multiple actors around environmental management
- ... highlight the importance of stakeholders and IPLCs' participation in decision-making
- ... improve environmental awareness

# NbS can also have negative consequences for relevant stakeholders and IPLCs. They can...

- ... reduce or deny control over and access to natural resources
- ... increase conflicts over natural resources
- ... exacerbate food insecurity
- ... criminalise the use of natural resources by IPLCs
- ... reinforce power imbalances
- ... legitimise uneven natural resource distribution
- ... violate human and environmental rights



# To strengthen positive impacts, it is important that NbS projects are just!

### NbS alone cannot ...

- ... put the global economy on a transformational pathway leading to decarbonisation and harmonise economic growth to stay within planetary boundaries
- ... tackle the whole range of proximate (e.g. habitat loss, pollution) and underlying (e.g. overproduction, overconsumption) drivers of climate change and biodiversity loss

## NbS must ...

- ... reduce the risk of greenwashing by fully relying on emissions reduction rather than on carbon offsets
- ... be implemented under strict and constantly monitored social and environmental safeguards plus accessible and transparent grievance mechanisms
- ... promote equitable control over and access to natural resources and associated ecosystem services plus strengthening local governance
- ... support the recognition of IPLCs' rights to natural resources (rights-based conservation) and help to protect environmental activists

#### Sources

Chan, S. et al. (2021): Nature-based Solutions - Cooperative Initiatives Database (N-CID 2020). German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), Global Center on Adaptation (GCA), Blavatnik School of Government at Oxford University (BSG), The Energy and Resources Institute (TERI), African Centre for Technology Studies (ACTS). [database]

Cohen-Shacham, E. et al (2016): Nature-based Solutions to address global societal challenges. IUCN, Gland, Switzerland.

European Commission (2015): Towards an EU Research and Innovation policy agenda for Nature-Based Solutions & Re-Naturing Cities, Luxembourg.

Hein, J. et al. (2015): Rescaling of access and property relations in a frontier landscape: insights from Jambi, Indonesia. The Professional Geographer 68, 380-389.

International Union for Conservation of Nature (IUCN), https://www.iucn.org/theme/nature-based-solutions, accessed November 2021. Richerzhagen, C. et al. (2019): Ecosystem-based adaptation projects, more than just adaptation - Analysis of social benefits and costs in Colombia. Int. J. Environ. Res. Public Health 16, 4248. Rodríguez-de-Francisco et al. (2013): Payment for environmental services and unequal resource control in Pimampiro, Ecuador. Society & Natural Resources 26, 1217-1233.

Rodríguez-de-Francisco, J.C. / Boelens, R. (2014): Payment for Environmental Services and Power in the Chamachan Watershed, Ecuador. Human Organization 73, 351-362.

Rodríguez-de-Francisco, J.C. / Budds, J. (2015): Payments for environmental services and control over conservation of natural resources: The role of public and private sectors in the conservation of the Nima watershed, Colombia. Ecological Economics 117, 295-302.

Rodríguez-de-Francisco, J. C. et al. (2021): Post-conflict transition and REDD+ in Colombia: Challenges to reducing deforestation in the Amazon. Forest Policy and Economics 127, 102450.

Zelli, F. et al. (2014): Reducing Emissions from Deforestation and Forest Degradation (REDD) in Peru: A challenge to social inclusion and multi-level governance, Studies 85. Deutsches Institut für Entwicklungspolitik (DIE), Bonn.

#### Sources used to determine NbS activities:

Cohen-Shacham, E. et al. (2019): Core principles for successfully implementing and upscaling Nature-based Solutions. Environmental Science & Policy, 98, 20–29. https://doi.org/10.1016/j.envsci.2019.04.014 Eggermont, H. et al. (2015): Nature-based Solutions: New Influence for Environmental Management and Research in Europe. GAIA - Ecological Perspectives for Science and Society, 24(4), 243–248. https://doi.org/10.14512/gaia.24.4.9

Nesshöver, C. et al. (2017): The science, policy and practice of nature-based solutions: An interdisciplinary perspective. Science of The Total Environment, 579, 1215–1227. https://doi.org/10.1016/j.scitotenv.2016.11.106



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