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TRANSFORMATIVE ACTIONS.
CONVERGENCE #44

TRANSFORMATIVE MULTILEVEL ACTION: SUBNATIONAL SOLUTIONS FOR CLIMATE & BIODIVERSITY

Dealing with eroding peatland at Carn Fflur, in the Tywi Forest region which is part of the Welsh Government Woodland Estate in mid-Wales, the restoration action included re-wetting with low peat dams to create more open habitat for aquatic sphagnum, invertebrates and other species
©National Peatland Action Programme

Renata Gomez
Biodiversity Programme Manager, Regions4 Sustainable Development

Jordan Harris
Executive Director, Regions4 Sustainable Development

Subnational governments are innovation laboratories for local and inclusive solutions to the dual climate and biodiversity crisis. Their best practices in integrated approaches, transformative governance, and financing mechanisms for climate and biodiversity action make them natural and much-needed leaders in the field.

"CLIMATE CHANGE DOES NOT RECOGNISE BORDERS. IT IS THE ABILITY OF SUBNATIONAL GOVERNMENTS AND REGIONS TO PARTNER WITH THEIR PEERS AND TO FORM COALITIONS AND NETWORKS THAT WILL ALLOW THEM TO ADDRESS CLIMATE CHANGE AND BIODIVERSITY LOSS IN MORE EFFECTIVE WAYS"

- Manuel Pulgar-Vidal, Champion for the Action Agenda for Nature of the Convention on Biological Diversity, Global Lead of Climate & Energy at WWF

The scientific community is clear on the transformations needed to maintain planetary boundaries so that there is a safe operating space for humanity[1], and ambitious international biodiversity, climate and sustainability targets have been set for 2030 and 2050. However, knowledge, agreements and commitments do not always guarantee results. Subnational governments[2] serve as real-world laboratories for innovative policy-making and action. They also have a great potential for upscaling innovative solutions and developing horizontal, vertical and hierarchical integration[3], making them essential for successful multilevel governance and coordination.

Subnational governments can propose possible paths and offer concrete examples of transformative change and innovative models of multilevel governance. The international community can support the implementation of these responses in this decisive decade.

1. BIODIVERSITY LOSS AND CLIMATE CHANGE INTERLINKAGES

The unprecedented rate at which we are losing biodiversity[4] and the irreversible impacts of climate change around the world[5] represent the most severe risks to planetary stability[6]. In addition to sharing some of the same root causes, the two crises are mutually reinforcing: Climate change is a key driver of biodiversity decline, and ecosystem loss and degradation further accelerate climate change and undermines resilience[7]. The combined impacts of biodiversity loss and climate change can lead to irreversible tipping points with severe ramifications for both people and nature[8].

Science is clear when it states that, to achieve successful outcomes, policy should take an approach by which climate, biodiversity and human society are treated as interconnected systems. Increased understanding of local dynamics of this nexus from a socioecological perspective will allow policy-makers to regularly consider the interactions between those systems and opportunities to maximise co-benefits while minimising trade-offs[9].

Furthermore, climate adaptation solutions that currently show positive results will become less effective in a warmer world, and in some ecosystems the limits to adaptation have already been reached[10]. The dangers of poorly adapted practices are also well documented. Among the key mechanisms required to avoid such practices are inclusive planning initiatives that are informed by cultural values, indigenous and local community knowledge, experience and scientific research[11].

2. KEY ELEMENTS TO ENGAGE SOLUTIONS

Landscape and integrated approaches to multi-scale, multi-sector, inclusive solutions

As countries look to meet net-zero, resilience, biodiversity and Agenda 2030 targets, it is more important than ever to find emerging ecosystem-friendly solutions coupled with free and open consultation with Indigenous Peoples and Local Communities (IPLCs). By considering more sustainable approaches that are closely linked to local realities, subnational governments can develop solutions that are good for the environment, the economy and people.

Implementing carbon dioxide removal methods (e.g. restoration, reforestation and forest management) has the potential to address biodiversity and ecosystem functions as well as human livelihoods and development[12]. Moreover, subnational governments need to implement cross-sectoral actions that provide multiple benefits and solutions to contribute to the global ambition to restore 30% of degraded ecosystems by 2030, as reflected in Target 2 of the Kunming-Montreal Global Biodiversity Framework (KMGBF) and Sustainable Development Goal (SDG) 15 to protect, restore and promote the sustainable use of terrestrial ecosystems.

Subnational governments are exceptionally well placed to implement landscape approaches[13] and methodologies based on the principles of multifunctionality, multiple scales and inclusive stakeholder engagement[14]. These are among the best solutions for mainstreaming global targets into local territories[15] and are central to a wide range of solutions, including multifunctional landscape conservation or mosaic approaches, biosphere reserves and biological corridors[16]. Subnational governments that have already implemented mixed-use landscapes have experienced enhanced biodiversity and climate co-benefits, as well as improved health and resilience of local communities.

Similarly, nature-based solutions[17] and ecosystem-based approaches[18] have great potential at the subnational level. This is also the case for strategies that use the conservation of natural systems, and the biodiversity they support, to mitigate and adapt to climate change. Nature-based solutions including ecosystem protection, restoration and management in and around cities and in wider landscapes have mitigation potential of up to 10.1 Gt CO_2 equivalent/year (for forest restoration and reforestation) as well as biodiversity co-benefits (such as the conservation of hundreds of species)[19].

INITIATIVE	PROJECT AT GLANCE
Landscape approaches and multi-scale, multi-sector, integrated solutions	
Quebec's Multidisciplinary Hub of Expertise (Canada)	20 projects implemented by nearly 30 researchers in collaboration with the Ministries of Agriculture, Fisheries, and Environment.
Sustainable Fuelwood Management project (Nigeria)	Multiple environmental and socioeconomic co-benefits across 3 states in Nigeria, including reduced GHG emissions, enhanced carbon storage and sequestration, biodiversity and watershed conservation, and improved rural livelihoods and local development.
Nature-based solutions for climate mitigation	
Wales's National Peatland Action Programme (UK)	Successful coexistence of peatland restoration and community livelihoods while sequestering carbon

"AS THE UN CLIMATE CHANGE HIGH-LEVEL CHAMPION FOR COP 28, I AM COMMITTED TO CHAMPIONING THE WORK OF SUBNATIONAL GOVERNMENTS AND SUPPORTING LOCALLY LED CLIMATE ACTION. (...) WE ARE ENCOURAGED TO SEE REGIONS PRIORITISING PEOPLE AND NATURE THROUGH INNOVATIVE INITIATIVES SUCH AS NATURE-BASED SOLUTIONS, CLIMATE JUSTICE AND INCLUSIVITY. THESE EFFORTS CREATE OPPORTUNITIES FOR INVESTMENT, RESILIENT ECONOMIES AND SUSTAINABLE DEVELOPMENT, CONTRIBUTING DIRECTLY TO INTERNATIONAL AGREEMENTS LIKE THE PARIS AGREEMENT AND THE CONVENTION ON BIOLOGICAL DIVERSITY."
- Razan Al Mubarak , UN Climate Change High-Level Champion

Kwafalls, Cross River national Park
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1 See: Rockström et al. (2023).

2 For the purposes of this document, 'subnational governments' refers to the first immediate level of government below the national and above the local, as used in CBD Decision X/22.

3 See: Fuhr et al. (2018).

4 See: IPBES (2019).

5 See: IPCC (2023).

6 See: WEF (2023).

7 See: Pörtner et al. (2021); IPBES (2019); and IPCC (2022).

8 See: Pörtner et al. (2021).

9 Ibid.

10 See: IPCC, Climate Change 2023, Synthesis Report.

11 Ibid.

12 Ibid.

13 See: Reed et al. (2015).

14 See: CBD (2023).

15 See: Gaugitsch & Heissenberger (2020).

16 See: Sayer et al. (2013).

17 See: UNEP (2020).

18 See: CBD COP5 Decision V/6.

19 See Pörtner et al. (2021); Shin et al. (2022); Kemppinen et al. (2020).

Skye's monkey, Forest KwaZulu Natal
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20 The 'Rio Conventions' were founded at the 1992 Earth Summit in Rio de Janeiro, Brazil, in response to the interlinked challenges of and threats posed by Climate change, desertification and biodiversity loss. These are: the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD).

21 See Transformative action Convergence #43 on Integrated Land Use Planning.

22 See Pörtner et al. (2021).

23 Ibid.

24 See: UNEP (2021).

25 See in: 'BioScience', Volume 72, Issue 7, July 2022.

26 See: Scottish Government (2021).

27 See: Dialogue with #18 – Edinburgh Process – POST2020 (4post2020bd.net).

28 Including the Welsh Government, the Government of Quebec, the European Committee of the Regions, and networks such as ICLEI, the Group of Leading Subnational Governments (led by the Government of Aichi) and Regions 4 Sustainable Development.

29 See: Edinburgh Declaration (2020).

30 See: CBD COP15 Decision 15/4.

31 See: ICLEI (2023) Subnational Governments & Cities at CBD COP15 Event Report.

32 See: CBD COP15 Decision 15/12.

33 Watch: Post 2020 Video on Transformative actions needed for Target 12 implementation.

34 Watch: Post 2020 Video on Transformative actions needed for Target 14 implementation.

35 Watch: Post 2020 Video on Transformative actions needed for Target 18 implementation.

36 See: UNDP BIOFIN (2022).

37 See: UNEP (2022).

38 See: OECD/UCLG (2016).

Achieving global targets through transformative governance

Achieving the scale and scope of transformative change needed to meet the objectives of the 3 Rio conventions[20] and the SDGs requires an unprecedented level of rapid and ambitious action[21]. It will need commitments from emerging coalitions and governance models at all levels, as well as massive investment to adapt and respond to the climate and biodiversity emergencies concurrently.

As shown by both the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC), transformative changes in the governance of socioecological systems can lead to resilient development pathways that mainstream both climate and biodiversity considerations. However, current governance systems require more effective mechanisms for this mainstreaming, as well as consistency and coordination between the international, national and subnational levels[22]. Only by taking into account differences in social-environmental contexts and aligning global goals with local contexts and capabilities will we be able to access the full range of solutions needed to achieve climate, biodiversity and social outcomes together[23].

Multilevel and transformative governance, involving subnational governments, is therefore key to systemic change that reconciles environmental and socioeconomic objectives[24]. Transformative governance aims to create the conditions for multifunctional action, mainstreaming and innovation across scales; coalitions of support; equitable approaches; and positive social tipping dynamics[25]. Subnational governments have demonstrated that it is possible to implement urgent in-depth reforms to address the underlying and indirect drivers of both climate change and biodiversity loss.

INITIATIVE	PROJECT AT GLANCE
Transformative governance	
South Africa's unique take on ecosystem-based approaches	Horizontal and vertical coordination for holistic solutions, involving multiple national ministries, mandates for provincial action, and a strong science-based and multi-stakeholder approach.
Multilevel governance for restoration	
Restoration in Brazil's Nationally Determined Contributions	Brazil pledges to restore 22 M ha of land by 2030, in line with the Bonn Challenge and the 20x20 initiative. 3 Brazilian states - São Paulo (0.3 M ha), Espírito Santo (0.08 M ha), and Mato Grosso (2.9 M ha) - have set ambitious targets as part of this restoration effort.

Speeding up the flow of funds

The Edinburgh Process[26,27] was launched in 2020 under the leadership of the Scottish Government and the Edinburgh Process Partners[28]. It called for strengthening the role of subnational and local governments in delivering the KMGBF and advocated for a new dedicated CBD COP decision for greater involvement by such governments[29].

This COP delivered a framework[30] that includes important references to the 'whole-of-government' approach and some 12 decisions[31] directly relevant to the subnational and local constituencies, including Decision 15/12[32] on engagement with subnational governments, cities and other local authorities to enhance implementation of the KMGBF and its Plan of Action. Of particular relevance to subnational governments are Target 12[33], on connectivity and access to natural spaces in urban and densely populated areas, Target 14[34] on biodiversity mainstreaming at all levels of government, and Target 18[35] on the elimination, phase-out or reform of incentives harmful for biodiversity by 2025.

Despite the existing commitments and mandate, the financial resources that would enable the framework's implementation on the ground are still flowing very slowly. The United Nations Development Programme's BIOFIN programme estimates a biodiversity funding gap of between USD 559 billion and USD 824 billion per year[36], whereas adaptation finance flows to developing countries are 5 to 10 times lower than estimated needs[37]. In 2018, only 21% of total climate finance provided or mobilised by developed countries was dedicated to climate adaptation (compared to 70% for mitigation).

The gap is even wider for subnational and local governments[38]. Estimates between 2003 and 2016 show that less than 10% of climate finance from global climate funds was spent on local action[39]. Subnational governments have limited capacity to raise revenue through taxes and fees and are largely dependent on central government transfers and other grants[40], which on average account for more than half (51.5%) of subnational government revenues[41]. Against this backdrop, it is a matter of concern that the share of loans in total public climate finance provided by developed countries grew from 52% to 74% between 2013 and 2018, while the share of grants decreased from 27% to 20%[42]. Subnational governments need to mobilise greater public and private resources to bridge the funding gaps for biodiversity and climate actions[43].

While subnational governments are making strides with limited resources, further empowerment for the implementation of the KMGBF and the Paris Agreement must include the key drivers that are the enabling conditions and financing needed to unlock the tremendous potential of subnational actors as innovative laboratories for action.

INITIATIVE	PROJECT AT GLANCE
Innovative financing mechanisms	
Catalonia's Life Climark Initiative	Local carbon credit market to combat climate change, particularly in a region where forests already absorb 10% of the region's CO2 emissions and have the potential to increase this capacity by up to 20%.
Biocultural Corridor of Central Western Mexico	Mosaic of landscapes prioritising governance mechanisms and sustainable management of cultural and natural heritage in 8 states in Mexico.
Conexão Mata Atlântica	Payment for environmental services to increase carbon stocks in the river basins of Paraíba do Sul and support from the federal government and the states of Rio de Janeiro, São Paulo and Minas Gerais, with funding from the Global Environment Facility (GEF).

Picture 1: Biomass sampling of alternative crops at the end of the growing season in Lac Saint Pierre, Quebec ©Élise Smedbol

Picture 2: Ecological restoration in the Paraíba do Sul River Basin, Rio de Janeiro ©Gustavo Stephan

39 See: Soanes et al. (2017).

40 See: UNDP (2022).

41 See: OECD/UCLG (2022).

42 See: UNDP (2022).

43 See: OECD (2023).

44 CBD Decision 15/8 on capacity-building and development and technical and scientific cooperation recognises the need to strengthen cooperation to address capacity gaps by proposing a long-term strategic framework and mechanisms that recognise the importance of subnational actors and networks in promoting learning exchange and scientific cooperation.

45 See: Morchain & Terton (2022).

46 See: GEF (2023) and CBD (2023).

47 See: https://www.un.org/en/common-agenda/summit-of-the-future

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Making the connections on subnational synergies

While the science is clear on the way forward, there is still a need to capitalise on high-impact subnational actions; support implementation; and replicate, scale up and expand subnational best practices and policies.

This transformative change will require:

+ Disseminating scientific knowledge and capacities. Capacity-building opportunities need to be tailored for specific stakeholders and levels of government, including technical and scientific capacities to implement approaches and solutions that mainstream biodiversity[44].

+ Transformative governance at all levels of government. Harnessing current international policy frameworks and instruments at the subnational level, including subnational governments taking on a formal role in the reporting and monitoring of SDGs, Nationally Determined Contributions, National Adaptation Plans, and National Biodiversity Strategies and Action Plans. This inclusion can lead to enhanced synergies between biodiversity and climate on the ground, as well as innovative practices that can later be scaled up into national policies[45].

+ Promoting innovative and integrated cross-sectoral solutions with sustainable co-benefits for nature and people. Subnational governments are well suited to implement landscape and integrated approaches, nature-based solutions and ecosystem-based approaches that respond to multiple challenges simultaneously. Policies and actions that promote sustainable land and biodiversity use and management, as well as provide economic opportunities for the local community, can lead to tangible results in climate mitigation. They can also foster a just transition and climate justice by building the resilience of vulnerable communities and producing nature-positive outcomes.

+ Speeding up money flow. Making global finance available for implementation is essential for rapid action. Financing mechanisms and global funds, including the recently launched Global Biodiversity Framework Fund[46], should be available to all levels of government. Subnational governments are well suited to channel funding to local stakeholders and implement existing strategies. National focal points for multilateral agencies and funds should prioritise funding for subnational actions that directly contributes to the achievement of national goals and policy instruments. As countries have a variety of legal and administrative contexts, subnational governments must tailor capacity building to access all financing mechanisms available to them, whether domestic, international, public and/or private. They can also prioritise robust public-private partnerships to maximise flexibility and adaptability to different financial mechanisms.

3. SUBNATIONAL GOVERNMENTS AS PROVIDERS AND TESTERS OF EFFICIENT SOLUTIONS

Looking ahead to the Summit for the Future in 2024[47], which will look beyond the 2030 Agenda, CBD COP16 will usher in the implementation of the KMGBF. Together with the growing importance of defining the Global Goal on Adaptation under the Paris Agreement, the vision, experience and leadership of subnational governments can be leveraged to provide inclusive and integrative solutions that simultaneously address the climate, biodiversity and SDG agendas.

Subnational governments are a vast territorial laboratory; they test innovative solutions that provide synergies between climate, biodiversity, justice and development challenges. These solutions lead to efficient use of often limited resources and can ensure that all actions are also measured by their effectiveness in improving the prosperity, well-being and livelihoods of local populations and opportunities for future generations. The most successful best practices can be scaled up and disseminated, feeding into national and international policy-making. Aligning the international climate and biodiversity agendas at the territorial level is one of the most powerful ways forward and can help address the planetary crises we face, while building a sustainable and prosperous future for all.