

Subnational action to global impact

A snapshot of subnational
climate action driving net zero

**Policy
Report**

Under2 Coalition

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Executive summary

As the world races to keep global warming below 1.5°C, some of the most decisive climate action is emerging not from national capitals but from states, regions, and provinces. Together, these subnational governments represent over half of the global economy and nearly two billion people—holding both the power and responsibility to turn ambition into action.

Data from the New Climate Institute (2021) show that states and regions hold the greatest untapped potential for emissions reduction—greater than the current annual emissions of the European Union. The Under2 Coalition’s analysis reinforces this: 73% of its members now have Subnational Transition Plans (STPs), translating global climate goals into locally driven strategies for cutting emissions, building resilience, and driving green growth.

Drawing on nearly 100 examples worldwide, this report illustrates how subnational governments are delivering measurable progress across energy, finance, adaptation, resilience, and nature-based solutions. Nearly half of all documented initiatives are policy instruments, while a third are on-the-ground projects and pilots, and the remainder are technical and institutional tools such as MRV systems and finance-readiness guides. Together, they show how subnational action is bridging the gap between ambition and implementation.





Yet, despite strong strategic intent, delivery capacity remains uneven. Projects often stall due to limited finance, fragmented coordination, and technical or institutional gaps—challenges that are especially acute in emerging economies with constrained fiscal and administrative powers. The analysis highlights that subnational leadership thrives where fiscal autonomy, coherent governance, and technical cooperation mechanisms are in place.

Many governments are investing in training and peer-learning initiatives, signalling clear appetite for capacity building. The next phase, however, must move from learning to doing—turning plans and workshops into investment pipelines and measurable impact.

The findings point to a critical inflection point: ambition and innovation exist, but scaling them requires an enabling environment that links subnational delivery with national, private, and multilateral systems. Institutionalised multi-level governance, clear fiscal devolution, and joint planning frameworks are key to this transformation. Where such mechanisms exist—through regional climate funds, integrated MRV systems, or co-designed policies—states and regions are already achieving measurable emissions cuts, stronger resilience, and social co-benefits.

If this opportunity is missed, the world risks a two-speed transition—where national pledges advance on paper while implementation falters on the ground. Effective global delivery depends on empowering subnational governments and embedding collaboration across every level of decision-making.

As the decisive years to 2030 unfold, the measure of success will be coordinated implementation, not new commitments. Aligning national frameworks, finance, and multilateral systems with subnational ambition will determine whether this decade delivers incremental progress—or systemic change.

The recommendations that follow set out practical steps to make this alignment real and lasting.

Recommendations:

Subnational governments: Translate ambition into actionable plans

- Translate ambition into action: Develop high-integrity transition plans and sectoral roadmaps with measurable targets and robust MRV systems.
- Strengthen implementation capacity: Invest in technical training, institutional coordination, and workforce development to scale delivery in energy, adaptation, and nature-based solutions.
- Leverage partnerships: Use blended public-private finance and collaboration to accelerate high-impact, scalable projects.

National governments: Embed subnational delivery within national frameworks

- Embed subnational delivery into national frameworks: Integrate regional contributions into NDCs, adaptation plans, and long-term strategies.
- Enable fiscal and institutional alignment: Provide predictable, climate-aligned transfers and strengthen multi-level governance mechanisms that connect national policy with local execution.
- Harmonise data systems: Align subnational MRV and monitoring processes with national systems to ensure coherence and transparency.

Private sector: Invest in regional transitions

- Engage early in regional transitions: Partner with subnational governments on permitting, infrastructure, and workforce planning.
- Localise value creation: Support green industrial clusters and just transition strategies in renewable energy, e-mobility, and circular manufacturing.
- Expand impact disclosure: Report regional-level emissions, investments, and community outcomes to strengthen accountability and alignment with local goals.

International Finance Institutions: Design fit-for-purpose mechanisms for subnational investment and build catalytic mechanisms

- Create fit-for-purpose finance mechanisms: Establish dedicated subnational financing windows and catalytic funds to channel capital directly to regional actors.
- Support project readiness: Provide technical assistance and early-stage finance for project preparation, particularly in adaptation and nature-based solutions.
- Scale blended finance: Combine concessional and private investment to de-risk infrastructure and unlock local delivery capacity.

Multilateral decision makers: Elevate subnational implementation within the Global Climate Architecture

- Recognise subnational governments as formal delivery partners: Elevate their role under the Paris Agreement and the Global Stocktake process.
- Bridge policy and delivery: Institutionalise annual implementation forums and strengthen the Global Climate Action Agenda as a mechanism linking regional action, national priorities, and finance.

Methodology

This report focuses on state, regional, and provincial governments– the subnational tier operating between national and municipal levels, where policy, planning, and investment decisions bridge national ambition with local delivery.

It draws on a consolidated dataset of nearly 100 subnational climate solutions– including policies, projects, and technical tools– implemented by jurisdictions worldwide. Each record captures the area and type of intervention, implementation stage, alignment with the COP30 Action Agenda, and indicators of investment readiness.

Data were sourced from verified platforms such as *CDP Cities, States and Regions Disclosure (2023–2024)*, the *Under2 Ambition Tracker*, and the *Future Fund*, alongside direct government submissions and expert inputs from partners including *Solutions for Our Climate (SFOC)*, *IESR*, the *US Climate Alliance*, and the *Green Brazil Consortium*. All entries were quality-checked by the Under2 Coalition, with duplicates removed and data triangulated for accuracy and public verifiability.

Together, this dataset provides an indicative snapshot of global subnational climate action– highlighting overarching trends and priorities rather than serving as a comprehensive inventory.



1. Context

1.1 Global Mutirão and the COP30 Action Agenda

In early 2025, as Brazil assumed the COP30 Presidency, it issued a clear call to action for *non-Party stakeholders*—actors outside the formal UNFCCC negotiations, including subnational governments, businesses, civil society, youth, Indigenous peoples, and financial institutions. Though not Parties to the Convention, these real-economy actors are central to driving implementation, innovation, and accountability for global climate goals.

The COP30 Presidency emphasises that achieving these goals through collective effort—what it terms the *Global Mutirão*—depends on mobilising such actors and embedding their work within the COP30 Action Agenda, a framework designed to accelerate tangible impact before 2030.¹ At its core lies the COP30 Granary of Solutions, a joint initiative of the COP30 Presidency and the UN Climate Change High-Level Champions.²

The Granary serves as a global repository of proven climate action—drawing together initiatives from all regions to align, scale, and accelerate progress in line with the Paris Agreement and the Global Stocktake.³ Building on hundreds of projects and coalitions launched since COP21, it showcases tested, people-centred solutions—from community-led weather information systems and marine biofuels to regional programmes combining conservation, restoration, and sustainable production.

1 COP30 Brasil, CLIMATE MUTIRÃO, 2025, cop30.br/en/news-about-cop30/global-mutirao-the-cop30-aims-to-go-beyond-negotiations-to-heal-the-planet

2 COP30 Action Agenda Granary of Solutions, 2025, cop30.br/en/action-agenda/granary-of-solutions-1

3 UNFCCC Outcome of the first Global Stocktake, 2023, unfccc.int/topics/global-stocktake/about-the-global-stocktake/outcome-of-the-first-global-stocktake

1.2 The NDC Ambition Gap

The 2023 Global Stocktake made one reality clear: current Nationally Determined Contributions (NDCs) are insufficient to keep global warming below 1.5°C.⁴ Collectively, national pledges through 2030 put the world on a path exceeding 2.6°C—revealing a persistent gap between ambition and implementation.⁵

Beneath these national averages, however, lies a different story. States and regions are legislating, investing, and innovating daily—often at or above national levels of ambition. Within the Under2 Coalition, 50% of member governments have climate targets that match or exceed their national counterparts. Representing over half the global economy, these governments are shaping the direction of climate action, not merely following it.

Today, 73% of Under2 Coalition members have Subnational Transition Plans (STPs)—comprehensive roadmaps addressing mitigation, adaptation, and energy transition priorities.⁶ Unlike national plans, these strategies are agile, data-driven, and regionally responsive, allowing states and regions to act quickly on evidence and local needs.

“ New South Wales accounts for 26% of Australia’s emissions. If our state doesn’t succeed, the national plan won’t succeed – that is why subnational governments are essential to delivering NDCs.

Penny Sharpe, Minister for Climate Change,
Energy and the Environment, New South Wales

High-integrity STPs align with the UN’s *Integrity Matters* principles, ensuring transparency, accountability, and ambition.⁷ They demonstrate how subnational action directly bridges the NDC ambition gap—aligning local priorities with national and global goals.

Recognising this, the COP30 Presidency invited the Under2 Coalition and partners to contribute a dataset of subnational solutions to the *Granary of Solutions*, transforming previously unseen progress into a shared evidence base to inform national ambition and international cooperation.

4 Why the Global Stocktake is Important for Climate Action this Decade, 2023, unfccc.int/topics/global-stocktake/about-the-global-stocktake/why-the-global-stocktake-is-important-for-climate-action-this-decade

5 Climate Action Tracker, Global Thermometer, 2024, climateactiontracker.org/global/cat-thermometer/

6 Climate Group, Subnational transition plans: key contributors to national climate plans, 2025, theclimategroup.org/subnational-transition-plans-key-contributors-national-climate-plans

7 United Nations, Climate Action, Integrity Matters: Net-Zero Emissions Commitments of Non-State Entities, un.org/en/climatechange/high-level-expert-group

1.3 The Global Contribution of Subnational Solutions

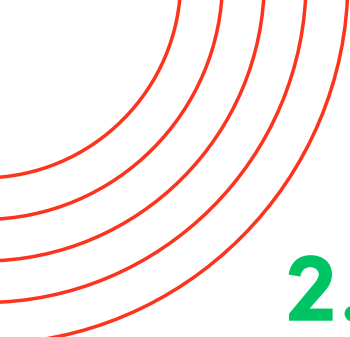
In 2025, the Under2 Coalition, as Secretariat of the world's largest network of states and regions, launched a global effort to consolidate subnational climate solutions demonstrating progress toward net zero, resilience, and just transition goals. The initiative not only documents achievements but also identifies transferable innovations, collaboration opportunities, and barriers to scale.

The resulting dataset compiles nearly 100 subnational climate solutions from around the world—providing one of the most comprehensive snapshots to date of how states and regions are delivering the Paris Agreement in practice through innovation, cooperation, and local leadership.

“ National climate targets cannot succeed without the action of states and regions. Subnational governments are on the front line - closer to communities, farmers, and solutions - and must be recognised as essential to delivering NDCs.

Gabriel Souza, Vice-Governor, Rio Grande do Sul





2. Building the Evidence Base: Mapping the Global Landscape of Subnational Solutions

2.1 Dataset structure and purpose

The consolidated dataset captures nearly 100 subnational climate initiatives at state, regional, and provincial levels, offering a structured view of how these actors drive climate action across decarbonisation, adaptation, finance, and nature-based solutions.

Policy and regulatory measures—such as climate laws, carbon pricing, and renewable energy plans—feature prominently, complemented by nature-based and resilience initiatives leveraging forests, peatlands, and community-led adaptation.

Designed as more than a compilation, the dataset functions as a strategic tool supporting three core objectives:

- **Evidence of implementation:** Showcases how subnational governments translate ambition into measurable outcomes within the global governance system.
- **Contribution to the COP30 Granary of Solutions:** Feeds directly into the global platform, ensuring subnational action gains recognition alongside national, city, and private-sector efforts.
- **Pipeline for investment and replication:** Highlights scalable, high-impact projects for investors and partners aligned with the Paris goals.

Together, these functions position the dataset as a living bridge between evidence, policy, and investment, showing where climate action is advancing and where it can be scaled.

2.2 Analytical approach

The analytical framework translates subnational action into insights that inform global policy and investment. Combining quantitative mapping, qualitative analysis, and alignment with the COP30 Action Agenda, it identifies innovation patterns, barriers, and scaling opportunities.

Data were consolidated from verified sources—including disclosure platforms, regional partners, and government submissions—ensuring credibility and global coverage. Each initiative was validated for accuracy and public verifiability.

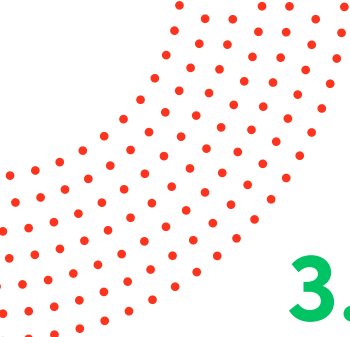
By mapping initiatives against the People, Nature, Systems, and Finance pillars of the COP30 Agenda, the analysis reveals strengths, gaps, and investment readiness. It also examines systemic enablers—governance, finance access, and institutional capacity—providing insight into how effective local action can be scaled globally.

2.3 Data limitations and assumptions

The analysis relies on self-reported data that vary in scope, maturity, and regional context. Differences in language and interpretation may affect how initiatives are classified. Broad thematic categories were applied to enable comparability, which may obscure finer distinctions.

The dataset does not fully capture variations in political, fiscal, and devolved powers shaping subnational action. As such, findings should be seen as indicative of overarching trends and priorities, rather than a comprehensive global inventory.





3. Mapping Subnational Climate Action: Patterns, Progress, and Potential

3.1 Areas of intervention: Where and how are subnational governments demonstrating progress?

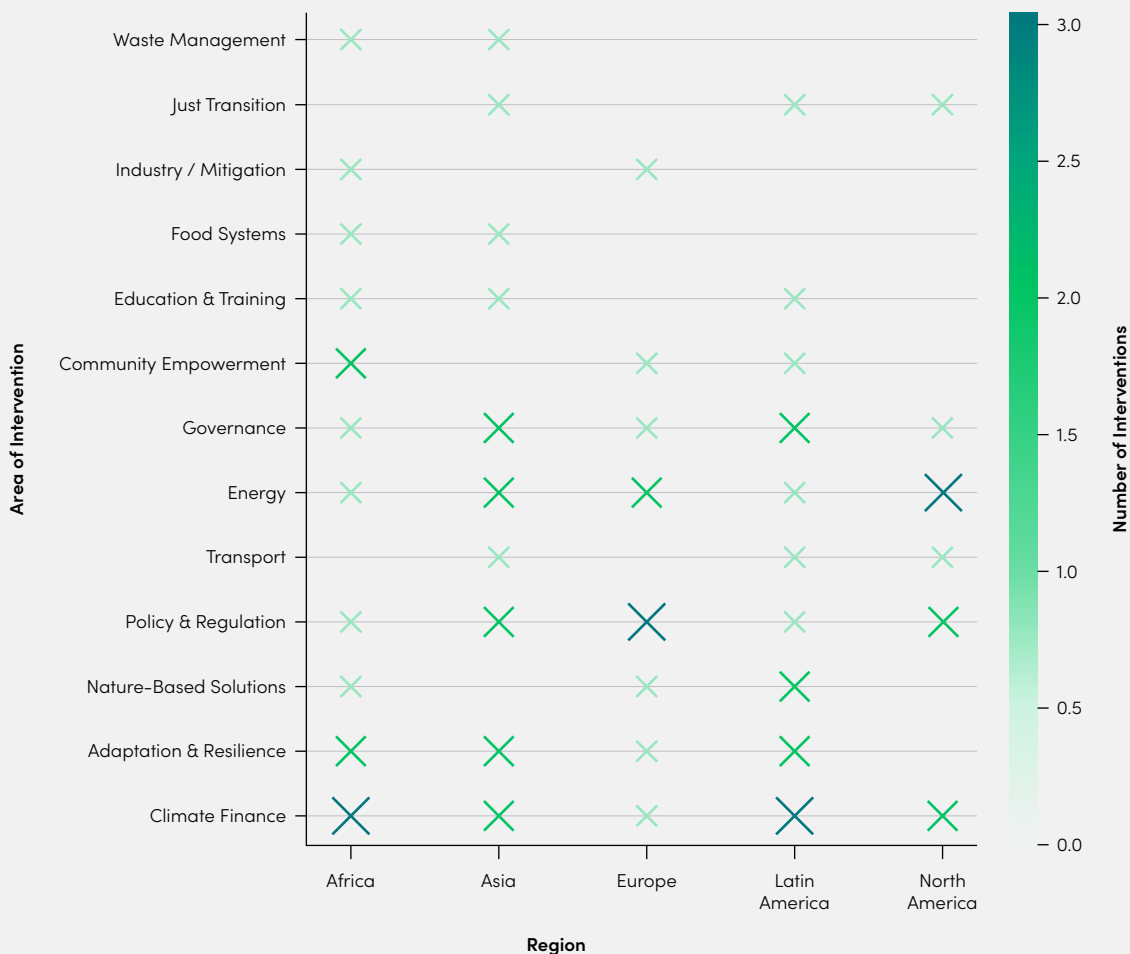
Across the dataset, a dynamic picture emerges of subnational climate leadership spanning every region of the world. From fiscal reform and renewable energy to resilience-building and restoration, states and regions are implementing climate action that reflects their local priorities, resources, and governance capacities.

In Latin America, subnational governments are advancing some of the most integrated approaches to climate finance, resilience, and nature-based solutions. States such as Aguascalientes (Mexico) are piloting ecological and carbon taxes, while Acre (Brazil) is leveraging its Flood Impact Platform and REDD+ programme to link adaptation, forest protection, and livelihoods. Across the region, the focus is on building resilience through community-led initiatives and regional climate funds that connect finance directly to local needs.

In Africa, innovation in governance and community-based climate action is accelerating. Examples include Cross River State (Nigeria), which is strengthening forest monitoring and carbon credit readiness, and local governments investing in ecosystem restoration and social inclusion. Many African regions are demonstrating how climate policy can serve as both an environmental and development strategy.

In Europe and North America, strong institutional frameworks at the subnational level underpin policy and regulatory innovation. Mature governance systems have enabled ambitious climate legislation- from California's Cap-and-Trade programme to Scotland's Climate Change Act and Wales's Future Generations Act. These regions also lead in energy and transport transitions, pairing renewable expansion with ecosystem protection. Scotland's offshore wind and peatland restoration and California's zero-emission vehicle and low-carbon fuel policies illustrate how subnational leadership can accelerate market transformation.

Bubble Matrix: Subnational Climate Solutions by Area of Intervention and Geography

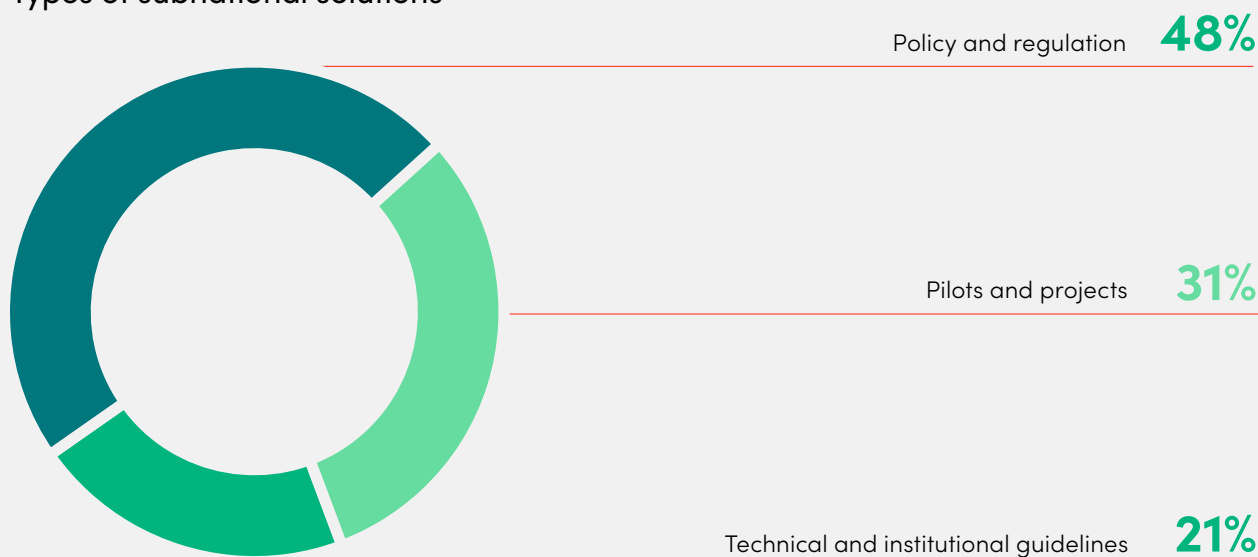


In Asia, the focus is on adaptation, resilience, and energy transition, often driven by acute climate vulnerabilities. From Cebu Province (Philippines) integrating renewable energy with coastal resilience, to India's state-led training and education initiatives, governments are coupling innovation with community empowerment. Across the region, resilience mapping, flood management platforms, and nature-based projects are strengthening both environmental and economic security.

Across all regions, a growing number of education, training, and capacity-building programmes are linking climate literacy to resilience—particularly in Brazil and India. This demonstrates how subnational action can build not only low-carbon economies but also informed, adaptive societies.

Together, these regional trends reveal a global mosaic of subnational innovation—where states and regions are shaping climate solutions that respond directly to their people, economies, and ecosystems.

Types of subnational solutions



3.2 Types of solutions: what are they really doing which qualifies as climate action?

Nearly half of all subnational climate solutions in the dataset (46%) are policy instruments, underscoring that regional and local governments are not just implementers- they are strategic and regulatory drivers of climate action. Through frameworks, standards, and transition plans, they are institutionalising climate ambition and creating the enabling conditions for systemic change across economies.

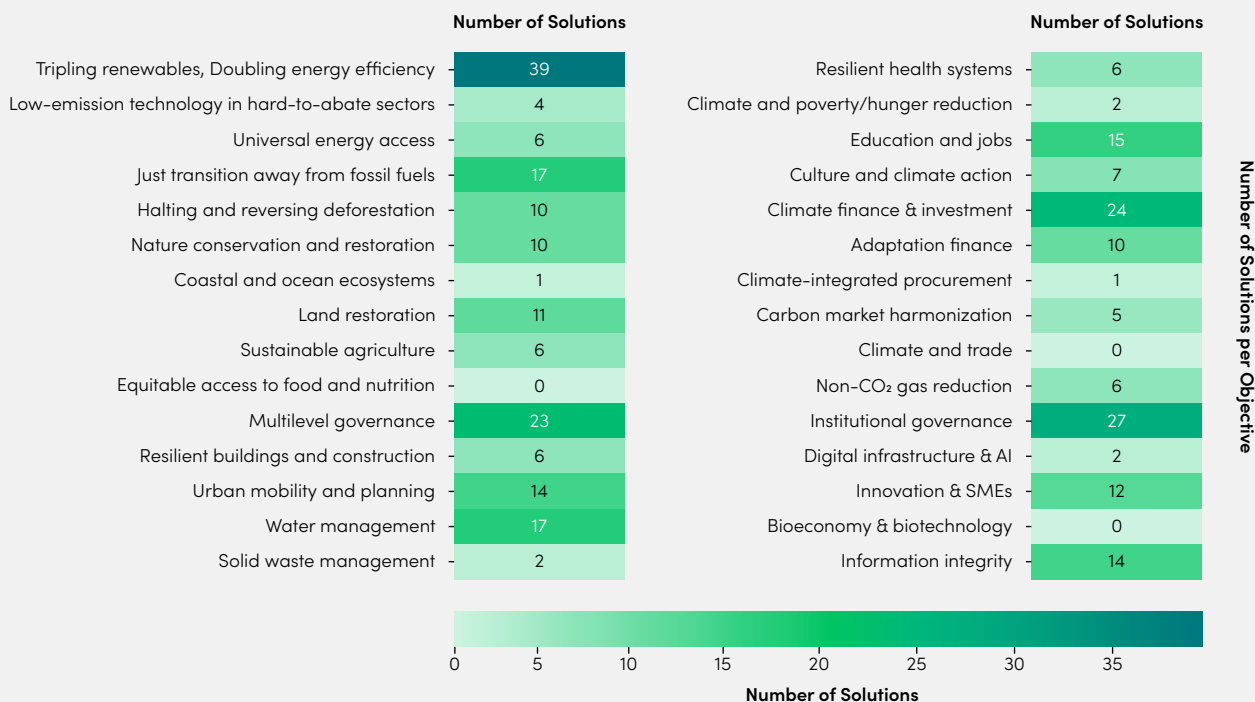
This dominant policy leadership signals strong institutional capacity and political will at the subnational level to legislate, plan, and mandate transitions- whether through building codes, renewable energy standards, or just transition commissions. However, it may also indicate a policy-implementation gap that warrants closer attention. Policies can set ambition and direction, but their impact depends on enforcement, financing, technical capacity, and local stakeholder engagement. Bridging this gap will require stronger monitoring, targeted investment, and mechanisms to translate mandates into tangible outcomes such as clean energy deployment and low-carbon mobility infrastructure.

Around a third of the dataset (31%) consists of on-the-ground pilots and projects, reflecting strong delivery capacity and practical know-how. These efforts are most prevalent in adaptation, resilience, and nature-based interventions, where benefits are immediate and locally visible. Many also emphasise community empowerment and inclusion, embedding social equity into climate delivery.

Finally, roughly one-fifth (21%) of the solutions comprise technical and institutional guidance- tools that strengthen governance, finance, and reporting systems. These include MRV frameworks, finance-readiness toolkits, and adaptation planning guidelines. For example, Hidalgo's state-level MRV system enhances transparency and reporting, while Morocco's Climate Finance Guide provides actionable pathways for subnational entities to mobilise and manage climate finance. Together, these initiatives illustrate how subnational governments are investing in internal capacity and acting as connective tissue between national and city levels- bridging policy design and on-the-ground implementation.

Figure: Solutions per COP30 Action Agenda Objective

(Source: Subnational solutions consolidated dataset, Climate Group, 2025)



3.3 COP30 Objectives alignment: how are they aligning to the global climate action agenda?

We analysed each subnational solution against the COP30 Action Agenda objectives. Across 30 objectives, we found that the **most supported objectives** include:



Objective 1: Tripling renewables, doubling energy efficiency (39 solutions) – energy transition is a clear subnational priority. Due to states and regions often directly operating – with fiscal and regulatory autonomy – key aspects of the energy sector.



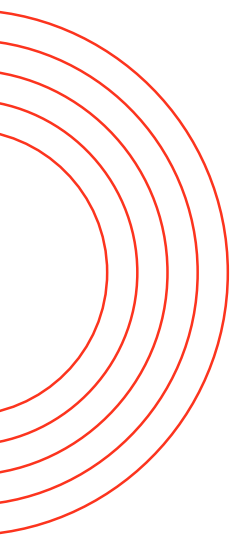
Objective 26: Institutional governance (27 solutions) – shows that most subnational solutions focus on strengthening capacity, planning, and MRV systems, suggesting institutional governance is a key priority for subnational action.



Objective 20: Climate finance & investment (24 solutions) – finance is critical to enable other sectoral objectives.



Objective 11: Multilevel governance (23 solutions) – integrated planning across different levels of government, especially enabling municipal governments is widely addressed by state and regional governments, reinforcing their critical role as connectors of national ambition with local progress.



Underrepresented and emerging areas of subnational action

Some areas of the COP30 Action Agenda remain less developed within subnational climate action. Objectives related to climate and trade and the bioeconomy and biotechnology are currently underrepresented in the dataset, pointing to emerging opportunities for states and regions to shape the next frontier of low-carbon growth.

By contrast, nature and land-restoration objectives show moderate coverage, reflecting strong engagement in forestry, agriculture, and land-use solutions. However, the limited presence of initiatives focused on coastal and ocean systems management highlights a key opportunity to strengthen support for coastal and island regions. Partnerships such as the Mediterranean Climate Action Partnership could play a pivotal role in enabling subnational actors to advance integrated coastal management, marine conservation, and blue-carbon strategies.

Social dimensions of climate action- including equity, employment, and education- are increasingly visible, represented by 24 solutions in the dataset. Examples such as West Kalimantan's Green School Programme in Indonesia and Yucatán's Women's Water House in Mexico show how subnational governments are linking environmental education, gender equity, and community empowerment to embed climate action within broader social and economic development.

3.4 Investment/financial readiness: are they attracting the right kind and right level of finance?

Investor readiness goes beyond private investment or profitability. It measures how prepared subnational climate solutions are to attract, manage, and deploy finance effectively- whether through public budgets, development cooperation, or blended finance. Readiness reflects institutional strength, technical capacity, and governance systems that enable delivery at scale.

- High readiness solutions have established governance, infrastructure, and partnerships, making them ready for investment or scale-up.
- Mid-stage readiness solutions are under development, with core systems in place but requiring further refinement or capacity building.
- Early-stage readiness solutions remain in conceptual or pilot phases and need foundational work- such as feasibility studies, policy alignment, or institutional strengthening- before becoming investable.

Across the dataset, 45% of solutions are high readiness, 40% mid-stage, and 15% early-stage. This distribution points to a growing pipeline of investable subnational initiatives, particularly in energy, governance, and climate finance- from green budgeting and bonds to blended and catalytic finance mechanisms. However, adaptation and nature-based solutions, while high in social and climate value, remain underfunded and are less investment-ready, signalling a key area for targeted support.

Additionally, across the dataset, patterns of investment readiness vary significantly by sector and region. Transport, adaptation and resilience, and nature-based solutions largely demonstrate mid-stage readiness. These sectors have strong policy frameworks and project concepts but require more demonstration projects and concessional finance to validate and scale viable models. Adaptation and resilience interventions deliver high

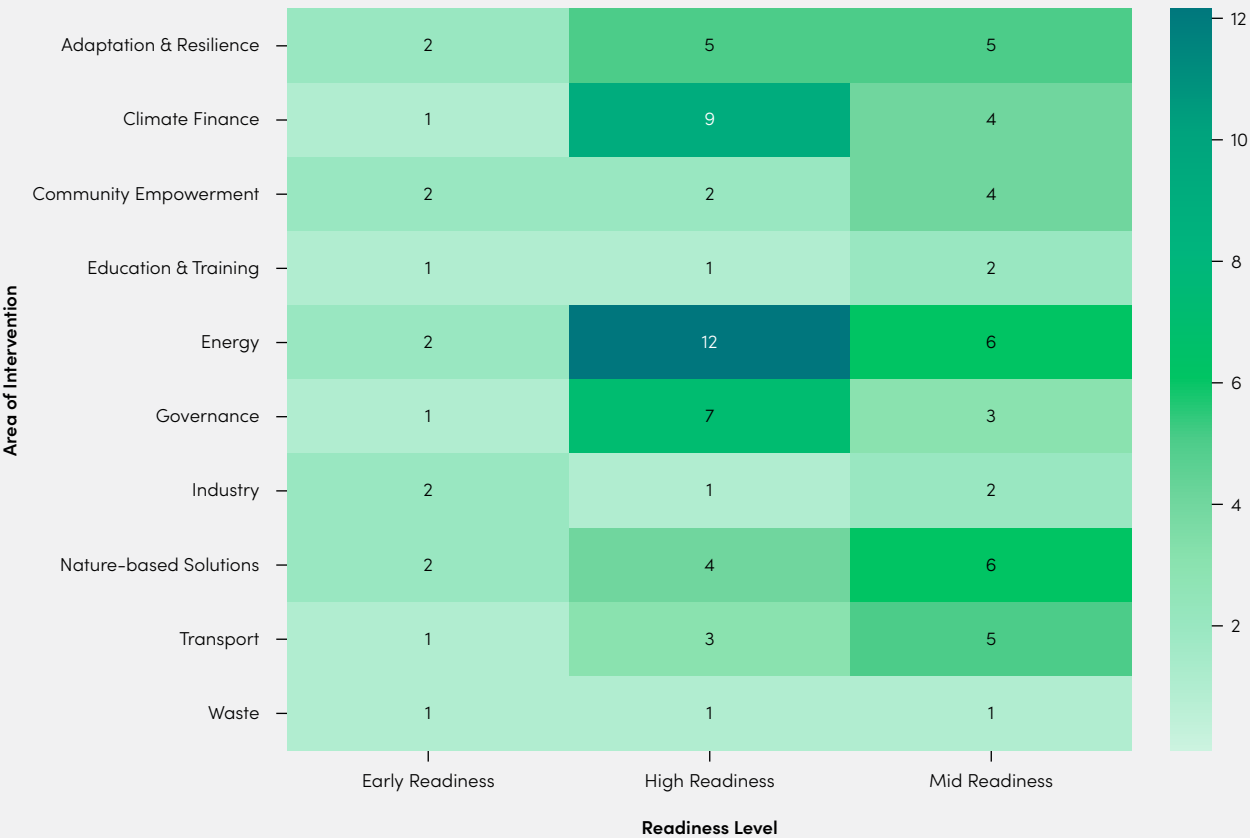
social and climate value yet remain constrained by risk perceptions and a lack of long-term capital. Nature-based solutions- particularly those focused on forestry, agriculture, and peatlands- show strong potential for impact investment and blended finance but need greater technical support and standardisation to reach investment maturity.

Community empowerment and education initiatives offer substantial social benefits and deep local engagement but limited revenue potential. These are best suited to grant-based or philanthropic funding, underscoring the ongoing importance of overseas development assistance in scaling inclusive climate action.

Industry and waste-sector projects are at the early feasibility stage, presenting opportunities for public-private partnerships and concessional capital to pilot innovative technologies and circular economy solutions.

Geographically, high-readiness solutions are concentrated in regions with mature subnational governance systems- notably California, São Paulo, Morocco, and South Africa. Finance-readiness gaps persist in contexts where institutional capacity, MRV systems, and project aggregation mechanisms are still emerging, such as early-stage adaptation or just transition programmes. In some cases, language and reporting variations may influence readiness assessments, as “technical guidance” entries can range from fully operational platforms to early capacity-building tools.

Investment Readiness Heatmap: Subnational Climate Solutions



4. Barriers to subnational action

Barriers to Subnational Delivery

Analysis of the dataset reveals four interrelated categories of barriers that continue to limit the effective delivery of subnational climate action. These barriers often interact, compounding delivery challenges and slowing the translation of policy ambition into practical outcomes.

Strategic and political barriers: Many regions face difficulties in governance and coordination across horizontal and vertical levels of government. Inconsistent institutional alignment, overlapping mandates, and fragmented planning processes weaken coherence. Limited long-term political commitment and complex legislative or approval procedures can further delay project implementation and undermine continuity across political cycles.

Financial and operational barriers: Across both developed and emerging economies, inadequate access to finance remains a core constraint. Funding gaps, limited private-sector engagement, and rigid budgetary frameworks restrict project pipelines. Operational challenges—such as complex procurement systems, cost-efficiency requirements, or short-term funding cycles—often impede project execution even when policy ambition is high.

Technical and capacity barriers: The ability to design and deliver climate solutions depends heavily on institutional and human capacity. Many subnational governments report shortages of skilled personnel, limited access to technical expertise, and weak partnerships with research and innovation actors. Gaps in technical infrastructure and insufficient integration of climate data into decision-making processes reduce the effectiveness and scalability of interventions.

Data and knowledge barriers: Incomplete or inconsistent climate data, limited local analysis, and the absence of standardised metrics for tracking progress make it difficult to evaluate outcomes or attract investment. Without robust evidence systems, subnational governments struggle to demonstrate impact or align with national and international reporting frameworks.

Subnational climate action barriers

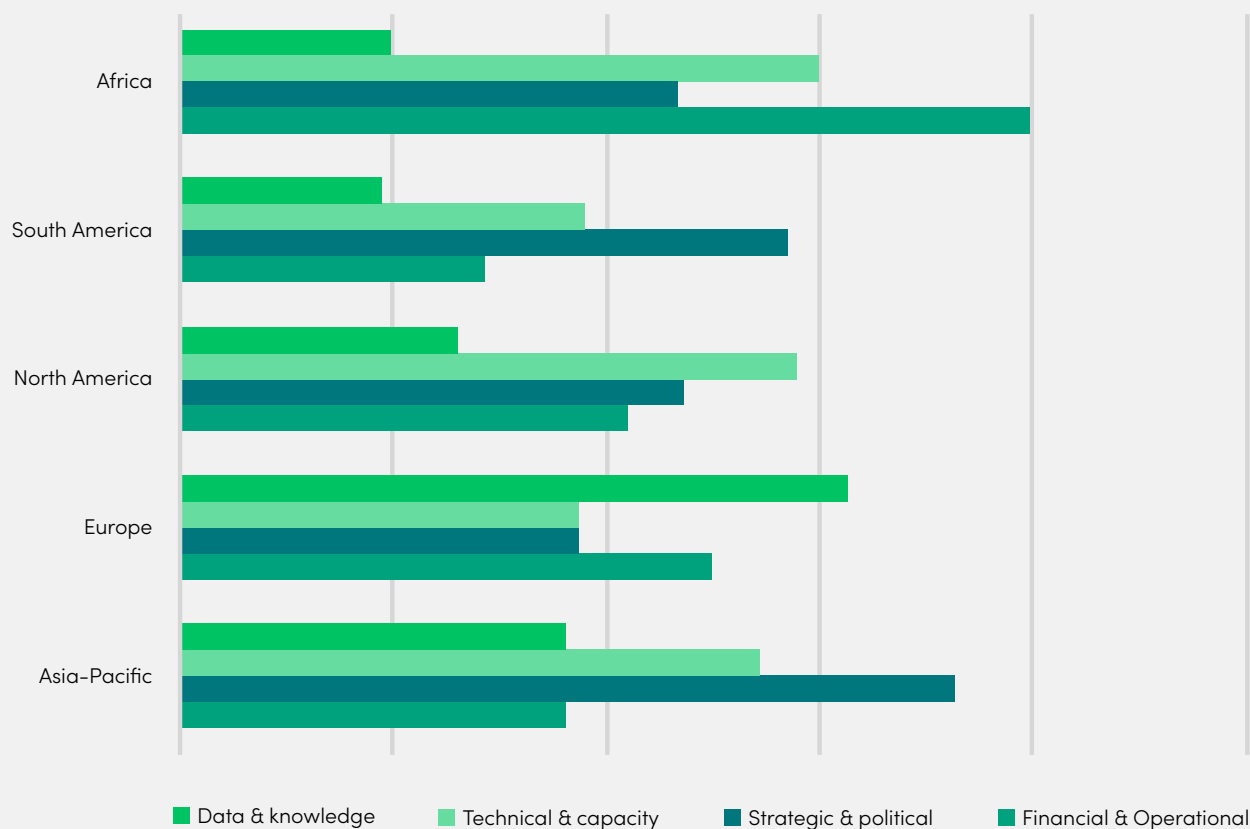


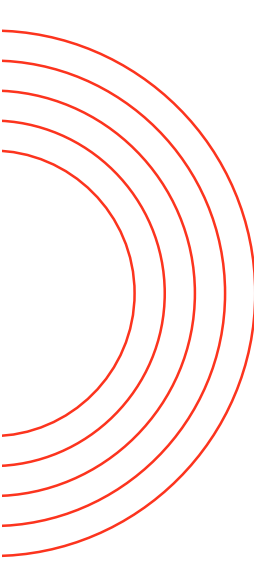
A smaller number of cases also point to context-specific implementation barriers, such as limited access to raw materials, logistical constraints, or geographic isolation, which further hinder progress. For example, developing economies such as Morocco, India, Brazil, Mexico, and South Africa most often face financial, capacity, and operational barriers, compounded by coordination challenges across political and institutional levels. These constraints reflect limited access to finance, uneven technical capacity, and complex governance arrangements that slow implementation.

In contrast, developed economies including the United States, Germany, and the United Kingdom are more affected by strategic-political and technical barriers, such as policy complexity, infrastructure scaling, and workforce training needs. Data and knowledge gaps are universal, but they are particularly acute in emerging economies where MRV systems and standardised reporting frameworks remain underdeveloped.

Together, these findings show that subnational delivery is constrained less by a lack of ambition and more by the systems, resources, and institutional capacities required to turn policy into practice. Strengthening these foundations is therefore critical for achieving scalable and sustained climate action at the regional level.

Subnational climate action barriers across geographies





4.1 Interconnected barriers to delivery

Analysis of the dataset also illustrates that most subnational projects face multiple, overlapping barriers, rather than isolated challenges. Strategic and political constraints are especially common in cross-sectoral or multi-level governance initiatives—such as adaptation planning, MRV systems, and mobility strategies—where coordination and long-term alignment are critical.

Financial and operational barriers are most acute for initiatives that demand high upfront investment or sustained capacity, including large-scale energy and nature-based infrastructure. Technical and capacity challenges are widespread across both project and guidance-based interventions, particularly in specialised sectors such as offshore wind, peatland restoration, and MRV system development.

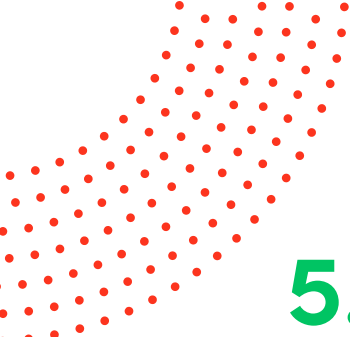
Finally, data and knowledge gaps consistently hinder scaling, monitoring, and impact assessment—especially in adaptation and resilience projects. These findings underline that subnational governments are not constrained by ambition, but by the systems, finance, and data infrastructure needed to sustain and scale implementation.

Area	Key Challenges	Policy Insight
Climate Finance	Strategic & Political; Financial & Operational; Data & Knowledge	Fragmented planning, limited finance access, and weak MRV systems constrain delivery. Solutions often involve policy or technical guidance (e.g., Morocco Climate Finance Guide, Regional Climate Change Fund).
Adaptation & Resilience	Financial & Operational; Strategic & Political; Technical & Capacity; Data & Knowledge	Success requires integrated data and inter-agency coordination. Complex technical and operational barriers—seen in projects like TRMP and Flood Impact Platform—are often compounded by governance weaknesses.
Energy	Strategic & Political; Technical & Capacity; Financial & Operational	Infrastructure gaps, workforce shortages, and grid integration challenges slow transition. Initiatives such as Hydrogen Roadmap BW and Scotland Offshore Wind show the need for policy alignment and targeted technical training.

Nature-Based Solutions	Technical & Capacity; Financial & Operational; Data & Knowledge	Projects like Peatland Restoration and Regenerative Agriculture face funding and skills shortages, plus MRV and carbon market readiness gaps. Strengthening monitoring and finance access is key to scaling.
Transport	Strategic & Political; Data & Knowledge	Policy-led projects face coordination and data fragmentation issues. Examples such as Climate Mobility Plans and São Paulo Urban Mobility highlight uneven regional implementation.
Governance & Policy Guidance	Strategic & Political; Technical & Capacity; Financial & Operational; Data & Knowledge	MRV and planning tools reveal the need for stronger capacity building and vertical coordination. Effective governance depends on technical guidance and institutional alignment (e.g., Climate Roadmap Tool, Regional MRV Systems).
Community Empowerment & Education	Strategic & Political; Financial & Operational; Technical & Capacity	Initiatives such as Women's Water House, Green School Programme, and Citizen Assemblies face infrastructure and training barriers. Sustained grant funding and local capacity support are essential.
Industry & Food Systems	Financial & Operational; Technical & Capacity	Industrial and agricultural initiatives—e.g., GISP, Methane Reduction in Agriculture, FruitLook Platform—face high upfront costs and limited cross-sector collaboration. Targeted finance and awareness-building can accelerate uptake.

Beyond these core categories, a cross-cutting barrier evident across the dataset is the limited space for genuine collaboration between subnational governments, national institutions, and external partners. States and regions are often forced to balance short-term service delivery pressures with long-term climate investment needs yet lack formal mechanisms to co-design and co-finance solutions with national or private actors.

The absence of structured co-creation platforms—where priorities, risks, and delivery pathways can be negotiated collectively—reinforces fragmentation, weakens ownership, and slows progress from planning to implementation. Building these collaborative mechanisms is essential to unlocking scalable, durable, and context-driven climate action.



5. Policy levers and innovations

Subnational governments are using a growing suite of policy levers to institutionalise climate ambition, align markets, and embed equity into economic transformation. The examples below highlight how legislative, fiscal, and governance innovations are driving systemic change across regions.

5.1 Policy levers driving systemic change

Legislative and regulatory frameworks:

Nearly half of all subnational solutions identified are policy instruments, underscoring strong institutional and legislative capacity. Examples such as California's Climate Leadership and Community Protection Act and Cap-and-Trade Program, Northern Ireland's Climate Change Legislation, and Indian states' Climate Action Plans demonstrate how binding targets, renewable energy mandates, and compliance mechanisms are embedding climate action into economic planning. These legislative anchors create long-term certainty for markets, enable regulatory coherence across sectors, and institutionalise climate ambition beyond political cycles.

Green budgeting and fiscal tools

An emerging class of fiscal policy instruments– including carbon taxes, green bonds, and climate budgeting frameworks– shows how subnational governments are aligning financial governance with climate goals.⁸ Morocco's Climate Finance Guide and São Paulo's Regional Climate Change Fund illustrate how states are creating transparent systems for investment and accountability. These tools integrate climate objectives into public finance, enabling both resource mobilisation and results tracking, while bridging public and private finance to catalyse blended investment at scale.

Just transition and social equity mechanisms

From Scotland's Just Transition Commission to Ceará's Climate Education Strategy and South Africa's Citizens' Assembly on Climate Change, subnational governments are embedding justice and inclusion at the heart of their climate strategies.

⁸ Climate Group, Next Generation Budgets and Transforming State and Regional Budgets for Net Zero Report, 2025, theclimategroup.org/next-generation-budgets



These approaches link skills development, education, and participatory governance with climate planning– ensuring that transition policies deliver social transformation alongside economic change. They demonstrate that equity-centred design is not an add-on but a core enabler of durable, politically viable transitions.

Multilevel governance instruments

States and regions are also leveraging their role as connectors between national and local authorities. Instruments such as the Future Generations Act (Wales) and regional MRV systems across Latin America and Asia demonstrate how subnational governments create vertical and horizontal coherence across levels of government. These mechanisms strengthen data consistency, shared accountability, and integrated planning– foundations for coordinated action and systemic scale-up.

While strong policy leadership defines subnational climate action, effective implementation depends on the financial, technical, and governance enablers that accompany it– many of which are explored in the sections that follow.

5.2 Innovations accelerating implementation

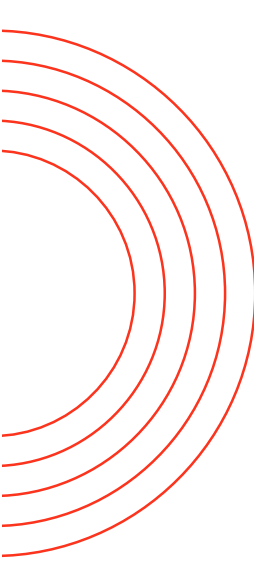
Subnational governments are increasingly moving from planning to delivery through institutional, financial, and social innovation. Across the dataset, a new generation of tools and mechanisms is accelerating implementation, embedding climate goals into governance, finance, and community systems.

Transition planning and sectoral roadmaps

Many states are deploying Subnational Transition Plans and sector-specific roadmaps such as Baden-Württemberg’s Hydrogen Roadmap or Maharashtra’s Climate Action Plan. These planning instruments combine technical modelling with policy foresight to chart credible, place-based pathways to net zero. In September 2025, Catalonia released its pioneering regional carbon budget as a mechanism for planning and monitoring greenhouse gas emissions and integrate the objectives of their climate change legislation into sectoral policies.⁹

The innovation lies in their ability to translate abstract global goals into spatially and economically grounded delivery plans, often through stakeholder co-design and iterative updating mechanisms.

⁹ Government of Catalonia, Catalonia presents its pioneering carbon budget proposal to the world, 2025, exteriors.gencat.cat/en/actualitat/250923_carbon_budget



Blended finance and catalytic investment mechanisms

Innovation in finance is reshaping how subnational governments mobilise capital. Emerging models combine public, private, and concessional finance– from soil carbon credit systems in agricultural regions to ecological tax frameworks in Jalisco and Querétaro. These mechanisms mark a shift from project-by-project funding to systemic investment platforms, designed to de-risk private participation through public guarantees, policy incentives, and transparent governance structures.

Knowledge and capacity-building systems

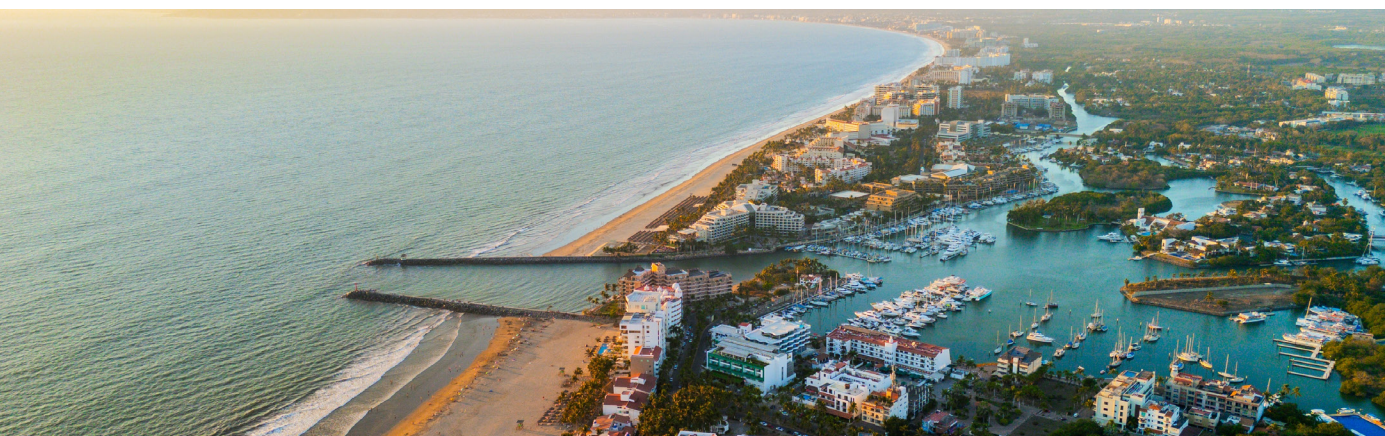
Many regions are strengthening institutional capacity and technical infrastructure through the development of MRV systems, updated GHG inventories, and finance-readiness toolkits. These knowledge-based enablers underpin transparent reporting, data-driven decision-making, and investor confidence, forming the backbone of effective multi-level coordination.

Community-based innovation

Subnational governments are also testing community-driven models that merge innovation with empowerment such as solar food dehydration projects in Mexico, green school programmes, and women’s water houses. These interventions not only deliver climate outcomes but strengthen the social contract between governments and citizens building trust, legitimacy, and citizen ownership– critical ingredients for sustained transitions.

Across all regions, the evidence shows that subnational governments are not merely implementing climate policy– they are redefining governance models to make climate action systemic. Their innovation lies in the integration of governance, finance, and social levers, transforming fragmented initiatives into coherent, scalable strategies.

This evolving ecosystem– from climate budgeting and transition planning to inclusive governance and fiscal reform– is turning policy from a compliance tool into an engine of transformation.



Recommendations: Aligning the global climate architecture with subnational ambition

This report shows that while subnational ambition is high, delivery remains constrained by finance gaps, fragmented governance, and limited technical capacity. Aligning global climate architecture with subnational ambition requires coordinated collaboration among four key actors: subnational and national governments, the private sector, the finance community, and multilateral institutions.

Subnational Governments: Translate Ambition into Action

- Develop high-integrity transition plans and roadmaps with measurable targets and robust MRV systems to align implementation with national and global goals.
- Co-create policy frameworks with local stakeholders that reflect regional realities and enable iterative learning and scaling.
- Strengthen implementation capacity through technical training, institutional coordination, and workforce development across energy, adaptation, and nature-based solutions.
- Leverage public-private partnerships using blended finance and risk-sharing mechanisms to attract investment for scalable, high-impact projects.

National Governments: Embed Subnational Delivery into National Frameworks

- Institutionalise subnational co-creation within NDCs, National Adaptation Plans, and Long-Term Strategies to ensure national targets reflect real implementation capacity.
- Strengthen fiscal enablers through predictable, climate-aligned transfers, fiscal incentives, and enabling legislation to support long-term subnational planning and private capital mobilisation.
- Build multi-level governance mechanisms such as climate councils, compacts, and Just Transition frameworks linking national policy to subnational delivery and workforce skilling.
- Harmonise data systems to align subnational MRV with national reporting, enabling transparency and finance access.

Private Sector: Invest in Regional Transitions

- Engage early with subnational governments on transition planning, permitting, infrastructure, and workforce development to ensure regulatory clarity and social acceptance.

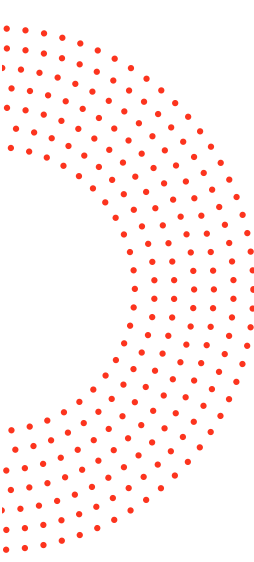
- Localise value creation through regional industrial clusters in renewables, e-mobility, green hydrogen, and circular manufacturing aligned with just transition goals.
- Catalyse finance for pilot projects by co-investing in blended finance structures that connect private innovation with public purpose.
- Expand impact disclosure to include regional-level emissions, investments, and community outcomes to strengthen alignment and accountability.

International Finance Institutions: Design Fit-for-Purpose Mechanisms for Subnational Investment

- Establish dedicated financing windows and catalytic funds allowing subnational governments direct access to capital, modelled on successful pooled and partnership funds.
- Support project preparation and readiness through technical assistance and early-stage grants for bankable adaptation and resilience projects.
- Scale blended finance by combining concessional funds, sub-sovereign guarantees, and private investment to de-risk infrastructure delivery.
- Track finance flows and barriers through coordinated annual mapping to improve targeting and accountability.

Multilateral Decision-Makers: Elevate Subnational Implementation

- Recognise subnational governments as delivery partners under the Paris Agreement and integrate them within the Global Climate Action Agenda (GCAA) and Global Stocktake.
- Institutionalise the Global Climate Action and annual Action Agendas as bridges between policy and implementation, tracking progress on finance, emissions, and resilience outcomes.
- Establish an annual Implementation Forum, hosted alongside each COP, to coordinate delivery, match finance, and showcase subnational progress.



Conclusion:

In the decisive years to 2030, success will depend not on new commitments but on coordinated implementation. Subnational governments are the connective layer linking global ambition with local delivery. Systematically recognising, resourcing, and integrating them into global governance and finance systems will determine whether ambition becomes tangible, equitable progress.

The task ahead is clear: build from the ground up, empower where delivery happens, and make collaboration the engine of transformation. The path to 2030 runs through effective multilevel governance—where every level, from local to global, delivers as one.





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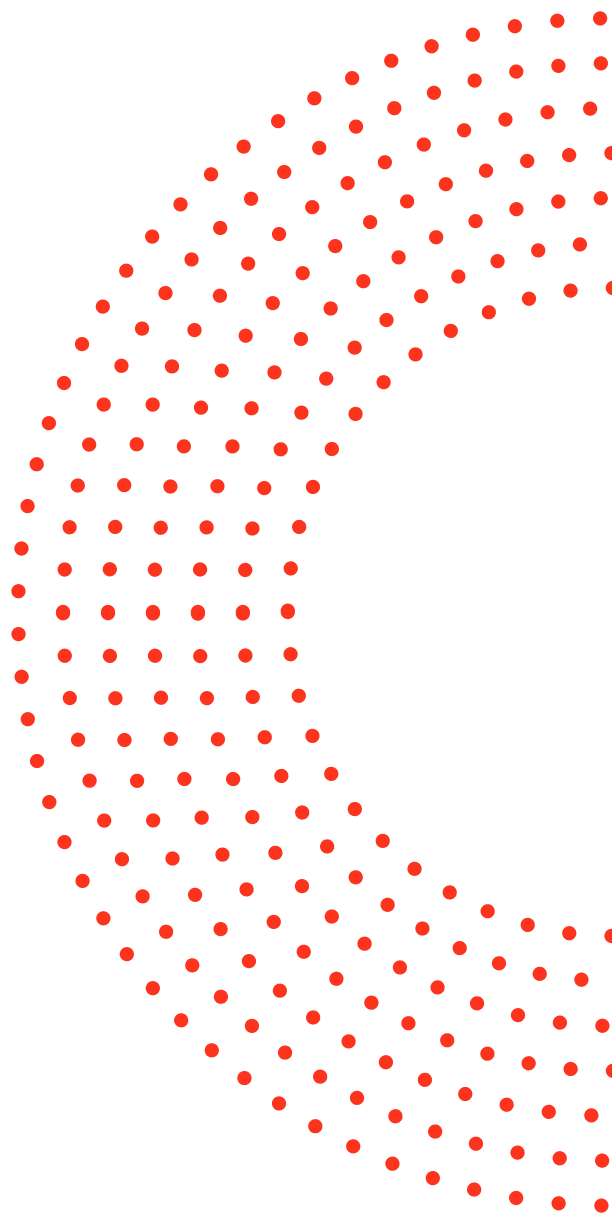
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Secretariat

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