



Brief for Action

Mobilising Subnational Investment for Climate Resilience

BRIEF FOR ACTION



We act,
We connect,
We transform.

Mobilising Subnational Investment for Climate Resilience

Turning Finance Barriers into Solutions

Climate Program



Introduction

On 28 April 2026, Regions4 hosted a RegionsAdapt Community of Practice session on Subnational Adaptation Finance, bringing together over 70 regional governments and experts who joined online to explore how to mobilise and structure finance for climate resilience at the territorial level.

Building on insights from the RegionsAdapt Progress Report 2025, the session combined expert guidance with concrete regional experiences.

It highlighted both the structural barriers limiting access to finance and the growing innovation by regions in designing financing mechanisms and investment frameworks.

The discussion marked an important milestone in RegionsAdapt's 10-year journey, reflecting a broader shift from adaptation planning toward implementation and investment.

Background

This Community of Practice builds on the evidence and insights generated through the RegionsAdapt Progress Report 2025 and ongoing engagement with members, including data from the CDP States and Regions disclosure process.

The report highlights 11 subnational stories that demonstrate how regions are leveraging a range of financial approaches, from carbon revenues to devolved funding mechanisms, to advance climate adaptation while delivering co-benefits for nature and communities. It also underscores persistent challenges, notably the gap between adaptation needs and available finance, and the limited share of funding reaching subnational levels.

Experiences of regions highlighted

- **Québec** (Canada) on the carbon market
- **Catalonia** (Spain) on the Climate fund and climate credits
- **Île-de-France** (France) on diversifying finance options
- **São Paulo** (Brazil) on FINACLIMA, a mechanism for blended finance
- **Lombardy** (Italy) on green budgeting

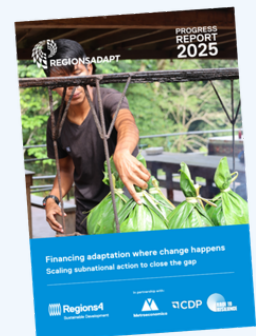
Expert guidance

- **Sustainable Finance Observatory** on making adaptation projects investable

RegionsAdapt 2025 Report

Financing adaptation where change happens

[Read the report](#)



Session material

Access the full recording and presentation from the session

- [Agenda and speakers](#)
- [Recording](#)
- [Presentation slides](#)



RegionsAdapt 2026 Report

As climate impacts intensify, adaptation is increasingly recognized as a strategic investment; however, global financial flows remain insufficient. Adaptation needs for developing countries are estimated at \$365 billion annually, yet only 3.5% of global climate finance is currently directed toward adaptation, with less than 17% reaching local communities.

The gap is most acute in the Global South, where impacts are greatest but access remains constrained by centralised systems and limited direct access.

At the same time, many regions, particularly in OECD contexts, are demonstrating leadership—mobilising resources, creating mechanisms, and piloting innovative solutions, positioning themselves as drivers of climate investment.

The Role of Regions

Regional governments are essential actors because they:

- **Hold key mandates** across sectors like water, agriculture, and infrastructure
- **Act as connectors**, translating national strategies into territorial action
- **Drive innovation**, testing and scaling financial solutions
- **Mobilise investment**, with subnational governments delivering around 70% of climate-related public investment in OECD countries

Diverse but fragmented financing sources

Subnational governments are already mobilising a wide range of financing sources, grouped into five categories:

1. **Domestic public finance** (regional budgets, national transfers, climate funds)
2. **International public finance** (multilateral and bilateral sources, often accessed via national systems)
3. **Private sector engagement** (loans, bonds, public-private partnerships)
4. **Philanthropy** (supporting innovation and early-stage projects)
5. **Innovative finance** (e.g. carbon and biodiversity credits, still largely at pilot stage)

Barriers to subnational adaptation

Institutional challenges

- Regions lack direct access and clear mandates.
- Adaptation remains siloed in environmental departments.
- Weak vertical integration

Access and distribution gap

- Adaptation finance is highly centralised
- Funding favours more creditworthy or visible regions
- Most vulnerable territories struggle to access finance

Capacity & Data Barriers

- Weak project preparation and/or limited technical expertise to develop investment-ready projects
- Lack of localised data and monitoring systems
- Difficulty demonstrating impact

Financial & Market Barriers

- Instruments are not adapted (large size, complex procedures)
- Adaptation is seen as a low-return investment. No clear revenues → benefits hard to monetise
- Limited fiscal autonomy and borrowing capacity
- There are limited pipelines of bankable projects matching investor requirements in terms of risk, return and impact, due to key structural barriers
- High & poorly allocated risks
- Small, fragmented projects → no scale and standardisation
- High transaction costs → move from model to implementation: contractualisation,
- Hard to categorize → Subnational adaptation is a new category of projects

The Way Forward: Recommendations for subnational governments:

<p>1 Shift from planning to investment pipelines Develop finance-ready, bankable projects by integrating financial considerations from the start.</p>	<p>4 Embed adaptation into budgeting systems Use tools like green budgeting to mainstream adaptation across public spending.</p>
<p>2 Strengthen data and monitoring systems to track investment and demonstrate impacts</p>	<p>5 Strengthen legal and policy frameworks Strengthen governance, cross-department coordination, and financial expertise</p>
<p>3 Diversify financing sources Deploy innovative financial tools and reinforce fiscal capacity, including own-source revenue and creditworthiness.</p>	<p>6 Build institutional and technical capacity Foster multilevel and peer partnerships, leveraging networks like RegionsAdapt</p>

Panel 1

Subnational Experiences

Mobilising finance for adaptation

Québec

Carbon market as a financing backbone

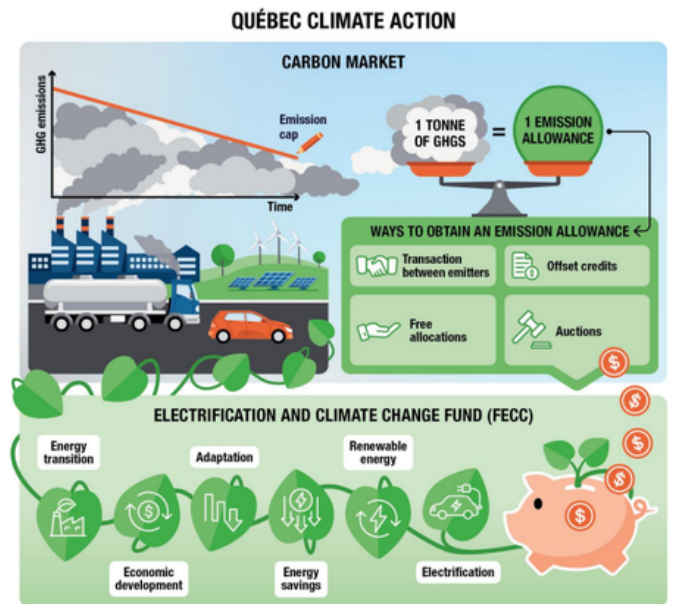
Québec has long considered carbon pricing to be one of the most effective tools for reducing greenhouse gas emissions while generating revenue to support climate action and adaptation efforts.

The province first introduced a carbon price in 2007 through a fuel levy, which financed its initial climate action plan. This was followed in 2013 by the creation of a cap-and-trade system (SPEDE), integrating a carbon cost directly into business decisions. In 2014, Québec linked its system with California, creating the largest carbon market in the Americas, with potential future expansion to Washington State by 2027

The system now covers approximately 80% of Québec's greenhouse gas emissions. Regulated entities across the transport, industry, building, and energy sectors must surrender emission allowances corresponding to their emissions, which they can acquire through auctions, market transactions, free allocation, or offset credits. The remaining emissions can also be addressed through voluntary projects, including offset mechanisms.

Québec highlighted that the system is designed to reduce emissions at the lowest possible cost while providing flexibility and predictability for businesses. A key feature is that **all revenues generated—over \$11 billion to date—are fully reinvested into climate action** through the Electrification and Climate Change Fund (FEC). This fund supports a wide range of interventions, including electrification, energy efficiency, innovation, economic development, and increasingly, adaptation, through the implementation of Québec's 2030 Green Economy Plan.

Adaptation financing has significantly scaled up over time. For the 2025–2030 implementation plan, Québec has allocated approximately CAD 1.34 billion to adaptation, nearly tripling previous levels. Investments target key risks such as flooding, heatwaves, coastal erosion, and wildfires.



Programmes funded include:

- A CAD 500 million programme supporting municipalities to develop climate plans (including risk assessments and adaptation measures) through the “Accelerating Local Climate Transition” initiative
- Flood resilience programmes
- Urban greening initiatives (e.g. OASIS) supporting municipalities and Indigenous communities
- Coastal erosion and submersion projects
- Agrilimat, supporting farmers in integrating adaptation into practices

In response to questions, Québec clarified that funds are legally ring-fenced for climate action. However, the allocation between mitigation and adaptation remains flexible and politically determined, with a clear trend toward increasing adaptation spending as climate impacts intensify.

For more information

- **Presentation slides:** [PPT available here](#)
- **Carbon Market:** https://www.environnement.gouv.qc.ca/changementsclimatiques/marche-carbone_en.asp
- **2030 Plan for a Green Economy:** <https://www.quebec.ca/en/government/policies-orientations/plan-green-economy>
- **Regions4 Case Study on Québec Carbon Market available in English, French and Spanish:** <https://regions4.org/csd/quebec-carbon-market-financing-climate-action>



Catalonia

Climate fund, green taxation, and emerging climate credits

Catalonia presented a dual system combining public finance from tax on CO₂ emissions from motor vehicles and private financing mechanisms through Climate credits financed by landowners and companies.

Catalan Climate Fund

The Catalan Climate Fund, established in 2017 through the regional budget law and reinforced by the Climate Change Law, is a fully earmarked instrument dedicated exclusively to climate mitigation and adaptation. Funding allocation follows a structured prioritisation across five categories: research and innovation, business projects, local authority projects, citizen participation, and Special strategic projects.

The fund is financed in part by :

- 50% of the revenue obtained from the tax on CO₂ emissions from motor vehicles, which was created specifically to capitalise the Climate fund.
- 20% of the revenue from the tax on installations that have an impact on the environment
- the remainder from other regional sources.

To date, around €407 million has been mobilised, supporting 99 projects.

The tax on CO₂ emissions from vehicles applies to passenger cars, commercial vans, and motorcycles, based on ownership and emissions levels rather than usage (NOT AUTOCARES O CAMIONES). Annual revenues have ranged from €65 million in 2021 to €51 million in 2023, with a downward trend reflecting improvements in vehicle emissions.

Catalonia highlighted several implementation challenges:

- Delay due to COVID pandemic
- Resistance from the automotive sector
- The need to build new data collection systems
- Debates over taxing ownership versus usage

Despite this, the system is now functioning effectively and has enabled significant climate investment.

Climate Credits mobilizing private finance

Catalonia also introduced an emerging system of climate credits, developed through a LIFE project. These “forest climate credits” are tailored to regional conditions, where forests cover around 65% of the territory and are largely privately owned.

Catalonia therefore promotes multifunctional forest management that enhances the provision of ecosystem services, moving beyond traditional carbon credits to “climate credits”, which integrate carbon, water and biodiversity within a combined mitigation and adaptation framework.

This emphasises social value, dignifying forest work and generating local economic opportunities that help maintain population in rural areas.

Projects are financed by private companies, which in return receive climate credits that they can use for non-financial reporting in their annual accounts under the Corporate Sustainability Reporting Directive, or to align with the EU taxonomy.

The Government of Catalonia establishes the regulatory framework and ensures rigorous compliance, while landowners and companies develop and finance the projects.

In three years, 9 projects are underway, 4 of which have been completed, covering 500 hectares, and we have mobilised over €1 million in investment.

The system responds to key regional challenges such as drought, wildfire risk, and water scarcity, and reflects a more integrated approach to adaptation and ecosystem management.

For more information

- **Presentation slides:** [PPT available here](#)
- **Catalan Climate Fund:** https://canviclimatic.gencat.cat/ca/ambits/Llei_ca_nvi_climatic/el-fons-climatic/



Île-de-France

Diversifying finance under structural constraints

Île-de-France provided a detailed overview of its territorial context and financial constraints.

The region, home to around 12 million inhabitants, is the capital region of France, encompassing Paris and over 1,200 municipalities. It represents nearly 20% of the national population and close to 30% of GDP, concentrated on just 2% of the territory.

While highly dense and urban, 75% of its land remains agricultural or forested, exposing it to key climate risks including heatwaves, flooding (riverine and pluvial), and drought. About one in three residents (over 3 million people) is exposed to urban heat, while flooding, from the Seine and surface runoff, affects the entire region. Drought was also highlighted as an increasing challenge, particularly regarding impacts on agriculture and buildings.

The regional government holds key competencies in planning, transport, education, and economic development. Its adaptation strategy has been progressively developed since 2021, starting with a vulnerability assessment and leading to a plan comprising 60 actions, integrated into regional planning documents. These planning documents are binding for subregional authorities across the territory.

Financially, the region operates with a budget of approximately €6 billion, but has limited fiscal autonomy, relying largely on state transfers and existing taxation. It cannot create new taxes, and some relevant fiscal instruments (e.g. flood-related taxes) are held at lower levels of government. The region also stressed that it has very limited capacity to modify existing taxes or generate new revenues.

In this context, the region has focused on diversifying funding sources and maximising existing levers, particularly to support smaller municipalities and local authorities with limited financial capacity.

For more information

- Presentation slides: [PPT available here](#)
- Regional Adaptation Plan: [here](#)
- [Green, Social and Sustainable Bond Framework for the Region Île-de-France](#)



In this context, the region has focused on diversifying funding sources and maximising existing levers, particularly to support smaller municipalities and local authorities with limited financial capacity.

- Public subsidies remain the main instrument, supporting over 200 projects, including urban cooling, schoolyard greening, river restoration, and flood prevention
- A regional agency (Île-de-France Nature) supports the creation and management of green spaces and contributes to improving existing natural areas
- Borrowing mechanisms, notably green and sustainability bonds issued since 2012, now represent over 20% of regional revenues and finance infrastructure such as the construction or renovation of 450 climate-resilient schools, with a strong focus on improving summer thermal comfort
- European funding, particularly through Pathways2Resilience, supports strategy development and implementation, with Île-de-France participating as one of the programme's selected regions
- European Agricultural funds are used to support climate resilience in farming
- Blended finance approaches are being explored, particularly for forest adaptation
- Investments are also directed toward transport resilience, given the scale and importance of the regional network, which was described as the second densest and most used transport network in the world

The overall approach emphasises combining instruments to compensate for limited revenue-generation capacity and to support municipalities, especially smaller ones.



Guest expert

Sustainable Finance Observatory on making adaptation projects investable

Understanding investors & Communicating project value

Investors tend to be risk-averse and require clear bankability conditions. This includes well-defined risk–return–impact profiles, characterised by low risk levels, predictable returns, and scalability.

Financial engineering can strengthen these profiles by:

- Reducing risks and enhancing returns (or perceived value), thereby lowering the cost of capital
- Quantifying and monetising impacts, including avoided losses and broader economic, social, health, and ecological co-benefits
- Strengthening data systems and monitoring frameworks related to climate risks, impact assessment, and economic valuation

Amplifying the Impact of Public Finance

- **Integrate adaptation into subnational strategies and investment plans, to build clear project pipelines and align public spending with climate objectives.** *Example: In India, Maharashtra and Tamil Nadu are embedding passive cooling measures into public budgets and targeting subsidies towards priority interventions.*
- **Track and tag adaptation-related expenditures, to strengthen prioritisation, transparency, and accountability.** *Example: UNEP's urban nature-based framework supports governments in identifying and monitoring climate-relevant spending.*
- **Embed adaptation within larger development programmes, to address scale constraints and improve attractiveness for financiers.** *Example: The EcoCity initiative in Tianjin, China integrates nature-based solutions into a broader urban development programme.*
- **Use regulatory and market-based incentives to mobilise private investment, including taxation, regulation, and tradable credit systems.** *Example: In Washington, DC, a stormwater retention credit market allows developers to meet obligations by purchasing credits generated through green infrastructure investments, supported by a public price floor to ensure liquidity and reduce risk.*

The Sustainable Finance Observatory is an independent non-profit think tank specialised in financial engineering. Building on on expertise from former banking professionals, it supports the development of innovative financial solutions to help climate adaptation projects become bankable.

Financing principles and models often used to make adaptation projects bankable

A range of complementary financial mechanisms can be combined to improve the viability of adaptation investments:

- **Bundling with revenue-generating assets:** Pairing adaptation measures with profitable infrastructure or economic activities, allowing cross-subsidisation within projects. *Example: In Malaysia, a tunnel serves both as stormwater infrastructure and a tolled road generating revenue.*
- **Monetisation of co-benefits:** Adaptation projects generate economic value through avoided losses and additional co-benefits, which can be captured through user fees, tariffs, or land value mechanisms. This requires robust risk assessment and stakeholder analysis. *Examples: In Quintana Roo (Mexico), a parametric insurance fund for reef restoration is financed by tourism stakeholders; in Cape Town, upstream ecosystem restoration is supported by downstream water users.*
- **De-risking and blended finance:** Public finance is used strategically to reduce investment risks through instruments such as concessional loans, grants, CAPEX subsidies, and guarantees.
- **Public–private partnerships (PPPs):** Structured contracts enabling risk and revenue sharing between public and private actors. *Example: In the Netherlands, a major road upgrade incorporating flood protection is financed through a design–build–finance–maintain model.*
- **Project aggregation and portfolio approaches:** Bundling projects into larger portfolios (e.g. for bond issuance) to attract institutional investors. *Example: Zanzibar issued a Sukuk (Islamic bond) to finance blue economy initiatives.*
- **Carbon and biodiversity credits:** These mechanisms require verified outcomes, additionality, clear monetisation strategies, and robust monitoring systems aligned with market standards.



		Adaptation benefit (to private sector)	Benefit of adaptation benefit by private sector	
Bilbao flood-proof district	Flood risk management within public and private landholdings	Developable commercial land and improved real estate value	Revenues from land sales	<ul style="list-style-type: none"> → Shared profits from joint venture with private landowners → Allocation of private developable area for public housing → Indirectly – through increased city tax revenues from new real estate developments
Quintana Roo	Coastal area protection from extreme weather	More secure tourism revenues	Tourism revenues	<ul style="list-style-type: none"> → Contributions by tourism sector to parametric insurance premium payments → Indirectly – through increased taxes from tourism
Aquapolo Ambiental wastewater reuse	Enhanced water security and resource savings through reuse of treated wastewater	Avoided operational losses from depleting water supply	Stable and predictable water supply and tariffs through reuse of treated wastewater	<ul style="list-style-type: none"> → Private company financed the wastewater treatment and reuse system → State government retained industrial businesses within its jurisdiction

Source: Building the financial case for urban adaptation: Guidance and case studies. C40 cities, Rebel, 2026

Practical steps to improve project structuring for value creation

- 1 Align climate planning and financing functions
- 2 Strengthen economic valuation and assess stakeholder exposure, CBA and willingness to pay
- 3 Engage beneficiary stakeholders (e.g. companies) at an early stage
- 4 Involve financiers early in the project design, planning, and preparation phases
- 5 Identify or develop revenue streams linked to adaptation benefits
- 6 Invest in project preparation capacity and financial engineering support (design bankability model upfront, anticipate requirements, structuration, due diligence)
- 7 Strengthen data, transparency, and reporting frameworks

For more information

Explore the presentation slides for further insights and practical examples [here](#).

sustainablefinanceobservatory.org



Panel 2

Structuring resources for subnational adaptation

São Paulo FINACLIMA and blended finance architecture

The State of São Paulo presented FINACLIMA, a subnational climate finance mechanism launched in 2024 to mobilise private and blended finance for climate adaptation, mitigation, and resilience. It was designed to address a structural financing gap while leveraging an underused opportunity: existing environmental regulatory obligations that already generate significant private financial flows (e.g. compensation, settlements, R&D requirements).

FINACLIMA aims to channel private, multilateral, and eventually public resources into climate action, with an initial focus on ecosystem restoration, biodiversity, and nature-based solutions in agricultural systems—illustrated by pilot projects in the Cantareira water system (payments for ecosystem services) and Pontal do Paranapanema (restoration in complex, low-vegetation areas). Future phases will expand to sectors such as energy, waste, and circular economy.

How the mechanism works

A key feature is that FINACLIMA is a financing mechanism rather than a fund. It aggregates multiple private funding streams into a single operational vehicle, aligning regulatory compliance with growing private sector demand for structured ESG investments, and with the broader shift from grant-based to blended finance approaches.

In its initial phase, FINACLIMA operates mainly with private and multilateral resources, with public funding pathways still under development.

- Funds are managed by FUNDBIO, an independent non-profit, ensuring agility and transparency through a 7-year cooperation agreement.
- A multi-stakeholder governance model (government, private sector, academia, civil society) defines strategic priorities.
- Importantly, financial flows do not pass through the state treasury, enabling more flexible and efficient implementation.



Key results and differentiations

- Ability to combine multiple funding instruments (legal obligations, regulatory settlements, donations, blended finance), increasing financial viability.
- Strong regulatory certainty and alignment with the state strategic priorities, as it is monitored by the state of São Paulo.
- Facilitation of land access for restoration projects, addressing a major implementation bottleneck.
- Economies of scale and enhanced traceability, enabling larger, more impactful interventions.
- Support for local supply chains and technical capacity, including farmers and service providers.

Key lessons

1. Institutional design matters as much as financial tools, particularly combining high level strategic oversight with independent operational management.
2. Blended finance requires sequencing, with pilot projects helping to de-risk and attract larger investments.
3. Regulatory obligations can be repurposed as climate finance, creating new capital streams for nature-based adaptation.
4. Territorial context shapes financial solutions, requiring tailored approaches rather than one-size-fits-all models.

FINACLIMA demonstrates how subnational governments can structure finance mechanisms aligned with both regulatory frameworks and market demand. The mechanism is expected to support up to 1.5 million hectares of restoration by 2050.

For more information

- finaclima@sp.gov.br
- <http://www.semil.sp.gov.br/finaclima-sp>
- Presentation slides: [PPT available here](#)



Lombardy

Green Budgeting:

An early-state experience

WHO

Lombardy presented its early-stage experience with green budgeting, starting in late 2024 with the establishment of an **interdepartmental working group** involving multiple departments to ensure broad ownership and expertise (environment & climate, budget & finance, planning & external relations, agriculture & forest, territory & green systems).

WHAT

The process combined two initiatives:

- A European Commission-funded project (TSI) to implement a methodology to assess green expenditures
- The Under2 Coalition's Next Generation Budget project, focused on training and peer learning

WHY

This process is linked to the regional budget cycle and strategic frameworks, including the Regional Strategy for Sustainable Development, the Regional Programme for Sustainable Development, the Climate Law, and the Regional adaptation strategy adopted in 2025.

WHEN

The region chose to implement ex-post tagging, analysing expenditures based on legal acts after budget adoption by April 30 by regional government, and by July 31 by regional council

WHERE

The methodology is based on the EU taxonomy, and was implemented and tested on a sample of expenditure commitment decrees.

Initial results include:

- Development of a functional tagging methodology, based on the six environmental objectives of the EU taxonomy, assessing whether expenditures positively contribute to environmental objectives, and do not harm other objectives
- Testing on budget data
- Engagement of over 230 staff across departments
- Recognition of Lombardy's work on green budgeting in Moody's 2025 rating

The experience highlights the importance of capacity building, internal coordination, and learning from other regions.

i For more information

- [Green Budgeting in Lombardy Region](#)
- [Next Generation Budgets - Transforming State and Regional Budget for Net Zero](#) (Under2 Policy Report - September 2025)
- Presentation slides: [PPT available here](#)

Andalusia

Linking Green Budgeting

with climate planning and monitoring

In addition to the panel interventions, participants from the audience also took the floor to share concrete experiences from their regions. Notably, Andalusia provided an example of an integrated approach to green budgeting.

The region highlighted that its system is anchored in its 2018 climate law, which establishes green budgeting as a strategic priority within the Andalusian Climate Action Plan. As part of this framework, Andalusia produces two complementary annual reports:

- An **ex-ante report**, assessing the alignment of the budget with climate objectives
- An **ex-post report**, evaluating actual implementation

Both are publicly available and developed through collaboration between environmental and budget planning departments.

A detailed methodology has been developed, aligned with international frameworks such as the EU taxonomy.

It includes three steps:

1. analysing the climate relevance of budget indicators,
2. applying quantitative weighting coefficients, and
3. assessing programmes based on their institutional mandates and responsibilities.

In parallel, the regional climate office produces an annual monitoring report tracking KPIs, including climate-related expenditures.

This system creates a strong link between regional budgeting and climate policy implementation and monitoring, allowing for improved transparency and coherence.

i For more information

- Regions4 Case Study, available in English and Spanish: [From Budget to Impact: How Andalusia is Aligning Public Finance with Global Sustainability and Climate Goals](#)



Acknowledgement

We would like to thank the speakers who shared their experiences and insights during this session:

- **Sustainable Finance Observatory:** Emilie Maehara, Deputy Executive Director
- **Québec (Canada):** Philippe Grégoire, Climate Change Advisor, International Partnerships, Carbon Market Directorate
- **Catalonia (Spain):** Maria José Sarrias, Director of the Catalan Office for Climate Change
- **Île-de-France (France):** Daniel Richard, Climate Change Adaptation Officer
- **São Paulo (Brazil):** André Previato, Special Advisor to the Cabinet
- **Lombardy (Italy):** Maria Chiara Merlo, Administrative officer – Strategic Planning and External Relations Department

About this Brief for Action

This brief for action is part of a series aiming to inform Regions4 members on key results and recommendations based on Regions4 research and Community of Practice sessions.

- **RegionsAdapt** is Regions4 climate initiative gathering more than 85 regional governments. It mobilizes ambition and action on climate adaptation by facilitating access to the latest innovations, tools, and best practices at the regional level.
- **RegionsAdapt Community of Practice** offers a space for regional governments to present their expertise and to learn from each other, discuss and engage, in a series of learning sessions on focused topics on adaptation, so as to help them gain capacity and improve their own policies and activities on adaptation.

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For more information on the initiative, please visit:

