



Photo: Quangpraha

Addressing Climate Justice in Regional Adaptation Planning and Actions

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Acknowledgments

Authors: Méli^sa Cran (Regions4), with the support of Regions4's climate team.

Design: Agencia Satellite

Special thanks and recognition to: Anezka Jandova for her Master's thesis, supervised by Elisa Sainz de Murieta (BC3) and Noelia Zafra-Calvo at BC3. Their work and contributions has been instrumental in shaping this report.

We also extend our gratitude to our focal points from [Catalonia](#) (Spain), [KwaZulu-Natal](#) (South Africa), [Flanders](#) (Belgium), and [Wales](#) (United Kingdom) for participating in interviews with Regions4 and BC3.

Additionally, we thank the **teams at CDP** for their support in collecting data from RegionsAdapt members.

Thanks to

Québec 

for its support to RegionsAdapt.

+ FOREWORDS

In the pivotal year of the Global Stocktake, as nations globally reflect on their climate commitments, we are honoured to present the "RegionsAdapt Progress Report 2023" — focusing on climate justice in regional adaptation. Proudly led by the Basque Country, this international effort encourages regional collaboration, shared learning, and a collective push towards a more sustainable, equitable, and resilient future.

Addressing climate justice is at the core of our mission. In the Basque Country, our commitment to inclusion and equity drives us to address climate justice in a holistic way, as exemplified by our action line to integrate a gender perspective into climate change initiatives. Climate policies are not gender-neutral; they can perpetuate inequalities if they do not converge with equality policies.

This report is a testament to our collective dedication. Through this initiative, we aim to ensure that the benefits of climate adaptation reach every corner of our societies. We aspire to leave no one behind and to protect our most vulnerable communities and ecosystems. This report provides an insight into our progress, the challenges we've faced, and the path forward as, together with regions across the globe, we are determined to craft a future where the allure of our planet is preserved for generations to come.

Climate change is intensifying in many parts of the world, and Québec is no exception to this trend. In 2023, we were impacted by extreme weather events, including intense rainfall and major wildfires, which affected several regions and communities.

In the face of this reality, it is important to recognize that not all individuals and groups in society have the same capacity to cope with these situations; conversely, the impacts of climate change can reinforce pre-existing vulnerabilities and inequalities. Consideration of these equity issues in the development, planning, implementation, and assessment of our policies has clearly become a necessity.

This report rightly details the progress achieved by subnational states regarding action on climate justice. It illustrates the measures they are taking to address the climate crisis while also taking social issues into account. This puts them at the forefront of adaptation actions and best practices. Québec is proud to contribute to the publication of this report, which ultimately fosters innovation and encourages boldness in our public policies.



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LEADING REGIONS IN THE RACE TO RESILIENCE

+ Accelerating adaptation at a subnational level

RegionsAdapt is the flagship **climate initiative of Regions4**, dedicated to advancing climate change adaptation efforts at the subnational level, encompassing **states, provinces, and regions**. Since its launch in 2015, the RegionsAdapt platform has been committed to **fostering collaborations and enhancing capacities** to assist over 70 subnational governments implement strategies for addressing the impacts of climate change.

+ Analyzing climate adaptation data

Since the inception in 2015, Regions4 has **partnered with the non-profit CDP organization**, urging member regions to participate in the **worldwide environmental disclosure system** by reporting their actions and advancements in the online **CDP States and Regions Questionnaire**. Each year, the annual RegionsAdapt Report concentrates on a subset of its members, **evaluating their climate risks, monitoring progress and trends**, and promoting peer-to-peer learning for the replication of effective adaptation measures.

+ Contributing to the Race to Resilience

In 2021, RegionsAdapt became an official **partner of the Race to Resilience campaign**, led by High-Level Climate Champions for Climate Action. In collaboration with global partners, the campaign strives to **increase the resilience of 4 billion people in vulnerable communities by 2030**. RegionsAdapt stands out by actively involving states, regions, and provinces in the campaign, empowering them to demonstrate, stimulate, and enhance ambition in alignment with their local context. By analysing CDP data and aligning it to the Race to Resilience Metric Framework, the **RegionsAdapt annual reports strengthen accountability and bolsters global adaptation progress** shared with the UNFCCC - most notably through the UNFCCC Global Climate Action Portal (GCAP) and the Race to Resilience campaign.

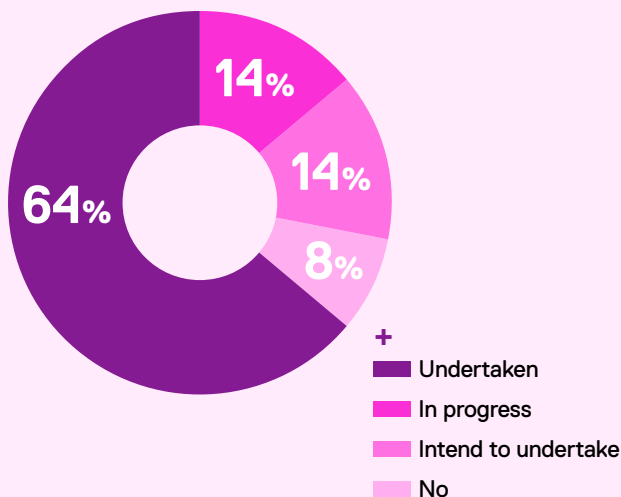


PROGRESS REPORT 2023 KEY FINDINGS

Since 2021, 36 RegionsAdapt members have reported on their progress, with 27 providing updates in 2023.

1 ASSESS

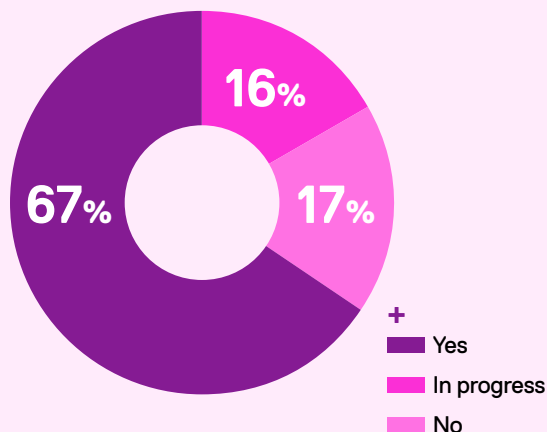
Percentage of RegionsAdapt members reporting since 2021 (36) with risk and vulnerability assessments:



2 PLAN

72% of RegionsAdapt members reporting since 2021 (36) have established at least one adaptation goal.

Percentage of RegionsAdapt members reporting since 2021 (36) with climate action plan or strategy that encompasses adaptation:



3 ACT

In 2023, 174 adaptation actions were reported by 27 regions:



38%
on climate risk
governance and
capacity building **+**



16%
on sharing
knowledge and
best practices **+**



15%
on climate-proofing
of infrastructure and
services **+**

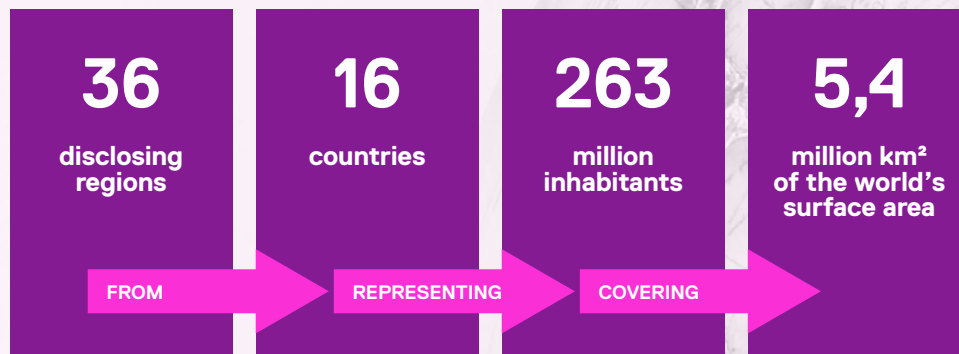


14%
on nature-
based solutions **+**

+ 33 of these actions have quantifiable impacts, benefiting over **66** million people **+**

4 REPORT

Since 2021:



Disclosing RegionsAdapt Members List



AUSTRALIA

Australian Capital Territory*
South Australia*

BRAZIL

Ceará
Goiás*
Minas Gerais*
Paraná*
Rio Grande do Sul*
Rio de Janeiro*
São Paulo
Tocantins

BURKINA FASO

Centre Nord

CANADA

British Columbia*
Prince Edward Island*
Québec*

COLOMBIA

RAP Pacífico

ECUADOR

Santa Elena
Pastaza*

FRANCE

Auvergne-Rhône-Alpes*
La Réunion

ITALY

Lombardy*

IVORY COAST

Sud-Comoé

MEXICO

Baja California Sur*
Campeche*
Guanajuato*
Jalisco*
Yucatan*

NIGERIA

Cross River State*

SENEGAL

Gossas

SOUTH AFRICA

KwaZulu Natal*

SPAIN

Basque Country*
Catalonia*
La Rioja*
Navarra*

UNITED KINGDOM (UK)

Scotland*
Wales*

UNITED STATES OF AMERICA (USA)

California*

*Updates in 2023

A FOCUS ON CLIMATE JUSTICE: BRIDGING INEQUALITIES IN A CHANGING WORLD

+ The inequalities of climate change

Climate change is more than an environmental crisis – it is fundamentally a global crisis of civilization and of development, with strong social and economic components. **Disproportionately affecting marginalized and vulnerable communities**, the climate crisis aggravates existing social disparities. Consequently, addressing climate change requires tackling multiple facets of inequality as a core element. These facets include historical responsibility for climate change, disparities in power and interests between wealthy and poor countries, differences between the rich and poor within countries, inequalities between men and women, among generations, and among others.

Vulnerability, understood in the [IPCC AR6 Synthesis Report: Climate Change 2023](#) (IPCC AR6) as the propensity or predisposition to be adversely affected, and encompassing a variety of concepts and elements like **sensitivity** or **susceptibility to harm** and **lack of capacity** to cope and adapt; is higher in locations with more accentuated poverty rates, governance challenges and limited access to basic services and resources. It is further exacerbated by marginalization, exclusion of vulnerable groups, and structural inequalities. It is also well-known that **climate change does not affect all countries and communities equally**: those who have contributed less to the problem will tend to suffer the most.

+ Unpacking notions behind climate justice

The IPCC AR6 argues that **prioritizing equity, climate justice, social justice, inclusion, and just transition processes can facilitate both adaptation and ambitious mitigation actions, fostering climate-resilient development.**

Taking its roots in environmental justice, the concept of climate justice has experienced a significant surge in use and popularity in recent years; yet, climate justice is understood in many different ways. In this report, we will focus on the approach of the IPCC AR6 which defines Climate justice as:

“Justice that links development and human rights to achieve a human-centred approach to addressing climate change, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly”.

Other concepts in the broader literature that are often associated with climate justice, include:

- ♦ **No-one left behind**: the central transformative promise made by the UN Agenda 2030 and a growing element of policies and initiatives related to climate change and sustainability.
- ♦ **Just Transition**: as defined by the International Labour Organization, means “greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind”. The concept originated as a trade union requirement for the fair treatment of workers whose livelihoods or jobs were dependent on fossil fuels and thus, at risk in a low-carbon future. It is now often used more broadly, linking the climate transition with social equity and justice issues.
- ♦ **Just Resilience**: as mentioned in the EU Adaptation Strategy, refers to “achieving resilience in a just and fair way so that the benefits of climate adaptation are widely and equitably shared”. It recognizes that adaptation measures need to consider that unequal exposure and vulnerability to climate impacts of different regions and socio-economic groups worsens pre-existing inequalities and vulnerabilities. There adaptive capabilities differs according to groups.



Photo: Mark Butterworth

+ Progress on climate justice at the international level

In the year of the Global Stocktake, assessing the progress of governments on their climate commitments and the ongoing negotiations on the Global Goal on Adaptation, **the question of how to tackle vulnerability and develop resilient solutions that target the most vulnerable populations is key.**

Some progress has been made in the context of the international climate convention. For instance, by establishing a dedicated agenda item to address **issues of gender and climate change**, Parties to the UNFCCC have recognized the importance of involving women and men equally in UNFCCC processes and ensuring that national climate policies that are gender-responsive.

Furthermore, the concept of loss and damage, rooted in Article 8 of the Paris Agreement, recognizes the importance of “averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including

extreme weather events and slow onset events.” In other words, it refers to impacts from climate change that cannot be avoided through adaptation actions, including those which have already occurred and those which are inevitable in the future (Adger, 2023). Such impacts are particularly felt by highly vulnerable countries and communities, including small island states and less developed nations and regions. As effective financing mechanisms aimed at assisting the most vulnerable are pivotal to rectifying historical and contemporary inequities, **the creation of a Loss and Damage fund** at COP27 Sharm-el-Sheikh was praised as a major outcome of the conference.

+ Growing focus on climate justice at the regional level

Subnational governments (states, provinces, and regions) play a crucial role in climate adaptation, **bridging the gap between national and local levels**, as well as **between urban and rural areas**, often **holding authority over key climate domains** such as energy, transportation,

land use, housing, disaster management, and natural resources.

Subnational governments can play a role in leading just and effective climate resilience efforts, by actively engaging marginalized communities in **shaping bottom-up policies** that span different decision-making levels, and by fostering **inclusive adaptation**. By adopting **cross-sectoral approaches**, prioritizing the voices that are less heard and involving communities in policy-making, they can create adaptation strategies that align with diverse community needs and **benefit all stakeholders**.

Initiatives promoting climate justice at the regional level - which explicitly address multifaceted inequalities within climate change adaptation strategies - can **rectify disparities** in resource access, assets, services, decision-making power, and leadership. Such efforts are pivotal and can be **upscaled for inspiration** at the national level, helping to realize the shared vision of the Agenda 2030. This further ensures that **new adaptation policies effectively tackle both climate justice and social issues**, leaving no one behind.



+ This report examines how subnational governments are integrating vulnerable populations and climate justice dimensions in their adaptation planning and actions. The information is drawn from a literature review, CDP States and Regions data, and interviews conducted by the Basque Centre for Climate Change and RegionsAdapt with Catalonia, Wales, Flanders, and KwaZulu-Natal.

While not exhaustive, this report offers insights and recommendations for identifying and including the most vulnerable in climate adaptation efforts, considering the essential role played by subnational governments. It is structured around the 4 commitments of RegionsAdapt: assessing climate change impacts, planning adaptation strategies, implementing concrete adaptation actions and reporting on progress.

1 ASSESS

IDENTIFYING VULNERABLE GROUPS IN CLIMATE RISK AND VULNERABILITY ASSESSMENTS

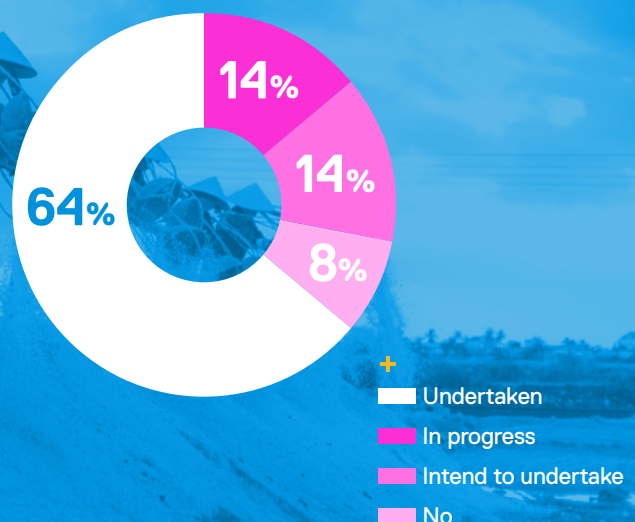
→→ *When joining RegionsAdapt and Regions Race to Resilience, subnational governments commit to evaluating the impacts of climate change in their territory by developing risk and vulnerability assessments that includes all vulnerable communities.*

A comprehensive understanding of how climate change affects their territory, obtained through climate risk and vulnerability assessments, enables subnational governments to make informed decisions that strengthen the resilience of their jurisdiction.

Risk involves the potential for impacts, considering projected climate changes, likelihood, and exposure, while vulnerability reflects the propensity or predisposition of a system to be adversely affected by these changes.

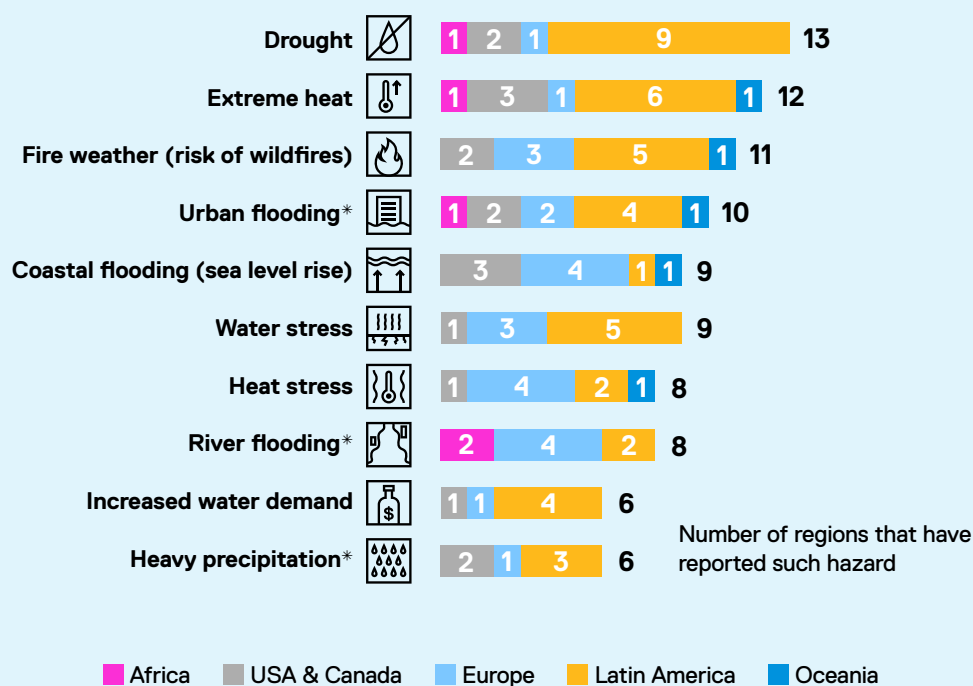
64% of RegionsAdapt members reporting since 2021 (36) have undertaken risk and vulnerability assessments, marking an increase from last year's figure (53%) due to the completion of some assessments and the addition of new reporting regions.

+ Percentage of RegionsAdapt members reporting since 2021 (36) with risk and vulnerability assessments:



+ 2023 reported hazards: Drought and Heat lead again

Top 10 hazards reported in 2023



In 2023, the 27 disclosing regions reported facing 137 climate change hazards. The graph above depicts their distribution across geographical areas. Like previous years, **drought** remains the most common, affecting around 48% of regions, followed by **extreme heat** at approximately 44%. Notably, **wildfires** are now more frequently reported, with about 40% of regions mentioning them.

**It's important to note that heavy precipitation and flooding may seem less prominent in the chart compared to previous years as this category is now divided into "Urban flooding," "River flooding," and "Heavy precipitation," which could affect the perception of their visibility on the chart.*

+ Diverse approaches to regional climate risk and vulnerability assessments

Looking at RegionsAdapt members, many subnational governments conduct separate climate risk and vulnerability assessments, often as standalone analyses (e.g., [Australian Capital Territory](#), [British Columbia](#), [Guanajuato](#), [Paraná](#), [Prince Edward Island](#), [Scotland](#), [Wales](#)) or using online tools (Observatoire regional climat air energie in [Auvergne Rhone Alpes](#), LifeNadapta-CC in [Navarra](#), EscenariosKlima in the [Basque Country](#), Clima Gerais in [Minas Gerais](#)).

However, a majority of the subnational governments reviewed opted for direct integration into other planning key documents, primarily within their **Climate Strategy or Plan** ([Catalonia](#), [KwaZulu-Natal](#), [Campeche](#), [Jalisco](#), [Rio de Janeiro](#), [South Australia](#), [Basque Country](#), with a few also incorporating it into their Disaster Risk Management ([Pastaza](#), [Rio Grande do Sul](#)).

Desk reviews, stakeholder and expert consultations, stakeholder workshops, and community-based approaches are among the prevalent techniques employed for conducting risk and vulnerability assessments. They are often supported by quantitative data (census data, downscaled climate models, spatial analysis) and simulations models.

+ Identifying vulnerable groups in climate assessments

In risks and vulnerability assessments completed by most states and regions, the focus is often on identifying the vulnerabilities of sectors or systems to specific climate hazards, but less on identifying how climate change specifically affects certain population groups.

While a few recent assessments and studies (such as [Prince Edward Island](#) in 2021 and [Basque Country](#) in 2023, amongst others) have started to incorporate gender and indigenous perspectives, some subnational governments acknowledge the need for further addressing risks concerning ethnic minorities, marginalized low-income populations, and gender-specific issues in their future assessments. Providing explicit and specific information about these groups allows for a better comprehension of each region's unique context, as the composition of vulnerable groups and communities may vary from one region to another, as well as from a risk to another.

Among the 27 RegionsAdapt members who reported in 2023, only 56% regional governments indicated that their climate risk and vulnerability assessments considered vulnerable groups:

- In the Australian Capital Territory, a [Longitudinal Survey on Climate Change](#), involving 2,671 participants, assessed overall resilience to the effects of climate change and identified areas of high and low resilience. As shown in the study, the population typology with lower resilience is most likely to be a renter, a woman, aged 25-44, born overseas, with

a low formal education, living in a unit/apartment.

- **British Columbia** completed a [Preliminary Strategic Climate Risk Assessment](#) in 2019, which evaluated the likelihood of 15 climate risks events that could occur in British Columbia along with their health, social, economic, and environmental consequences, notably on specific population groups. The province is also developing a provincial Disaster and Climate Risk and Resilience Assessment in consultation and collaboration with communities and Indigenous peoples that builds on B.C.'s Preliminary Strategic Climate Risk Assessment and integrates climate and disaster risk.
- In **Catalonia's** new Strategic Reference Framework for Adaptation to Climate Change for the Horizon 2030 ([ESCACC30](#)), the main climate impacts and vulnerabilities include for the first time the cross-cutting nature of social vulnerability (including the gender perspective), and territorial vulnerability.
- In **California's** [Fourth Climate Change Assessment](#), key findings highlights the need to protect the most vulnerable populations and communities, recognizing that vulnerability arises from a combination of physical, social, economic, and demographic factors.
- **Guanajuato** has two separate documents, including its [Climate Diagnostic](#) (updated in 2021) and its [Prospect of Vulnerability to Climate Change](#) (2022). The latter features a focus on social conditions such as age and gender repartition, poverty, isolation, and income; and makes the case for developing indicators to assess women's vulnerability to climate change.
- In **Jalisco**, the [diagnosis and assessment of health vulnerability to climate change](#) identified both social groups (children, elderly, and those with chronic disease) as well as specific geographical inhabitants as vulnerable groups using the CONAPO's 2010 urban marginalization index estimation.
- The **Minas Gerais** Climate Vulnerability Index (IMVC), established in 2014, and shared on the [Clima Gerais](#) Platform, offers detailed insights into the vulnerability of the various territories within the state, and confirmed that most economically disadvantaged municipalities in the state are situated in areas with high climate vulnerability and limited adaptive capacity.
- **Prince Edward Island's** (Canada) [Climate Change Risk Assessment](#) (CCRA) published in 2021 includes a section on the climate risks that are unique to Indigenous communities, and is based on interviews and reviews of existing studies.
- In the **UK's third Climate Change Risk Assessment** (UKCCRA3), which informs **Scotland** and **Wales**, authors were asked to assess the key socio-economic factors that influence vulnerability, how they interact with climate, and what their relative importance or contribution are. An additional research project was commissioned to update UK socio-economic data in the report. Parts of the report discuss risks or opportunities across affected populations, and assess inequalities in relation to the impact of climate change, as well as those generated by any relevant adaptation responses.
- Other regions that mention taking into account vulnerable populations in their climate assessments include, **KwaZulu-Natal, Campeche, Paraná, Rio de Janeiro** and **Yucatan**.



The World Risk Poll, carried out by the independent global charity, Lloyd's Register Foundation (LRF), includes a major thematic focus on global perceptions and experiences of climate change related risks, such as severe weather and the different forms of resilience that individuals, households, communities, and societies need to cope – intelligence that can be of great use to policymakers and businesses responding to the complex and connected crises of our changing world. [Read more here.](#)

Photo: Guaruda

+ Recognizing factors shaping climate vulnerabilities

Although many regions may not explicitly identify vulnerable groups in their climate assessments, subnational governments often possess awareness of vulnerable communities through administrative data or policies.

An analysis of the responses from RegionsAdapt members to the CDP States and Regions questionnaire reveals that

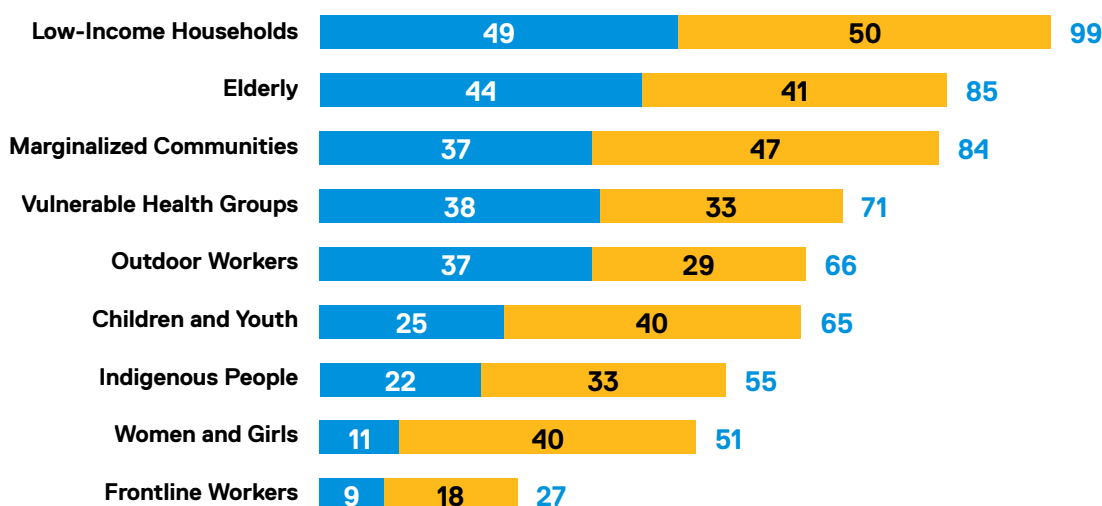
subnational governments recognize the significance of factors such as age, gender, chronic illness, income, and ethnicity in influencing vulnerabilities to specific climate hazards (see graph below).

For instance, socially vulnerable groups often face heightened exposure to climate change impacts when they live in areas with subpar environmental conditions, such as limited green spaces, poor air quality, or inadequate housing. Limited adaptive capacities, due to low socio-economic

status or education levels, hinder their ability to effectively respond to and recover from climate-related hazards. Population groups with specific sensitivities, such as age and health factors, are more likely to be impacted by extreme heat-related events.

Analysing the differences between gender, race, ethnicity, and social class with regards to the effects of climate change, reveals **the need for disaggregated indicators** in issues such as energy poverty or the health effects of climate change.

Vulnerable Population Groups Most Exposed to Climate Change Hazards



Number of occurrence by region from:

■ High-income countries ■ Lower and upper-middle income countries

For each of the 137 climate-related hazards reported by the 27 regions in 2023, regional governments were asked to identify the most exposed vulnerable population groups. The chart above highlights the most vulnerable population groups reported by the regions, categorized by country income level ([World Bank Classification](#)). Regional governments from high-income and middle-income countries both identify **low-income households**, the **elderly**, **vulnerable health groups**, and **marginalized communities** among their top 5 vulnerable population groups. However, high-income regions also include **outdoor workers**, while middle-income regions specifically emphasizes **women and girls**.

REGIONS IN ACTION: Identifying Climate Vulnerabilities in Baja California Sur

While Baja California Sur (Mexico) is still finalizing its Climate Risk Assessment, it has effectively identified vulnerable populations to climate change through a comprehensive approach. Leveraging data from the 2020 national census, they pinpoint remote rural communities facing limited adaptive capacities due to their geographic isolation. Additionally, the assessment considers climate vulnerabilities related to hurricanes, water stress, rising sea levels, and flooding within municipalities, which are compounded by widespread marginalization. A concurrent energy vulnerability diagnosis highlights five priority communities in need of support. Finally, community workshops, which ensure the participation of women, the elderly, youth, and indigenous groups, help consolidate efforts and direct financial resources to those who need it most.

The **geographical location of communities also significantly influences their vulnerability** to climate change. For instance, farmers and rural communities are particularly susceptible to drought, water stress, extreme temperatures, and heavy precipitation. Similarly, individuals residing in coastal zones and areas prone to heatwaves, flooding, and bushfires encounter increased climate-related risks.

As reported in the CDP 2023 States and Regions questionnaire, these **geographical factors can intersect with socioeconomic conditions**, thereby amplifying challenges for vulnerable population groups. The following examples highlight the diverse range of vulnerable groups and the varied impacts of climate change, exacerbating inequalities and emphasizing the urgent need for targeted adaptation and mitigation efforts:

- Disadvantaged coastal communities in **California** will be at over five times higher risk of living near flood-prone areas by 2050 than the general population, rising to over six times the risk by 2100 due to coastal erosion.
- Changing conditions, such as ocean acidification in **British Columbia**, coastal erosion in **Prince Edward Island**, and permafrost thawing in northern **Québec**, lead to long-term psychological impacts for those communities most connected to the ocean regarding culture and livelihoods, and in traditional territories.
- Heatwaves in **Baja California Sur, British Columbia, California, Australian Capital Territory, Prince Edward Island, and South Australia** pose public health risks, especially for seniors, children,

and individuals with health conditions. Cooling is unaffordable for almost a third of the population of **Australian Capital Territory**, exacerbating heat-related health issues and contributing to increased electricity demand and blackout risks.

- Wildfires exacerbate challenges for pregnant people, infants, and individuals with pre-existing health conditions in **British Columbia**, as well as for low-income workers with limited job flexibility or security in the **Australian Capital Territory** where they struggle to protect themselves and their property from fire threats.
- Flooding in **KwaZulu-Natal** disproportionately impacts children, women, people with disabilities, and the elderly, damaging infrastructure and livelihoods in vulnerable communities and threatening access to basic services.
- Droughts particularly affect small-scale farmers in **KwaZulu-Natal**, who suffer due to lack of insurance, further jeopardizing food security.
- Water shortages and infrastructure challenges affect low-income households and marginalized communities in **Cross River State, Paraná, Baja California Sur, and Jalisco**.
- Informal settlements in **KwaZulu-Natal** and **Jalisco** face significant impacts from extreme events like storms and floods due to inadequate housing, low income, and high rates of unemployment.

+ Creating methodologies to support assessment

Due to the unique contexts faced in each territory, subnational governments often develop their own methodologies for assessing vulnerable populations.

California, for instance, has created a comprehensive resource guide titled "[Defining Vulnerable Communities in the context of Climate Adaptation](#)," which includes various potential indicators. In 2022, they introduced the [Climate Vulnerability Metric \(CVM\)](#), a 5-Step method that identifies communities least resilient to climate impacts, considering factors such as human mortality, energy costs, and property damage as a percentage of local incomes. This approach accounts for economic inequality and the overall well-being of communities.

Meanwhile, the **Minas Gerais Climate Vulnerability Index (IMVC)**, established in 2014, has shown that economically disadvantaged municipalities in the state are primarily located in regions with high climate vulnerability and limited adaptive capacity.

Utilizing its Multidimensional Index of Needs of Families in **Goiás (IMCF)**, the Goiás Social Programme identifies and empowers families in the state's most at-risk areas, considering factors such as income, education, and housing conditions.

Finally, the [Methodological Guide to Provincial Strategies for Climate Change](#), developed by the Consortium of Autonomous Provincial Governments of Ecuador (**CONGOPE**) includes recommendations and steps for identifying gender bias in assessments and strategies.



A BC3 study of 226 adaptation policies in 57 regions (Olazabal et al., 2019) uncovers a lack of both socio-economic projections and alignments with climate scenarios, raising concerns about effectively translating risk knowledge into practical action. In light of these findings, there is a pressing need for systematic utilization of risk and vulnerability assessments to better inform policies and actions.

Photo: Sasint

Approaches to Climate Action: Insights from Diverse Communities

REGIONS IN ACTION:

+ Considering Climate Change From the Gender Perspective in the Basque Country

As outlined in the “Climate Change in the Basque Country from the Gender Perspective” study (2023), gender roles and social norms significantly influence how men and women contribute to and perceive climate change impacts. Moreover, power dynamics and the limited representation of women in critical areas and decision-making spaces impact the ecological footprint and the differential roles of men and women in climate change. Recognizing this, the Basque Country (Spain) prioritizes the integration of a gender perspective into policy and regulatory frameworks across sectors, by raising awareness about the gender approach and eco-feminist vision, integrating the gender perspective into climate change mitigation and adaptation, and promoting cross-cutting implementation of the climate and gender integrated approach within the administration. [Read more here.](#)

+ Building the Resilience of First Nations in British Columbia

British Columbia's (Canada) Climate Preparedness and Adaptation Strategy places a significant emphasis on collaboration with Indigenous peoples in addressing climate change. This commitment is reinforced by the B.C. Declaration on the Rights of Indigenous Peoples Act Action Plan. The strategy includes a \$2 million pilot project aimed at enhancing Indigenous climate resilience capacity, involving regional coordinators, education, training, and mentorship. Additionally, efforts are being made to improve inclusive and diverse Indigenous engagement, allocate stable funding for Indigenous leadership groups, and engage with youth, elders, and off-reserve Indigenous communities. Furthermore, a project led by the First Nations Emergency Services Society is creating an Indigenous Climate Research and Data Portal, ensuring culturally appropriate climate data is accessible to Indigenous communities while respecting cultural sensitivities. This comprehensive approach reflects the province's commitment to integrating Indigenous knowledge and priorities into climate preparedness and adaptation efforts. [Read more here.](#)



+ Scotland's Climate Assembly and Children's Participation in Climate Policy

The Scottish Climate Assembly, composed of over 100 representative participants, met virtually from November 2020 to March 2021 to address how Scotland (UK) should combat the climate crisis fairly and effectively. This assembly exemplifies Scotland's commitment to open government and involves citizens in the journey toward net zero emissions. The recommendations from this assembly offer valuable insights into the desires and visions of the Scottish population. To ensure the participation of younger children (aged 7-14), Children's Parliament collaborated with over 100 children from diverse backgrounds. This reflects Scotland's dedication to upholding children's rights, as demonstrated through the UNCRC Bill. The contributions of children have been valuable in shaping the assembly's discussions. Engaging a broad audience and different sectors of Scottish society in climate policy requires collaboration with various organizations across the country. [Read more here.](#)

+ Taking Into Consideration Future Generations in Wales

The Well-Being of Future Generations (Wales) Act in Wales (UK) is a significant piece of legislation that requires public bodies to prioritize the overall well-being of the nation, including the social, economic, environmental, and cultural aspects, for the benefit of current and future generations. This law establishes key well-being goals, notably "a resilient Wales" and "a more equal Wales," which are highly relevant to climate justice. It promotes long-term thinking, cooperation among public bodies, preventative measures, and a comprehensive approach to addressing challenges. The Act also forms public service boards (PSBs) responsible for creating well-being plans and ensuring social equity in climate change actions. Additionally, the Future Generations Commissioner for Wales plays a vital role in safeguarding future generations' interests and supporting public bodies in achieving well-being goals. Essentially, this Act serves as a guiding framework for all governmental and public actions in Wales, with a strong emphasis on equality and resilience. [Read more here.](#)

2 PLAN

INTEGRATING JUSTICE DIMENSIONS IN ADAPTATION PLANS

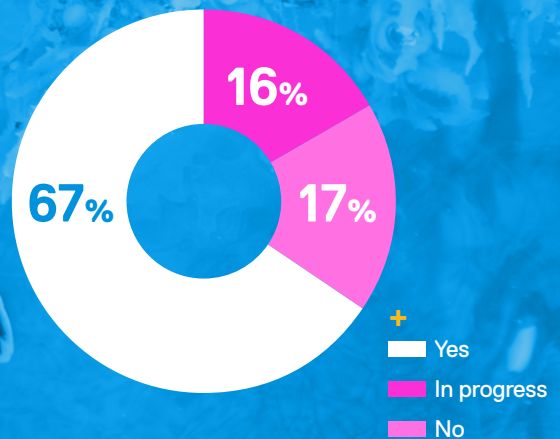
→→ *When joining the RegionsAdapt initiative and Regions Race to Resilience, subnational governments commit to planning, prioritizing, and adopting an ambitious adaptation plan or programme, mainstreaming adaptation into other sectoral policies, including the most vulnerable populations, and establishing interim targets and long-term goals.*

Among the 36 RegionsAdapt members reporting through CDP since 2021, 72% have established at least one adaptation goal. These goals often stem from climate action plans, or are integrated into other sustainable development and nature conservation frameworks. However, few of these regions have established specific metrics or monitoring frameworks for these goals.

About half of the regions with adaptation goals align them with 2030, following the timelines of the Sustainable Development Goals and Sendai Framework for Disaster Risk Reduction.

Only three regions explicitly target vulnerable populations in their adaptation goals. For example, California aims to 'strengthen protections for climate-vulnerable communities,' Minas Gerais seeks to 'promote adaptation for the most climate-vulnerable individuals,' and Guanajuato aims to 'enhance the adaptive capacity of vulnerable individuals in the face of climate change. It's possible that other regions have similar goals not reported through CDP.

 Percentage of RegionsAdapt members reporting since 2021 (36) that have a climate action plan or strategy that encompass adaptation:



+ Including climate justice dimensions in adaptation strategies and programs

As the IPCC outlines, present adaptation strategies do not sufficiently include poverty reduction or address the underlying social determinants of human vulnerability such as gender, ethnicity, and governance.

To allow for stronger inclusion of social justice and equity into climate actions, climate plans or programmes should look at integrating three main justice dimensions recognized by the IPCC AR6:

- ♦ **Recognition justice** entails basic respect, and robust engagement, with and fair consideration of diverse values, cultures, and perspectives.
- ♦ **Distributive justice** in adaptation planning examines how the burdens, and benefits, and disadvantages of climate policy measures are distributed.
- ♦ **Procedural justice** refers to who decides and participates in decision-making. In adaptation planning, this entails the fairness of various policymaking phases and requires examination of equitable participatory opportunities, the transparency and impartiality of decision-making, and the accountability of decision-makers to citizens and residents.
- ♦ Another key dimension, not mentioned by the IPCC but often cited in research, is **restorative justice**, which aims to restore dignity and agency to those who have lost it.

Various methodologies are employed to evaluate the inclusion of these dimensions in policy planning, and one such method is the [Adaptation Justice Index](#), which has recently been applied in research projects. Its indicators can be used to guide and assess adaptation plans at the national and city level (Juhola, 2022), as well as the European regional level (Jandova, 2023).

In these papers, recognition and restorative justice received low scores on all levels, indicating a lack of assessment of societal structures and their impact on group adaptation. It also denotes a lack of compensation mechanisms. On the brighter side, the other two dimensions fared better in the evaluation. **Regions frequently exhibit proactive engagement in procedural justice by enabling participation in policy-making processes. Additionally, distributive justice is often addressed through comprehensive risk and vulnerability assessments, complemented by reflective discussions on maladaptation.**



Photo: Elias Falla

REGIONS IN ACTION: Climate Justice as a Core Pillar in Minas Gerais' New Climate Action Plan

In 2023, the Government of Minas Gerais in Brazil unveiled its groundbreaking State Climate Action Plan in partnership with UKPACT, CDP, ICLEI, and the State Foundation of Environment (FEAM), a product of extensive public consultation. This forward-looking plan pioneers a novel approach by placing Climate Justice as one of its four foundational pillars, alongside mitigation, adaptation, and innovation, emphasizing its pivotal role in shaping deliberations and decisions. The Climate Justice pillar proactively addresses the protection of human rights for marginalized communities while confronting longstanding socioeconomic and territorial disparities. This pillar encompasses a wide range of initiatives, such as empowering vulnerable communities through organic farming, offering employment opportunities, and fostering sustainable tourism. These measures not only bolster their capacity to adapt but also diminish health hazards linked to climate change. The plan incorporates essential elements like financial mechanisms, governance enhancements, and educational programs that specifically target disadvantaged groups. Furthermore, the plan goes beyond the surface by recognizing that inequalities intersect with all aspects of the program. It meticulously scrutinizes each facet of the Climate Action Plan to assess its impact on gender, race, and class. By shedding light on how proposed measures counteract historical disparities, this marks a significant stride toward achieving a more equitable and just approach to climate action. [Learn more about this plan here.](#)

+ Increasing recognitional justice

The core idea of recognitional justice is the acknowledgement of the plurality among societal actors and their differing adaptation needs and abilities (Jandova, 2023).

While most governments are only beginning to work with the concept of recognition within adaptation planning, this topic has emerged in some recently published adaptation plans, in which vulnerable groups are more explicitly taken into account.

For instance, many European regions such as the **Basque Country**, **Catalonia**, **Flanders** recognized different regional adaptation needs. **Prince Edward Island's** Plan recognizes that “the impacts of climate change are not universal and will uniquely burden vulnerable populations”. As a result, it commits to “focusing on equity in [their] climate response”. Equity is also highlighted as one of the guiding principles of the **Australian Capital Territory Climate Change Strategy (2019-2025)**. This strategy prioritizes community leadership and a just transition that supports the most vulnerable in their community. One of the six **Californian** adaptation priorities

is to “strengthen protections for climate vulnerable communities, particularly low-income and rural communities, communities of colour, and tribal nations”. **Scotland** wishes to “empower people to make informed decisions about how best to adapt to climate change while considering their local knowledge”, thus embodying the essence of recognition justice. **Navarra** acknowledges the necessity of adopting policies protecting the most vulnerable groups from high exposure to the effects of climate change. **Minas Gerais** takes it one step further, by placing all dimensions of Climate justice at the core of its Climate Action Plan (see Regions in Action p.16).

REGIONS IN ACTION: Québec's Commitment to a Just Transition

The 2030 Plan for a Green Economy (2030 PGE) guides the Government of Québec (Canada) in its transition to address the climate emergency. One of the nine principles guiding Québec's actions is the "just transition," which connects the climate transition with social equity and justice issues. In doing so, it considers numerous issues related to the climate transition, including its impact on labor, current and future generations, Indigenous peoples, communities, and individuals who are particularly vulnerable to the effects of climate change. In 2021, a motion was unanimously passed in the National Assembly to support the Just Transition Declaration presented at the United Nations Climate Change Conference in Glasgow (COP26) in 2021, emphasizing Québec's commitment in this regard.

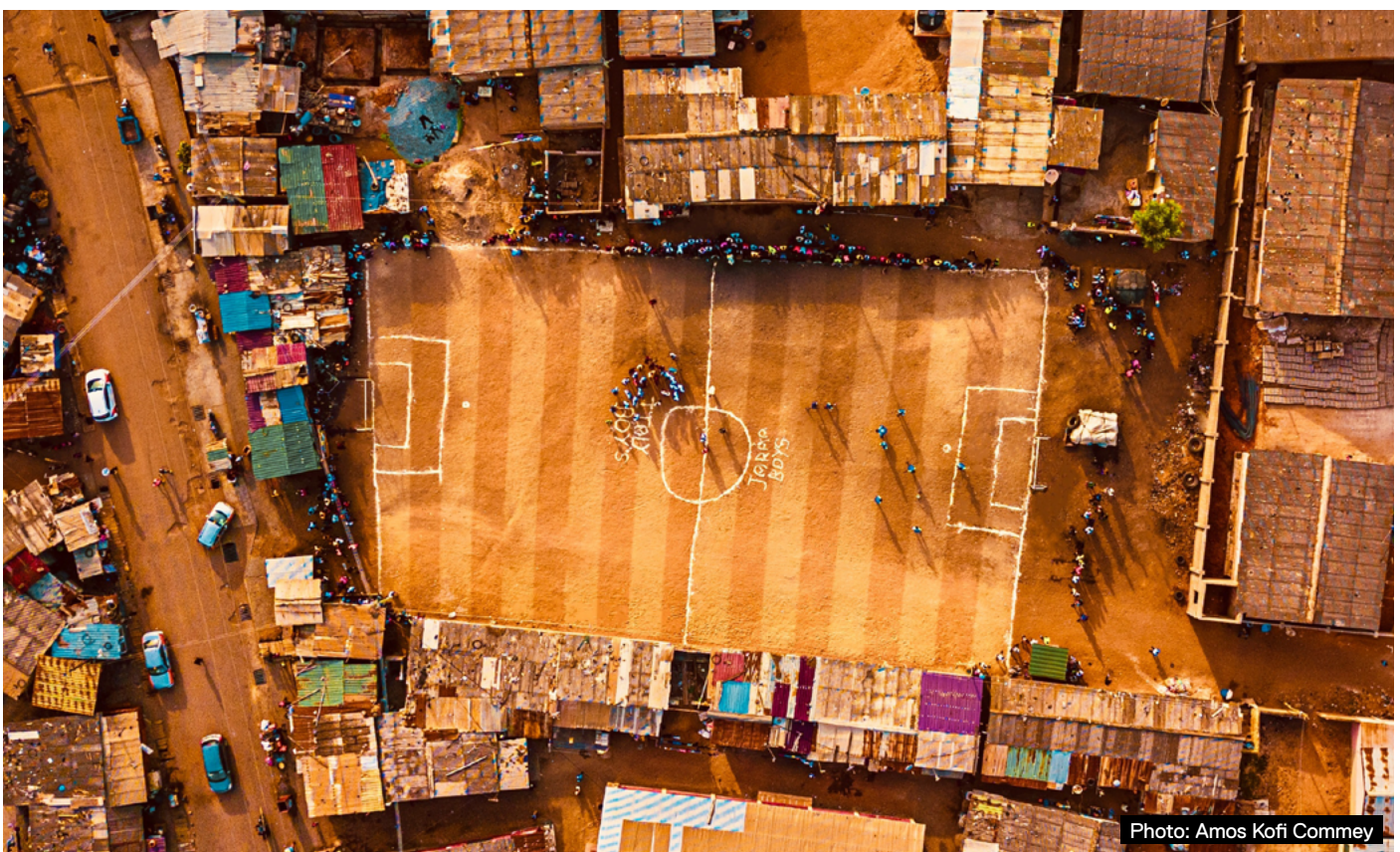


Photo: Amos Kofi Commey

+ Identifying the distribution of negative impacts

Distributive justice is considered in terms of how climate impacts are distributed in society, or how adaptation measures and their impacts, both negative and positive, are distributed across society. **Distributive justice is often addressed through comprehensive risk and vulnerability assessments, complemented by reflective discussions on maladaptation.**

Maladaptation includes distributional issues related to the negative consequences of implemented adaptation, for instance when adaptation measures shift vulnerability to or erode sustainable development for another group or locality. The extensive use of air conditioning to fight heat extremes gives rise to difficult issues regarding electricity consumption, peak electricity demand, and heat generated by equipment and its subsequent contributions to urban heat island effects. Green and blue infrastructure development should be mindful of potential gentrification that could harm low-income communities.

Striking a balance between climate resilience and broader societal concerns is vital for successful adaptation.

+ The right to meaningful participation in adaptation decision-making

A vast majority of subnational governments now include engagement with various stakeholders in the preparatory phases of climate planning and strategy making, though **consultations, workshops, ongoing dialogues and digital platforms** or forums. This emphasis on procedural justice and to the importance of having transparent collective discussions is highlighted by the existence of **engagement strategies** (such as those found in the following reports: [Quebec's Climate Action Engagement Strategy](#); [Climate Change Welsh Government Engagement Approach 2022-2026](#); [Australian Capital Territory Engagement Report](#), [Minas Gerais Engagement Report](#)).

However, **equity is not just about allowing for participation and public engagement. It is about going the extra mile to ensure that hard-to-reach and vulnerable populations have the resources and opportunities to participate.** There is a risk that adaptation options primarily benefit the more vocal, organized, or powerful groups within society or a given territory. Policymakers should be aware of this imbalance by giving less-represented

groups a chance to make their voices heard and taken into consideration. By investing in proper planning, tools, partnerships, and resources, regional governments identify and remove barriers for meaningful participation from all facets of the community.

In CDP reporting for RegionsAdapt, six subnational governments (**Australian Capital Territory, California, Minas Gerais, Prince Edward Island, Scotland, Wales**) have explicitly reported engaging with vulnerable population groups, and three have reported engaging with indigenous peoples (**British Columbia, KwaZulu-Natal, Pastaza**).

Additionally, stakeholder engagement should extend beyond the preparatory phase. In **KwaZulu-Natal**, the [Climate Change and Sustainable Development Council](#) promotes inclusive decision-making by uniting diverse stakeholders, with a focus on amplifying marginalized active participation and integration of expertise from women and indigenous communities. **Scotland** and **Catalonia** also involve stakeholders in evaluation and monitoring of their plans. Similarly, **Minas Gerais** is planning to include the participation of civil society and service sector in the monitoring of its recently published plan.



While the Mission Implementation Platform for Adaptation (MIP4Adapt) supports European regional and local authorities in preparing and planning their climate resilience adaptation pathways, it has developed a "do-it-yourself" (DiY) manual on ["Stakeholder and Citizen Engagement in Climate Adaptation: A DIY Manual"](#). This manual is available to all and is offered in different languages, to assist regional and local authorities in identifying the participatory activities, tools, and methods that can be implemented in their adaptation policy cycle.

REGIONS IN ACTION: Embracing Diversity in Catalonia’s Social Climate Change Forum

In Catalonia (Spain), the “Taula Social del Canvi Climàtic” or Social Climate Change Forum, stands as a notable example of procedural justice. This initiative, established on February 2022, is dedicated to representing Catalonia’s diverse society while striving for gender parity. 65 representatives from various sectors were meticulously selected. Operating under the Climate Change Law, the forum shares climate insights and engages in policy dialogues, advising the Department of Climate Action, Food, and Rural Agenda. This forum garners strong support from the Catalan government and society, offering the potential to genuinely involve vulnerable groups and citizens in processes, ensuring their voices are acknowledged and treated equally with the voice of sectors that have regular interactions with the administration. This capacity is reinforced by steadfast government and societal backing.

+ Empowering vulnerable groups through education and awareness and community self-organization

As mentioned by various regions through in-depth interviews with BC3 researchers, engaging with vulnerable groups in a sustained manner can be difficult due to their living conditions and struggles to meet basic needs, leading them to prioritize daily necessities over participating in city hall workshops or consultations. One potential solution, as recommended in the BC3 interviews as well as in the **Australian Capital Territory Climate Change Strategy**, is to **tap into community self-organization** to simplify government engagement with these groups, rather than reaching out to individuals one by one. An actionable recommendation is the establishment of

a directory of influential groups where individuals can readily engage, akin to the approach adopted by **Wales** in listing key collaborative entities in the climate change sphere.

Empowerment also lies in education and awareness initiatives. Numerous regions—including the **Basque Country, Lombardy Region, South Australia, Yucatan, Goiás, Wales, and KwaZulu-Natal**, among others—have actively embraced environmental education and awareness to involve citizens, vulnerable families, schools, and municipalities in climate change and sustainability initiatives. This ensures that communities are equipped with the requisite knowledge, resources, and capabilities to respond effectively to the challenges posed by climate change and participate equitably in adaptation strategies.

+ Allocating responsibilities related to adaptation

Subnational governments often play a pivotal role in facilitating collaboration among stakeholders to drive equitable development, emphasizing the importance of involving stakeholders throughout all phases of adaptation planning.

Many climate adaptation plans now specify responsible state entities for actions, with some regions establishing subnational agencies and departments to coordinate cross-sectoral efforts and roles, as seen in **Catalonia, Guanajuato and Jalisco, Flanders, and Cross River State**. In the **Scottish Adaption Plan** and in the [Team Wales approach](#), a whole-of-society approach based on societal ownership is put forward.



Photo: Muktinath Bista

REGIONS IN ACTION: Jalisco's Climate Leadership and Collective Engagement

The State of Jalisco (Mexico) acknowledges the climate emergency and strengthens synergies, cooperation, and governance schemes in response. Recognizing climate change as a complex issue with implications for its future development, particularly impacting women and communities in vulnerable conditions, the State established the Climate Change State Council. This Council, aligned with the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (also known as the Escazú Agreement) as well as Article 12 of the Paris Agreement, serves as a participatory and advisory body. Its purpose is to plan, program, and evaluate actions for mitigating greenhouse gas emissions, reduce vulnerabilities in people, ecosystems, strategic infrastructure, and productive systems, and also address the effects of climate change in the state. Comprising citizens from 10 social sectors, 12 territorial representation spaces, and two thematic schemes, the Council embodies a commitment to diversity and collective action. [Read more here.](#)

+ Restorative justice through loss and damage

Restorative justice in the context of adaptation has been discussed within the loss-damage debate, which highlights the experienced and irreversible losses and damages attributed to climate change and felt by the most vulnerable in society ([Juhola, 2022](#)).

REGIONS IN ACTION: Scotland's Pioneering Commitment to Climate Justice and Just Transition

Scotland's pioneering commitment to climate justice began in 2012 with the launch of the Climate Justice Fund (CJF), marking it as the world's first nation to allocate funds for this cause. Additionally, at COP26, the Scottish Government pledged to triple the CJF, reaching £36 million by 2026, and in parallel, becoming the first Global North government to pledge funding explicitly to address loss and damage. At COP27, Scotland led the way by again acknowledging its moral responsibility to assist developing countries in addressing loss and damage. It also established a critical partnership with the Climate Justice Resilience Fund, allocating an extra £5 million to tackle non-economic losses. These actions underscore Scotland's dedication to supporting vulnerable communities in partner developing nations and addressing deep-seated inequalities.

This commitment to equitable climate action extends beyond international policies and is woven into Scotland's domestic affairs. The Climate Change Act of 2019 embeds the principles of a just transition, understood as both a desired outcome—a fairer, greener future for all—and a collaborative process undertaken in partnership with those affected by the shift to a net-zero society. To support the realization of this ambition, the Scottish Government has committed to taking the lead in crafting pivotal just transition plans, with active participation from communities, businesses, unions, workers, and society at large in their co-design and co-implementation. The Just Transition Commission will play a key role in supporting the development and oversight of these plans, offering expert guidance in their formulation. For more information on Scotland's work on the [Climate justice Fund](#) and on the [Just transition Commission](#), [read here.](#)



Photo: Kanenori

3 ACT

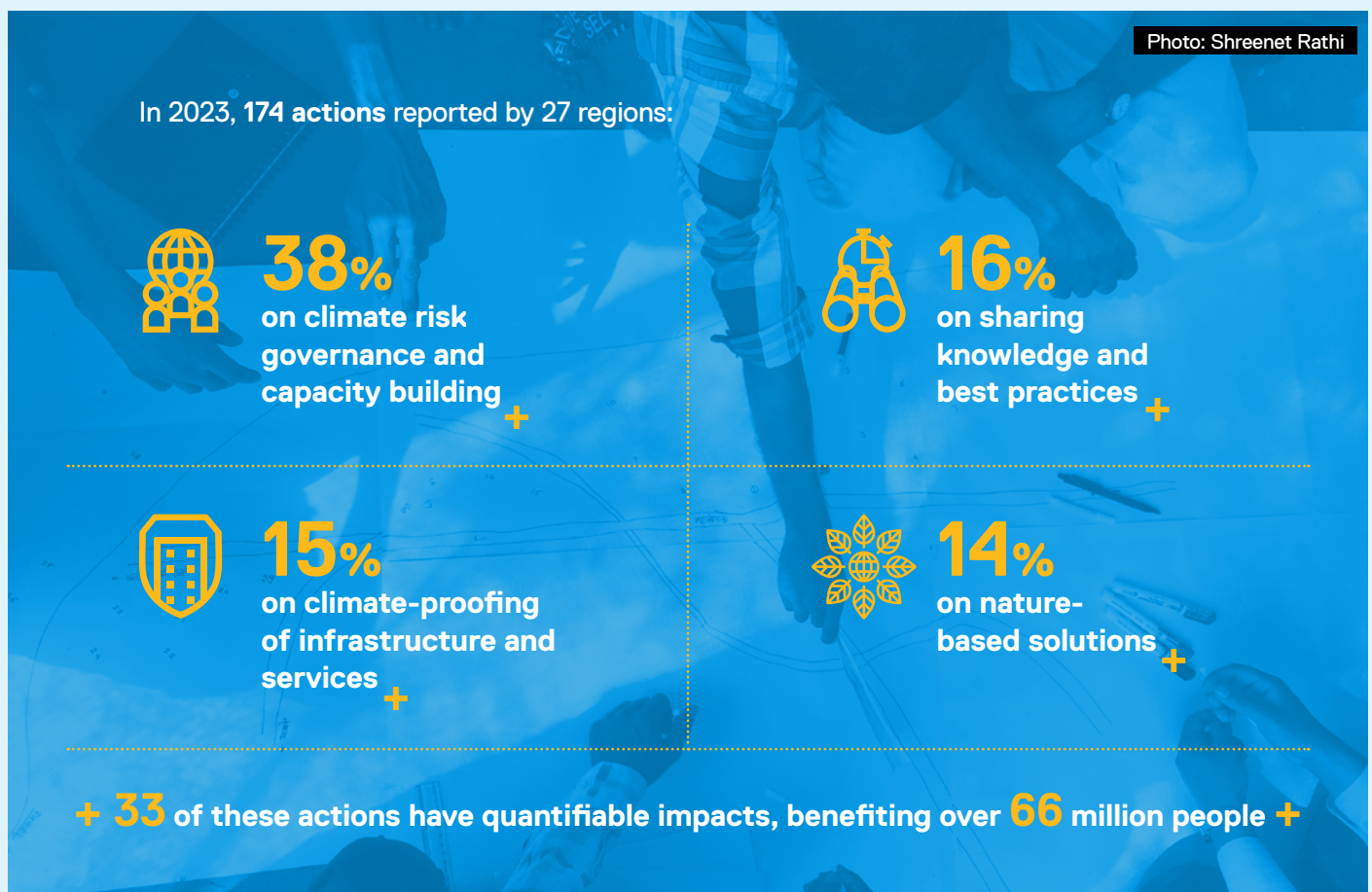
IMPLEMENTING CONCRETE ACTIONS ON ADAPTATION

→→ When joining the *RegionsAdapt* initiative and *Regions Race to Resilience*, regional governments commit to implementing concrete actions on adaptation in key identified priority areas.

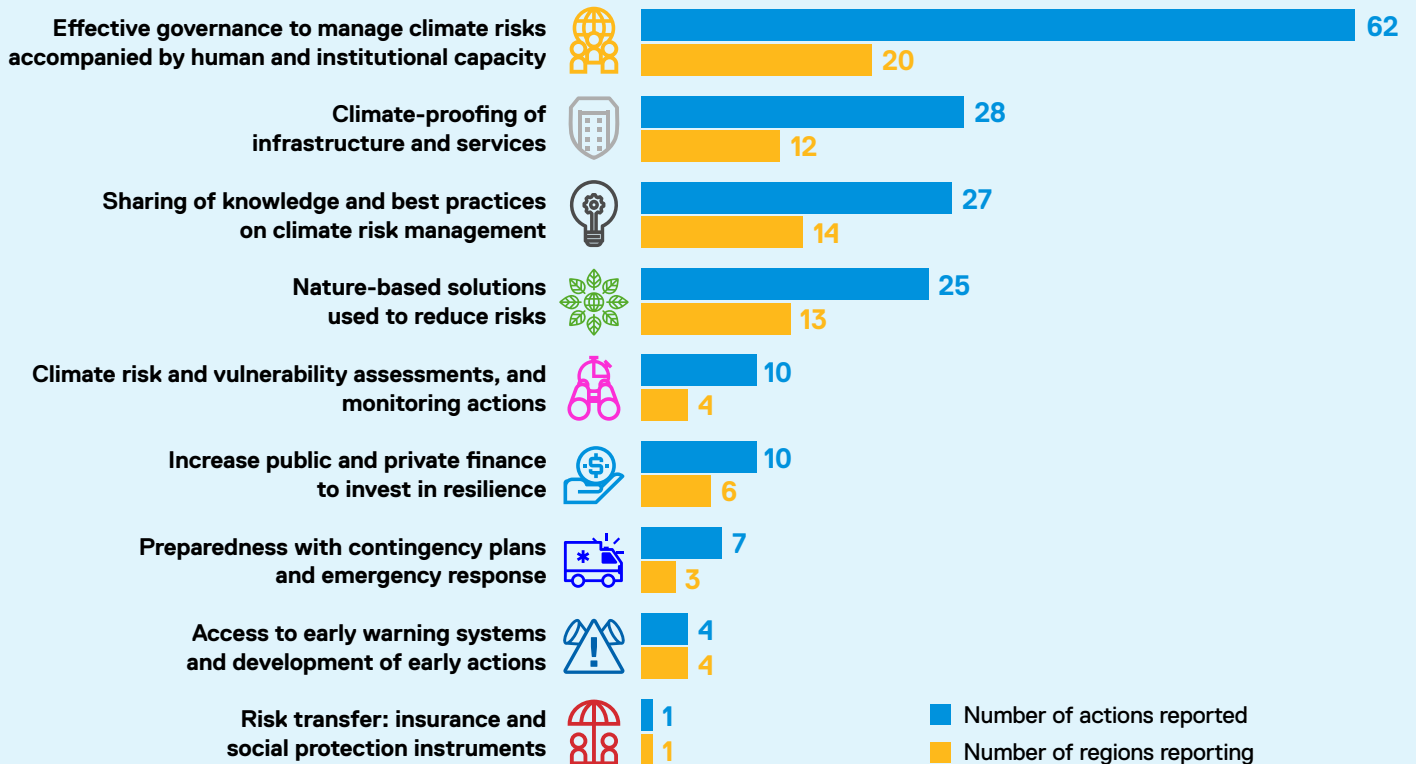
These priority areas have been aligned to the UNFCCC Marrakech Partnership for Global Climate Action sectors (or impact systems): Water and Nature, Agriculture, Human Settlements, Infrastructure, and Ocean and Coastal systems.

The UNFCCC Marrakech Partnership action typology to categorize actions has also been reflected, enlightening *RegionsAdapt* member's contributions to both the Marrakech Partnership for Global Action and the Race to Resilience.

The section below presents an overview as well as case studies, illustrating how subnational governments actively contribute, increase and improve the resilience of vulnerable communities. For additional regional contributions, explore the [Race to Resilience Data Explorer](#).



RegionsAdapt members' type of action



In line with previous years, regional governments continue to prioritize their efforts on the establishment of effective governance and the enhancement of human and institutional capacities. This commitment is evident through various initiatives encompassing **environmental governance and resource management systems**, with 22 actions executed by 10 different regions. Additionally, **institutional-led climate adaptation processes** have been undertaken by 11 regions, totaling 19 actions, further reinforcing their dedication to this critical area. **Environmental laws and regulatory frameworks** have seen 14 actions carried out across 8 regions. **Building regulations and standards** have also garnered attention, resulting in 4 actions distributed across 4 regions. Furthermore, the development of **protected areas and property rights definitions** has been a focus for 3 regions, each undertaking respective actions.



Remarkably, the sharing of knowledge and best practices on climate risk management is a notable strength, illustrated by a wide range of actions. These encompass the **sharing of practices in agriculture and forestry** (10 actions by 7 regions), **community-based inclusive and participatory risk reduction** (5 actions by 5 regions), **knowledge building for resilience** (5 actions by 5 regions), **climate hazard communication and information** (5 actions by 3 regions), and **collaborative research efforts** (3 actions by 2 regions).



Notably, the region's commitment to climate-proofing infrastructure and services is particularly pronounced in areas of **water security and quality**, with 15 actions executed by 9 regions. Additionally, there is a keen focus on **safeguarding critical infrastructure and protective systems**, with 10 actions distributed among 4 regions, highlighting their dedication to ensuring resilience.

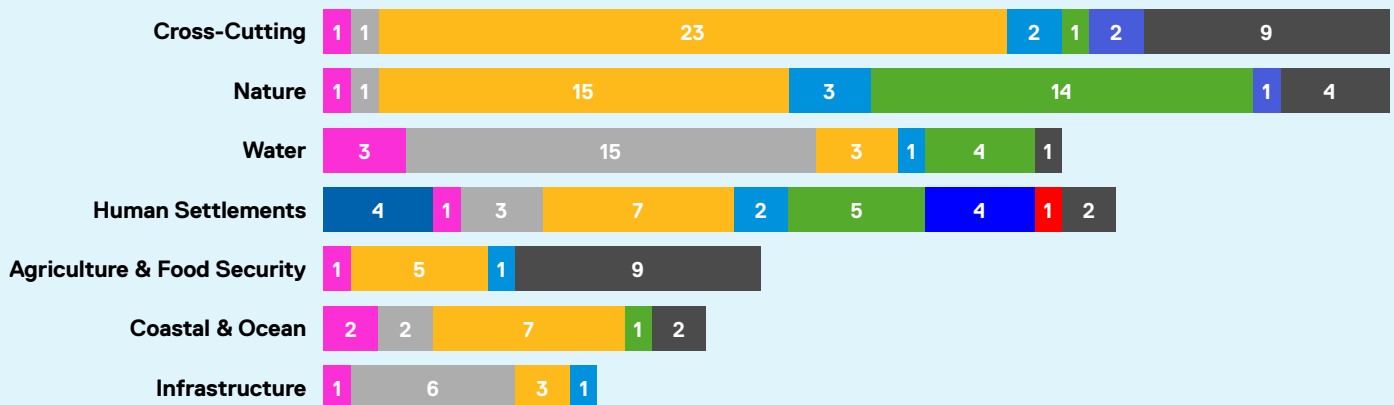


In the realm of nature-based solutions, the regions have directed their efforts towards the **conservation and restoration of terrestrial and aquatic systems**, with 17 actions being undertaken by 10 regions. Furthermore, they have demonstrated their commitment to the development of **green infrastructure and other engineered nature-based solutions**, with 5 actions carried out by 5 regions.



Other often reported lines of work include **emergency preparedness** (7 actions by 4 regions), **monitoring and mapping of hazards and vulnerabilities** (10 actions by 4 regions), as well as **economic incentives and livelihood diversification** (10 actions by 6 regions).

RegionsAdapt members' contributions per sectors



- Effective governance, human and institutional capacity-building
- Climate-proofing of infrastructures and services
- Sharing of knowledge and best practices
- Nature-based solutions
- Climate assessments and monitoring actions
- Increase of finance for resilience
- Contingency plans and emergency response
- Early warning systems, early actions
- Insurance and social protection instruments



+ Cross-Cutting: Planning and Finance

Regional governments, with their authority and jurisdiction, uniquely adopt a transversal approach to planning and financing climate change adaptation. This integrated approach can break down silos, ensuring effective governance and capacity building for a holistic response to climate challenges.



+ Nature

Nature and conservation actions include mapping permafrost, sharing ecological data, sustainable forestry management, promoting agriculture sustainability, conserving native forests, developing carbon sequestration projects, preparing national forest reports, revitalizing wild salmon populations, addressing barriers to natural asset use, supporting threatened species, and managing invasive species. Together, these efforts tackle environmental challenges, regenerate ecosystems, establish connectivity, and create green spaces, fostering climate resilience and conservation.



+ Water

Subnational governments address climate challenges with comprehensive risk assessments and water-related measures, including enhanced monitoring, real-time data management, water supply diversification, improved efficiency, and quality initiatives. They invest in expanding water networks, rainwater systems, and cleaning to prevent flooding, enhancing climate resilience.



+ Human Settlements

Subnational governments actively combat climate change in human settlements through measures like extreme heat response systems, flood strategies and resilience plans, climate-resilient public buildings, support for community sustainability initiatives, heat health education, flood prevention investments, Sustainable Drainage Systems (SUDs) mandates, and sector-specific adaptation plans. Some regions integrate Indigenous knowledge into pilot projects and capacity-building initiatives, showcasing dedication to climate resilience and sustainability.



+ Agriculture & Food Security

Subnational governments actively address climate change in agriculture, emphasizing long-term planning and integrating climate considerations. They employ techniques like salinity monitoring and subsurface drainage, investing in timber management and forest restoration. Collaborative efforts support vulnerable sectors through agroforestry, sustainable production, and conservation. Strategies include disseminating weather information, promoting climate-resilient farming, regenerative agriculture, and reducing emissions in livestock. They advocate for carbon-reducing seaweed farming, sustainable land management, and improved water use efficiency. Encouraging market gardening and sustainable cultivation enhances climate resilience in vulnerable communities, improving overall food and agriculture system sustainability.



+ Coastal & Ocean

Coastal subnational governments actively integrate climate considerations into long-term planning, investing in flood defences and using climate modelling for adaptation. Examples include public flood mapping, coastal ecosystem protection, and adaptation strategies. Regions share knowledge and promote risk awareness through various platforms. Testing innovative infrastructures, such as inter-tidal reefs and Geobags, reflects a comprehensive approach to enhancing coastal resilience in response to climate impacts.



+ Infrastructure

Subnational governments integrate climate considerations into infrastructure, focusing on flood mitigation projects, resilient highways, bridges, and culverts. They realign roads to avoid sea level rise and erosion, enhance weather forecasting, and conduct vulnerability assessments for critical assets, showcasing a commitment to resilience and preparedness against climate change impacts.

Diverse actions to increase adaptive capacities



REGIONS IN ACTION:

+ Flowing Rivers for Thriving Communities in KwaZulu-Natal

In KwaZulu-Natal, South Africa, the Province funds the Transformative River Management Project (TRMP), revitalizing degraded rivers into functional ecosystems, enhancing biodiversity, and bolstering local resilience to climate disasters. The initiative generates jobs and skills training for locals, involving waste collection, invasive plant removal, and indigenous tree planting. It educates municipal officials, project participants, and communities on climate and environmental matters. The first phase of the project has shown success in resource restoration, infrastructure protection, and job creation, boosting climate resilience. It's scalable approach can be replicated in other municipalities and watersheds, aligning with local climate strategies. [Read more on the Regions4 Knowledge hub.](#)

+ Social Housing Decarbonation in Wales

Overcoming levels of fuel poverty that remain stubbornly high (12%) sits at the heart of Wales' decarbonisation and social justice objectives. The decarbonisation of homes must be seen as a fundamental part of a green and just recovery from the pandemic in Wales. To remediate to this, Optimised Retrofit (ORP) programme has been awarded more than £13m in funding by the Welsh Government for the retrofitting of an existing home which provides effective, practical pathways to take that home to its lowest achievable carbon footprint, and to reduce heating/energy demand. This is achieved through a combination of building fabric improvements, low and zero-carbon technologies (such as solar panels, battery storage, and heat pumps), and intelligent ongoing operational controls. To help decarbonise homes of those who need it most, the 68 project partners, including 26 social housing providers, currently manage more than half of the social homes in Wales. All registered social landlords in Wales will have access to the processes, training, frameworks, and tools that are built as part of Optimised Retrofit. [Read more here.](#)



+ Indigenous-Led Conservation in Paraná's Metropolitan Forest

For the past year, 35 indigenous individuals representing the Kaingang, Guarani Nandeva, Tukano, and Terena ethnic groups have occupied a designated village spanning 4,400 hectares in Piraquara, located within the Metropolitan Region of Curitiba. This territory is integrated into the Metropolitan State Forest, which is one of over 70 Conservation Units (UCs) across Paraná. Marking an unprecedented move in the country, the indigenous community has been self-managing this environmental complex since 2022 through a Management Cooperation Agreement between the Water and Land Institute (IAT) and the Ângelo Kretã Ethno Bio Diverse Institute and Training Center, both tied to the State Secretariat for Sustainable Development (Sedest). The collaboration coincided with the creation of the State Council of Indigenous Peoples of Paraná. This initiative empowers Paraná's indigenous population to safeguard the region, promote sustainable tourism, and engage in environmental education. [Read more on the Regions4 Case Study Database.](#)

+ Cultivating Resilience in Yucatan Peninsula with Indigenous Wisdom

Based on the agronomy of the Maya and other Mesoamerican peoples, the Milpa system is used to produce crops of maize, beans, and squash without employing artificial pesticides and fertilizers. In Yucatán's southern region, this longstanding rural practice is vital for Mayan families and has evolved over 3,500 years. However, it faces vulnerability due to climate change, causing degradation and loss of the biocultural environment. To address this, enhanced Milpa Maya proposals are being developed, integrating local farmers' knowledge. This involves using a Community-Based Adaptation approach, which strengthens local capacities, resource access, and governance to empower communities in responding to changing conditions and reducing vulnerability. [Read more on the Regions4 Case Study Database.](#)

Diverse actions to increase adaptive capacities



REGIONS IN ACTION:

+ Rabat-Salé-Kénitra Leading the Way in Coastal Sustainability for Morocco

In Morocco, the health of the coastline plays a crucial role in ensuring income for coastal populations. The well-being of the coast is not only vital for biodiversity preservation but is also essential for providing income, especially for low-income households dependent on blue economy jobs, like fishing and tourism. The erosion of the Moroccan coastline poses a serious threat to both biodiversity and the livelihoods of coastal communities. The development in progress of the first Regional Coastal Plan (SRL) in the Rabat Salé Kénitra region, supported by the World Bank, marks a national milestone. This consultative and participatory approach, involving institutional actors, civil society, and the private sector at various levels, plans the sustainable use of coastal and marine resources over a maximum period of 20 years. In collaboration with the government, the World Bank has created a methodological guide for defining regional coastal plans, aimed at extending this innovative and integrated coastal management approach to other regions. This toolbox, available to decision-makers, emphasizes the importance of considering local specifics and constraints. [Read more here.](#)

+ Supporting Off-Grid Communities in Québec

From an energy standpoint, the climate transition in Québec involves a considerable reduction of fossil fuel usage, replacing it with renewable and low-carbon energies. Decarbonizing Québec will mean greater reliance on electricity to meet some of its citizens' essential needs. Some communities, including Inuit communities, are not connected to Hydro-Québec's main grid. These off-grid communities heavily depend on fossil fuels for electricity, heating, and transportation due to limited access to renewable energies and community safety concerns specific to Nunavik's cold climate. Therefore, they face particular decarbonization challenges. The framework of the 2030 Plan for a Green Economy will support these communities in their transition so they can be less dependent on energy sources likely to be subject to restrictions and rising costs. They will also be able to reap the benefits related to producing and using renewable energies. Energy initiatives aimed at Québec as a whole must also consider the realities of these communities.



Photo: Pixabay

4 REPORT

MONITORING THE IMPACT OF CLIMATE ACTIONS ON MOST VULNERABLE POPULATIONS

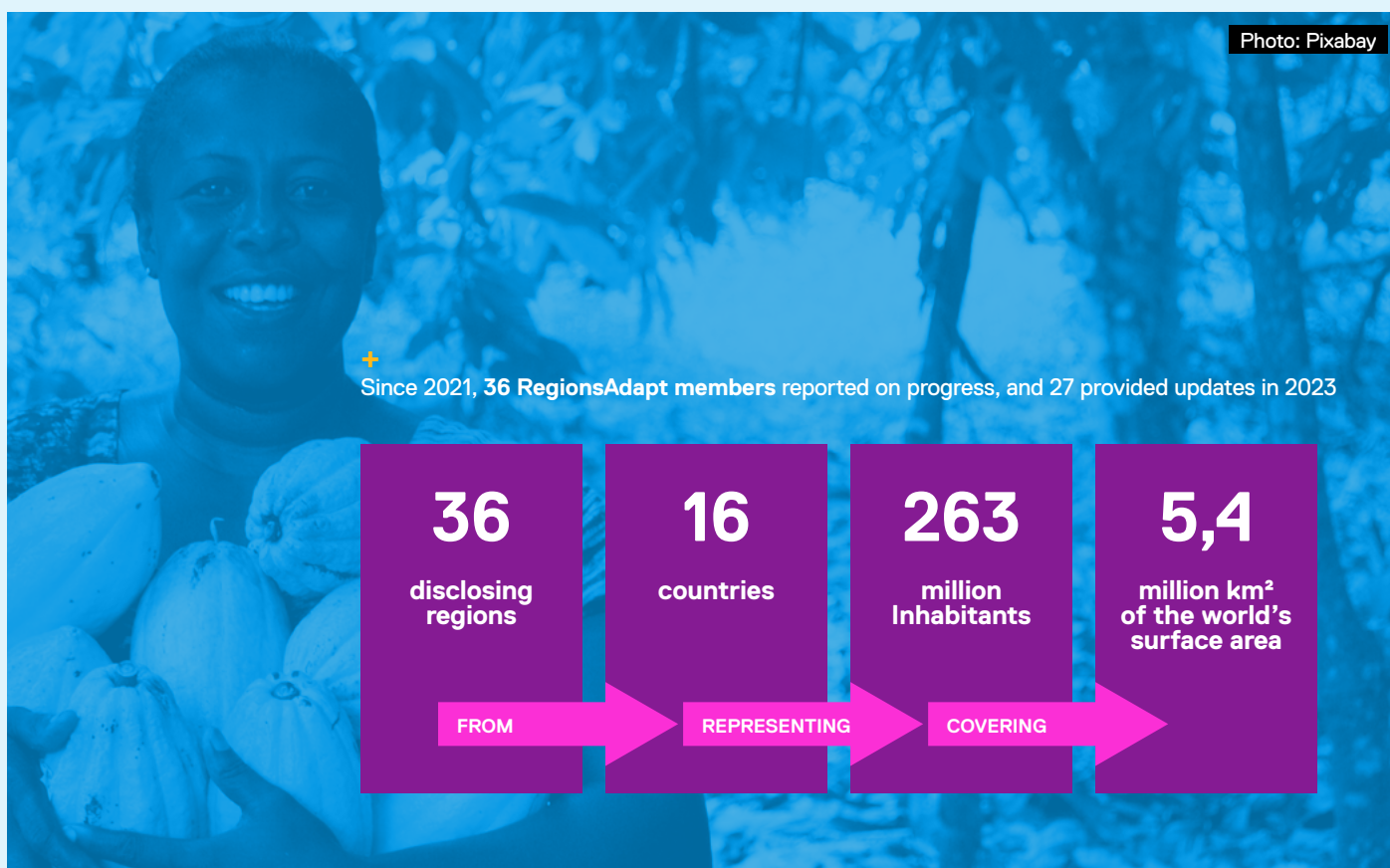
→→ When joining the RegionsAdapt initiative and the Regions Race to Resilience, regional governments commit to reporting on their progress through the online CDP States and Regions Questionnaire to inform and improve policies and actions.

They are urged to regularly share updates on adaptation planning and assess the impact of their actions, despite data gaps. Consistent reporting through the CDP questionnaire contributes to this collective effort.

Reporting offers valuable insights for policy improvement. Analyzing data and trends enables the identification of pressing challenges and effective strategies. This information informs tailored policies, fostering the exchange of best practices among regions

Among the 36 RegionsAdapt reporting regions since 2021, 15 consistently monitor their primary adaptation plans, 12 of them annually. This often leads to updates, as in Québec and California, with Québec revising its plan annually and California at least every 3 years.

Only six regions evaluate their main adaptation documents, indicating room for improvement and an opportunity to enhance strategies.



+ The challenge of monitoring the effectiveness of adaptation measures

Most often, monitoring tracks the progress of the implementation of the plan, but not necessarily the distribution or effectiveness of adaptation measures. To be able to address inequalities in adaptation actions, it would be essential to monitor and assess the outcomes of adaptation actions, as well as the social impact they have on different population groups; however, current indicators often lack detailed disaggregation based on socio-economic or other factors that would allow for such an assessment. There is a clear challenge, to include impact or outcome indicators alongside process indicators in Climate Adaptation Plan monitoring systems. Often, the development of such indicators requires additional resources, tools, capacities, and data. These can often be leveraged through partnerships with academic or research institutions, or other private or non-profit associations.

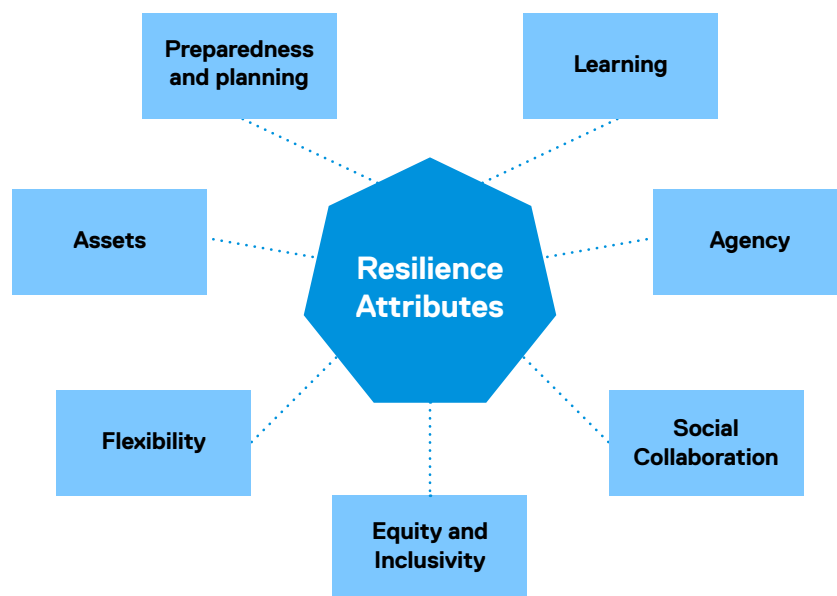
Another recommendation is using well-being and multi-objective measures that considers diverse priorities and avoid bias. For instance, a well-being measure assesses disaster impact by analysing the fraction of consumption lost at the household level among income groups, revealing that poor households are disproportionately affected compared to asset-based assessments.

To establish a just resilience monitoring framework and ensure equitable assessment of adaptation efforts, it is necessary to set clear policy goals, track progress over time, engage affected groups, and choose relevant indicators. Potential indicators are described in the technical paper "Just Resilience for Europe: Towards measuring justice in Climate change Adaptation" (2023). California's work defining vulnerable communities in the context of climate adaptation (2018), and its Climate Vulnerability Metric (2022), contribute to this important work.

+ The Race to Resilience metrics framework: attempting to close the gap

The Race to Resilience initiative has created a people-centred [Metrics Framework](#) for non-party actors to report climate resilience actions and assess their impact. This framework includes two main types of metrics: "Quantitative" (or "magnitude") metrics, which estimate the number of beneficiaries reached through an action, as well as "Qualitative"(or "depth") metrics, which examine how actors enhance the resilience of people vulnerable to climate change. These metrics focus on identifying key conditions known as "Resilience Attributes" that drive resilience and empower transformations.

From a pool of over 40 resilience attributes derived from the relevant literature, discussions, and expert webinars, seven resilience attributes and their corresponding subcategories were selected for assessment.



+ Presenting the Resilience Attributes

+ Preparedness and planning: The ability to anticipate, prepare, and plan for change and uncertainty by shaping responses, strategic planning initiatives and warning systems, and mitigation and prevention actions.

+ Social Collaboration: The ability to organize and act collectively.

+ Assets: The natural, financial, technological and service resources that people have access to in times of need (individually owned or public goods).

+ Learning: People's capacity to generate, absorb, and process new information and knowledge about climate change adaptation options, and ways to live with and manage uncertainties.

+ Equity and Inclusivity: The just and equitable distribution and access to resources, and respect of equal basic rights in decision-making, including and integrating all affected actors and discourses in decision-making processes.

+ Agency: The ability of people to have free choice in responding to environmental and other changes, whether individually or collectively.

+ Flexibility: The opportunity to switch between coping and adaptation strategies, actions, and management structures based on new information and ongoing evaluation.

THE WAY FORWARD

The urgency of addressing climate change has never been greater. This challenge operates within an intricate and multilayered governance framework. Subnational governments are pivotal in this endeavour, as they shoulder distinctive responsibilities and maintain a direct link to safeguarding their citizens, particularly the most vulnerable populations.

Climate change is more than an environmental crisis – it emerges as a social crisis, underscoring the existence of inequalities on multiple fronts. Society experiences the consequence unevenly. Communities most susceptible to the impacts of climate change bear minimal responsibility for its causes and possess limited capacity to adapt and cope. Unfortunately, responses to climate change can unintentionally exacerbate existing social inequities.

The IPCC AR6 underscores the efficacy of inclusive governance that emphasizes fairness and justice in both the planning and execution of adaptation measures. Subnational governments around the world are slowly starting to integrate principles of justice and equity into their climate adaptation policymaking and planning. Nevertheless, there is a pressing need for acceleration to guarantee the equitable distribution of the burdens and benefits of adaptation across society. This, in turn, will ultimately enhance the resilience and well-being of all community members, leaving no one behind.

→→ Recommendations for subnational governments to implement a just and equitable climate adaptation to leave no one behind

+ Integrate vulnerable communities' perspective in risk and vulnerability assessments

- Conduct comprehensive climate risk and vulnerability assessments using disaggregated indicators to identify who are the most vulnerable groups and why, and then to prioritize their specific needs. These assessments should identify social vulnerability, taking into account pre-existing inequalities and power dynamics
- Integrate the assessment findings into adaptation plans to ensure that adaptation efforts do not exacerbate current disparities, thus promoting climate justice.

+ Promote inclusive and participatory policymaking

- Involve vulnerable communities in all stages of climate adaptation policymaking, seeking their input, listening to their concerns, and considering their unique needs and perspectives, ensuring inclusive and transparent participation.
- Empower individuals to join organized groups and establish institutional arrangements for addressing vulnerable groups' needs. This approach fosters equity, responsiveness, and climate justice in policy development and implementation.

+ Invest in capacity building for policymakers and practitioners

- Invest in enhancing the capacity of government agencies, local institutions, community leaders, and civil society to understand the concepts of climate justice/just adaptation/leave no one behind
- Foster resilience through education, training, and knowledge-sharing. Develop practical tools for mapping and understanding the link between climate and social vulnerabilities.

+ Select and implement just and equitable adaptation options

- Evaluate adaptation options not only for their climate resilience but also for their potential social and environmental co-benefits.
- Ensure that both benefits and burdens are distributed more or less equally across different groups; avoid maladaptation by assessing whether new adaptation options may create new risks or vulnerabilities for some people, communities and places.
- Prioritize cross-sectoral policies that integrate both social and climate considerations, targeting vulnerable groups, and promoting long-term benefits.
- Encourage community-based adaptation initiatives for comprehensive resilience.

+ Monitor, learn and report

- Establish mechanisms to monitor and evaluate the effectiveness and equity of climate adaptation policies and actions, particularly their effects on social aspects, to prevent unintended inequalities.
- Regularly report on the progress made in achieving climate justice objectives, and be prepared to adjust strategies based on feedback and findings.
- Begin with existing indicators and datasets, then progressively modify them to reflect what is socially just and fair for different social settings.

→→ A call to support subnational governments in their climate actions

NATIONAL GOVERNMENTS

+ Policy framework for climate justice

- Develop a national policy framework that explicitly incorporates climate justice principles into climate adaptation strategies.
- Provide guidance and capacity building to subnational governments for climate adaptation planning with a focus on climate justice.

+ Data collection and disaggregation

- Collect and analyse data on climate vulnerabilities, making sure to disaggregate data by gender, age, income, and other relevant factors.
- Support information gathering capacity at the local and regional levels.
- Use this information to target interventions more effectively.

INTERNATIONAL ORGANIZATIONS (including climate funds)

+ Climate finance for equity

- Reform and set up financial mechanisms to allow subnational governments

to directly access climate finance opportunities, where appropriate, in order to ensure that investments are geared towards vulnerable communities. Ramping up both public and private finance flows, enabling direct access to multilateral funds, bolstering project pipeline development, and shifting financial allocations from readiness activities to project implementation can substantially enhance climate change adaptation and resilience efforts.

- Build the capacity of subnational governments to access climate funds and financing options by facilitating their use, enhancing advisory services on available financing options, and providing targeted training on the use of financial instruments in just and equitable ways.

+ Technical assistance and partnership

- Provide technical assistance and foster partnerships between international organizations, national governments, and subnational governments.
- Support the exchange of best practices and knowledge to enhance the integration of climate adaptation planning and justice.

+ Addressing loss and damage

- Recognize the role subnational governments play in vulnerable countries that are already facing loss and damage resulting from climate impacts, taking into account of their experience in designing financial support mechanisms for recovering and rebuilding livelihoods and infrastructure.

RESEARCH INSTITUTIONS

+ Behavioural-Research

- Analyze behavioral patterns to comprehend decision-making processes within vulnerable groups regarding climate adaptation and build on partnerships with subnational governments to share results.

+ Policy-Relevant Knowledge Translation

- Actively translate research findings into policy-relevant knowledge that subnational governments can use to develop and implement climate adaptation actions that promote justice.
- Ensure that research outcomes are accessible and actionable for policymakers and practitioners.



Photo: SDS Yucatan

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This document contains excerpts from the following sources:

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+ About

Regions4

Regions4 is a global network representing subnational governments (states, regions, and provinces) before UN processes, European Union initiatives, and global discussions in the field of sustainable development. Through advocacy, cooperation, capacity-building, and knowledge exchange, we empower subnational governments to accelerate climate action, halt biodiversity loss, and raise ambition to achieve the SDGs towards resilient and sustainable territories and communities. Follow @Regions4SD or visit www.regions4.org.



CDP

CDP is a global, non-profit that runs the world's environmental disclosure system for companies, investors, public authorities, cities, states, and regions. Over 24,000 organizations around the world disclosed data through CDP in 2023, including more than 23,000 companies - including listed companies worth two thirds of global market capitalization - and over 1,100 cities, states, and regions. Fully TCFD aligned, CDP holds the largest environmental database in the world, and CDP scores are widely used to drive investment and procurement decisions towards a zero carbon, sustainable, and resilient economy. Follow @CDP to find out more or visit data.cdp.net.



Basque Centre for Climate Change

The Basque Centre for Climate Change (BC3) is an international research centre focused on the causes and consequences of climate change. With a multidisciplinary team connected to the main scientific institutions, networks and socio-economic agents, its contribution to the research of climate change and to the science-policy interface over a decade puts BC3 in a unique position to offer knowledge, tools, new methodologies and cross-cutting proposals toward action in a collaborative framework with stakeholders, to design and help implement policies aimed at sustainable development. www.bc3research.org.



Race to Resilience

The Race to Resilience is the UN-backed global campaign led by the High-Level Climate Champions for Climate Action that aims to catalyse action by non-state actors in building the resilience of 4 billion people from vulnerable groups and communities to climate risks by 2030. Through a partnership of initiatives, its focus is on helping the most vulnerable, including frontline communities, to build resilience and adapt to the physical impacts of climate change, such as extreme heat, drought, flooding, and sea-level rise. climatechampions.unfccc.int/system/resilience.





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