

Exploring the role of regional governments in achieving the goals of the Paris Agreement

A closer look at regional powers and capacities across different countries

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Summary

State and regional governments can play an important role in addressing the large gap between current climate change mitigation measures and those needed to limit global warming to 1.5°C. This research is a first step in investigating the powers and capacities of state and regional governments across different world regions, political systems, degrees of decentralisation, and development.

Impact of states and regions

The mitigation potential of states and regions is extremely big, not the least because regions add up to almost the global level. The Paris Agreement requires that greenhouse gas emissions are reduced to net-zero in the second half of the century. This means that emissions in all countries eventually need to be reduced to zero. The sum of all regions in the world almost add up to the global level, which makes regions fundamental for reaching net-zero globally, and in that sense potentially more important than cities, which only cover urban and not rural areas and therefore do not add up to the global total.

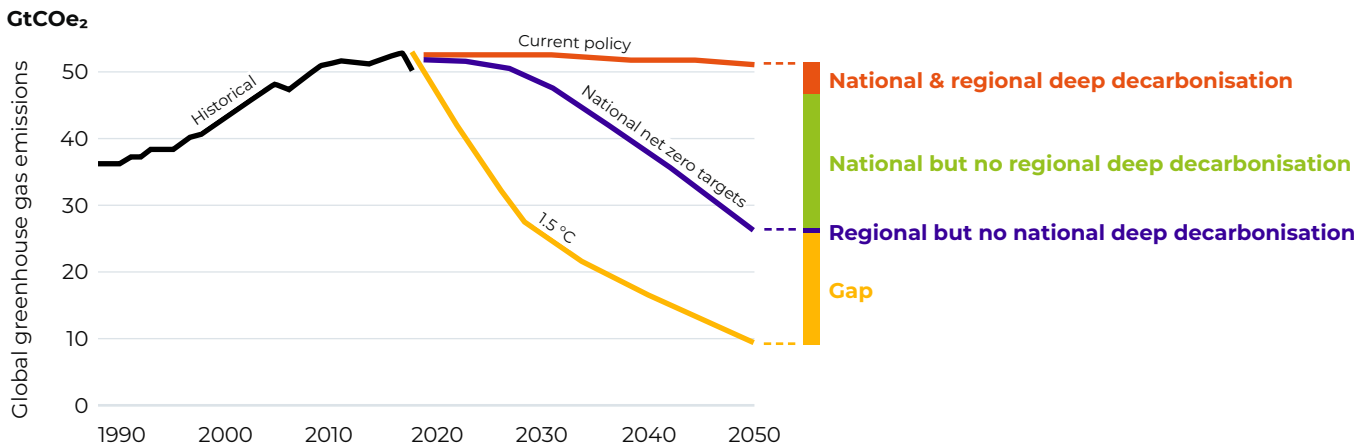
Climate action by states and regions increased significantly over time, reinforcing or nudging additional national action. Net-zero emission targets, renewable targets, support for emission free vehicles are spreading through various regions. Such regional action can support the plans of the national level (for setting net-zero targets it is shown as red bar in → **ES Figure 1**, or states and regions can complement national action and/or be a testing ground for additional action that later is implemented on the national level (purple bar in → **ES Figure 1**). States and regions are ahead of their national governments particularly for coal phase out and carbon pricing.

A survey to assess powers of states and regions

To analyse the potential actions by regions, we used the framework for 'power to act' which considers financial and regulatory hard powers, agenda setting and framing soft powers, and several dimensions of capacity – political alignment, funds, information, and trained staff (→ **ES Figure 2**). We collected data through a survey, a series of interviews, and two workshops with members of the Under2 Coalition of state and regional governments attempting to reach broad representation and capturing the various dynamics in countries.

ES Figure 1

Coverage of net-zero targets at national and states and regions level



Source: Emissions source: (CAT, 2022) target coverage (Net Zero Tracker, 2022) potential: own calculation on the basis of share of population

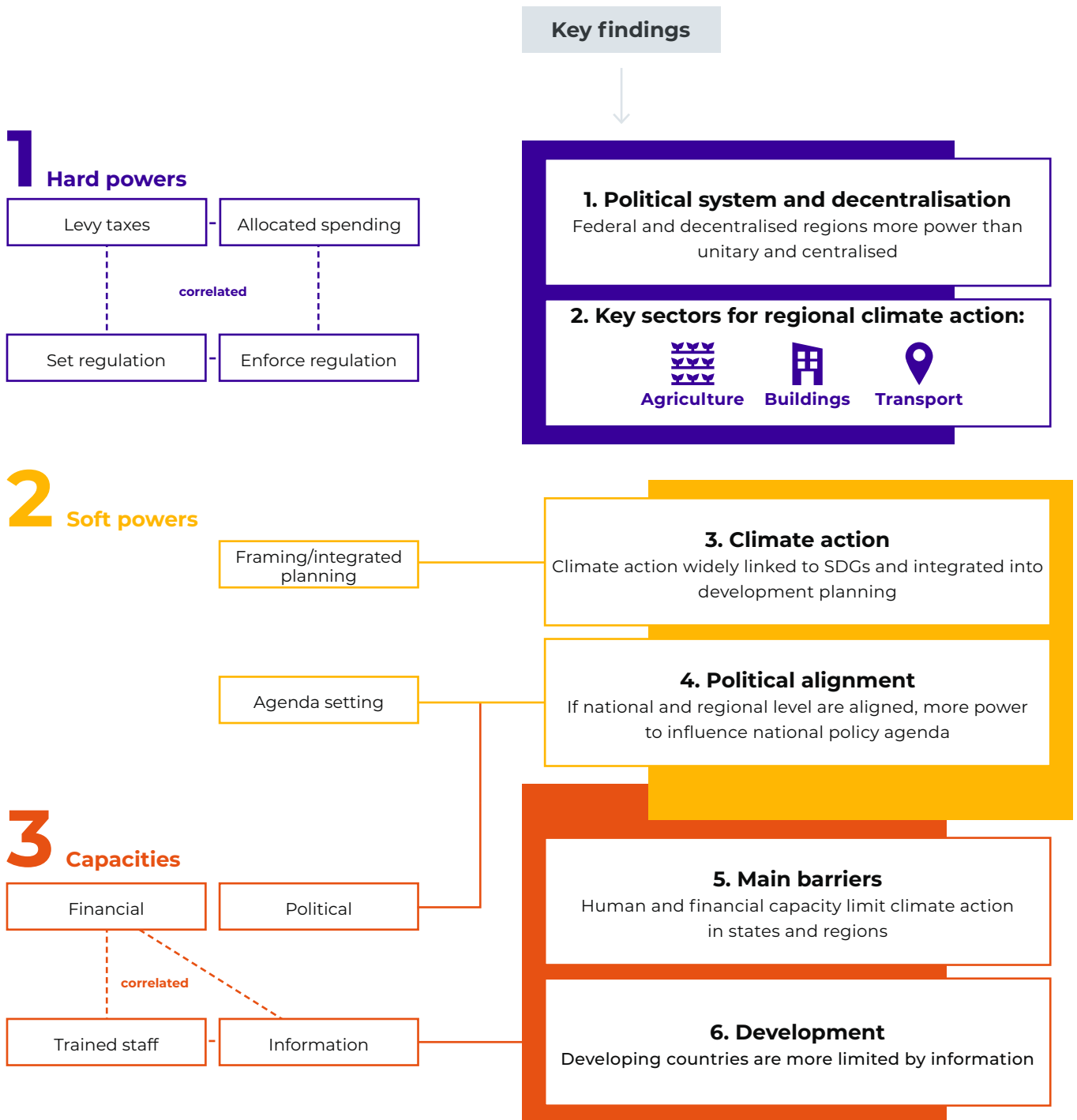
States and regions have significant financial and regulatory hard powers, particularly in federal and more decentralised countries. This allows them significant levy to undertake ambitious climate action on their own or in conjuncture with the national level. The survey undertaken for this study found that these powers were strongest in the agriculture, buildings, and transport sectors, in line with earlier studies. If a state or region has the power to set regulation, it is also very likely to have the power to enforce regulation and also allocate spending. In many cases they then can also levy taxes, but the link is less strong.

Even states and regions that do not have hard powers can still significantly influence climate action through agenda setting (soft) powers. This is generally weaker when the national and state/regional governments are not politically aligned. Climate change is high on the agenda in surveyed states and regions and widely linked to the achievement of sustainable development goals (SDGs). In developing countries climate is lower on the agenda due to the other pressing issues such as poverty, health, and security, however, climate action is still linked to the achievement of SDGs and widely integrated into development plans in surveyed states and regions.

Human capacity of states and regions is the biggest barrier for additional action, followed by financing and information. We found that capacities are widely a crucial barrier to climate action in states and regions. Limitations in human capacity in the respective ministries and government agencies is the greatest and most common barrier, followed by finances, and then information.

ES Figure 2

Hard and soft powers and capacities as per survey



How to lift the potential of states and regions

To bring states and regions to their full potential, national governments and international cooperation can undertake a variety of actions.

Addressing human capacity and financial limitations is essential to overcome barriers for climate action in all states and regions. Without these capacities in regional government institutions, any support provided will run the danger of not leading to sustainable change in the longer run. Only by building relevant institutional capacities such as in climate ministries or line ministries, can the long-term sustainability and institutionalisation of climate action be ensured at the state and regional level.

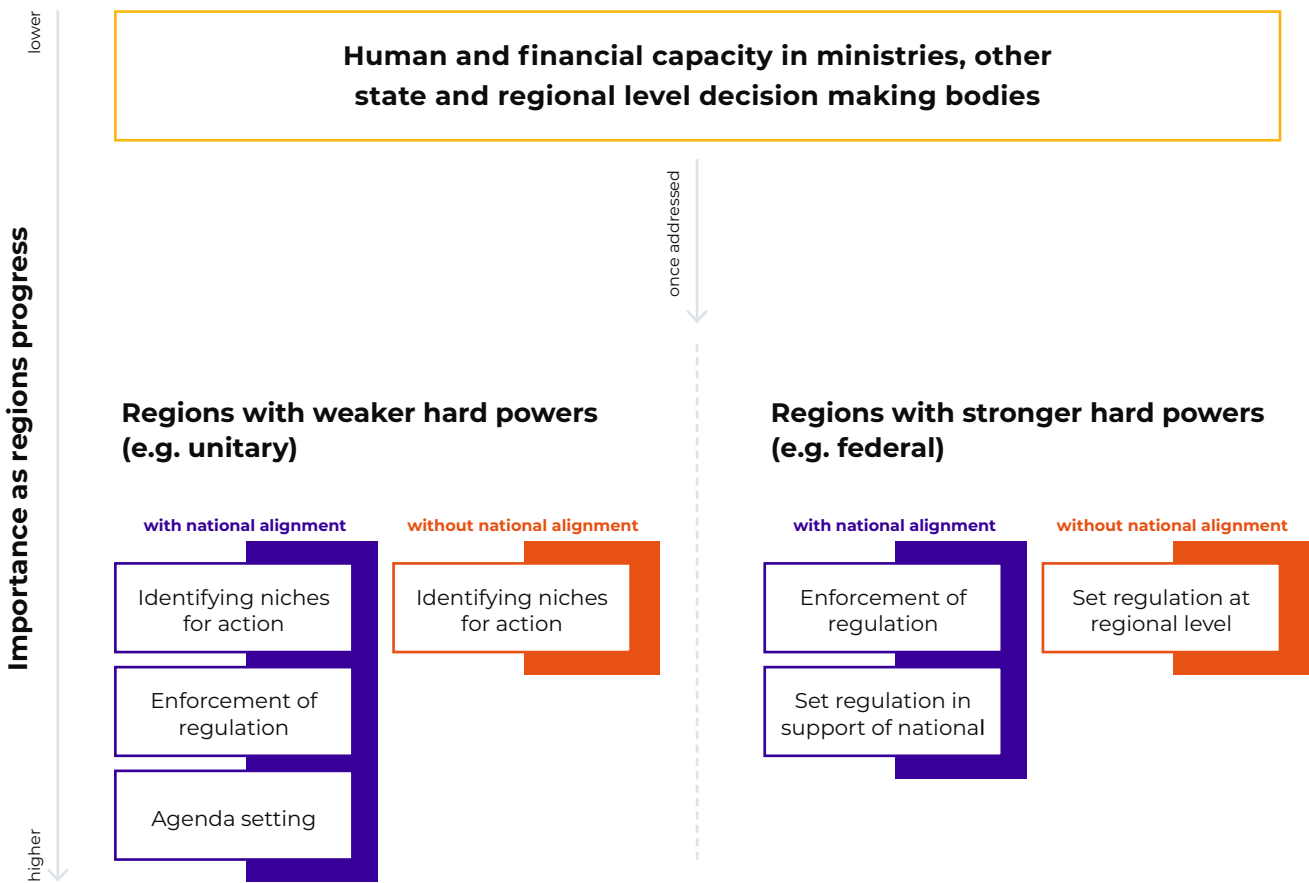
Once human and financial capacity constraints have been addressed, targeted support for states and regions should consider the availability of financial and regulatory (hard) powers and the political alignment between the state/regional and national governments on climate action (moving from top to bottom in → **ES Figure 3**).

States and regions with strong hard powers can implement a broad range of actions to drive climate action autonomously of the national government. In cases where the state or region is **broadly politically aligned with the national government**, especially with respect to climate-related ambitions, support could focus on helping the region identify how they **can strengthen/complement action at the national level**. States and regions that **lack political alignment with the national level**, especially where the state/regional level wants to undertake mitigation related action as a priority while this is not the case at the national level, may want to focus on developing standalone programs or legislation that directly lead to mitigation.

States and regions with weaker hard powers can still contribute to driving climate action through both effective use of their limited powers in specific sectors where the state/regional government is responsible, or through supporting their national and local governments with the development and implementation of policies, programmes and projects. To support these states/regions, it may make sense to first check whether hard powers do exist within specific sectors on the state/regional level; to shift the focus to supporting agenda setting (soft) powers that push for more action at the national level; or finally to support the implementation of national level policies through enforcement of legislation at the regional level. Efforts to support agenda setting should however be carefully considered in each case considering the highly uncertain outcome of such efforts.

ES Figure 3

Overview of how regions could be supported according to categorisation of regions (priority action adreas of support in orange boxes)



Grouping by political alignment and hard powers can also inform which states and regions can learn from each other. Other contextual factors like world region, language, and culture can also be important to consider when mapping lessons between states and regions. It is important to look at powers at the sector or implementation level since some states/regions with generally strong powers may still have very limited powers and scope for action in some sectors like energy and industry and vice versa.

Who has to do what?

Individual stakeholders can cooperate to lift the potential of states and regions. → **ES Table 1** provides an overview of how the various stakeholders can each individually and together with others help regions maximise their potential.

State and regional governments themselves have an important role to play:

- **Allocate capacities** in decision bodies (ministries) to mitigate climate change – ideally covering all sectors.
- Establish a process to **identify areas with key opportunities** for climate action, taking in consideration existing constitutional powers and alignment or misalignment with the national level, if not already implemented.
- **Institutionalise cross regional coordination** on climate mitigation within the county and across borders with other regions, through e.g. regional associations.

National governments can support their states and regions in the following way:

- **Address human and financial capacity** limitations in state and regional governments.
- **Initiate policy-labs in selected states and regions**, where projects, programmes, and policies can be trialled and later replicated at the national level, currently successful for coal phase out and carbon pricing.
- Cooperate to **optimise the design, enforcement and implementation** of climate policies, distributing roles between the different levels of government.
- Facilitate the **co-operation between different national regions**, especially in federal and decentralised states.

Inter-regional co-operation bodies such as the Under2 Coalition or cross-regional bodies between individual countries can significantly support the process:

- **Support peer learning** among states and regions.
- **Grouping lessons** and guidance by the relevant contextual factors can help facilitate effective peer learning.
- **Coordinate joint advocacy efforts** as well as the identification of common challenge and opportunities can help further the regional agenda.

International funders like multilateral donors and development banks can provide support:

- **Tailor support** for the state and regional level to the specific needs, avoiding a “one size fits all” approach.
- **Address financial and human capacity** limitations through grants.
- **Support the regional level, where they have power for implementation**, e.g. extend policy based lending to federal regional governments, support development of project pipelines to address potential niches.

ES Table 1

Summary on how stakeholders can cooperate to support states and regions

	State and regional governments	National governments	Inter-regional co-operation bodies	International funders
Build capacities	✗	✗	✗	✗
Identify tailored opportunities	✗		✗	✗
Coordination and learning between states, regions and support peer learning	✗	✗	✗	✗
Utilise states and regions as policy labs	✗	✗		
Cooperate on design, enforcement and implementation of policies	✗	✗		
Provide lessons learned organised by key characteristics of states and regions			✗	
Coordinate advocacy efforts			✗	
Support climate action tailored to the particular regional characteristics				✗

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Key findings

- 1** States and regions are critical for meeting Paris Agreement due to their size and role in policy and governance processes, and regardless of their exact powers.
- 2** Climate action by states and regions increased significantly over time reinforcing or nudging national action.
- 3** Many regions have significant financial and regulatory hard powers, mainly in agriculture, buildings, transport and more limited powers in energy and industry.
- 4** Even if hard powers are absent, regions can have influence through agenda setting, framing & integrated planning considering the sustainable development goals.
- 5** Lack of human capacity of states and regions is the biggest barrier for additional action, followed by financing and information.
- 6** The biggest lever for enhanced climate action by states and regions is to enable them to set their own priorities considering their particular powers.

»» 01

Introduction

Current policies from national governments are highly insufficient to limit global warming to 1.5°C as agreed under the Paris Agreement (UNEP, 2022). While discussion and support for climate action in the international sphere traditionally focuses on the national level, hopes are high that climate action from subnational and non-state actors, including states and regions¹, can make significant contributions on greenhouse gas (GHG) emission reductions to bring the world closer to a 1.5°C-consistent emission pathway. Recently, cities have received greater recognition as important actors in the global climate effort, while discussion and support for climate action at the state and regional level remains limited.

¹ States and regions are defined as subnational administrative units of a specific geographical territory that are usually the first administrative level below the national government and are broader in population and scope than other subnational administrative units, such as cities.

Recent research demonstrates the potential role of states and regions as key ambition drivers to achieve the goals of the Paris Agreement, particularly if the national level fails to do so (Kuramochi et al., 2020a). In 2021, 125 state and regional governments in ten major emitting economies had set quantifiable long-term emissions reductions targets, an increase of over 70 regions since 2019 (NewClimate Institute et al., 2021). In parallel, membership to international cooperative initiatives like the Under2 Coalition is increasing.

The Under2 Coalition is the largest global network of state and regional governments committed to reducing GHG emissions, bringing together 167 individual states and regions, along with several other national and subnational entities, totalling more than 270 actors and more than 50% of global GDP. Research in 2021 showed that full implementation of the Under2 Coalition's previous goal to reduce emissions 80-95% below 1990 levels by 2050 could lead to a 3.3-3.9 GtCO₂e/year reduction below current national policies by 2030, which would close the global emissions gap in 2030 by around 10% (NewClimate Institute et al., 2021). Since that time, the Under2 Coalition has further enhanced its ambition levels to aim to achieve net zero emissions as a coalition by 2050, in line with the latest evidence that reaching net zero emissions by 2050 is critical to limiting global warming this century to 1.5°C above pre-industrial levels (Lecocq et al., 2022). The net zero goal is now integrated into its 2021 Memorandum of Understanding, which is signed by 69 state and regional governments.

State and regional governments are endowed with unique sets of powers and capacities to drive climate action. These sets of powers and capacities vary significantly within but especially between countries, and also sector. Furthermore, states and regions are embedded in multi-level governance systems and are subject to complex interlinkages between the national and municipal levels. To date there is limited understanding on how powers, capacities, and multi-level governance relations impact climate action. These shortcomings have impeded the effective engagement of states and regions on this topic in a targeted and comprehensive manner.

This research is commissioned by the German Federal Ministry of Economic Affairs and Climate Action and aims to improve the understanding of what targeted support state and regional governments need for ambitious climate action. For this purpose, we map state and regional governments' hard powers (financial and regulatory), soft powers (agenda setting and framing) and capacities (political, financial, information, trained staff) for climate-relevant policy making. We define types of states and regions according to combinations of powers and political alignment and propose how the different types of states and regions can be best supported.

This report is structured as follows: → **Chapter 2** provides an overview of potential impact of states and regions to solve the climate crisis. → **Chapter 3** describes the current state of research on state and regional power to act on climate change and introduces some theory on political systems and multi-level governance. → **Chapter 4** describes the analytical framework we use to develop our survey and interview questions. We present detailed results in → **Chapter 5** and include a summary of main findings at the start of each sub-chapter. Finally, → **Chapter 6** provides a discussion and → **Chapter 7** proposes how various actors can best support states and regions.

»» 02

States and regions are essential actors in climate change mitigation

The mitigation potential of states and regions is extremely big, not the least because regions add up to almost the global level:

The Paris Agreement requires that CO₂ emissions are reduced to net zero by the middle of the century and that all greenhouse gases are reduced to net zero in the second half of the century (IPCC, 2018). This means that emissions in all countries eventually need to be reduced to zero. All regions in a country add up to the national level and all regions in countries with regional structure add up to almost the global level. This makes regions fundamental for reaching net zero globally, unlike cities, which only covers urban and not rural areas and therefore do not add up to the global total. Consequently, earlier studies assign regions the highest potential to reduce emissions of all other non-state actors (Hsu et al., 2018; NewClimate Institute et al., 2019, 2021; Kuramochi et al., 2020b; Lui et al., 2021). However, the full potential has not yet been leveraged (Data-Driven EnviroLab, Utrecht University and CDP, 2022).

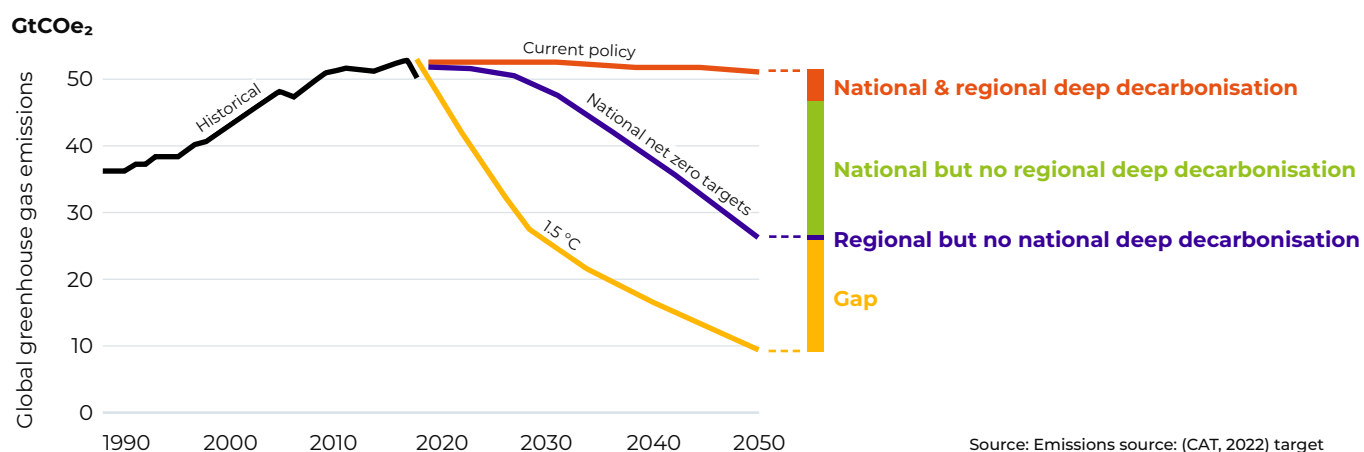
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Only regions of the 25 largest countries were surveyed systematically. Other regions could have net zero targets but were not analysed.

Coverage of decarbonisation commitments by regions largely mirror national commitments:

In response to the Paris Agreement, 126 national governments and at least² 131 states and regions have set net zero targets, aiming to reach almost zero emissions by the middle of the century (Under2 Coalition, 2022; Net Zero Tracker, 2023). In many cases national and regional level are aligned in the pursuit to reach net zero. Many regions (covering maximum 80% of the population that are covered by national net zero targets) could step up and follow the national government in setting a deep decarbonisation target. A very small share of regions are ahead of national governments and have set deep decarbonisation targets although the national level has not. These regions can be drivers of ambition (see also → Chapter 6). As such, all regions currently have a significant role in moving the world to net zero (→ Figure 1).

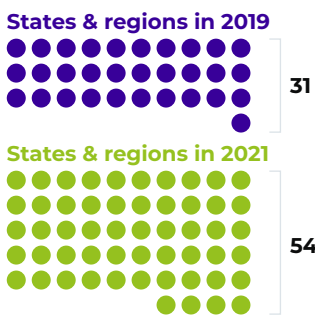
Figure 1

Coverage of net-zero targets at national and states and regions level



Source: Emissions source: (CAT, 2022) target coverage (Net Zero Tracker, 2022) potential: own calculation on the basis of share of population

Regions can lead the way in all policy areas: Regions must implement very similar policies to national governments (UNEP, 2022, → Chapter 5), subject to their governance power. The exact impact is difficult to estimate because it is not clear, which exact powers regions have in comparison to national governments (see → Chapter 5). However, the exact detail may not be so relevant, because regions almost always can complement actions that are undertaken at the national level and can push the national level to increase ambition.



³ <https://www.100-percent.org/>, https://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/IRENA_Coalition_100percentRE_2019.pdf and (Climate Group and CDP, 2020)

⁴ <https://poweringpastcoal.org/members/>
- coal phase out plans do not equate just transition plans, which are also in place in many regions but no central data portal exists

⁵ https://carbonpricingdashboard.worldbank.org/map_data

1. Expand renewable energy: Expansion of renewable energy, in particular wind and solar are essential for the energy transition. Regions need to remove administrative and economic barriers to the expansion of renewable energy and incentivise power system flexibility (expansion of electricity grids, storage and allowing flexible electricity demand that follows the supply). In 2021, **54** states and regions have set targets to reach 100% renewable electricity supply, up from only **31** in 2019. This is still low compared to the 78 national governments that have set such targets³.

2. Plan for just fossil fuel phase out: In the transition to reduce fossil fuel use to zero, regions have a special role to play. The transition will have significant impact on economic structure, jobs and future prospects of the regions that currently depend on fossil fuel extraction. Planning of fossil fuel phase out is essential to give the affected regions a perspective. At least **30** regions plan to phase out coal, while it was none in 2019⁴. Efforts of regions in Canada, Australia and Germany support the same goal as the national government. Regions in the US, Poland, South Korea, Philippines, China are ahead of their national government.

3. Support zero carbon industrial processes: Phasing out fossil fuels has to be complemented by phasing in zero carbon technologies in industry, in particular for steel, cement and chemicals. Where possible, industrial processes need to switch to electricity away from fossil fuels. Regions have to incentivise these transitions. For example, the number of regions initiating carbon pricing has increased steadily in the last 10 years from **5** in 2012 to **36** in 2022⁵. Subnational carbon pricing initiatives are driving policy development in Canada, US, Mexico, China and Japan. There is significant scope for learning from other regions.

4. Invest in zero emission infrastructure for rail and ships: A zero carbon transport system requires significant shift to rail and ships. Regions have to use their powers in planning transport infrastructure to expand rail and shipping.

5. Plan infrastructure to reduce travel demand: Regions have an important role in urban planning to support infrastructure that reduces travel demand, i.e. avoids urban sprawl or creates centres which provide all essential services in walking/biking distance.

6. Set mandates for or incentivise 100% zero emission road vehicles: The vehicle fleets need to be zero carbon by the middle of the century, which can be achieved by setting mandates, emission standards or incentivising the purchase of CO₂-free vehicles through bonus/malus systems or administrative advantages (driving lanes, access to certain areas, easy registration). The number of regions with goals to achieve 100% zero emissions vehicles sales by a certain date has increased to at least 18⁶, but that increase is slower than that for national governments which now count 24.

7. Regulate/incentivise/facilitate zero emission building stock: The complete building stock needs to be zero carbon by the middle of the century. This requires concerted action by all actors in regulation (e.g. building codes and mandates), incentives (e.g. low interest loans) and facilitation (education programmes for workers and architects). At least 5 states and regions have the explicit commitment to fully decarbonise the building stock⁷. The regions Baden-Württemberg (Germany), Catalonia (Spain), Navarra (Spain), Scotland (UK) and California (US) support with those commitment similar action by their national governments. Yucatan (Mexico) is ahead of its national government.

8. Conserving, restoring and protecting natural carbon sinks: Forests and natural sinks are essential for reaching net zero greenhouse gas emissions along with protecting biodiversity and serving as source of food and raw materials. In particular, deforestation needs to be reduced to zero as soon as possible through regulation or incentives. At least 21 states and regions have endorsed the New York Declaration of 2014 on Forests to halt natural forest loss by 2030, several of them in Brazil, Indonesia, Mexico and Peru⁸. There is significant scope for improvement, as this number is still low compared to the 144 countries that commit to “halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation” under the Glasgow Declaration of Forests and Land use of 2021⁹.



⁶ <https://zevalliance.org/members/andhttps://www.theclimategroup.org/our-work/news/states-and-regions-act-net-zero-emissions>

⁷ <https://www.worldgbc.org/thecommitment>

⁸ [https://forestdeclaration.org/about/endorsers/and\(TheClimateGroupandCDP,2020\)](https://forestdeclaration.org/about/endorsers/and(TheClimateGroupandCDP,2020))

⁹ <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

The scope and breadth of regions activities can increase significantly to lift the full potential. The above comparison of national versus regional activities shows, that in many policy areas, national governments are ahead of regional activities. Here the states and regions can step up and support the national governments in the implementation. In other cases such as carbon pricing and coal phase out, several states and regions are test cases ahead of their national governments.

>> 03

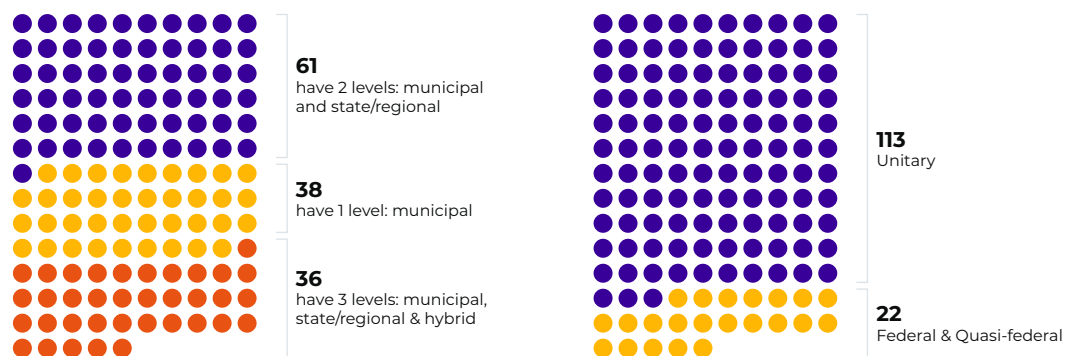
Governance – political systems and decentralisation

Most countries have at least two levels of governments – central and local. The structure of multi-level governance systems varies significantly across countries. In 2022, the Organisation for Economic Cooperation and Development (OECD) and United Cities and Local Governments (UCLG) updated their study on subnational governments in 135 countries across seven main world regions, accounting for 93% of the world population (OECD/UCLG, 2022c). **Of the 135 studied countries, 38 have only one level (municipal), 61 have two levels (municipal and state/ regional), and 36 have three levels, with an intermediate level between the municipal and state/ regional level. Most countries (72%) included in their study have a state or regional government.** Our research focuses on countries with state or regional governments, hence at least two levels of subnational government.

The powers and responsibilities of national governments are at the highest level defined in constitutions, which are a collection of fundamental principles and laws that define how a country is governed. **Depending on the distribution of powers between levels of government, a country can be described as either a unitary or a federal system.** Unitary systems are the most common type of political system around the world and account for 113 of the 135 countries in the OECD/UCLG database, compared to 22 federal and quasi-federal countries.

Figure 2

Subnational governments and political systems in 135 studied countries



3.1 Political systems

Unitary systems

Unitary systems are those in which most or all the constitutional governing power lies with a centralised (national) government. Subnational tiers of government (states, regions, municipalities, and in some cases intermediate level

governments) are delegated powers either through the constitution or through legislation. The degree to which power is decentralised in unitary systems can vary significantly between countries (see → **Box 1**). In the United Kingdom (UK), the devolved governments of Scotland, Wales, and Northern Ireland have powers to legislate on a broad range of devolved matters, including economic development, environment, agriculture, forestry and fisheries, housing, and some aspects of transport and energy. In contrast, Regions in France have a much more limited scope of responsibility and no powers to enact laws. Instead, Regions can set regulations in some policy-fields and allocate budget to exercise their functions.

Box 1

Decentralisation of power in unitary systems

Decentralised unitary system – United Kingdom

The United Kingdom (UK) is a sovereign country comprised of four constituent countries: England, Scotland, Wales, and Northern Ireland. In 1988, three devolution Acts were passed for Scotland, Wales, and Northern Ireland, which created three devolved legislatures and devolved a number of powers previously held by the central government. Further devolution Acts have followed for Scotland in 2016 and Wales in 2017.

Devolved matters include economic development, energy (some areas), environment, agriculture, forestry and fisheries, housing, transport (some areas), and local government (Elkins, Ginsburg and Melton, 2022h).

Constitutionally, the central UK Parliament is sovereign, which means that (1) there is no limit to what it can legislate (including amending the devolution Acts) and (2) that any law it enacts is the highest level of law and supersedes any law of devolved parliaments. However, in practice the UK government does not legislate on any devolved matters without consent of the devolved legislature.

More centralised unitary system – France

The French Constitution of 1958 defines two levels of local government – departments and municipalities. At this time, France was a highly centralised country, where all power was concentrated at the central government and all actions of local governments had to be supervised and approved centrally.

Regions were later established as a third level of subnational government in the Decentralisation Law of 1982. These Regions are defined as territorial authorities with directly elected assemblies. The role of Regions has expanded gradually since 1982 and now include areas relating to economic development, regional planning, and education (Elkins, Ginsburg and Melton, 2022c). Regions do not have legislative powers, however they have autonomy on their budget allocation and can set regulation in some policy-fields.

Federal systems

In contrast, federal systems divide power and authority between the national government and smaller state and regional governments. The high-level division of powers and responsibilities between the national and state or regional governments is detailed in the constitution of federal countries. Federal systems show some degree of variety in terms of the division of powers and responsibilities between government levels captured in constitutions. It is often difficult to compare countries since the extent to which powers and responsibilities are constitutionally defined, varies significantly across countries.

→ **Box 2** describes the distribution of power between the federal and state or regional governments in the United States (US) and Germany. In the US, the federal government has a number of exclusive powers, in addition to concurrent powers shared with the states. However, while the list of exclusive federal powers is clearly defined in the constitution, concurrent powers are not. In comparison, the German constitution clearly provides a list of exclusive federal powers and concurrent powers.

Box 2

Decentralisation of power in federal systems

United States

In the United States (US), the federal government reserved a limited number of “enumerated powers”, which it uses to provide for the general welfare and defence of the country (Elkins, Ginsburg and Melton, 2022i). These include the power to levy taxes, coin money, regulate commerce, establish federal courts, raise and maintain armed forces and declare war.

Powers not delegated to the national government in the constitution, are reserved for the states. This means that state governments have extensive autonomy to govern. There are, however, powers that both the national and state governments can exercise – these are called concurrent powers. Importantly, both the national and state governments have the power to levy taxes and pass laws. When federal and state laws conflict, the federal law takes precedence due to the Supremacy Clause of the Constitution.

Germany

The German Constitution provides lists for matters under exclusive legislative power of the federal government (Art. 73) and matters under concurrent legislative powers (Art. 74) (Elkins, Ginsburg and Melton, 2022d). The limited number of matters under exclusive legislative power of the federal government include foreign affairs and defence, currency and coinage, federal railways, and production and utilisation of nuclear energy.

The list of matters under concurrent legislation is significantly larger and includes laws relating to economic matters (including energy, industry, mining, and commerce), agriculture and forestry, road transport, non-federal railways, air pollution control, and environmental protection (focusing on climate-related policy fields).

Quasi-federal systems

Quasi-federal systems are intermediate forms of state between unitary and federal. Spain and South Africa are commonly cited as examples of quasi-federal systems. Both countries are constitutionally unitary states but have a number of federal characteristics – importantly, state and regional governments in quasi-federal systems have typically have more responsibilities compared to those in unitary systems.

Spain is constitutionally a unitary parliamentary monarchy, meaning that it is a unitary state, governed by a parliament, with a monarch as the head of state. In practice, Spain is a quasi-federation with three levels of subnational government – autonomous communities, provinces, and municipalities. The autonomous communities are the regional level government in Spain and have significant devolved legislative powers.

The Constitution of Spain describes the division of powers and responsibilities between the national government and autonomous communities (Elkins, Ginsburg and Melton, 2022g). The national government has a number of exclusive powers, including international relations, defence and armed forces, basic regulation of mining and energy, cross-state railways and roads, and basic coordination of economic planning (to name a few related to climate policy). Autonomous communities have several responsibilities relevant to climate action, including regional railways and roads, agriculture and livestock raising, forests management and environmental protection.

Autonomous communities can legislate in areas not explicitly delegated to the national government. If the policy area is not explicitly listed as the responsibility of either the national government or autonomous region, both governments can legislate, but in the case of conflicts the national law is supreme.

3.2 Division of power across political systems – similarities and differences

By definition, federal states are those which have been formed through the union of independent states. State and regional governments in federal systems therefore generally have much more autonomy, powers, and responsibilities than states and regions in unitary countries, which constitutionally concentrate power at the national level. States and regions in quasi-federal systems typically have powers and responsibilities somewhere between unitary and federal systems.

When we start to ask which sectors and policy-fields state and regional governments can and can't legislate on, we see that this level granularity in the division of responsibilities and powers is often not provided in constitutions.

The following chapter provides several examples which illustrate the varying levels of clarity regarding division of power in constitutions.

Clear delegation of responsibility in a specific sector

In some countries, the constitution does provide a clear division of power between government levels in certain policy fields. For example, in Mexico the national government is explicitly given powers to legislate on “hydrocarbons, mining, chemical substances, ..., electrical and nuclear energy” (Elkins, Ginsburg and Melton, 2022f). Furthermore, it states that the national government has exclusive power to plan and control the production, transmission, and distribution of electricity. The national government also has the power to collect special taxes from the exploitation of natural resources, electricity, and energy resources.

Similarly, in Canada, provinces are given clear exclusive powers related to direct taxation within the province, management of public lands, exploration and management of non-renewable natural resources, and electricity (list focuses on climate-related responsibilities) (Elkins, Ginsburg and Melton, 2022b).

Broad responsibilities leading to uncertainty

Constitutions show varying degrees of granularity in terms of the responsibilities of the different government levels. In some countries, the constitution will outline broad responsibilities of the national government and grant powers to legislate on anything required to fulfil those responsibilities. For example, in countries like Argentina (**see → Box 3**), the national government is tasked with providing the necessary means for economic and human development and granted the powers to legislate on anything necessary to fulfil this responsibility. Provincial governments are given all powers not delegated to the national government, however, in this case, it is not clear from the constitution in which policy fields these governments can legislate.

Uncertainties also arise when the responsibilities are more granular, for example when a government is tasked with managing air pollution or environmental protection. Both of these responsibilities are cross-sectoral – air pollution relates to emissions from the energy sector, power generation, industry, and transport, while environmental protection relates to natural resource exploitation in the energy, buildings (deforestation for human development), forestry, and agriculture sectors.

Concurrent powers

Concurrent powers are those which both the national and state or regional governments can exercise. Laws or taxes introduced using concurrent powers can either be complimentary, where both laws or taxes may coexist, or conflicting. In the case of conflicts, constitutions often have a supremacy clause which states that the national government law supersedes that of the state or regional government.

Complimentary laws often work where the national law sets minimum standards for the whole nation, while allowing states or regions to also legislate in the same policy-field, so long as it is in line with the minimum standard set by the national government.

Likewise, there are concurrent taxes that can be supplementary, where both the national and state/regional tax can coexist, like income tax in the US. On the other hand, laws and taxes may be conflicting, where the national law supersedes that of the state or regional government. In this case, states and regions can only set laws in policy-fields where there is no legislation at the national level.

Importance of looking beyond constitutions

Constitutions describe the responsibilities and powers of the national government and usually also provide some indication of the division of power between the national and subnational levels of government. However, the level of detail provided in constitutions is often not sufficient to inform which range of policy fields state and regional governments can legislate on.

National laws may also provide more clarity on the division of power between different government levels in specific sectors or policy fields. The presence of national laws in policy fields under the joint responsibility, can also determine the actual ability of the state or regional government to legislate (in the case of conflict, the national law stands).

In addition, different types of policy interventions can be used to reach the same goals. For example, the goal of providing net zero buildings could be set through a building standard at the national level but also be supported through financial incentives and zoning laws at the regional level, if the latter does not have the power to set building standards. This leaves flexibility to adjust to the particular regulatory environment in a given country in line with the constitutions.

To understand the power of state and regional governments to legislate on specific policy fields, it is important to look beyond constitutions.

Box 3

Constitutional division of powers – varying uncertainties

All powers necessary to fulfil role - Argentina

The Powers of Congress

Art. 75

18. To provide whatever is conducive to the prosperity of the country, to the improvement and welfare of all the Provinces, [...], [including] the introduction and establishment of new industries, the importation of foreign capital [...], through laws protective of these goals and by temporary concessions of privileges and incentive awards (Elkins, Ginsburg and Melton, 2022a).

19. To provide whatever is conducive to human development, to economic progress with social justice, to the productivity of the National economy, to the generation of employment, [...].

32. To enact all laws and regulations that may be necessary to carry out the foregoing powers, and all others granted by the present Constitution to the Government of the Argentine Nation.

Provincial governments

Art. 121

The Provinces retain all powers not delegated by this Constitution to the Federal Government, and those they have expressly reserved by special covenants at the time of their incorporation [into the Argentine Republic].

Art. 124

With the knowledge of the National Congress, the Provinces may create regions for economic and social development and establish bodies with power to achieve their goals, and they may enter international agreements as long as these are not incompatible with the foreign policy of the Nation and do not affect the powers delegated to the Federal Government or the public credit of the Nation. The City of Buenos Aires shall have a system that shall be established for such purpose. The original ownership over natural resources existing in their territory belongs to the Provinces.

Power to regulate industries necessary for public good – India

The division of power in India's constitution is relatively well defined and provides lists for (I) the power of the Union (national), (II) states, and (III) concurrent powers (Elkins, Ginsburg and Melton, 2022e). However, even in such a case, uncertainties do still arise in certain policy fields.

For industries and mineral development, the national government is given power to regulate if the Parliament declares that it is in the interest of the public:

List I: Union List

52. Industries, the control of which by the Union is declared by Parliament by law to be expedient in the public interest.

54. Regulation of mines and mineral development to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.

3.3 Regional governance models

The OECD and UCLG projects on subnational governance provide the most comprehensive documentation of regional governance models across the world. In 2016, OECD/UCLG published their landmark study on 'subnational governments around the world', which analysed subnational governance structure and finance in 101 countries (OECD/UCLG, 2016).

The consortium expanded their work in 2022, launching the World Observatory on Subnational Government Finance and Investment (SNGWOFI). Through this project the OECD and UCLG provide an online fiscal database and a website for country and territorial profiles (OECD/UCLG, 2022a). The fiscal database includes where possible socio-economic data (e.g., population and GDP), subnational structure (number of subnational governments), subnational expenditure (by sector), subnational revenue, and debts. The country profiles discuss the subnational finance, in addition to describing the main features of multi-level governance framework and subnational government responsibilities.

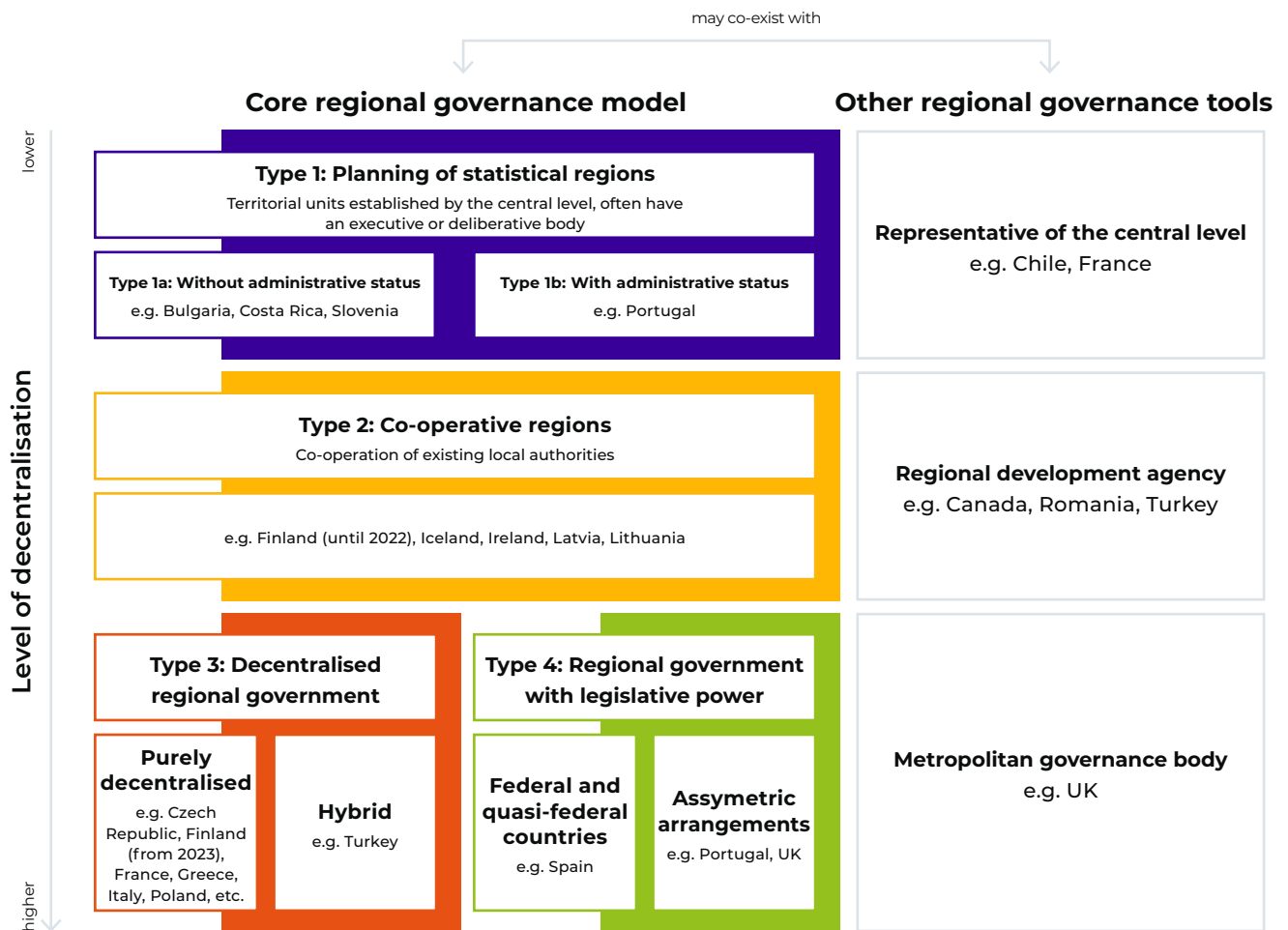
It is important to note that the description of the subnational responsibilities by the OECD and UCLG is nonetheless based on the constitution of each country. We therefore run into the same problems as described in → **Section 3.2** – constitutions often do not fully describe what climate-related policy fields state and regional governments can legislate on.

Based on this work, the OECD/UCLG present a new typology for categorising regional governance models (→ **Figure 3**). The typology defines four distinct types of regional governance models: (1) planning and statistical regions, (2) co-operative regions, (3) decentralised regional governments, and (4) regional governments with legislative powers. The categorisation is based on four dimensions: administrative institution, governing body, scope of responsibilities, and the source of funding.

Planning and statistical regions are territorial units created (and funded) by the national government for the purpose of regional planning and collecting regional statistics. These regions are most common in unitary countries with only a municipal level of subnational government.

Co-operative regions are formed through the formalised cooperation of municipal governments. The regions take responsibility for matters that are considered by the municipalities to be better managed at the regional level, such as regional development and spatial planning, regional transport infrastructure, and environmental protection. Unlike planning and statistical regions, co-operative regions are funded by municipal governments, in addition to the national government.

Figure 3
OECD/UCLG typology of regional governance



Source: NewClimate Institute elaboration based on OECD

Neither planning and statistical, or co-operative regions have legislative powers or the ability to raise their own funds. These types of regions are only found in unitary countries.

The decentralised regional governance model has an elected regional government above the level of municipal governments. **This model is the most common regional governance model in the OECD and is found in unitary and quasi-federal countries (OECD, 2022a).** In contrast to planning and statistical and co-operative regions, these decentralised regions are always legal

entities, have their own budget, and have a broader range of responsibilities. Importantly, these regions can sometimes generate revenue through regional or shared national taxes and have some degree of autonomy over the allocation of their budget. Nonetheless, these regions still lack the ability to legislate.

The strongest type of region in the typology is the model of regions with legislative powers. These regions have their own regional parliaments and the **power to legislate and levy taxes, have significant autonomy over the allocation of their budget, and have a much wider range of responsibilities** compared to the first three models of regional governance described above. Regions with legislative powers are found in federal, quasi-federal, and to a lesser extent in unitary countries.

3.4 Decentralisation

Political systems can provide a coarse-grained impression of subnational powers and responsibilities. By definition, more powers and responsibilities are decentralised in federal systems compared to unitary systems (→ **Chapter 3.1**). While this is useful to keep in mind, it is also important to understand that there is an immense degree of variety in the decentralisation of power within political systems, especially between unitary systems where regions can range from territorial units responsible for just planning and statistics, to devolved regional governments with extensive legislative powers like in the UK (→ **Figure 3**).

This means that it is important to not only look at the political system but also at the actual degree of decentralisation within countries. The forms and extent of decentralisation vary greatly between and even within countries. There are no clear boundaries within decentralised governance systems but instead different degrees of decentralised power, depending on the extent to which political, administrative, and financial powers have been transferred to subnational governments.

The complex nature of decentralisation means it is difficult to quantify and compare countries. Various indices are used to quantify and compare the degree of decentralisation across countries. Many such indices exist for measuring decentralisation, such as the regional authority index (RAI), the local autonomy index (LAI), and the decentralisation index (DI) (Ivanyna and Shah, 2014; Shair-Rosenfield et al., 2021a). These generally make a distinction between self-rule and shared-rule, and amongst other things consider the policy scope, fiscal autonomy, law making and executive control. Most indices focus on decentralisation of power to the local level. **The RAI however focuses on the state and regional level and is therefore most interesting for this research.**

The RAI measures the self-rule and shared-rule authority of regional governments along 10 dimensions (→ **Table 1**) for 1767 regions in 95 countries between 1950 and 2018 (Shair-Rosenfield et al., 2021b). Several interesting findings emerge from looking at the RAI datasets for individual regions and for countries (averages). Firstly, regarding political systems, the dataset shows that states and regions in federal systems generally have greater authority, but not always. While states and regions in unitary systems are generally have less authority, some score highly and in some cases have greater authority than some states and regions in federal systems.

Table 1
Regional Authority Index

	Dimension of authority	Description
Self-rule	Institutional depth	The extent to which a regional government is autonomous rather than deconcentrated
	Political autonomy	The range of policies for which a regional government is responsible
	Fiscal autonomy	The extent to which a regional government can independently tax its population
	Borrow autonomy	The extent to which a regional government can borrow
	Representation	The extent to which a region has an independent legislature and executive
Shared-rule	Law making	The extent to which a regional representative co-determine national legislation
	Executive control	The extent to which a regional government co-determines national policy in intergovernmental meetings
	Fiscal control	The extent to which a regional government co-determine the distribution of national tax revenues
	Borrow control	The extent to which a regional government co-determines subnational and national borrowing constraints
	Constitutional control	The extent to which a regional government co-determines constitutional change

Secondly, looking at the RAI dataset for individual regions emphasises the point that asymmetrical power distributions exist within countries, and that the degree of asymmetry is dynamic. The OECD and UCLG observed an increasing trend of asymmetric governance arrangements, where different powers and responsibilities are provided to governments at the same level (OECD/UCLG, 2022d). In most cases this development aims to either reflect strong capacities

in regions that need more power and responsibilities to fully utilise them, or regions with particular histories or strong identities, like the devolved nations of the United Kingdom or indigenous communities.

Finally, looking at a historical timeseries of the country RAI values shows that decentralisation of power is not static (**see → Figure 4**). Many countries are in the process of decentralisation, where regions gradually take on more powers and responsibilities – between 1970 and 2018, the regional authority (RAI) increased for 67% of the 95 countries analysed (Shair-Rosenfield et al., 2021b). Since 2020, Chile, Finland, France, Greece, Lithuania, Sweden, and Costa Rica have all implemented new legislation which give more powers and responsibilities to the regional level (OECD/UCLG, 2022d).

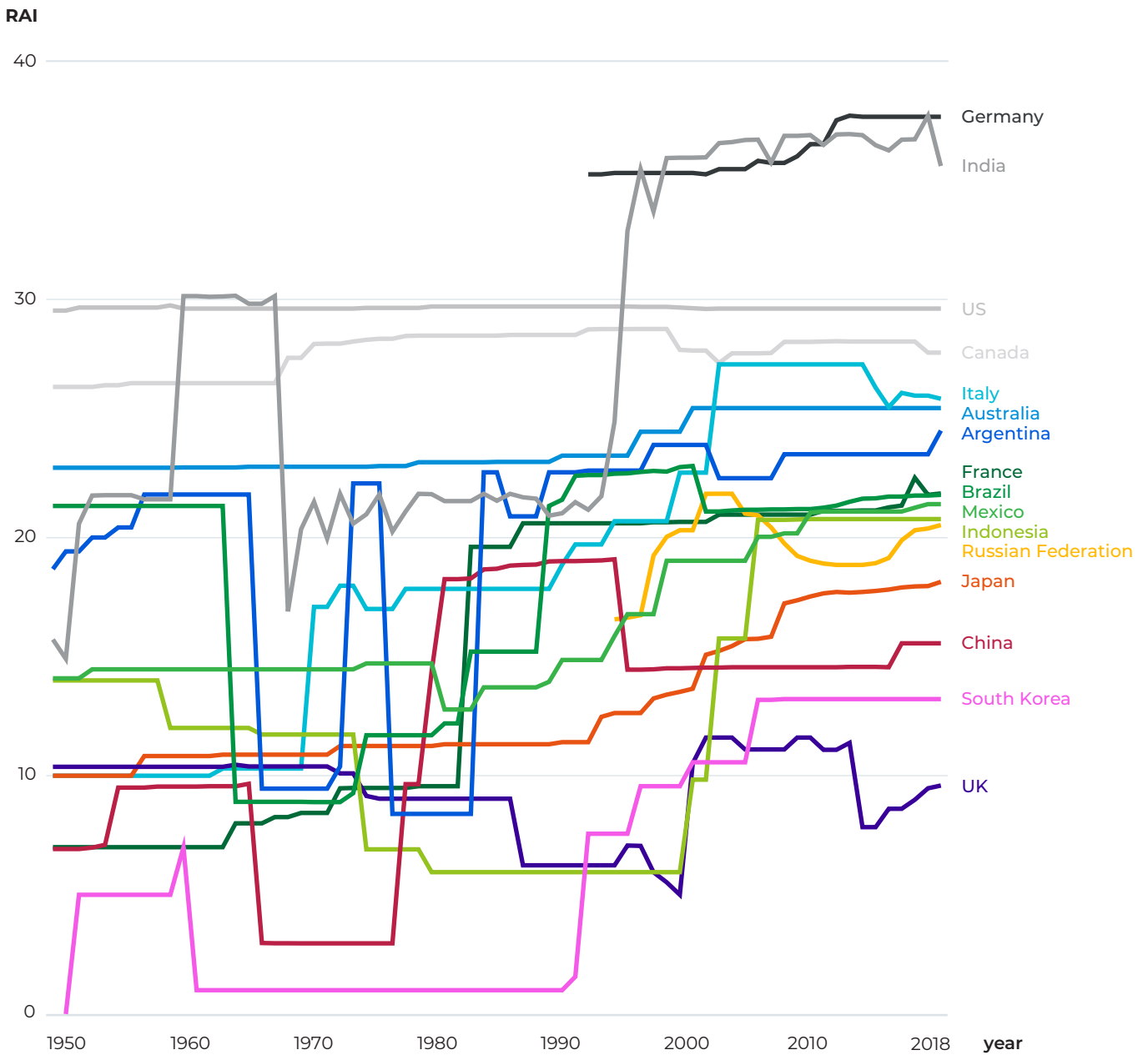
3.5 Existing research on regional climate governance systems

Achieving the goals of the Paris agreement requires a concerted global effort to address climate change. All countries and states/regions are part of the **global climate governance** system, which refers to all policies, measures and mechanisms that help socio-economic systems to prevent, mitigate, or adapt to the risks posed by climate change. The institutional policy framework on climate change is highly complex by nature, due to the need for coordination between countries, non-state actors, and across all sectors of the economy (Jagers and Striiple, 2003).

The Paris Agreement presented a new approach to addressing climate change: mandatory targets and timetables of the Montreal Protocol and Kyoto Protocol were replaced by a more bottom-up “pledge and review” approach where countries make pledges based on what they think they can achieve. The international process provides means for assessing countries’ progress and holding them accountable to their pledges.

While international processes focus on targets and measures at the national level, subnational governments and institutions play a pivotal role in the implementation and eventual outcome of climate change mitigation and adaptation measures. The outcome of these measures within countries depends on the complex relationships between the different governance levels. The study of multi-level governance is therefore essential for understanding how to achieve the goals of the Paris Agreement.

Figure 4
Historical trend in RAI for G20 countries



Responsibilities, power, and capacities are distributed across the different levels of government within a country and across the sectors. The power of a state or regional government to act on climate change is dependent on the specific governance system which it is embedded in. To date, there has been limited research on the role and power of state and regional governments in climate action.

Climate Group investigated the relationship between constitutional powers and degree of decentralisation of 25 state and regional governments in relation to climate action (Climate Group, 2014). The authors look at constitutional powers in eight policy fields: renewable energy supply, fossil fuels, energy distribution, energy efficiency in buildings, clean transport, R&D, agriculture, and adaptation. For each action area, the power of states and regions is rated 0-3, where 3 represents strong exclusive power of the state or regional government, 2 represents strong but shared power with the national government, 1 represents limited power, and 0 represents no power. They found that states and regions have a broad range of constitutional powers across these eight policy fields, with the strongest being in agriculture, buildings, and clean transport, and weakest in fossil fuels.

Furthermore, Climate Group found that **the devolution of constitutional powers did not always translate into climate action** – of these relatively ambitious states and regions, those with constitutional powers in some sectors may not implement action, whereas those with weak powers in some sectors may still implement action through other policy instruments.

Importantly, this study from Climate Group does not go beyond looking at constitutional powers. → Chapter 3.2 highlighted that the constitutional division of powers between national and subnational government across sectors and policy fields is not always clear and may be defined through subsequent legislation, like California's Clean Air Act waiver that grants authority to set and enforce more stringent vehicle emissions standards than the federal government (US EPA, 2023).

A similar, smaller study investigated the extent to which constitutional powers have influenced the scale of ambition and outcomes of climate policy (Royles and McEwen, 2015). The study focuses on Scotland and Wales as two devolved nations with differing constitutional power, within the same country. **The authors found that the devolution of power, or extent of constitutional powers, to some extent can explain the difference in the implementation of climate action.** In this case, the devolution of power was not found to have a significant influence on climate ambition.

Two prominent studies looked more generally at the role of state and regional governments in climate action. One study looked at the role of sub-state and non-state actors in international climate action processes (Hale, 2018). While the other looked generally at the role of state and regional governments in climate action and described the climate action in 23 leading states and regions (Galarraga, Gonzalez-Eguino and Markandya, 2011). This study also highlights the main sectors that states and regions act in adaptation and also mitigation, including energy efficiency, renewable energy, transport, sustainable agriculture, forestry and land-use policy, and waste management.

In sum, the literature on state and regional climate action focuses on the mitigation contribution, roles in national and international processes, and constitutional powers in relation to climate action. Many other factors influence how state and regional governments make use of the power to act on climate change, including the availability of finances, information, trained staff, and also political alignment between the national and state and regional governments. No studies were found that integrate these factors into a broader conceptualisation of 'power to act'.

The power of state and regional governments to act on climate change can vary significantly within, but especially between countries. Several indicators can provide high-level insights into state and regional 'power to act', such as the political system and degree of decentralisation (discussed below). Beyond these high-level indicators, it is necessary to define what constitutes 'power to act'. The following chapters provide background information on political systems, decentralisation, and power to act.

There is growing awareness that state and regional governments are important actors for the global climate effort but currently very limited understanding of what powers and capacities they have and what support they need.

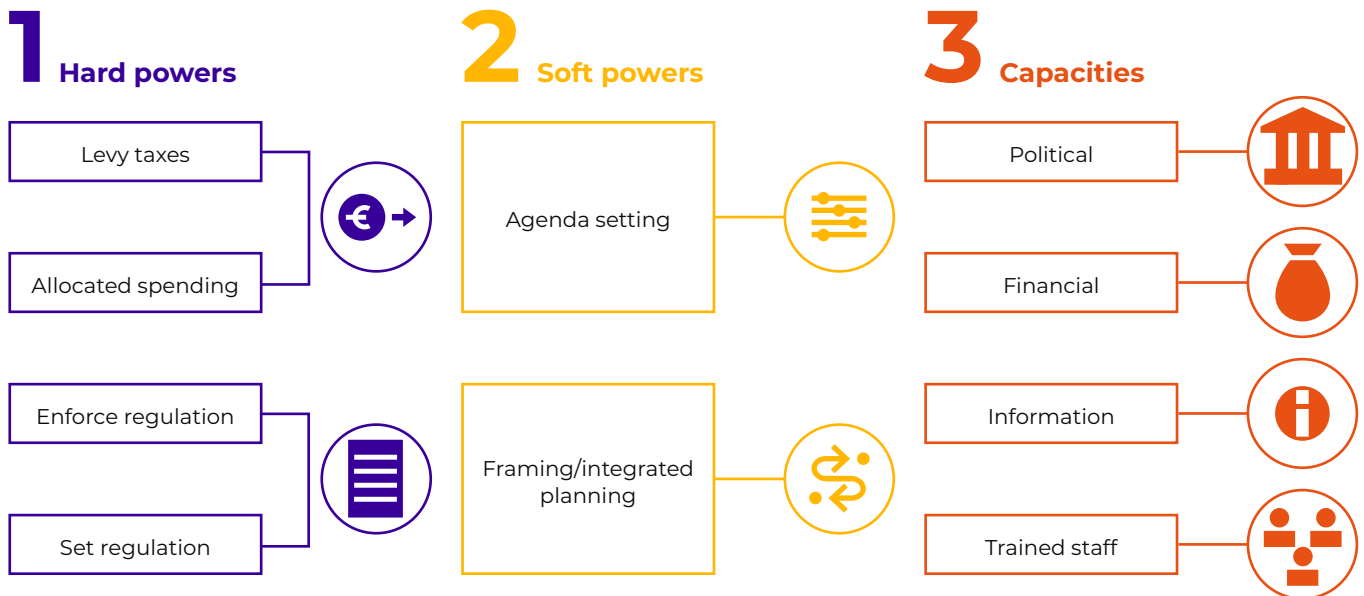
»» 04

Methodology to analyse powers of states and regions for climate action

4.1 Framework for ‘power to act’

The potential scope of climate action for any actor is determined by their specific set of powers and capacities. Powers, like those to regulate, enforce, levy taxes, and allocate spending allow actors to take more of an active role in driving climate action. Other powers, like those to influence the national policy agenda, allow actors with less regulatory and financial powers to still drive climate action. Ultimately, all actors need capacity to implement action and make use of the powers they have. Capacity comes in different forms like political, financial, information, and trained staff. The combined framework of hard powers, soft powers, and capacities is shown in → **Figure 5** and described in more detail in the following chapters.

Figure 5
Framework of powers and capacities



4.1.1 Hard powers

In political theory, hard power is thought of as “the ability to get others to act in ways that are contrary to their initial preferences and strategies” (Nye, 2011). These are also commonly referred to as “carrot and stick” and “push and pull” policies. This power relies on coercion and can be utilised through various channels. Drawing on the framework used by Marquardt (2017) in his research on how power shapes energy transitions in Southeast Asia, we consider two dimensions of hard power: financial and regulatory.

Financial hard power can be thought of as the ability to achieve certain outcomes using financial measures. The ability to levy taxes and allocate spending are two important dimensions of financial power. Raising funds through taxes allows states and regions to generate their own income that they can allocate independently of the national government. For example, implementing a carbon tax to achieve the goal of reducing emissions, while generating income that can fund additional climate change mitigation and adaptation measures. States and regions can also drive climate action by allocating spending to climate measures. The power to generate income and autonomously allocate spending are particularly important in countries where climate is low on the national agenda.

Regulatory hard power refers to the ability to achieve certain outcomes through setting and enforcing regulation. The ability to set regulation allows states and regions to drive climate action within their territory. The power to set regulation varies across sectors and governance levels within each country. For example, a state or region may have some power to set regulation in the buildings sector, but not in the energy sector. The power to set regulation can be a particularly important power in countries where climate is low on the national agenda and there are limited or weak climate-related policies at the national level.

The outcome of any regulation is dependent on how effectively it is enforced. The governance level responsible for the enforcement of regulation may be different to the level at which the regulation is set - a regulation can be set at the national level, but enforced at the regional, or even municipal level. State and regional governments that lack the power to set regulation can still be instrumental in the effective enforcement of regulations set by the national level.

Hard powers

The power to achieve outcomes using certain measures. In this research we look at the power to levy taxes, allocate spending, set regulation, and enforce regulation.

4.1.2 Soft powers

Contrary to hard power, soft power can be thought of as “the ability to get others to want the outcomes that you want” (Nye, 2005). This power relies on methods other than coercion to obtain specific outcomes. Drawing on the framework used by Marquardt (2017), we consider two dimensions of soft power: agenda setting and framing.

Agenda setting refers to the power to influence the policy-making agenda – the stronger the power, the more influence a government has on what issues are discussed and how much attention each issue receives in the policy-making process. Agenda setting is an important power that governments use to shape policy outcomes. Governments with significant agenda setting powers will be able to produce the outcomes they prefer.

Most of the theory on agenda setting focuses on the national level – analysing how countries cultivate and utilise soft power resources in foreign affairs (Princen, 2017a). Much like national governments in the international arena, state and regional governments cultivate and utilise soft power resources in national policy-making processes.

Agenda setting power

The power to put issues on the policy-making agenda and influence the relative importance of the issue on the agenda.

Complementary to agenda setting, which serves to put issues on the policy-making agenda, ‘framing’ shapes the outcome of the policy-making process by influencing how issues are understood (Marquardt, 2017; Princen, 2017b). For example, the energy transition may be framed in a way to target the uptake of some renewables (e.g., reaching a 20% share), or it can be framed in a way that creates a vision for a 100% renewable energy system. Framing also considers how issues are linked to other issues on the policy agenda, for example, linking the energy transition and the phase out of coal-fired power generation to reducing air pollution. Another important example is the link between climate action and other sustainable development goals (SDGs). If unaware of these linkages, climate action may be perceived as competing, rather than complementary to other development goals. The formal link between climate action and other development goals in government plans is a good indication that there is some degree of understanding of these synergies.

Framing and integrated planning

The power to influence how issues are understood in policy-making processes, including how issues relate to other topics and wider development objectives. The integration into government development plans provides important insights into how issues and their interlinkages are understood.

4.1.3 Capacities

Implementation of climate action often occurs at the regional and local level. However, governments and institutions at these lower levels often lack the capacities to implement measures.

CDP's 2021 survey of climate action in 96 state and regional governments shows that **capacity constraints were one of the main barriers to several key climate measures including setting a regional economy-wide emissions reduction target and formulating a climate action plan (CDP, 2021)**. However, capacity constraints are not explicitly investigated in CDP's survey, which asks open questions on why state and regional governments have not implemented eleven key measures (mainly targets and plans). The implementing policies of these targets and plans are in turn much more resource intensive and will too be limited by capacity constraints. Capacity constraints are also very sector and policy specific – this research can only help understand sectoral capacity constraints at a high level and **further research is needed to understand what type of capacities are limiting actions, and in which sectors**.

Capacities can be divided into several categories. In his study of how power (including capacities) shapes energy transitions in Southeast Asia, Marquardt (2017) defines **three dimensions of capacity – financial, information and human (availability of trained staff)**.

Financial capacity is a key enabler for the development of human and informational capacity. States and regions build human capacity by funding positions for people to work on climate change mitigation and adaptation. Building human capacity can require significant financial resources. Funds further support the development and implementation of projects and programmes. Availability of information can be important for some plans and measures, for example, to create a climate action plan and set GHG emissions reduction targets, states and regions need to have detailed sectoral GHG inventories. In some cases, states and regions need financial and human capacities to address gaps in information.

We add politics as the fourth dimension of capacity in our framework, to investigate how party politics at the national level impacts climate action at the state or regional level, and whether the political alignment between these two governance levels impacts climate action.

The relationship between climate change and politics has shifted since the rise of international cooperation on climate change - marked by the foundation of the UN Framework Convention on Climate Change (UNFCCC) in 1992 and the adoption of the Kyoto Protocol in 1997 with 150 signatories. Since then, the issue of climate change has been increasingly politicised in some constituencies, where views on climate change (and necessary action) are often tied to political ideologies and parties.

The US is an illustrative example of how politics can impact climate action – a 2016 study found that 72% of Democrats agreed that human activities were causing climate change, compared to just 22% of Republicans (Funk and Kennedy, 2016). In terms of climate action, the study showed strong political divides over the expansion of fossil fuel energy. The Trump administration saw the US withdraw from the Paris Agreement, impose large cuts to climate spending and programmes, and roll-back many major national climate policies from the Obama administration, including the Clean Power Plan, fuel economy standards, and efforts to reduce methane and hydrofluorocarbon (HFC) emissions (Pitt, Larsen and Young, 2020).

4.2 Research design

The aim of our research was to investigate the power that state and regional governments have to act on climate change. **Our research is designed around a fundamental belief that state and regional ‘power to act’ is not only dependent on financial and regulatory hard powers, but also on agenda setting and framing soft power, and a range of political, financial, informational, and human capacities (→ Chapter 4.1).**

Since there is no existing information on these powers and capacities to act on climate change, we need to ask people working in state and regional governments. It is important to remember that while constitutions can provide important validation for survey responses on financial and regulatory hard powers (also across sectors), these do not fully inform which policy areas state and regional governments can in fact legislate on (→ Chapter 3.2). If you only look at constitutions, you can miss policy areas where state and regional governments have power to implement climate action.

Since this is a global study, we collected information from states and regions across a wide range of country contexts, like world regions, political systems, degrees of decentralisation, and development. We combined an online survey with a series of interviews to collect as much primary data as possible for the analysis. We designed our survey and interviews to help us answer the following guiding research questions:

- **Power to act:** Which powers and capacities do state and regional governments have for climate action?
- **Identifying types of state and regions:** Which types of climate governance systems exist at the state and regional level according to their powers to act?
- **Indicators for types of states and regions:** To what extent can the political system, degree of decentralised and development inform the powers and capacities of state and regional governments?
- **Support:** How can each type of state or region be best supported?

4.2.1 Survey

The survey had a total of 31 questions and asks about the different dimensions of 'power to act', generally, and on a sector level:

- **General:** Devolution of power overall and in climate-related policy fields;
- **Hard powers:** Financial power (ability to raise funds and allocate spending) and regulatory power (ability to set and enforce regulation), generally and on a sector level.
- **Soft power:** The ability to influence national policy agenda and the framing of climate change in terms of the link made to SDGs.
- **Capacities:** The availability of political, financial, information, and human resources, and in which sectors these are crucial barriers to climate action.

The questions were a mix of drop-down menus, multiple choice and open questions (**see → Annex**). The survey was published on the Form Assembly platform and sent out to all Under2 Coalition and Regions4 members. Participants had the opportunity to translate the survey into their native language.

Questions relating to power and capacities were generally in the format of drop-down menus, where participants could select one option. Questions relating to sectors were presented in a multiple-choice list, where participants could select multiple sectors in which they have powers or capacities. Participants could add additional comments in the open questions at the end of each topic section.

For regulatory powers, we asked to what extent the state or regional government has power to (i) set and (ii) enforce regulation (from extensive to no power). For both “set” and “enforce” we also asked in which policy fields the government has power.

For financial powers, we asked to what extent the state or regional government has power to (i) levy taxes and (ii) allocate spending (from extensive to no power). Participants were also asked which type of taxes the state or regional government can levy, and in which sectors the state or regional government can allocate spending to.

For soft powers, we are interested in the state or regional policy agenda, the framing of climate action, and the power of the state or regional government to influence the national policy agenda. First, we asked about the relative importance of climate change on the state or regional policy agenda, and what the other priorities are. The latter is particularly important to understand given the diversity of states and regions globally. To investigate framing, we looked at the link to SDGs, and asked about the nature of the link and which SDGs climate action is linked to. We made a distinction between formal links (e.g., those made in state or regional planning documents) and informal links (e.g., public discussion).

Finally for capacities, we investigated to what extent each capacity is limiting climate action, and in which sector it is critical barrier. For political capacity we also looked at the alignment between political parties at the state/regional and national level.

Country characteristics – political system, decentralisation, development

State or regional power to act is informed by the availability of hard powers, soft power, and capacities, in addition to the specific governance dynamics between the state or regional and national government. As the specific constellation of powers, capacities, and multi-level governance dynamics are not widely known for all states and regions, it is interesting to investigate if there are any trends across different types of countries, according to the political system, degree of decentralisation, and level of development.

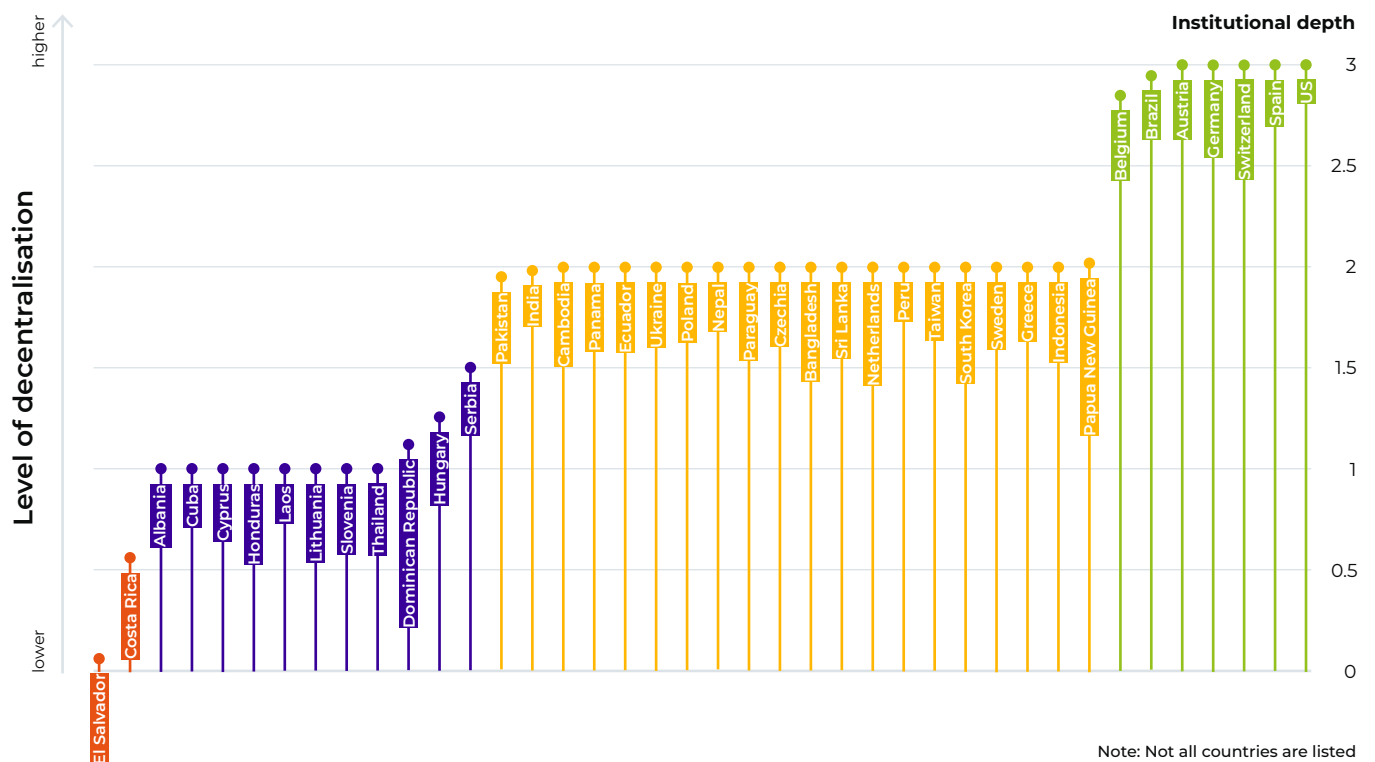
For political system, we use the OECD classification (OECD/UCLG, 2022b) and for level of development we use the UN classification (United Nations, 2014). For the degree of decentralisation, we use the RAI, however, we first need to convert the first dimension of the index, institutional depth, into three aggregated categories for most centralised countries, countries with a medium degree of decentralisation, and most decentralised countries (**see → Chapter 3.4 for full description**).

Institutional depth is an indication of regional autonomy, or decentralisation, and so can be used to define the degree of decentralisation for each country. Institutional depth in the RAI is rated 0-3:

- 0: Regions with no functioning general-purpose administration at the regional level
- 1: Represents deconcentrated general-purpose administration (not independent of central government)
- 2: Non-deconcentrated, general-purpose administration that is subject to veto from central government
- 3: Non-deconcentrated, general-purpose administration that is **not** subject to veto from central government

The RAI provides results for each region in all assessed countries and then aggregates these results for each country. Due to asymmetrical governance systems, index results are not always a whole number 0-3. For the purpose of

Figure 6
RAI institutional depth



analysing trends in survey responses, it is useful to convert the index values into three aggregated categories: most centralised, medium degree of decentralisation, and most decentralised countries. This allows us to define a degree of decentralisation for each country that participates in our survey.

Validation of survey results

Some degree of validation and cross-checking of results is possible through comparison to constitutions and to the RAI. Constitutions provide, to varying extents, information on regional powers and responsibilities, mostly across broad areas. These can therefore be used to cross-check survey responses for the degree of financial and regulatory hard powers and the selected policy-fields.

Several dimensions of the RAI can also be used to at least partially cross-check or validate survey responses – political autonomy, fiscal autonomy, and fiscal control. Political autonomy is defined in the RAI as the range of policies that the regional level is responsible for and can be used to cross-check survey responses for regulatory power in general, and the range of policy-fields the respondents select.

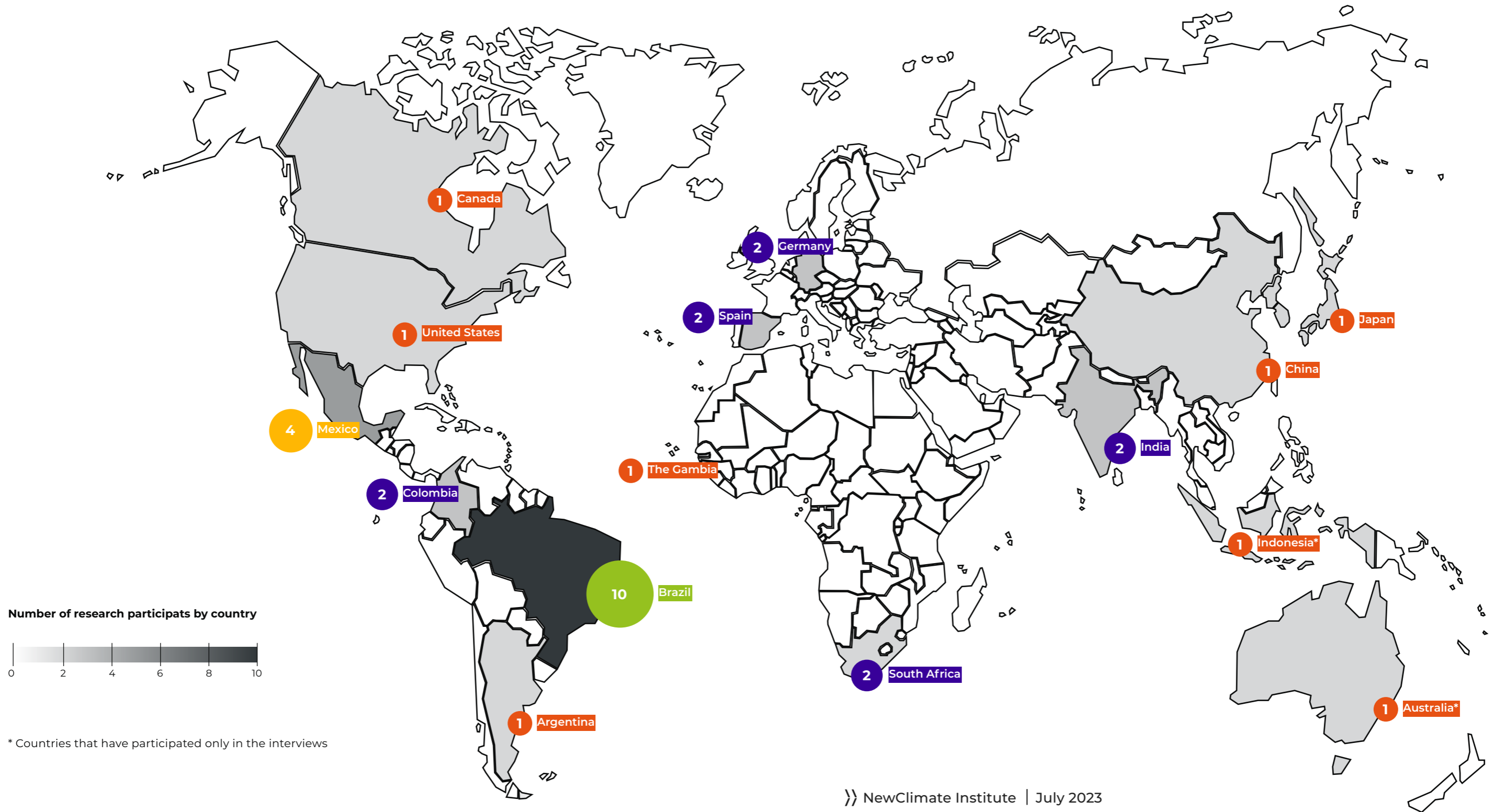
Likewise, fiscal autonomy is defined by the RAI as the extent to which a region can independently tax its population and can be used to cross-check responses for power to levy taxes. Finally, fiscal control is defined as the extent to which regions can co-determine the distribution of national tax revenue. Although it is not perfectly aligned with our survey question on regional power to allocate of budget, it can still provide a useful comparison.

Due to the uneven distribution of survey responses, analysing all responses would skew the overall results towards countries with more regional participants like Brazil. We average country responses to account for this difference in participation when analysing overall trends in how the political system and level of development impact regional power to act (hard powers, soft power, and capacities).

Figure 7
Research participation by country and survey representation of political systems, decentralisation and development

There was a total of 30 survey responses from states and regions in 13 different countries, totalling around 270 million people. The survey responses were unevenly distributed across countries and world regions – 30% responses came from Brazil and 57% from Latin America. Note that a province from Indonesia and a state from Australia participated in the research through interviews but not the survey.

Political system	Unitary	4
	Quasi-federal	2
	Federal	7
Degree of decentralisation	Most centralised	1
	Medium degree of decentralisation	5
	Most decentralised	7
Development	Developed	5
	Developing	8
Total		13



We observed significant differences in responses across states or regions in the same country. These differences in perceived power may reflect power inequalities within the country or other factors such as differences in relative size of regional population and economies.

The respondents only represent a fraction of states and regions in each represented country. While some responses may well represent general trends observed across other states and regions in each country, others could poorly represent general trends. For example, a federal state may have strong agenda setting power due to its size and proportional representation in the country – smaller states in this country would have less power to influence the national policy agenda.

As all survey participants are members of the Under2 Coalition of state and regional governments that strive for ambitious climate action, responses might not always be representative of the situations within each country. For example, a state or region that plays an active role in climate change mitigation and adaptation in a country may have developed human resource and informational capacities that enable it to implement climate action, while other states or regions in the same country may not have developed any of this capacity and remains much more limited.

Representation of political systems, degrees of decentralisation, and development state

A total of 13 unique country responses remain after averaging. Each political system and level of development is sufficiently represented, while most centralised countries are poorly represented with just one response. The poor representation of most centralised countries means that it is not possible to comment on trends between these countries and those with different degrees of decentralisation. We comment on trends between medium and most decentralised but do not comment on the results from most decentralised countries. Federal and unitary systems are both sufficiently represented, albeit federal with much stronger representation.

Survey limitations

We limited the length of the survey to around 20 minutes to maximise participation, considering that the respondents from state and regional governments often lack capacity for such engagements. With this limited survey length, we chose to focus on the key aspects of our framework for 'power to act' – financial and regulatory hard powers, agenda setting and framing soft powers, and capacities.

Importantly, we were not able to ask respondents to go through a list of best practice climate policies and select the ones which they have power to implement. The implication of this is that the survey only informs which policy areas state and regional governments have some power over, like energy – power generation, or buildings – government owned, rather than specific climate policies, such as building codes or support for charging stations.

Nonetheless, this limitation of survey scope was essential considering that after 6 months it was only possible to get 30 responses (see → Chapter 5) with limits to interpreting the data. Often knowledge is dispersed over several people, which may lead missing information if only one person is filling the survey.

4.2.2 Interviews

The survey is complimented by a series of semi-structured interviews. The interviews served to discuss some of the findings from the survey in more detail and explore two main additional topics - (1) the relationship in climate ambition between the national and state/ regional governments, and (2) the power distribution between the national and state/regional government across different sectors. The list of guiding questions can be found in the (see → Annex).

Regarding the first question, we wanted to identify specific instances where climate ambition or action at one governance level impacted the other and whether any good or bad examples could be identified, and if lessons could be drawn for other states and regions through consideration of any contextually important factors. The underlying assumption is that states and regions can learn from each other how to initiate an ambition loop within their country.

Regarding the second question, the survey provides broad insights into the distribution of power between national and state or regional governments overall in the country, and in climate-related policy fields. In the interviews we wanted to go deeper into this topic to understand how this distribution of power varies across sectors and whether there are good or bad practice examples. We ask this to explore to what extent broad insights at the national level can inform policymakers, and where it is important to look more closely at the sector level.

Insights from the interviews are integrated anecdotally throughout → Chapter 5.

⇒⇒ 05

Regional power to action climate change

In this chapter we explore the findings from the survey and interviews on the regulatory and financial (hard) powers, agenda setting and framing (soft) powers, and capacities, that state and regional governments have to act on climate change. We identify how these aspects of state or region's 'power to act' generally relate to each other, and look for trends between political systems, degrees of decentralisation, and development.

Most states and regions have at least partial financial and regulatory powers to make use of, but these vary significantly across countries (**→ Chapters 5.1 and 5.2**). States and regions in federal, most decentralised, and developed countries generally have slightly stronger hard powers. Regarding sectors, these hard powers are most common in the buildings, transport, and agriculture sectors.

Climate change is high on the policy agenda in surveyed states and regions and widely linked to the achievement of SDGs (**→ Chapter 5.3**). Climate action is slightly lower on the agenda in developing countries where pressing issues like poverty reduction and safety are more prominent. Agenda setting powers were generally not perceived to be strong across all states and regions, while those in federal countries seem to have slightly more power than those in unitary countries.

Capacities are limiting climate action in the vast majority of states and regions (**→ Chapter 5.4**). Human capacity is the most common limiting factor in surveyed states and regions, followed by financial, and then information. The only trend observed between the different political systems, degrees of decentralisation and development state is that informational capacity is more limiting in more centralised and developing countries.

Validation of survey results

Given the lack of pre-existing studies on the power to act on climate change in states and regions, validation of the overall survey is difficult. To validate individual aspects of the survey, we compared the results with individual indicator from (Shair-Rosenfield et al., 2021a) (**see also → Table 2**), which are however not specific to climate policy. The following indices were compared.

Table 2**Overview of Indicators from Shair-Rosenfield et al. (2021a) to indicators in this study**

Indicator (this study)	Indicator (Shair-Rosenfield et al.)	Description Indicator (Shair-Rosenfield et al.)
Power to set and enforce regulation	Policy Autonomy	The range of policies for which a regional government is responsible
Power to levy taxes	Fiscal Autonomy	The extent to which a regional government can independently tax its population
Power to allocate spending	Fiscal Control	The extent to which a regional government co-determine the distribution of national tax revenues

Results for each indicator were compared by calculating the correlation index between the datasets (on a country basis), whereby the absolute scale of the indicator did not matter. The correlation index allows to understand in how far the datasets are generally in agreement with respect to their results. A positive correlation index indicates that more often than not a higher scoring in one index correlates with a higher scoring in another (the same for lower). At an index of 1 this would be perfect, i.e. that for all countries a higher scoring in one of the two data sets also indicates a high scoring in the other, and the data set would basically be saying the same thing.

Table 3**Correlation between selected indicators in this study and selected Indicators in Shair-Rosenfield et al. (2021a)**

Indicator in this study	Correlation Index
Power to set and enforce regulation	0.58
Power to levy taxes	0.32
Power to allocate spending	0.57

From the results it can be observed that all indicators reviewed correlate positively with each others. There are several reasons that could explain the difference and hence a non-perfect correlation.

- **Difference in the scope and definition of the indicators** – The indicators compared do not match one to one. In particular, participants in this study were focused on climate related actions, while in Shair-Rosenfield et al. (2021a) the focus was broader.
- **Differences between the approach to developing indicators** – while the scoring in this paper was done entirely based on self assessment by the survey participants, Shair-Rosenfield et al. (2021a) categorise indicators based on a scale and measurable indicators.
- **Differences between Regions within a country** – Our study included a varying number of states and regions for each country, depending on the responses received. In cases where only one or very few regions were included (as is the case for most countries), the result could be skewed towards the concrete powers of the individual state or region, which might be different from the average across all regions in the country.
- **Difference in the scale** – While this survey used more a subjective sliding scale, Shair-Rosenfield et al. (2021a) used a more objected scale.

Both studies have approached the very complex issue of regional power from different angles and approaches. In either case generalisation had to be made on a regional level to allow for scoring and have thus be handled with care.

5.1 Power to levy taxes and allocate spending



The possibility to leverage taxes and the ability to allocate financial resources are important tools for regions to fund climate actions at the regional level. Most regions have powers to make use of these financial levers, whereby it is slightly easier for regions to allocate spending than to levy taxes (→ **Table 5**). This is likely due to the fact that some regions receive financial resources coming from taxes levied at the national level. Unsurprisingly, states and regions in federal and most decentralised countries have a significantly stronger ability to levy taxes than their counterparts, but this difference is a little less pronounced when it comes to allocating spending. States and regions in developed and developing countries had similar financial hard powers, with those in developed countries having slightly more power to allocate spending.

Table 4

Summary - powers to levy taxes and allocate spending

Aspect	Power to levy taxes	Allocate spending
General	Strong	Strong
Main sectors (in order)	N/A	Agriculture and buildings
Federal	Strong	Strong
Unitary	Medium	Medium
Most decentralised	Strong	Strong
Medium degree of decentralisation	Medium	Medium
Developed	Medium	Medium
Developing	Medium	Medium

How are states and regions making use of taxes?

Many states and regions can levy general taxes such as on circulation of goods (VAT/GST), income, heritage, real estate, automobiles, consumption of cigarettes and beverages, and for basic services like water. The power to levy taxes varies across sectors and limits the ability of states and regions to generate revenue. With regards to environmental protection, states and regions sometimes have powers to implement taxes relating to emissions (e.g., carbon taxes) and use of natural resources. In some cases, levying a tax is only possible if there is no existing tax levied at the national level – for example in Spain, regions can introduce environmental taxes as they have recognised competence (power and capacity) in this field and there is no existing national tax.

Power to levy taxes allows states and regions to fund climate action independently

States and regions with extensive power to levy taxes can generate revenue from carbon markets, carbon taxes, and fossil fuels taxes. For example, in Quebec, where the revenue from its carbon markets and carbon tax is reinvested into the Electrification and Climate Change Fund which finances greenhouse gas reduction and adaptation measures in the region.

Likewise, most surveyed states and regions have some power to allocate spending to climate action. The process for budget allocation varies across countries and will usually require negotiation on several levels, especially if funding is distributed from the national government to ministries and subnational governments. The state or regional budget is distributed across sectors and so the department, ministry, or agency responsible for climate action often only has

partial power to directly allocate state or regional budget to climate action. Extensive power to allocate spending is mostly seen in countries where states or regions have extensive power to levy taxes. States and regions in these countries, like Quebec from the example above, can directly allocate revenue from environmental taxes to climate mitigation and adaptation measures.

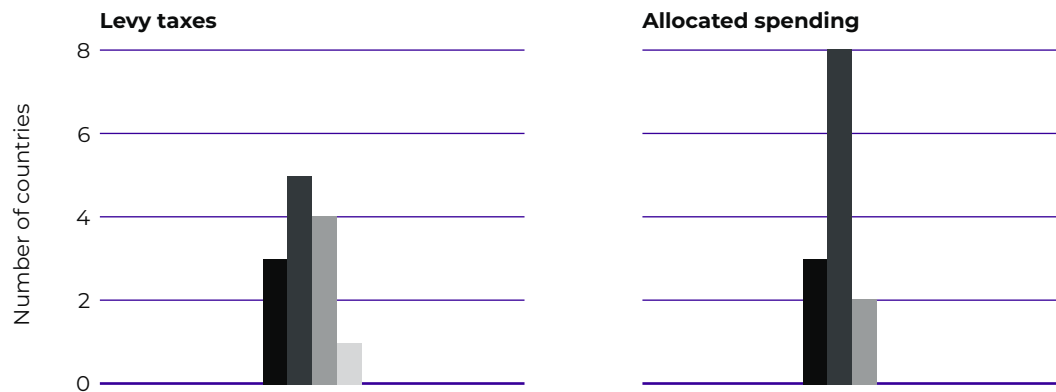
Survey responses – overall

States and regions generally have significant powers to levy taxes and allocate spending (→ Figure 8). Around 62% of surveyed states and regions have at least partial power to levy taxes, 23% of which with extensive power. States and regions generally had stronger power to allocate spending than to levy taxes – 85% of surveyed regions have at least partial power to allocate spending. For more detailed results please see → Annex.

Figure 8

Financial power – overall

● Extensive power ● Partial power ● Limited power ● No power





5.2 Power to set and enforce regulation

Regulations are important tools for driving climate action at the regional level, for example, renewable portfolio standards in the energy sector, fuel efficiency standards in the transport sector or environmental regulations to prevent deforestation in the land-use sector. The power to set and enforce regulations allows states and regions to be more autonomous of national government regulations and is therefore a particularly important power in countries where national climate-related regulations are weak or insufficient. A good example of this is California (US), where the state government has extensive power to set and enforce regulation across many sectors. California's waiver from the US Congress allows them to set stricter standards for low carbon fuel efficiency compared to the federal level. This was particularly important during the Trump administration that weakened federal climate regulations.

Most surveyed states and regions have significant powers to set and enforce regulations (→ **Table 5**). Generally, the power to set regulations was found to be slightly stronger than the power to enforce regulations. While regulations may be set at the national or state/regional level, they are often implemented at the municipal level. Hence the perceived power might be lower at the state/regional level here, as states/regions have to go through the municipal level to enforce regulations. Nevertheless, as national governments generally do not have much oversight of the municipal level, state and regional governments have a key role to play in the enforcement of regulation.

The power of states and regions to set and enforce regulations is stronger in federal systems, most decentralised, and developed countries, compared to those in unitary, most centralised and developing countries.

Power to set and enforce regulation varies across the sectors, with states and regions having more power in agriculture, buildings, and transport, and less in energy and industry. Power to set and enforce regulation in the energy sector was slightly more common in federal, most decentralised, and developed countries, compared to their counterparts in unitary, most centralised, and developing countries.

Table 5

Summary – power to set and enforce regulation

Aspect	Power to set regulation	Power to enforce regulation
General	Strong-medium	Strong-medium
Main sectors (in order)	Buildings, agriculture, transport	Transport, buildings, agriculture
Federal	Strong	Strong-medium
Unitary	Medium-weak	Weak
Most decentralised	Strong	Strong
Medium degree of decentralisation	Medium	Medium
Developed	Strong	Strong
Developing	Medium	Medium

How are states and regions utilising regulatory hard powers?

States and regions with strong powers can drive climate action autonomously of the national government. Certain contextual factors can make the power to set and enforce regulation very important for climate action at the state or regional level, for example, when the national government does not have ambitious climate policies, or when the state or region has powers in a sector with large mitigation potential.

Emissions trading schemes are a prime example of how states and regions around the world are utilising hard powers to drive emissions reductions independently of national governments. Such schemes have been in place for many years in the nine eastern US states of the Regional Greenhouse Gas Initiative (RGGI), California, and Quebec. The schemes in the US were particularly important for driving emissions reductions during the Trump administration that dismantled ambitious climate policy at the federal level.

States and regions with large mitigation potential and hard powers in certain sectors can be key drivers for climate action within their country. For example, in Indonesia, provinces have significant powers in the forestry sector, which also accounts for a large share of Indonesia's mitigation potential. Provincial governments are key actors in driving mitigation through the Reducing Emissions from Deforestation and Forest Degradation (REDD+) programme.

Regulatory powers can be used in creative ways at the regional level to substitute inaction at the national level, as examples in Rio de Janeiro (Brazil) and in New South Wales (Australia) show. In the region of Rio de Janeiro, under

the “Tomorrow’s Forest” program the regions have implemented policies to recover 10% of the forest in the next years, in a time when the federal level did little to nothing to halt deforestation in the country. A similar situation was in New South Wales, when the state decided to implement a building certification scheme, the “Neighbours program” during a time of national inaction 20 years ago, that is now replicated at the national level but still administered at the regional level.

How is climate action in states and regions being limited by lack of regulatory powers?

The inability to set regulation can hinder climate action in states and regions. This is most problematic in countries where the national climate-related regulations are relatively weak – Australia, Germany and South Africa are three examples where state or regional climate action in a particular sector is limited by the lack of regulatory power in a country where the national level climate regulation is or were unambitious. In Australia, states do not constitutionally have the power to set fuel efficiency standards for cars and are therefore unable to strengthen the past weak standards set by the national government. In South Africa, regions want to play a larger role in the supply of energy, especially in the context of the ongoing energy crisis. However, regional governments in South Africa do not have the mandate to set and enforce regulation in the energy sector and so have no influence over the energy supply mix (and resulting emissions). In Germany, regulation for agriculture is extremely stringent at the EU level and states with large emission sources such as peatlands struggle to identify and implement regulations that could reduce emissions, simply because EU regulation does not allow them to.

Regardless of whether a regulation is set by the national or state/regional government, regulation will often have a very limited impact without its proper enforcement. Enforcement is often significantly more resource intensive, especially at the capacity level, than instating the regulation. A prime example is building codes, which can be set relatively easily but require significant capacities at the regional and local level to enforce. Regulations are usually enforced close to the level of implementation, which is usually the state/regional or local/municipal level. However, these governments sometimes lack the powers or capacities to do so (see → Chapter 5.4), which limits the effectiveness of regulations set by higher levels of governance. For example, in The Gambia, where the national government sets strong forestry regulations, but there is limited power to enforce these regulations at the implementing levels of governance (regional and local).

While financial and regulatory powers are important tools for widening the scope of measures that states and regions can implement autonomously, it does

not necessarily mean that those with less powers are less active on addressing climate change. There are many ways to drive climate action without utilising financial and regulatory powers such as supporting national and local processes. While the role of states and regions in national processes can vary significantly across country, all states and regions can play a major role in supporting the planning and implementation of climate action at the local level.

Survey responses – overall

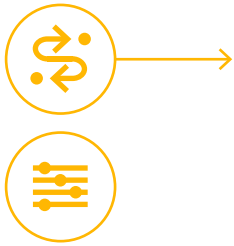
States and regions generally have significant powers to set and enforce regulation (→ Figure 9). Around 77% of surveyed states and regions have at least partial power to set regulation, 31% of which with extensive power. States and regions showed similar but slightly less power to enforce regulation – 69% of surveyed regions with at least partial power, 23% of which extensive. For more detailed results please see → **Annex**.

Figure 9

Regulatory power - overall

● Extensive power ● Partial power ● Limited power



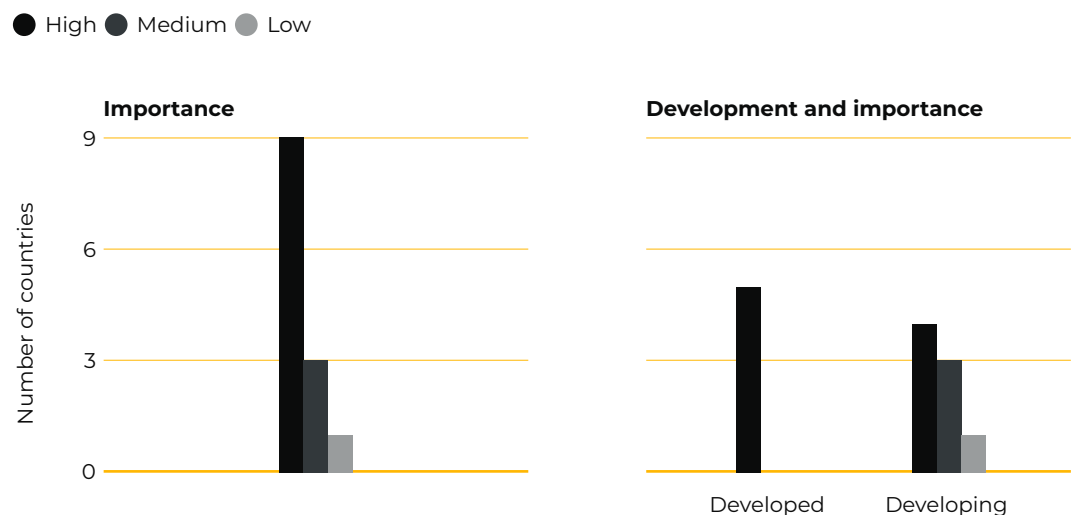


5.3 Soft power – agenda setting and integrated planning

Climate change is of high importance in the policy agendas of surveyed states and regions (→ Figure 10). This might be influenced by the fact that the survey was undertaken amongst member of the Under2 Coalition. Climate action is generally slightly lower on the policy agenda in developing countries due the presence of other pressing issues like poverty, health, access to basic services, safety, and education (SDGs).

Climate action is widely linked to the achievement of SDGs in surveyed states and regions and integrated into development plans (→ Chapter 5.3.2). Understanding the links between climate action and SDGs is particularly important in developing countries.

Figure 10
Importance of climate change on state or regional policy agenda



5.3.1 Power to influence national policy agenda

Agenda setting power allows states and regions to influence the national policy agenda. These powers are particularly important when states and regions have limited regulatory and financial powers, and in countries where climate change is low on the national policy agenda. Surveyed states and regions do not have strong agenda setting powers (→ Table 6). Agenda setting power is

perceived to be slightly stronger in federal systems and most decentralised regions, compared to regions in unitary and more centralised countries, but the difference is a lot smaller than for hard powers. The weaker agenda setting power of unitary states can be viewed as especially problematic as these states often lack other instruments to contribute towards an increased mitigation effort. There was no clear trend between developed and developing countries.

The mode by which state and regional governments participate in national policymaking processes varies across countries. Agenda setting power of states and regions is dependent on the existence and effectiveness of participation from regions in policymaking processes. Agenda setting power is also influenced by the relative power of the respective ministry and, for ambitious climate policy especially, on the existence and power of a coordinating body for climate change. If the ministry responsible for climate action is strong, it will have a stronger power to influence the policy agenda, for example the Federal Ministry of Economic Affairs and Climate Action in Germany. If the ministry is relatively weak, it will have less power to influence the policy agenda, for example the Department of Forestry, Fisheries and the Environmental (DFFE) in South Africa. The power to influence the national policy agenda of the states and regions (e.g. the respective ministries) is hence also influenced by the power of the counterpart ministry at the national level.

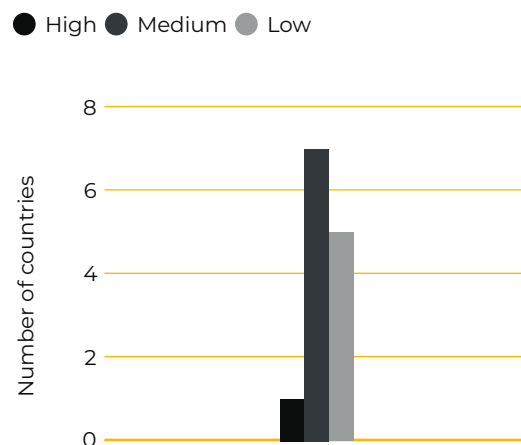
Table 6
Summary - agenda setting power

Aspect	Agenda setting power
General	Weak-medium
Main sectors (in order)	-
Federal	Medium
Unitary	Weak
Most decentralised	Medium
Medium degree of decentralisation	Weak-medium
Developed	Weak-medium
Developing	Weak-medium

Survey responses – overall

The power to influence national policy agenda was generally not perceived to be as strong across states and regions (→ Figure 11). Over half of surveyed states and regions have partial agenda setting power, while a significant share of respondents indicated only limited agenda setting power (38%). Nonetheless, all states or regions have some degree of agenda setting power, with one state or region indicating that they have extensive power to influence the national policy agenda.

Figure 11
Agenda setting power - overall



5.3.2 Integrated planning – link to SDGs

Climate change competes with many other issues on national, sub-national, and supranational policy agendas. The ability to influence how climate change is understood is a key soft power that influences how important people feel the issue is, what the cause is, which actions are necessary, and what the impact and co-benefits could be. Framing is complementary to agenda setting power – once an issue makes the policy agenda, the eventual outcome depends greatly on how this issue has been framed and understood.

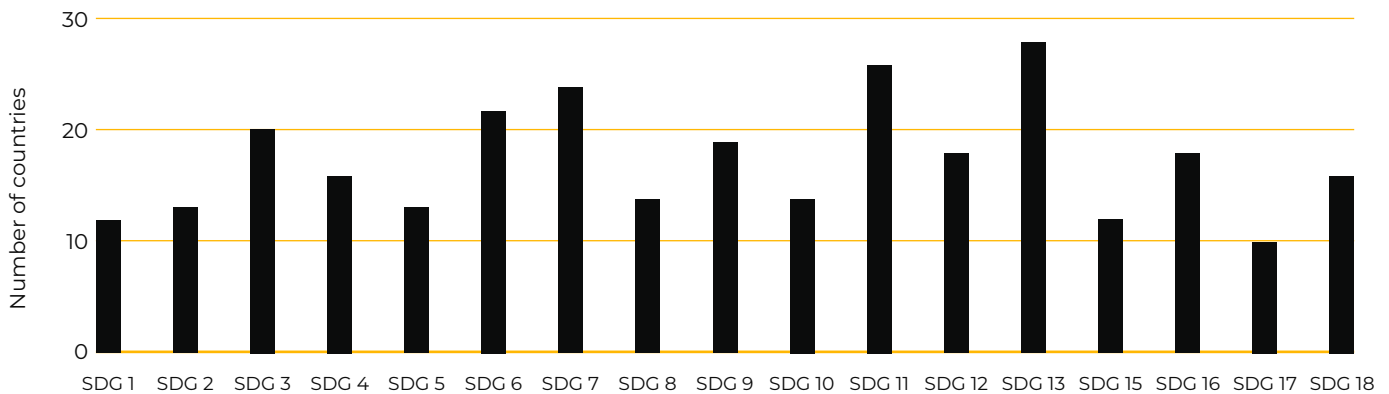
If climate change (and action) is poorly understood, it can often be deprioritised and seen as competing, rather than complementary

to achieving other development objectives like poverty reduction. This issue is more common in developing countries that have very pressing issues on the policy agenda like safety & security, health, poverty, education, access to basic services like sanitation, etc.

The link of climate action to SDGs, and its integration into formal planning documents can provide insights into how climate change is understood. Strong links to SDGs and good integration into regional planning documents can mean more funding is made available for climate projects as they contribute to achieving other development objectives.

Almost all surveyed states and regions had either a formal link (80%) or an informal link (17%) between climate action and achievement of SDGs. Examples of formal links are those made in government plans and strategies, while informal links could be those made in public debate and discourse. The most common SDGs linked, other than SDG 13 climate action (93%), were sustainable cities and communities (87%), affordable and clean energy (80%), and clean water and sanitation (73%) (→ Figure 12).

Figure 12
SDGs linked to climate action in states and regions



This hints towards an integrated planning approach within the regions, whereby climate issues are not only considered within isolation but are integrated into a more holistic economic/ development agenda. This integration has significant advantages for topic experts who have a good understanding of the dynamics of their topic and can implement realistic climate actions that link the different agendas. However, this can also lead to a situation where insufficient capacity is dedicated to emissions reductions as a topic, resulting in lower

levels of ambition. If climate action is integrated well with other development priorities, this would make more funding streams available to climate action as formerly competing budget needs become integrated and work towards the same goals. Climate action is after all a matter that affects all strains of the economy and budgets are limited at the national and state/regional level.



5.4 Capacities – political, funds, information, and trained staff



Capacities are central to successful implementation of climate action at the states and regions level. Capacities allow regions to take action where they have the powers, even if they are limited, to do so. Human capacities enable states to plan and enforce action, political capacities allow regions to decide on actions, financial capacities enable the implementation of action and informational capacities allow for a better understanding of the solutions space available. While the survey reveals that capacities are significantly lacking on all ends, human resources were found to be the most common limiting factor (85% of surveyed states and regions), followed by finances (77%), information (77%), and political (46%) (Table 8). This was confirmed in our interviews, where several interviewees identified human capacity as the main limiting factor for state or regional climate action and highlighted the need for capacity building programmes and long-term positions on climate change within the state or region.

The picture is similar when it comes to different types of countries – capacities lack on all ends but a few region types are especially constrained. The survey found that availability of information is especially constrained in most centralised countries, where the room for manoeuvring is already more limited, and in developing countries, where capacity to act on climate is significantly more constrained than in developed countries.

Financial and information constraints correlate with the existence of power at the sectoral level, while human resources do not. Financial capacity limitations were most common in the transport sector, followed by buildings, agriculture, and energy, while least common in the industry sector, which might be explained by the fact that states and regions generally have less financial and regulatory powers here. Access to information is most commonly a crucial barrier to climate action in the transport and agriculture sectors, where regions

generally claim to have significant financial and regulatory powers. Interestingly, the relationship with existence of power is the opposite for human resource capacity in the survey, which is most commonly a crucial barrier to climate action in the energy sector, followed by industry and agriculture, buildings, and least common in the transport sector. This might be explained by the fact that while energy is often regulated at the national level, it has very regional implications, especially if it comes to distributed energy sources.

Table 7
Summary - capacities

Aspect	Political	Financial	Information	Trained staff
General	Weak-medium	Medium-strong	Medium-strong	Strong
Main sectors (in order)	-	Transport, buildings, agriculture	Transport, agriculture	Energy, industry, agriculture
Federal	Weak-medium	Weak-medium	Strong-medium	Strong-medium
Unitary	Weak-medium	Medium	Medium	Strong
Most decentralised	Weak-medium	Medium	Medium	Strong
Medium degree of decentralisation	Weak	Medium	Weak-medium	Medium
Developed	Weak-medium	Medium	Medium	Strong-medium
Developing	No barrier	Medium	Medium	Strong-medium

How climate action in states and regions is limited by capacity constraints

States and regions generally have significant powers to act on climate, but they will only be able to make use of them if they have the capacities to do so. While the impact of capacities is undoubtedly largest with pre-existing powers, capacity building can also have a significant impact in regions with limited powers. For example, in the German agriculture sector increased human capacity could allow states and regions to explore options to act despite strict EU regulation, such as through private land-payment options. Providing more human resource would allow regions to still be active in a sector where they have limited powers as it would allow them to explore how they can take action.

In addition, states or regions with limited financial power and capacities to implement programmes can conduct feasibility and scoping exercises to ensure that programmes are ready to implement when funding is available.

For example, in India, the Kolkata regional government undertook feasibility studies to show that it is possible to introduce 80 electric buses without increasing ticket costs. This programme was then implemented as soon as the national government introduced a programme to incentivise the adoption and manufacture of hybrid and electric vehicles (FAME). A similar case is seen in the Western Cape, South Africa, where the regional government supports local governments with scoping context-specific climate measure and programmes while exploring financing options outside of the national government, recently through the Green Climate Fund.

Many regions with hard powers such as on the regulatory level lack the staff to identify and implement actions at the regional level. Barriers at the capacity level include that staff is sometimes tasked with too many other work areas and climate change is often just one of them or that people that are tasked with climate change lack the standing and experience necessary to push forward climate mitigation items on agendas. Even when a good knowledge base exists, such as is the case in many developed countries and particularly the German region of Lower Saxony, this is often not sufficiently institutionalised as not enough human resources in ministries are allocated to the topic. Staffing ministries with more staff dedicated to climate mitigation issues and/or putting in place central ministries responsible for climate change can go a long way in enabling regions with powers to make use of them and therefore act effectively in the space that they have.

Lack of availability of funds hinders regions with hard powers significantly from putting in place effective regulatory changes and/or incentives schemes. Successful examples from some regions such as the electric vehicle incentive schemes that are implemented in California, could go a long way for other very climate ambitious regions in pushing forward their agenda on electric vehicles. But for many regions that do not have the same resource endowments such as California, putting in place a regional level incentive scheme like this remains a pipe dream.

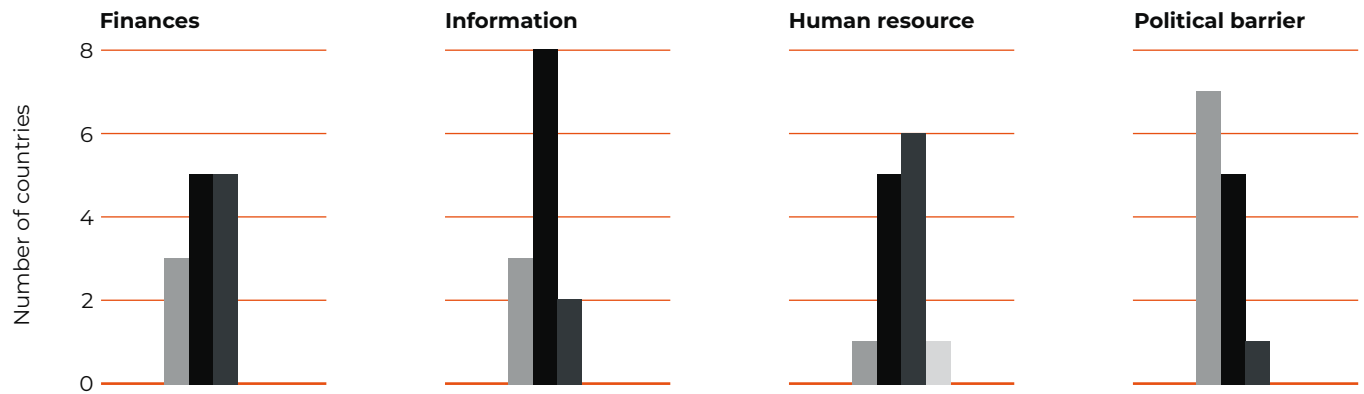
Survey responses – overall

Most states and regions are limited by the availability of funds (77%), information (77%), and trained staff (85%) (→ **Figure 13**). Political capacity is the least limiting capacity – over half of respondents indicated that party politics at the national level do not limit state or regional climate action. Human resource capacity limitations are the strongest limiting factor for climate action across surveyed states and regions, with almost 50% of all respondents indicating that they are strongly limited by the availability of trained staff.

Figure 13

Capacity limitations - overall

● Strongly limits ● Partly limits ● Does not limit ● Do not know



5.5 Relationship between power and capacities

We checked whether the different powers of regions correlate with each other, i.e. whether many regions with one characteristic also have another one. This includes overall devolution of power, financial and regulatory powers, agenda setting, capacities, and political alignment.

We averaged country responses to ensure each country has equal weighting (see → Chapter 4) and so that the results are not skewed towards regions that are more heavily represented in survey. The analysis of all responses returned the same results as the one for country averages, while the trends were slightly stronger in the country-averaged results, these can be seen in → Figure 14. Correlation analysis returns values between 100% and -100%, which represent perfect positive and negative relationships, respectively. For example, a strong relationship (close to 100%) between power to set and enforce regulation indicates that if you have extensive power to set regulation, you are very likely to have extensive powers to enforce regulation. Conversely, a strongly negative relationship (close to -100%) indicates that if you have one power, you are very unlikely to have the other. Values close to 0% indicate weak correlation between variables.

States and regions that have one hard power, usually have many of them. The strongest relationship between groups of variables is seen within the hard powers and the strongest between the power to set regulation, enforce regulation, and allocate spending. The power to levy taxes is also correlated with these powers but to a lesser degree. This indicates that hard powers are often linked for states – for instance, if a state has strong powers to set regulations, the likelihood that it is also strong enforcing them or allocating spending is relatively high. Vice versa, if there are only weak powers to allocate spending, there is a good likelihood that it also has weak powers to set regulations and enforce them. This suggests that a grouping of states with strong and weak hard powers might make sense **(see → Chapter 5.6)**.

The overall devolution of powers is only correlated to the power to set regulation and levy taxes, albeit a much weaker correlation compared to that observed between the financial and regulatory powers described above.

If the political parties at the national and state or regional level are aligned, the state or regional government will likely have more power to influence the national policy agenda and will perceive less of a political barrier to climate action. This is seen in the correlation between political alignment between the national and state or regional government and agenda setting power and the political barrier to climate action. If they are not aligned, the state or region is likely to have less power to influence the national policy agenda. While this result could be expected, it emphasises again the difficulty that states and regions have when their political agenda is more ambitious than that of the political parties in power at the national level. In cases of political non-alignment, it might make more sense to prioritise developing strong regional policies over efforts to influence the national policy agenda **(see also → Chapter 5.6)**.

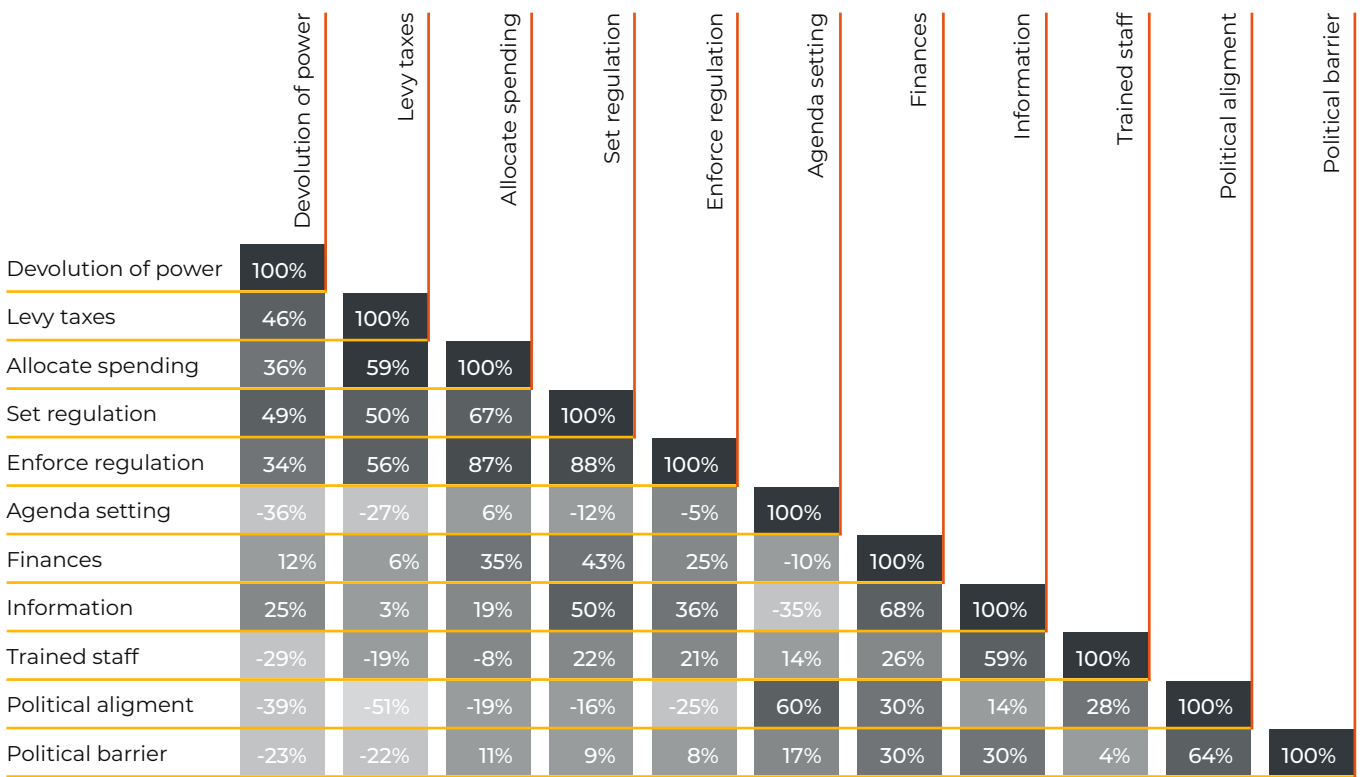
Financial, information, and human capacity limitations in surveyed states and regions are not correlated to the devolution of power, regulatory power, financial power, or agenda setting power. The vast majority of states and regions identified capacities as a limiting factor for climate action, irrespective of whether they identified strong powers or not **(→ Chapter 5.4)**.

Capacity constraints are correlated – states and regions with limited finances or human capacity are also likely to be limited by information. The correlation between financial and human capacities is less clear – states and regions that have addressed human capacity constraints may still be limited by finances.

This shows that there is currently a large space for action available at the regional level - powers are not regarded as much as the limiting factor at this point but it is more the capacity to act that is lacking. This finding is encouraging for capacity building initiatives across all types of regions but should be closely monitored as, once capacities have become more readily available,

powers to act might become more limiting. However, with the current gap in climate action, scarce resources should focus on capacity building in states and regions with an ambitious political agenda, irrespective of their powers to act (see also → Chapter 5.6).

Figure 14
Correlation analysis – powers and capacities



5.6 Summary of findings

Hard powers, including the power to levy taxes, allocate spending, and to set and enforce regulation were found to be stronger in federal and more decentralised countries, compared to their counterparts in unitary and more centralised countries. It is important to note that there are many nuances to this finding – for instance, states and regions in federal systems may still have a very limited role in some sectors due to the specific distribution of powers between governance levels and specific regulations at the national level. Similarly, while extensive financial and regulatory powers are more common in federal and more decentralised countries, states and regions in these countries might also have limited financial and regulatory powers – this is dependent on the country-specific distribution of powers between governance levels and sectors.

In contrast no such clear trend was found for agenda setting (soft) power, which were generally not perceived to be strong across all political systems, degrees of decentralisation, and development states. However, since soft powers often complement hard powers in that they allow regions to influence the national agenda where they do not have the ability to implement regulation or similar themselves, the question of where soft powers can help is more important than the question of where they exist. As shown above, a lot of federal and more decentralised regions tend to have stronger hard powers they can use to help set the climate agenda directly. Hence soft powers, which often act indirectly and with an uncertain outcome, are more important to those regions with limited hard powers, such as is the case for many centralised and unitary regions.

For capacities the survey clearly showed that states and regions across all political systems, degrees of decentralisation, and development states are limited by capacities – particularly the availability of trained staff and finances. The general lack of capacity is a significant barrier for regions to take more actions. Paired with the fact that powers seem to be generally available, it should become a major area of support.

>> 06

Discussion – categorising states and regions

Climate governance systems in state and regional governments can be grouped according to the political systems and degrees of decentralisation, and the survey aimed to answer the question whether these also correlated with unique sets of powers and capacities to act on climate change. States or regions within groups of climate governance systems were thought to have similar needs in terms of support for implementing ambitious climate action. Our research shows that this separation is not as straightforward as originally expected at the outset of this study: Regions across the board claim to possess powers as well as lack the capacity to make use of them. However, a closer look at the results, as shown in the previous chapters, allows for some conclusions to be drawn across different types of regions. Since these are however not as strong as expected, further research should be undertaken to verify or falsify these. Based on the findings of this study, a categorisation of regions can serve in two different ways to inform how states and regions can be supported:

- **Identify how states and regions can best be supported.** Our study identified that capacities lack across the board, independent of the powers of the states and regions. But it also highlighted how support to states and regions can otherwise differ depending on the hard powers they have. Separate priority areas for support can be differentiated by considering hard powers in combination with the alignment between national policy and regional policies.
- **Identify how states and regions can best learn from each other and work together.** States and regions with similar powers can also learn from each other more easily than those with very different powers. Interregional co-operation and learning is essential for region to succeed (OECD, 2022b) For instance, a federal region with strong hard powers might learn from another region that has implemented a successful emissions trading system (ETS), regulating emissions at the same time as providing a green income stream, whereas this will be of little use for most unitary regions with limited hard powers.

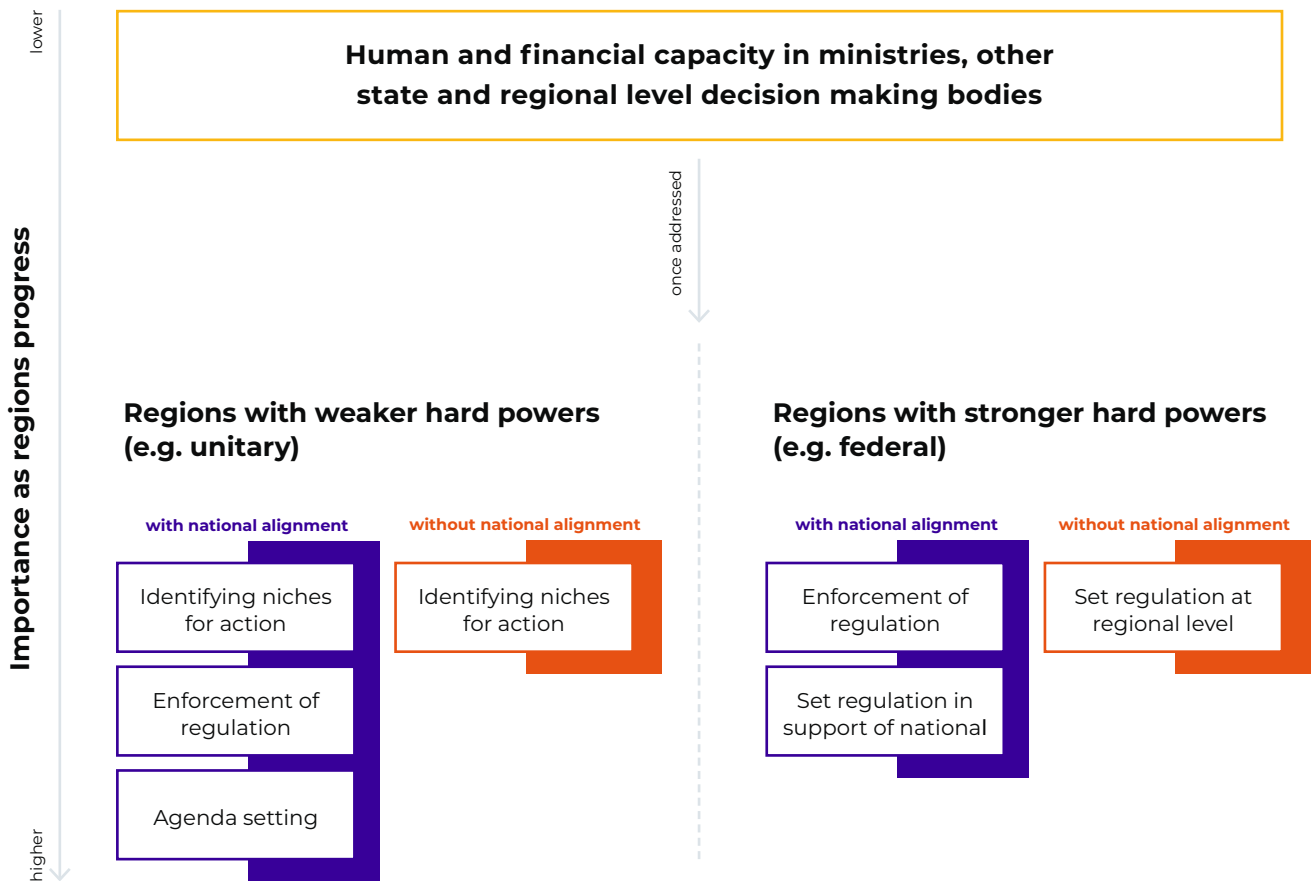
6.1 Supporting states and regions

Depending on their powers, states and regions have different support needs. Our findings show that some types of states and regions, like those in federal and most decentralised countries, tend to have stronger hard powers. However, the results also showed that the situation of individual states and regions can differ significantly. **Hence it makes most sense in our eyes to closely review the powers in a particular state or region, even down to the sector or intervention/policy level, and that the categorisation of the state or region by political system or degree of decentralisation can only provide a first indication.**

That said, → **Figure 15** highlights some potential areas for support depending on the hard powers that exist and the level of alignment between the national and the regional level.

Figure 15

Overview of how regions could be supported according to categorisation of regions (priority action areas of support in orange boxes)



Above all, all states and regions need **human capacity and financial support to enable actions** at the level of decision-making bodies. Without these capacities, any support provided will run the danger of not leading to sustainable change in the longer run. Only by building relevant institutional capacities such as in climate ministries or line ministries, can the long-term sustainability and institutionalisation of climate action be ensured at the state/regional level. This is

needed to ensure follow-through and implementation of action. As highlighted by some of our interviewees, a trend exists where project-based finance is made available without simultaneously providing finance for human capacity at the institutional level. This has led to a gap between researching what needs to be done and actually implementing these measures. Project based research can often not be used in decision making process as the institutional capacity is lacking to ensure its use. **It is hence of utter importance that any support provided to regions also has to ensure that human and financial capacity exist to anchor it in the longer term.**

Once human and financial capacity constraints have been addressed, optimal support for states and regions should consider the availability of financial and regulatory (hard) powers and the political alignment between the state/regional and national governments on climate action.

Supporting states and regions with stronger hard powers

States and regions with hard powers have a broader spectrum of options for climate action compared to those with more limited powers. This allows them to take a more proactive role in allocating funding streams, setting climate-related regulations and enforcing them. Support for regions with strong hard powers should focus on enabling regions to make use of these hard powers in a manner that makes most sense in each particular context. This support ranges from capacitating and building up institutions that are responsible for implementing policies, to the provision of credit lines or other financial support through capitalising financing instruments (e.g., guarantee funds) or direct support.

In cases where the state/region is **broadly politically aligned with the national government**, especially with respect to climate mitigation related ambitions, support could focus on helping the region identify how they **can strengthen or complement action at the national level**. This could be through developing own regulation that aligns with that of the national level or ensuring that existing legislation is sufficiently enforced at the regional level. For example, tax credits for electric vehicles in the US, where the consumer can receive separate tax credits both for the state and national tax in some US states. Support here, could for instance focus on helping set up the state/regional system to ensure that the national and state/regional systems complement each other. In addition, the funding could be aimed at helping the state or region to **enforce existing legislation** if this is indeed within the responsibilities of the state/region. In the case of the state level tax credit mentioned above, funding could flow to provide additional capacity that review incoming request for the tax credit scheme.

States and regions that **lack political alignment with the national level**, especially where the state/regional level wants to undertake mitigation related action as a priority while this is not the case at the national level, may want to focus on developing standalone programs or legislation that directly lead to mitigation.

Developing these can have an important role for spearheading climate action that can later be replicated at the national level, when the political powers at the national level become aligned. This was the case for the earlier described “Neighbour program” where the state of New South Wales had developed a building certification scheme that was later implemented at the national level. As with the case in New South Wales, the state/regional level could thereby keep an important role even after the national implementation. Support for developing state/regional stand-alone legislation could look very similar to those in a case with political alignment but might need more broader support to compensate for the lacking national level ambition.

Supporting states and regions with weaker hard powers

In a case where the hard powers at the state/regional level are rather weak, such is the case for some unitary regions that were part of the survey, it might make sense to explicitly seek out those hard powers that exist on the state/regional level, to support standalone programs/niches, to shift the focus of support towards soft powers that push for more action at the national level and/or to support the implementation of national level policies through enforcement of legislation at the regional level. As our survey showed, regions often possess powers at different levels, be it a sector or a particular regulatory area, and identifying these niches that allow for targeted intervention would help maximising the impact in these regions. In addition, and when those strong niches cannot be identified, support for soft powers, especially agenda setting, could be the most effective route for moving forward the mitigation agenda in some regions. A word of caution should be added here however, as our survey shows that these powers are often limited at the regional level. In combination with the highly uncertain outcome of agenda setting efforts such as lobbying, it needs to be carefully evaluated in each context whether supporting agenda setting is indeed a promising way to influence the mitigation agenda. For some regions it might however be the only way to successfully take action. Lastly, supporting regions with the enforcement of national legislation can be another way to enable regions/states to contribute to the mitigation agenda, especially if they lack the hard powers to set their own regulations.

In a case of alignment of the political agenda with the national level, states/regions with limited hard powers have various options to drive ambition. If they can identify areas/niches with hard powers, they could focus on pushing these. Most effectively this can either be done in areas where measures complementary to the national level can be taken or where there are no actions at the national and state/regional level, and action clearly addresses a gap. Through synergies with the national level, action in niches can achieve significant impacts. Providing support for enforcing or implementing legislation set at the national level is another important pillar for action here. Without the regional level ensuring this, national legislations can have a much smaller

reach. In the Indonesian forestry sector, some regions such as West Kalimantan have attempted to support the nationally implemented legislation by actively seeking support from financing sources such as the Green Climate Fund (GCF). Lastly, regions can work together with the national government in agenda setting, such as is the case in Indonesia with participation in the government-led climate forest task forces.

If the **political agenda is not aligned** the options are likely more limited and it might make sense to shift the focus to developing niches and/or undertaking preparatory measures for action that might be implemented at the national level, once the political agenda becomes aligned around climate change. In West Bengal (India) the state undertook a feasibility study to introduce electric buses, showing that this transition is viable without increasing ticket costs. This program was then submitted to a national funding scheme that was later implemented. Another example is that of Western Cape, South Africa, where the state joined forces with other similar states to develop a proposal for funding that they submitted to the GCF, especially for adaptation (but can be replicated for mitigation). This enables the state to tap into other funding sources, as a proposal as a single state would have likely gotten less momentum within the GCF. Support could here focus on helping regions find niches, implement actions within them and to then either directly support them or identify financing sources that could.

6.2 Best practice learning between regions

Lessons are more transferable between states and regions with similar contexts, such as hard powers and political alignment. Again, the political system and degree of decentralisation can only provide a first indication of hard powers, any support should look more closely at the availability of power on a sector/implementation level.

Drawing from → Figure 15, we split states and regions into four categories according to hard powers and political alignment. Note that this should also be considered at the sector level – a state or region with strong hard powers overall, may still have limited powers in some sectors, and could learn from others how to best implement climate action with limited hard powers. Hence peer learning should also be organised at the sectoral or even at times measure level, to ensure that regions with similar powers are best enabled to learn from each other. In addition, there are many other factors that make peer learning between regions more likely and that were not considered in our survey – for instance a regional proximity, paralleled with a more frequent exchange between regions in general, often makes it more likely that regions can make

better use of the lessons from other regions (this is often the case with Spanish speaking countries and states/regions in Latin America). These need to be considered additionally to the examinations made here.

States and regions with strong hard powers (financial and regulatory) can learn from each other how to drive climate action autonomously, even with limited financial support or regulatory action from the national government.

These states and regions can learn from each other how to use extensive powers for levying taxes and allocating spending to finance its own projects and programmes. Again, it is important to note that the financial and regulatory power can differ significantly across sectors and even if there are generally strong hard powers, some sectors might be excluded such as energy and industry.

When climate change is low on the national government's policy agenda and national climate policies are weak, then it is especially important that state and regional governments with strong hard powers set and enforce ambitious climate regulations independent of the national government to drive emissions reductions within the country (see above for supporting states and regions). Peer learning should, in these cases of low alignment with national climate policy, focus on how to implement ambitious policies in sectors where states/regions have powers. For regions it is thereby especially important to learn from each other how they can approach this best, circumventing potential blockages that might come from the national level. A successful example that might serve as a learning for other regions are the fuel efficiency standards set by California, where the state directly reached out to car manufacturers to set more ambitious standards during a time of low ambition from the national level. Exemplary state/regional policies that regions have successfully implemented and that other could learn from are emissions trading schemes (ETS), fuel efficiency standards, building codes, and regulations to limit deforestation.

In contrast, when climate is already high on the national government's policy agenda and national climate policies are strong, then it is more important for states and regions with strong hard powers to focus on enforcing existing ambitious national policies and setting supporting regulation. Regions can here learn from each other how to create the synergies to national actions, including what actions at the regional level have been most effective in achieving this. Peer learning can thereby help focus the effort and thereby increase the chances of success. Importantly, peer learning can help in identifying processes that have successfully supported the coordination between the national and regional level. With regard to the enforcement of regulation, regions can learn from each other what resources are required to ensure the effective implementation and to identify ways on how these resources can be used most effectively.

States and regions with weaker financial and regulatory powers have less scope to raise their own funds, allocate budget and to set and enforce regulation. Here, peer learning could focus on how to use the often-limited powers

available most effectively at the state/regional level. Peer learning around specific actions might however be somewhat more limited as the specific local context will play a very important role. Finding peers with the exact same circumstances might be difficult. Focusing peer learning on how to identify the niches and how the link with the national agenda can be created might be the most effective for these regions. Soft powers could play a significant role as well, especially as regions with less hard power often already have a strong link to the national level, given their limited powers otherwise. Collaboration will play a particularly important role in sectors where the national government has the mandate, such as power or industry.

In regions with limited hard powers and non-alignment on the climate agenda with the national level, peer learning could focus on understanding how to identify niches that might be most effective. The lack of alignment will require finding areas where the state/regional level can take action without support from the national level. This can prove very difficult when there are no hard powers - examples from the power sector in South Africa and other countries have shown that regions in these cases can find it very difficult to identify opportunities for action. Peer learning on how to identify niches could here focus on specific sectors and between the respective line ministries, as this allows for a detailed exchange on potential action areas and takes account of the peculiarities of each sector.

In regions with limited hard power but where climate is higher on the agenda at the national level, peer learning can also focus on learning how to influence or cooperate with the national agenda. The spectrum for regulatory action is also widened as these regions can rely more on the cooperation from the national authorities. This also broadens the spectrum for peer learning, and regions can focus their learning on how to best cooperate with the national government as much as the identification of niches. Another important peer learning area is how to enforce national regulations. In that respect learning how to support municipalities with regulation that requires enforcement and the sub-state/regional level is also a valuable peer learning area.

Across all states and regions, peer learning should focus both at the economy-wide level, such as the ministries responsible for climate, but also the sectoral line ministries. This is especially true as almost all mitigation actions contribute to different targets under the SDG agenda, which are often the actual drivers for action in many countries. Only with a good understanding of these other benefits, will it be possible to allow for effective peer learning, as they might differ significantly across different constituencies.

>> 07

Conclusion and outlook

7.1 Support agenda for different actors

State and regional governments can play a key role in the global climate change mitigation effort. The constellation of powers and capacities shapes which measures these governments can implement and so are important to understand when trying to support state and regional climate action.

Financial and regulatory hard powers, those to levy taxes, allocate spending, set regulation, and enforce regulation, for each sector are determined at the highest level by each country's constitution. **States and regions most often have powers and responsibilities in the agriculture, buildings, and transport sectors.** However, it is important to note that the constitutional division of powers and responsibilities is not always clear, especially for climate action, where measures often fall under several sectors of the economy.

States and regions in federal countries generally have stronger financial and regulatory powers than those in unitary countries. This power allows them to drive climate action more autonomously by raising funds and setting regulation independent of the national government – this can be particularly impactful in countries where climate is low on the national policy agenda.

The ability to influence the national policy agenda and to frame how issues like climate change are understood, are important soft powers that state and regional governments can make use of. Agenda setting power is correlated to the political alignment between the state/region and national governments – states and regions generally feel that they have more power to influence the policy agenda when they are aligned, compared to when they are not aligned. Overall, climate was high on the policy agenda and formally linked to the achievement of SDGs in surveyed states and regions – this is likely not representative of all states and regions since respondents were members of the Under2 Coalition. Climate was generally lower on the agenda in developing countries due to the other pressing issues like poverty, health, and security.

States and regions need a combination of political, financial, informational, and human capacities to implement climate action. We found that climate action in states and regions is being strongly limited by human and financial capacity. Informational capacity is also limiting in developing countries. Political capacity was not widely seen as a crucial barrier to climate action at the state and regional level.

Since the scope of climate action is determined by each state and region's constellation of powers and capacities, knowledge of which powers they have, and which capacities are limiting, is important for guiding targeted support. A first important step is to address capacity limitations in states and

regions, particularly human and financial. Further support should then look at the specific context of state or regional powers and national climate policy in order to envisage what ambitious climate action at the state or regional level would look like in each case and decide how best these governments can be supported.

While the findings of this research are relevant for all stakeholders, action points can be drawn for a range of key actor groups like state and regional governments, national governments, international funders (e.g., foundations, development banks), inter-regional co-operation bodies like Under2, and international coordinating bodies like the UNFCCC.

State and regional governments

State and regional governments should allocate capacities in decision bodies (ministries) to mitigating climate change – ideally covering all sectors. This requires building capacities in relevant line ministries and consider putting one agency/ ministry in charge of coordination of climate mitigation matters. Ensure continuity of staff and avoid overburdening with too many other tasks of responsible staff members but instead allow them to dedicate significant time to climate mitigation.

Put process in place to identify areas with key opportunities for climate action. Taking in consideration of existing constitutional powers, regional governments should put in place national processes in place to develop strategies to plan and identify regional climate policies and strategies, linked to the national level. The result could be net zero strategies such as the ones developed in the German region of NRW, highlighting opportunities for regional actions (Landesregierung NRW, 2022).

Institutionalise the cross regional coordination on climate mitigation within the county and across borders with other regions. Regional association, such as exists in France (OECD, 2022a), or other regional coordination bodies can serve as a voice for regions and channel and develop advocacy opportunities towards the national level but also identify opportunities for peer learning ways to work on addressing common challenges.

National governments

National governments can play a key role in addressing human and financial capacity limitations in state and regional governments. National governments can support the development of institutional capacity in state and regional governments (specifically climate ministries or related line ministries) by providing the funds necessary to create secure, long-term positions for experienced staff working on climate action and further supporting training programmes to build technical expertise.

Due to their smaller size, state and regional governments can act as a useful policy-labs, where projects, programmes, and policies can be trialled and later replicated at the national level. National governments can play a role in supporting climate projects and programmes at the state and regional level. It is however important that institutional capacity is built up in parallel to ensure that outcomes of any short-term project-based interventions can be anchored into longer-term plans and programmes.

National governments can cooperate and coordinate with regional governments to ensure the most effective and efficient implementation of climate policies. The OECD (OECD, 2022a) highlights different instruments that national governments can use to increase trust and ownership between the different governance level such as contracts or inter-governmental committees. Using such instruments, national governments can ensure the successful implementation of policies and coordination between policies.

National governments could also facilitate the cooperation between different national regions, especially in federal and decentralised states. Coordinating the efforts between regions can be done through setting up opportunities for knowledge/experience sharing, especially when it comes to the implementation of national policies ensures that national policies there is no overlap between regions (OECD, 2022a).

Inter-regional cooperation bodies

Inter-regional cooperation bodies, such as the Under2 Coalition or cross regional bodies between individual countries, can play a key role in supporting peer learning among states and regions. For peer learning, it is often important to understand the similarities and differences in context between peers – lessons from one state or region are not necessarily applicable to others due to differing contexts.

Peer learning can look at best practice climate action and lessons learned for different constellations of financial and regulatory powers, and alignment with the national government on climate. In this research we split states and regions into four groups for strong or weak financial and regulatory hard powers, both when the national government is also ambitious on climate and when it is not (see → Chapter 6.1). However, it is important to note that other factors like development state and world region may be important for some lessons.

Grouping states and regions, or rather the lessons and guidance, by the relevant contextual factors can help facilitate effective peer learning. For example, sharing good practice examples and guidelines for designing and implementing an ETS is only relevant for states and regions with extensive regulatory powers in major emitting sectors like energy and industry.

The coordination of joint advocacy efforts as well as the identification of common challenge and opportunities can help further the regional agenda.

This could be achieved by supporting the formation of regional association in individual countries and/or the integration of climate issues into existing regional governance bodies (see also above) (OECD, 2022a).

International funders

The provision of funding should be tailored to the regional context at hand.

International funders like multilateral donors and development banks should recognise the importance of supporting climate action at the state and regional level and carefully think about how best to tailor support in each case by considering contextual factors like availability of capacities, financial and regulatory hard powers, and political alignment.

Addressing financial and especially human capacity limitations is the first step to supporting regions and providing grants to address these is an essential first step.

These grants could for example support training programmes to build technical expertise within relevant ministries at the state/regional level. Building the capacity at the regional level is essential to all further action, to ensure the longevity of the impact that the support aims to achieve, beyond the initial financial support that might be provided. Staff at the regional level can ensure that policies and other interventions are designed in a way that they become integral to the regional planning processes. Otherwise funders run the danger of supporting one-off interventions.

Instruments that funders use to support national level action, such as lending, could be extended to the regional level.

As our research shows, regions have significant hard powers that they can use to implement policies and other interventions themselves. Furthermore, regions are often more closely linked to the implementation level than the national level. Funders that have credit lines or policy based lending instruments in their portfolio should consider extending these to regional actors to allow them to access additional funding stream to support their actions. This could be especially relevant when the priority for climate action is higher at regional government than the national government (misalignment) – regional governments might be more willing to generate project portfolio that are in line with Paris compatible investments. (Höhne et al., 2015).

To target support for states and regions beyond addressing financial and human capacity limitations, international funders need to first understand the emissions profile of the state or region – what are the key sectors and opportunities for reducing emissions, and where does the state or region have power to implement action.

For example, if the land-use sector is a key source of emissions in a state and the state government also has extensive regulatory powers in this sector, then support from international funders could focus on

setting and enforcing ambitious climate policies in the land-use sector. Consideration of key sectors is also important for supporting standalone climate projects and programmes – this type of support can be applied to all states and regions since it is not necessary to make use of any financial or regulatory powers.

International coordinating bodies (UNFCCC)

International bodies, like the UNFCCC could develop official guidelines on how to supporting state and regional governments. Such guidelines could help clarify how different institutions could support regional climate action. They could help streamline and coordinate support, ensuring that the money is flowing where it is most needed but also ensuring that regional level action get the credit it deserves. While non-state actors such as states and regions are currently being acknowledged by the UNFCCC, a more focused efforts on states and regions, which are relevant governance levels unlike other actors, could ensure a better targeted support to them.

7.2 Future research agenda

This research is a first step to understanding the powers and capacities of state and regional governments and how they can be supported to implement ambitious climate action. We limited the scope of the survey to cover all the main dimensions of our framework of ‘power to act’, while remaining brief enough so that state and regional governments with limited time and capacity were able to participate. In attempting to reach a broad audience it was not able to provide several important insights like differences in powers between sectors and which specific policy measures can be implemented. Several topic areas covered in this report would benefit from further research.

- **Further clarification of relevant climate policy areas at the regional level.** Our research has highlighted hard and soft powers at the regional level and has identified sectors where regions have more ‘power to act’ than in others. To be able to design and implement effective climate actions at the regional level, a better understanding of the role that regions can play in certain type of measures, such as policies, is needed. Policy menus such as described in → **Chapter 2** or provided by a policy database (e.g. the climatepolicydatabase.org (NewClimate Institute, 2021)) can serve as a starting point to identify policy areas relevant at the regional level. A better understanding of the role that regions can play in those policy areas that are most relevant to mitigating climate change will allow for a more targeted approach in supporting region in ambitious climate action.

- **Capacity needs in ministries and other central bodies.** Our survey showed that human capacity needs are a major concern, and initial interviews indicated that these are especially needed at the ministry level and with other decision making bodies. Further understanding of these capacity needs across different regions is an essential next step in supporting these regions build up the capacity. Importantly it is necessary to understand where these capacities could come from, e.g. from shifting internal capacity within the region or by providing funding to enable regions to have a dedicated person responsible for climate. Furthermore it is important to clarify the profiles and roles of these capacities and to ensure they can play a role in decision making, in order to avoid create inefficiencies in these bodies. This will ensure that a targeted approach is taken in supporting regions here.
- **Governance structures at the regional level to support climate change.** Climate change at the national level is often administered in a central ministry responsible for reporting to the UNFCCC process (e.g. NDC) and several line ministries that have dedicated staff working on climate change issues that report to the central ministry. While also at the national level governance structure are often not straight forward and lead to in-action as responsibilities, especially with regards to developing more ambitious climate policies, are not clear between ministries, our research showed that the situation is even worse at the regional and state level. Further research could clarify optimal governance structure for climate change at the regional level. This research would need to take account of the differences of the overall multi-level governance structure of regions, but could identify successful examples and help other regions by categorising them accordingly.
- **Identification of niches/policies that are best suited for state and regions to take on.** Our research highlighted potential sectors where regions have more power to act than other sectors. Using these as a starting point, research could identify concrete successful action that have been proven to be successful at the regional and state level. In line with and building on work already undertaken by the Under2 Coalition on the identification of finance flows for regions (Ward and Sayer, 2023), this work could identify regional interventions such as policies that have been successful and could be replicated to other regions. Working closely together with members of the Under2 Coalition or other states and regions with an ambitious climate agenda, such research could further describe how successful regional policies need to be designed and what prerequisites fulfilled for them to have the desired impact.

- **Identifying and help organise opportunities for peer learning between regions (e.g. through “Peer learning clubs”).** Lessons are more transferable between states and regions with similar contexts, such as hard powers, political alignment but also aspects such as geographical proximity or cultural similarity. Understanding better which contexts are most relevant to enable learning between regions could help with the organisation of peer-learning “clubs”, which group regions together that are most likely able to learn from each other. These clubs could facilitate learning and discussions on topics such as successful regional policies, interaction with the national level on climate issues or the identification of priority areas for intervention (**see also → Chapter 6.2**). The clubs should thereby be organised in a manner that ensures that its participant have similar powers (e.g. the ability to implement environmental taxation policies), but given the high discrepancy within regions with regards to sectoral power, regions could also join different clubs depending on their power in a concrete intervention area.

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