

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

Annex

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Annex I - Survey on powers and capacities

The following questions aim to collect general data about the state and regional government, looking at region-wide hard powers, soft powers, and capacities. A focus is placed on those powers and capacities a government has within its jurisdiction (self-rule). Note that questions 1-3 asked for participant details and are omitted below.

Devolution of powers and capacities

How do you rate the devolution of powers and capacities from the national to the state/regional level overall in your country?	<ul style="list-style-type: none"> a. Strong devolution of powers b. Medium devolution of powers c. Limited devolution of powers d. No devolution of powers e. Don't know
How do you rate the devolution of powers and capacities from the national to the state/regional level in climate-relevant policy fields in your country?	<ul style="list-style-type: none"> a. Strong devolution of powers b. Medium devolution of powers c. Limited devolution of powers d. No devolution of powers e. Don't know
Is there anything you would like to add regarding the devolution of powers and capacities ?	[Please insert text]

Power to raise and allocate funds

Does your government have the power to levy taxes in the state/region?	<ul style="list-style-type: none"> a. Extensive power b. Partial power c. Limited power d. No power e. Don't know
If so, which type of taxes?	[Please insert text]
Does your government have the power to allocate spending to climate-related policy fields in the state/region?	<ul style="list-style-type: none"> a. Extensive power b. Partial power c. Limited power d. No power e. Don't know
If so, to which policy fields?	<p>[Please select all relevant answers]</p> <ul style="list-style-type: none"> a. Energy - centralised power generation b. Energy - distributed power generation c. Energy - network expansion d. Buildings & lighting - government-owned buildings e. Buildings & lighting - private residential buildings f. Buildings & lighting - private commercial buildings g. Buildings & lighting - streetlights h. Industry - industrial activities i. Transport - government-owned fleet j. Transport - private vehicles k. Transport - taxis l. Transport - cycling

	<ul style="list-style-type: none"> m. Transport - inter-regional road and rail (passenger) n. Transport - inter-regional road and rail (freight) o. Transport - shipping ports p. Transport - airports q. Agriculture, land-use & forestry - agricultural activities r. Agriculture, land-use & forestry - land-use planning s. Agriculture, land-use & forestry - afforestation and forest restoration t. Other (please specify)
<p>Is there anything you would like to add regarding the financial powers of your state/ region?</p>	<p>[Please insert text]</p>

Power to set and enforce policy/ regulation

<p>Does your government have the power to set policy/regulation in climate-related policy fields?</p>	<ul style="list-style-type: none"> a. Extensive power b. Partial power c. Limited power d. No power e. Don't know
<p>If so, in which policy fields?</p>	<p>[Please select all relevant answers]</p> <ul style="list-style-type: none"> a. Energy - centralised power generation b. Energy - distributed power generation c. Energy - network expansion d. Buildings & lighting - government-owned buildings e. Buildings & lighting - private residential buildings f. Buildings & lighting - private commercial buildings g. Buildings & lighting - streetlights h. Industry - industrial activities i. Transport - government-owned fleet j. Transport - private vehicles k. Transport - taxis l. Transport - cycling m. Transport - inter-regional road and rail (passenger) n. Transport - inter-regional road and rail (freight) o. Transport - shipping ports p. Transport - airports q. Agriculture, land-use & forestry - agricultural activities r. Agriculture, land-use & forestry - land-use planning s. Agriculture, land-use & forestry - afforestation and forest restoration t. Other (please specify)

Does your government have the power to enforce policy/regulation in climate related-policy fields?	<ul style="list-style-type: none"> a. Extensive power b. Partial power c. Limited power d. No power e. Don't know
If so, in which policy fields?	<p>[Please select all relevant answers]</p> <ul style="list-style-type: none"> a. Energy - centralised power generation b. Energy - distributed power generation c. Energy - network expansion d. Buildings & lighting - government-owned buildings e. Buildings & lighting - private residential buildings f. Buildings & lighting - private commercial buildings g. Buildings & lighting - streetlights h. Industry - industrial activities i. Transport - government-owned fleet j. Transport - private vehicles k. Transport - taxis l. Transport - cycling m. Transport - inter-regional road and rail (passenger) n. Transport - inter-regional road and rail (freight) o. Transport - shipping ports p. Transport - airports q. Agriculture, land-use & forestry - agricultural activities r. Agriculture, land-use & forestry - land-use planning s. Agriculture, land-use & forestry - afforestation and forest restoration t. Other (please specify)
Is there anything you would like to add regarding the regulatory powers of your state/region?	[Please insert text]

Policy agenda and priorities, framing, and agenda setting

What is the relative importance of climate change on the state/ regional policy agenda?	<ul style="list-style-type: none"> a. High importance b. Medium importance c. Low importance d. No importance e. Don't know
What are (other) priorities on the state/ regional policy agenda?	[Please insert text]
How is climate action linked to the achievement of sustainable development goals (SDGs) within the state/region? Formal link (e.g. in government plans, strategies, etc.)/ informal link (e.g. within public debate)	<ul style="list-style-type: none"> a. Formal link b. Informal link c. No link d. Don't know
Which SDGs is climate action linked to?	[Please select all relevant answers]

	<ul style="list-style-type: none"> a. SDG 1 - No poverty b. SDG 2 - Zero hunger c. SDG 3 - Good health and well-being d. SDG 4 - Quality education e. SDG 5 - Gender equality f. SDG 6 - Clean water and sanitation g. SDG 7 - Affordable and clean energy h. SDG 8 - Decent work and economic growth i. SDG 9 - Industry, innovation and infrastructure j. SDG 10 - Reduced inequalities k. SDG 11 - Sustainable cities and communities l. SDG 12 - Responsible consumption and production m. SDG 13 - Climate action n. SDG 14 - Life below water o. SDG 15 - Life on land p. SDG 16 - Peace, justice and strong institutions q. SDG 17 - Partnerships for the goals r. None s. Don't know
To what extent does your government have the power to put climate-related issues (of state/regional importance) on the national policy agenda and determine their relative importance on the agenda?	<ul style="list-style-type: none"> a. Extensive power b. Partial power c. Limited power d. No power e. Don't know
Is there anything you would like to add regarding the soft powers of your state/region?	[Please insert text]

Political, financial, information, and human capacities

To what extent is the political orientation of the state/regional government aligned with the political orientation of the national government?	<ul style="list-style-type: none"> a. Fully aligned b. Partly aligned c. Hardly aligned d. Not aligned e. Don't know
Are party politics at the national level limiting climate action at the state/regional level?	<ul style="list-style-type: none"> a. Does not limit b. Partly limits c. Strongly limits d. Don't know
To what extent does current access to the necessary funds limit climate action?	<ul style="list-style-type: none"> a. Does not limit b. Partly limits c. Strongly limits d. Don't know
In which climate-related policy fields are financial constraints a crucial barrier to climate action?	<p>[Please select all relevant answers]</p> <ul style="list-style-type: none"> a. Energy - centralised power generation b. Energy - distributed power generation c. Energy - network expansion

	<ul style="list-style-type: none"> d. Buildings & lighting - government-owned buildings e. Buildings & lighting - private residential buildings f. Buildings & lighting - private commercial buildings g. Buildings & lighting - streetlights h. Industry - industrial activities i. Transport - government-owned fleet j. Transport - private vehicles k. Transport - taxis l. Transport - cycling m. Transport - inter-regional road and rail (passenger) n. Transport - inter-regional road and rail (freight) o. Transport - shipping ports p. Transport - airports q. Agriculture, land-use & forestry - agricultural activities r. Agriculture, land-use & forestry - land-use planning s. Agriculture, land-use & forestry - afforestation and forest restoration t. Other (please specify)
<p>To what extent does current access to the necessary information (in terms of data) limit climate action?</p>	<ul style="list-style-type: none"> a. Does not limit b. Partly limits c. Strongly limits d. Don't know
<p>In which climate-related policy fields are informational constraints a crucial barrier to climate action?</p>	<p>[Please select all relevant answers]</p> <ul style="list-style-type: none"> a. Energy - centralised power generation b. Energy - distributed power generation c. Energy - network expansion d. Buildings & lighting - government-owned buildings e. Buildings & lighting - private residential buildings f. Buildings & lighting - private commercial buildings g. Buildings & lighting - streetlights h. Industry - industrial activities i. Transport - government-owned fleet j. Transport - private vehicles k. Transport - taxis l. Transport - cycling m. Transport - inter-regional road and rail (passenger) n. Transport - inter-regional road and rail (freight) o. Transport - shipping ports p. Transport - airports q. Agriculture, land-use & forestry - agricultural activities

	<ul style="list-style-type: none"> r. Agriculture, land-use & forestry - land-use planning s. Agriculture, land-use & forestry - afforestation and forest restoration t. Other (please specify)
To what extent does current access to sufficient trained staff limit climate action?	<ul style="list-style-type: none"> a. Does not limit b. Partly limits c. Strongly limits d. Don't know
In which climate-related policy fields are human resource constraints a crucial barrier to climate action?	<p>[Please select all relevant answers]</p> <ul style="list-style-type: none"> a. Energy - centralised power generation b. Energy - distributed power generation c. Energy - network expansion d. Buildings & lighting - government-owned buildings e. Buildings & lighting - private residential buildings f. Buildings & lighting - private commercial buildings g. Buildings & lighting - streetlights h. Industry - industrial activities i. Transport - government-owned fleet j. Transport - private vehicles k. Transport - taxis l. Transport - cycling m. Transport - inter-regional road and rail (passenger) n. Transport - inter-regional road and rail (freight) o. Transport - shipping ports p. Transport - airports q. Agriculture, land-use & forestry - agricultural activities r. Agriculture, land-use & forestry - land-use planning s. Agriculture, land-use & forestry - afforestation and forest restoration t. Other (please specify)
Is there anything you would like to add regarding the capacities of your state/region?	[Please insert text]

Annex II - Detailed results for regional power to act on climate change

Annex II-I Power to levy taxes and allocate spending

Survey responses by political system, degree of decentralisation, and development

Powers to levy taxes and allocate spending varied across the different political systems (unitary, federal, quasi-federal). **Federal states and regions generally have stronger powers to levy taxes and allocate spending, compared to those in unitary systems.** A large share of surveyed federal states and regions have extensive powers to levy taxes (43%), while those in unitary systems are split between partial and limited power. This relationship also holds for allocating spending, where extensive power is only seen in states and regions in quasi-federal and federal systems ([Figure 1](#)).

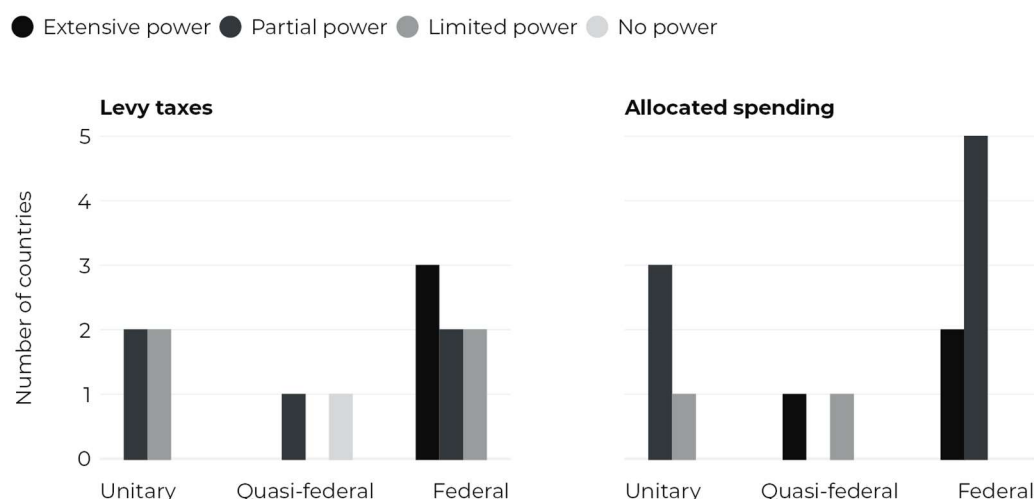


Figure 1: Financial power – political system (averaged country results)

A similar relationship is seen for the degree of decentralisation ([Figure 2](#)). **States and regions in the most decentralised countries generally have stronger power to levy taxes and allocate spending.** Extensive powers to levy taxes and allocate funding is only seen in these most decentralised countries. While the sample size of unique countries in the group of medium and most decentralised countries is sufficient (5 and 7 respectively), there is only one country in most centralised grouping.

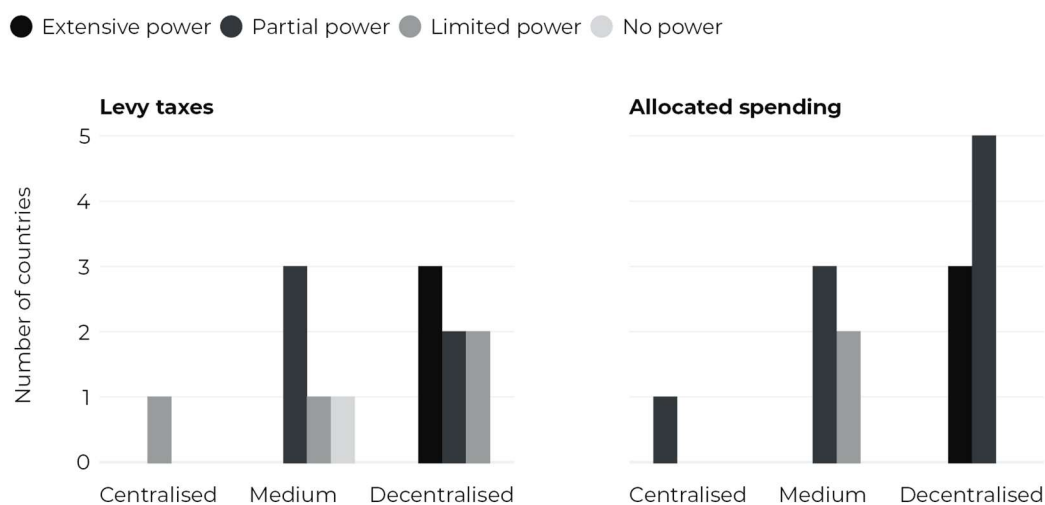


Figure 2: Financial power – degree of decentralisation (averaged country results)

Power to levy taxes and allocate spending is stronger in federal and most decentralised countries, compared to unitary and more centralised countries.

The majority of surveyed states and regions in both developed and developing countries have at least partial power to levy taxes (60-63%) and allocate spending (75-100%) (Figure 3). While the results are similar for the power to levy taxes, extensive power to allocate spending is more common in states and regions from developed countries.

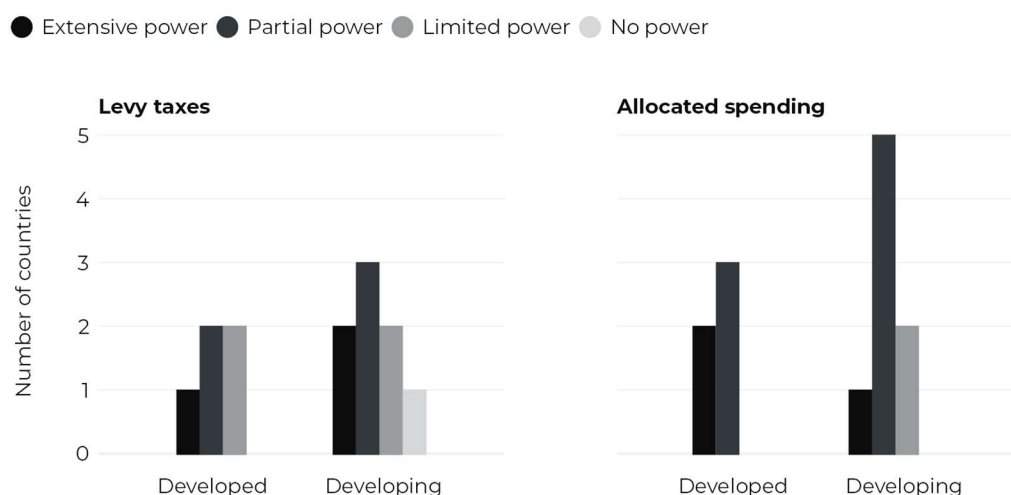


Figure 3: Financial power – development level (averaged country results)

Survey responses by sector

Generally, states and regions perceived to have the **most power to allocate spending in the agriculture and buildings sectors, and less power in transport, energy, and industry (Figure 4)**. This trend was observed across the different political systems, degrees of decentralisation, and development states (Figure 4). The trend was most prominent in developing countries where most states and regions have power to allocate spending in agriculture and buildings, and least in industry. In comparison, power to allocate spending in the industry sector was on a par with agriculture and buildings in developed countries.

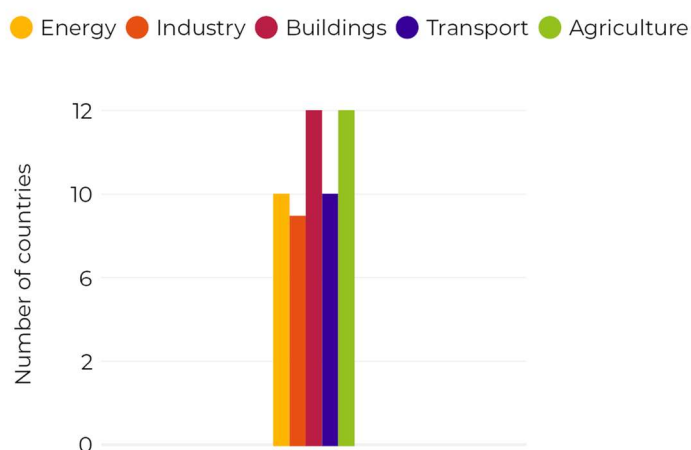


Figure 4: Power to allocate spending per sector (averaged country results)

States and regions tend to have more power to allocate spending in the agriculture and buildings sectors, and less in transport, energy, and industry.

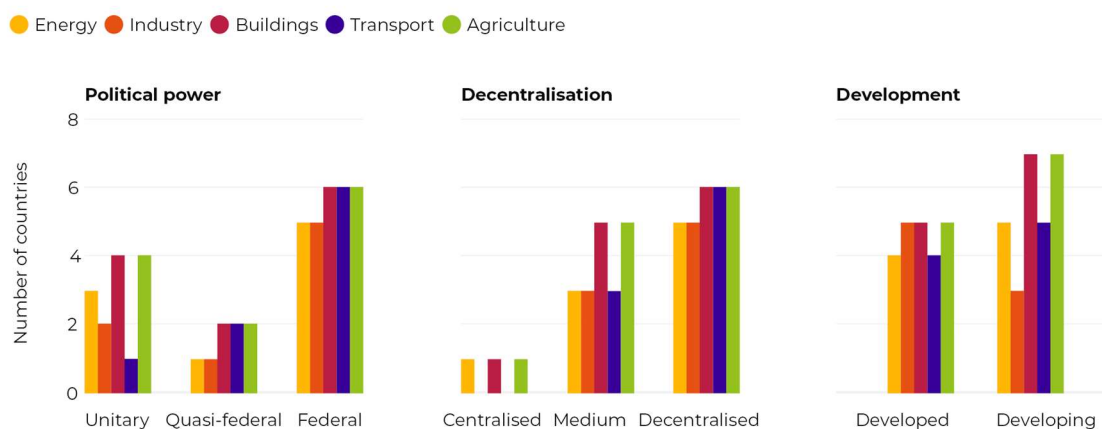


Figure 5: Financial power - sectors (averaged country results)

Annex II–II Power to set and enforce regulation

Survey responses by political system, degree of decentralisation, and development

Powers to set and enforce regulation varied across the different political systems. As with the financial hard powers (levy taxes and allocate spending), **states and regions in federal countries generally have stronger power to set and enforce regulation compared to those in unitary countries (Figure 6)**. All states and regions from federal countries had at least partial power to set and enforce regulation, with stronger power to set regulation compared to power to enforce regulation. Extensive power to set and enforce regulation is only seen in surveyed quasi-federal and federal systems, while limited power is only seen in unitary and quasi-federal systems.

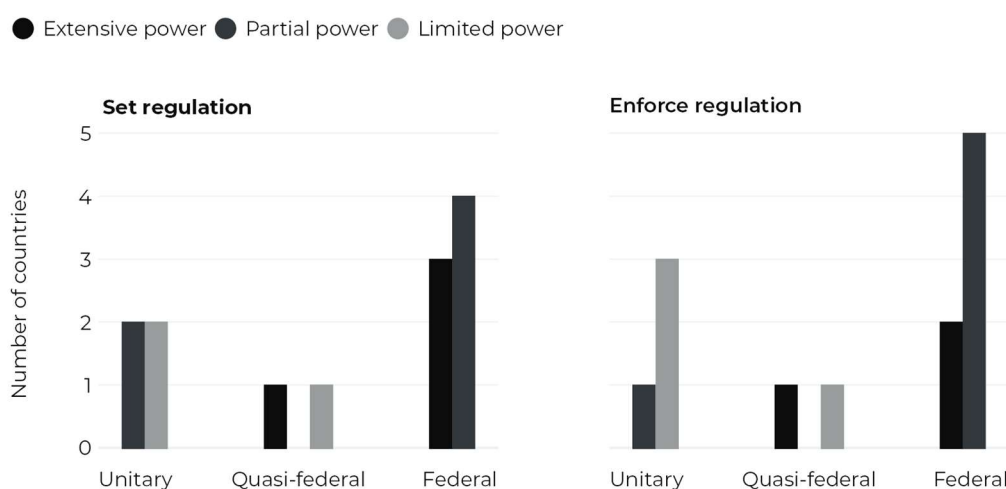


Figure 6: Regulatory power – political system (averaged country results)

A similar relationship is seen for the degree of decentralisation. **States and regions in the most decentralised countries generally have stronger power to set and enforce regulation.** Extensive powers are only seen in these most decentralised countries, while limited power is only seen in less decentralised countries. Again, it is important to highlight that while the sample size of unique countries in the group of medium and most decentralised countries is sufficient (5 and 7 respectively), there is only one country in most centralised grouping (Figure 7).

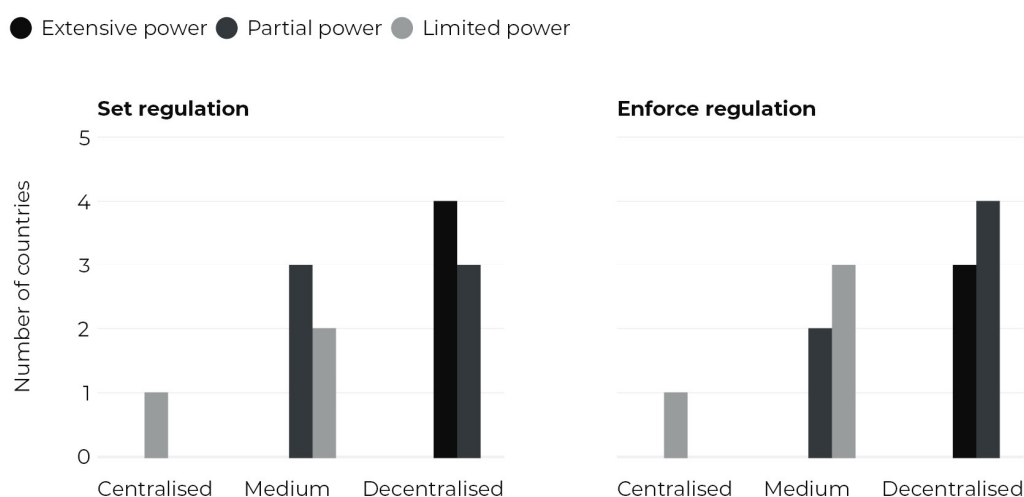


Figure 7: Regulatory power – degree of decentralisation (averaged country results)

Power to set and enforce regulation allows states and regions to autonomously drive a wide range of climate actions. Extensive power to set and enforce regulation is more common in federal and most decentralised countries.

Extensive power to set and enforce regulation is more common in the developed countries surveyed (60% and 40%, respectively), compared to developing countries (13% for both) (Figure 8). Likewise, states and regions in developing countries are more likely to have limited power to set (25%) and enforce (38%) regulation. **However, generalisations in this context feeding for instance into climate negotiations should not be made, given the small sample size. Further studies are needed to verify/ falsify these findings.**

In developed countries, 80% of states and regions have at least partial power to set and enforce regulation. This is slightly less for developing countries, where 75% of surveyed states and regions had at least partial power to set regulation and 63% to enforce regulation.

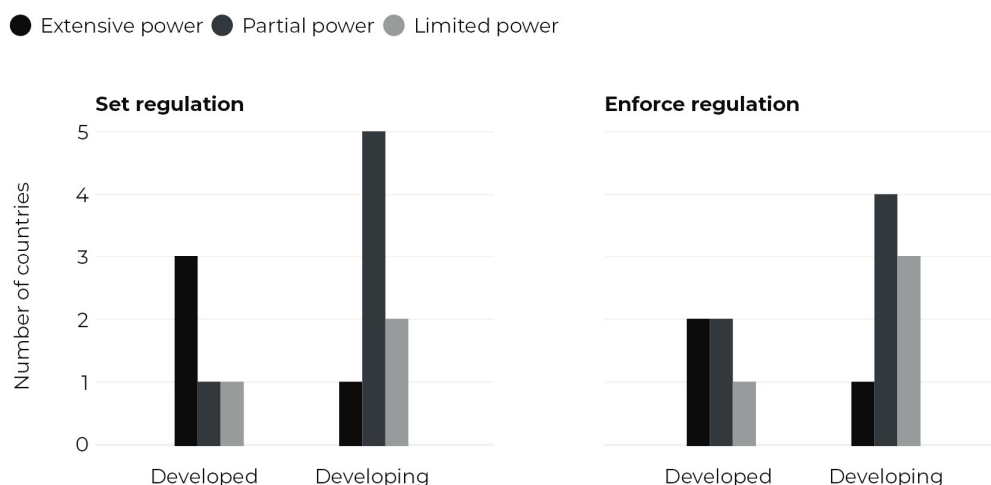


Figure 8: Regulatory power – development level (averaged country results)

Survey responses by sector

Overall, states and regions generally have more powers to set and enforce regulation in the buildings, agriculture, and transport sectors, and less powers in the industry and energy sectors (Figure 9). The power to set regulation is most common in the buildings sector, while the power to enforce regulation is most common in the transport sector. Note that waste, not a sector evaluated in the survey, was included by some regions using the ‘others action areas – please specify’ option in the survey.

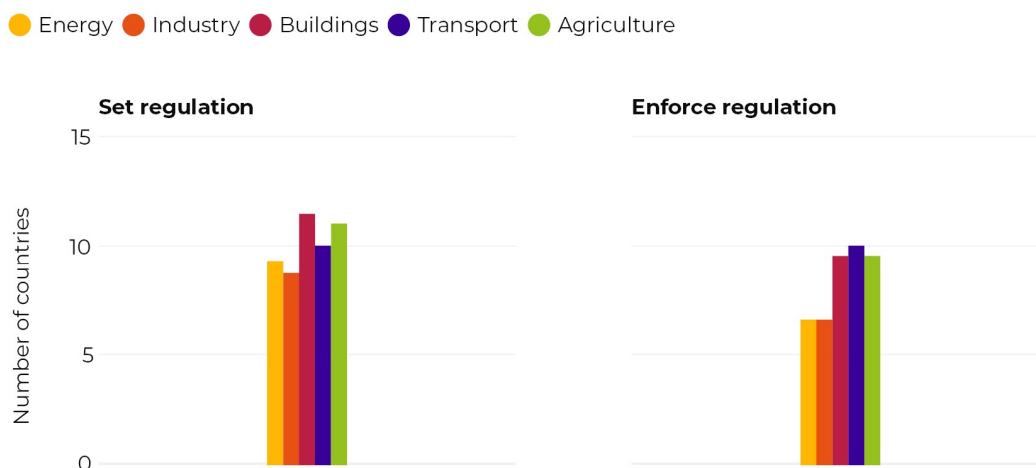


Figure 9: Regulatory power – sectors overview (averaged country results)

Power to set and enforce regulation is most common in the buildings, agriculture, and transport sectors, and less in industry and energy.

States and regions in unitary systems generally had the most powers to set regulation in the buildings, transport, and agriculture sectors, while powers to set regulation in the energy and industry sectors is slightly less common (Figure 10). The same relationship holds for the power to enforce regulation, albeit with more power to enforce regulation in the industry sector than to set regulation.

States and regions in federal systems had the least power to set and enforce regulation in the industry sector (Figure 10). Powers to set and enforce regulation in the energy and agriculture sector were equally common. Powers to set regulation are most common in the buildings sector, while the power to enforce regulation is most common in the transport sector.

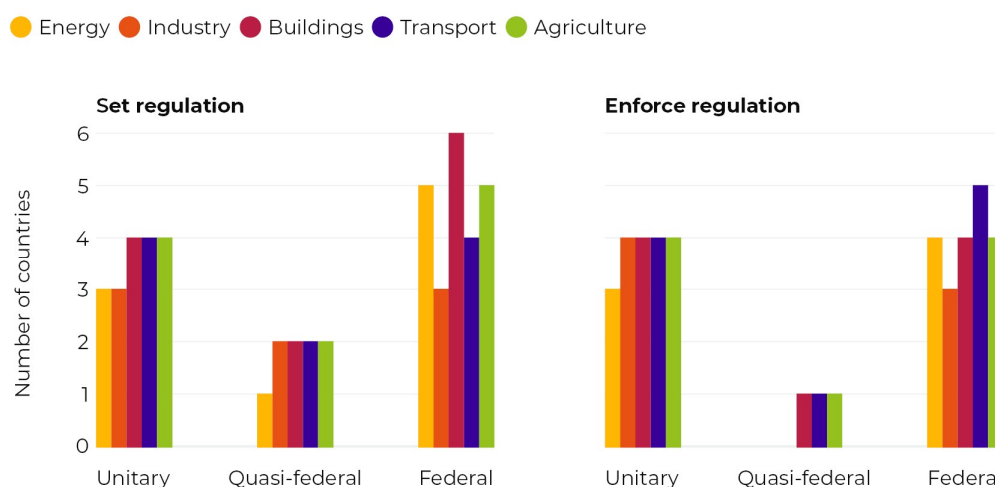


Figure 10: Regulatory power – sectors political system (averaged country results)

States and regions in countries with a medium degree of decentralisation generally had the most power to set and enforce regulation in the buildings, transport, and agriculture sectors, while powers were slightly less common in the energy and industry sectors (Figure 11). Differences in sectoral powers were most prevalent in most decentralised countries – where the powers to set and enforce regulation are also strongest (Figure 11). Powers to set regulation in these states and regions is most common in the buildings sector, while powers to enforce regulation is most common in the transport sector.

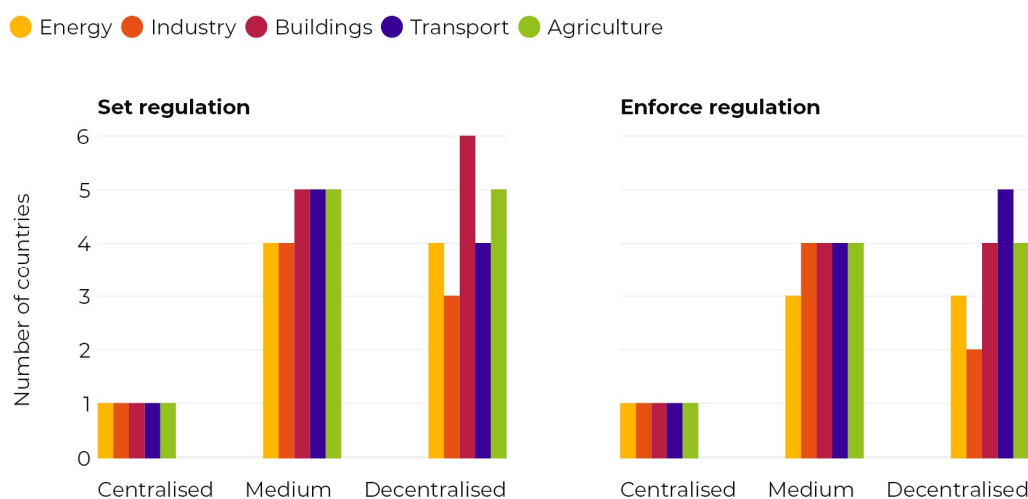


Figure 11: Regulatory power – sectors degree of decentralisation (averaged country results)

In developed countries, power to set and enforce regulation is most common in the buildings, transport, and agriculture sectors, and significantly less common in the energy and industry sectors (Figure 12). In developing countries, power to set regulation was similarly common across all sectors but slightly more common in the energy and buildings sectors. Power to enforce regulation in developing countries is most common in the transport and agriculture sectors.

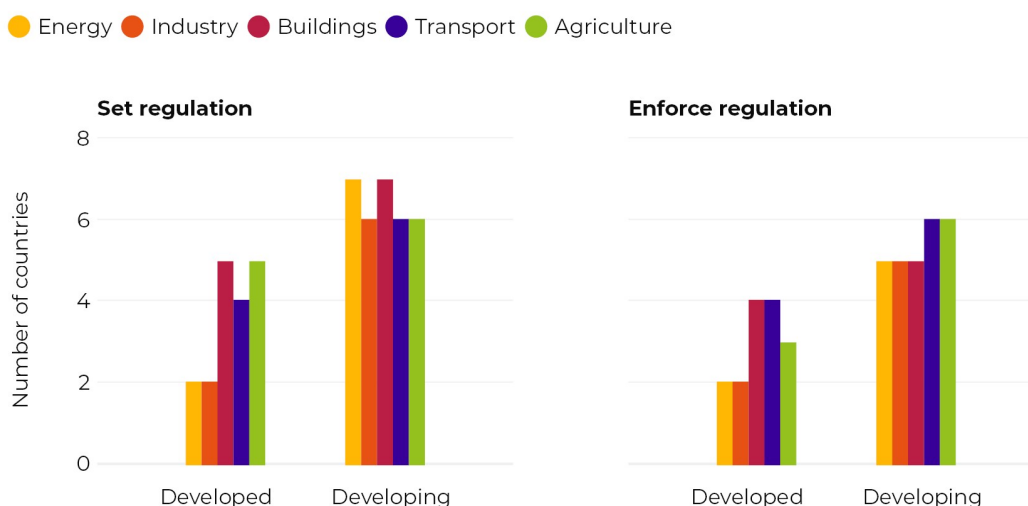


Figure 12: Regulatory power – sectors development level (averaged country results)

Annex II–III Power to influence national policy agenda

Survey responses by political system, degree of decentralisation, and development

Partial agenda setting power was very common for states and regions in federal and most decentralised countries (71%), with the remaining states and regions in these countries indicating limited agenda setting power (29%) (Figure 13). States and regions in unitary and quasi-federal countries seem to have less agenda setting power, however, the small sample size makes it difficult to comment on general trends in these groups of countries. No clear trend is observed in agenda setting power between developed and developing countries (Figure 13).

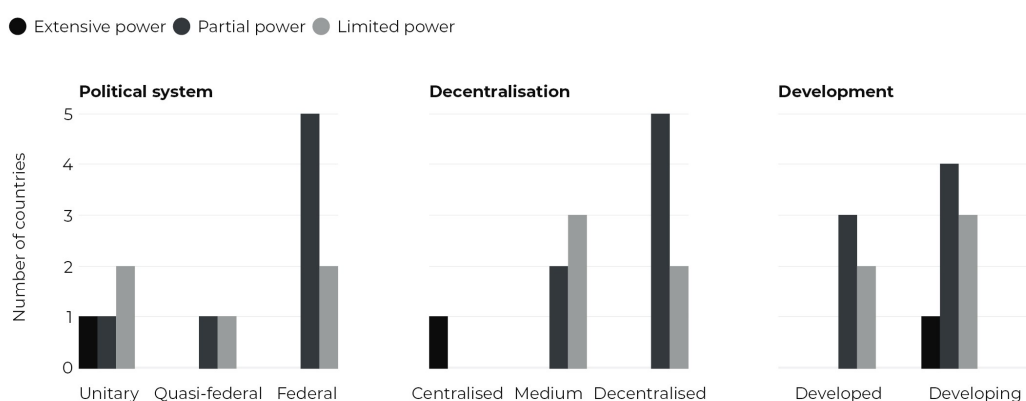


Figure 13: Agenda setting power – political system, decentralisation and development level (averaged country results)

Annex II-IV Capacities – political, funds, information, and trained staff

Survey responses by political system, degree of decentralisation, and development

There is no clear trend between capacity limitations and political system or degree of decentralisation. The only noticeable trends are that informational and political capacity constraints are only considered a strong barrier to climate action in developing countries (Figure 14).

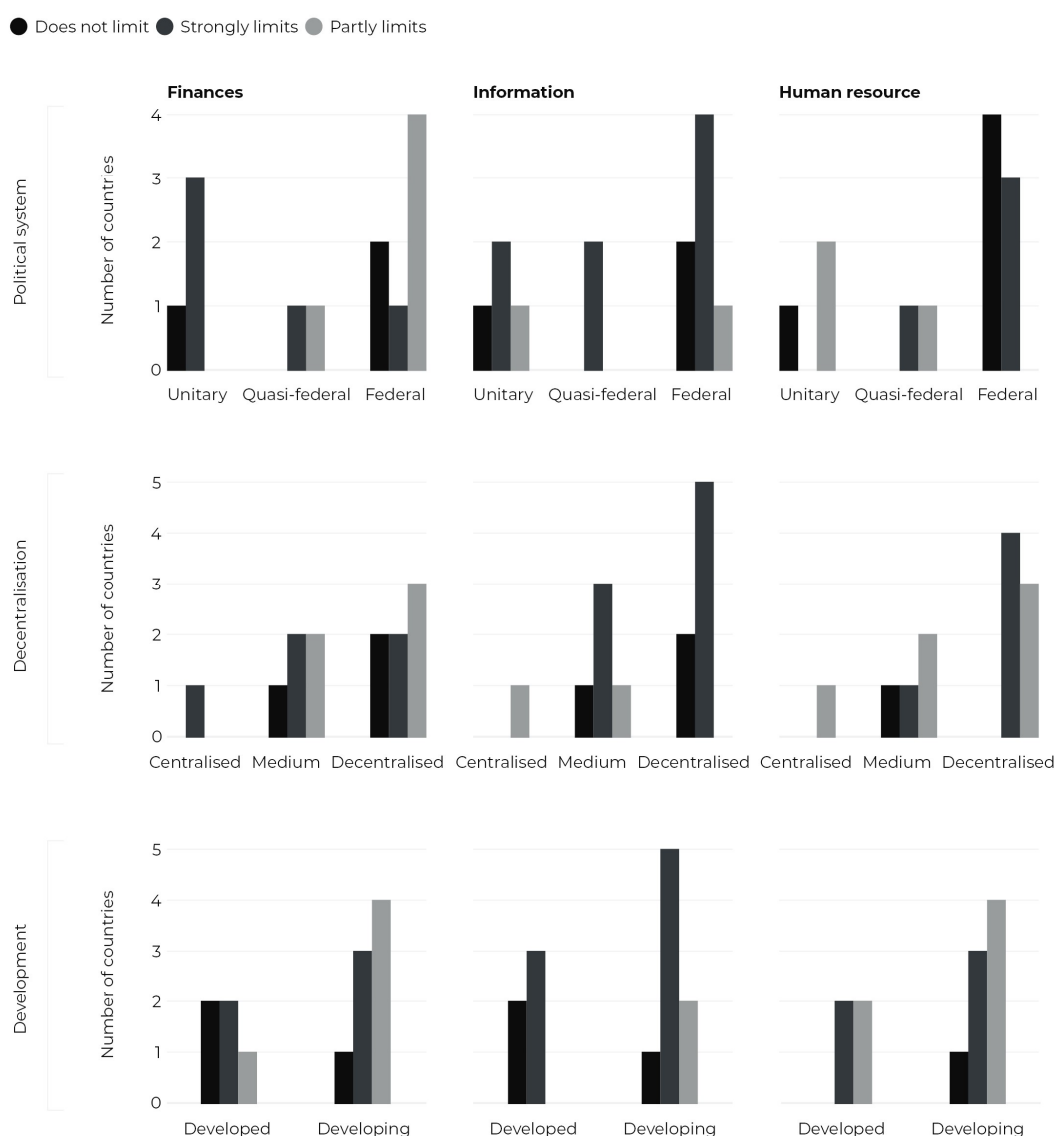


Figure 14: Capacity limitations – political system, decentralisation and development level (averaged country results)

Survey responses by sector

Overall, financial capacity limitations were most common in the transport sector, followed by buildings, agriculture, and energy, while least common in the industry sector, where states and regions generally had less financial and regulatory powers (Figure 15).

Access to information is most commonly a crucial barrier to climate action in the transport and agriculture sectors where regions generally have significant financial and regulatory powers. This is especially the case in developing countries that are more strongly limited by availability of information (Figure 16).

Interestingly, the trend is different for human resource capacity, which is most commonly a crucial barrier to climate action in the energy and industry sectors, where states and regions generally have less financial and regulatory power, and less commonly a barrier in the agriculture, buildings, and transport sector (Figure 17).

Even if states and regions do not have powers to set regulation in certain sectors, they still play an important role in the enforcement of regulations that are set at the national level. Effective enforcement of regulation can require significant capacity and varies from policy to policy. States and regions often lack the capacity to enforce regulations - addressing this issue is therefore key to realising the full mitigation potential of policies set at both the state/regional and national levels. An overview of capacity requirements for several key sectoral policies is shown in [Table 1](#).

It is important to note though that the survey just checked for each sector whether the capacity was a barrier and not to what degree. Hence conclusions with regards to the significance of the lack of capacity are difficult to draw without further studies. The results just show how commonly the lacking capacities are perceived as a barrier.

Sector	Major policy at national level	Capacity requirements - level	Capacity requirements - description
Buildings	Building standards	High	Enforcement of building codes
Transport	Vehicle emission standards	Low	Vehicle standards are enforced at the national level
Power sector	RE support schemes	Medium - high	Siting and permitting

Table 1: Exemplary depiction of major sectoral policies at the national level and their implications for capacity requirements at the regional and sub-regional level



Figure 15: Capacity limitations – sectors overview (averaged country results)

Financial capacity limitations are similarly common across all political systems, degrees of decentralisation and development states. Trends between different types of regions do not exist for financial capacity limitations across sectors.

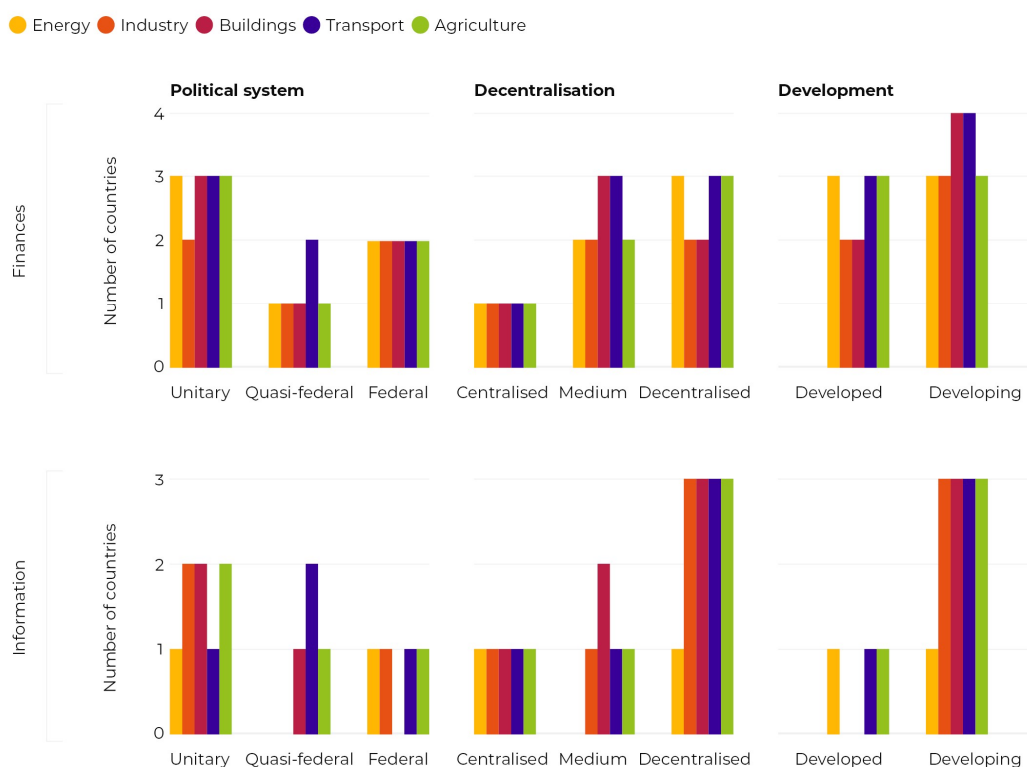


Figure 16: Capacity limitations – sectors: political system, level of decentralisation and development level vs financial and information capacity (averaged country results)

States and regions in developing countries are more limited by access to information than developed countries. In developing countries, information constraints are limiting in the industry, buildings, transport, and agriculture sectors, and less in the energy sector, where states and regions generally have limited role. States and regions in developed countries are not so limited by information, with respondents only indicating that this is sometimes a limiting factor in the energy, transport and agriculture sector (Figure 17).

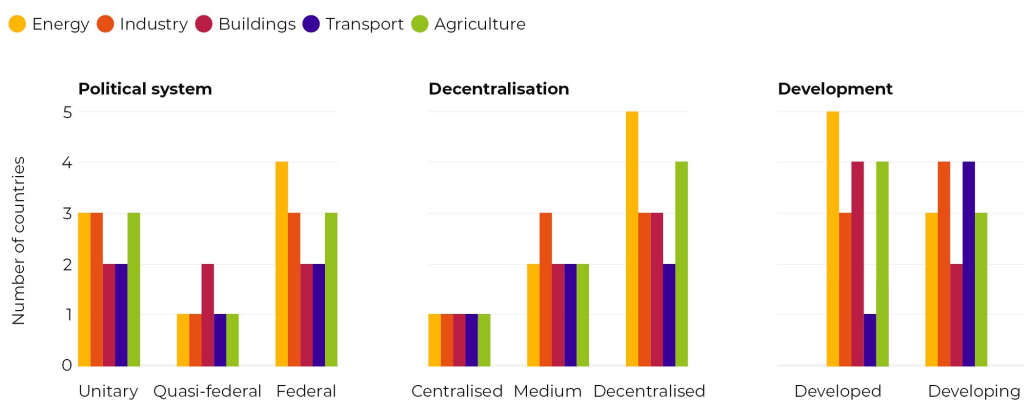


Figure 17: Capacity limitations – sectors: political system, level of decentralisation and development level vs human resources

Human resource capacity constraints are commonly a major barrier for climate action across all political systems, degrees of decentralisation, and development states. States and regions in federal, most decentralised, and developed countries, are most commonly limited by human capacity in the energy sector, where they have relatively more powers compared to their counterparts in unitary, more centralised, and developing countries. For these states and regions with (generally) more regulatory powers the survey suggests that human capacity is less likely to be a major barrier in the transport sector. This may be due to a combination of, firstly, states and regions being able to build capacity in this sector where they have for a long time had a clearly defined role and set of powers in for instance developing infrastructure, and secondly, the nature of the sector and capacity requirements for planning and implementing action (like those required to enforce regulation – see Table 1).

Sectoral human capacity limitations in unitary states and regions is similar to those in federal countries. While human capacity is considered a crucial barrier in all sectors, this is generally most common in the energy, industry, and agriculture sectors, and least common in the buildings and transport sectors, as mentioned before, this is also perhaps due to long standing powers and role in these sectors.

In developing countries, human capacity is most commonly a crucial barrier for climate action in the industry and transport sectors, followed by energy and agriculture, and least common in the buildings sector.



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