Where the Future Happens First: How Subnational Climate Diplomacy Generates Transformative Change Through Rescaling and Entrenchment

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Introduction

> *I come from a state of dreamers and doers. A state that has long prided itself on being on the leading and cutting edge. We love to say about California, 'the future happens there first.'*[1]

This is how Governor Gavin Newsom of California started his speech at last week's United Nations Climate Ambition Summit. As the sole United States government official to be granted the privilege of addressing global leaders during this high-profile climate summit, Governor Newsom took the opportunity to emphasize California's role as a frontrunner in the global fight against climate change and to call out the oil industry for its role in causing the global climate crisis. The speech was greatly applauded by the audience, and as the attending senior director of international climate policy for the Center for American Progress said in an interview with CNN, "This is what we were expecting from the US leadership the whole time."[2] This is not the first time that the U.S. state of California has been more successful at meeting international expectations for climate leadership than the U.S. federal government. In fact, California is widely regarded as a global leader in climate governance and has even been coined the "de facto shadow government on climate diplomacy" of the United States.[3]

This diplomatic engagement of the California state government in global climate governance is an example of 'subnational climate diplomacy.' Subnational climate diplomacy is a concept that has been gaining attention in the field of International Relations in recent years. It refers to the way in which state and local governments are increasingly taking part in international negotiations and cooperation to advance global climate objectives.

More specifically, the term 'subnational climate diplomacy' has been defined as:

> a form of targeted foreign policy to promote climate action through reaching out to other actors, cooperating on specific climate-related issues, building strategic partnerships and strengthening relations between state and non-state actors, including major contributors to global pollution, thereby contributing to mitigating the effects of climate change, as well as to enhancing climate action and strengthening diplomatic relationships.[4]

This signifies a sizable shift in the traditional approach to state-to-state diplomacy, in which diplomatic engagement with foreign governments is mainly reserved for national

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[1] Office of Governor Gavin Newsom, "Governor Newsom Calls Out Oil Industry at UN."
[2] Nilsen, "California Seals Its Reputation as a Climate Juggernaut with a Wave of Legislation and Head-Turning Lawsuit."
[3] Begert, "Washington Can't Get a Climate Pact. Gavin Newsom Just Cut Another One."
[4] European Parliament Resolution of 3 July 2018 on Climate Diplomacy.

governments. However, subnational governments have been challenging this tradition by becoming increasingly more central figures in the international arena. And while in academic circles this interest in subnational diplomacy has been gaining momentum since the topic of 'paradiplomacy' was introduced in the late 1980s, it has recently gained much more recognition due to the role that subnational governments assume in climate governance. For example, this recognition was expanded substantially when the Paris Agreement officially acknowledged the significance of sub- and non-state actors in achieving the goals of the agreement.[5] And as the recognition of the role of subnational governments in climate diplomacy has increased, so have the attempts at measuring the value of subnational climate diplomacy to the global fight against climate change.

However, this value is currently almost exclusively measured in terms of clearly quantifiable outputs, which provides a very limited assessment of its actual value. But as will become clear from the literature review provided in the next chapter, there is reason to believe that much of the true value of subnational climate diplomacy lies in its broader social, economic and political impacts. As authors Chan et al. point out, "while the direct impacts of sub-and nonstate actions are potentially large, their indirect impacts may be even greater."[6] However, such less directly quantifiable contributions are currently being largely overlooked in favor of measurements of progress in terms of emission reduction potential. Unfortunately, these estimates do not effectively address the more indirect and long-term impacts of climate diplomacy.

Therefore, this thesis will analyze how subnational climate diplomacy can contribute to transformative change through such more indirect impacts. The indirect impacts that will be measured are 'rescaling' and 'entrenchment,' based on the frameworks developed by authors van der Ven, Bernstein and Hoffmann (2017) and Setzer (2017), who share the belief that much of the indirect contributions of subnational climate governance can be narrowed down into processes of rescaling and entrenchment. These two concepts will serve to guide the analysis undertaken in this thesis, which aims to answer the following research question:

How can subnational climate diplomacy contribute to transformative change through rescaling and entrenchment? To answer this question, the thesis will include a detailed case study of the international climate agenda of the current "de facto shadow government on climate diplomacy:" California.[7]

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[5] Chan et al., "Climate Ambition and Sustainable Development for a New Decade." 247.
[6] Chan et al., "Reinvigorating International Climate Policy." 467.
[7] Begert, "Washington Can't Get a Climate Pact. Gavin Newsom Just Cut Another One."

Literature Review

As the past decade has seen the world become increasingly aware of the imminent threat of the climate crisis, an ever-growing body of literature has become available on the various facets of this crisis. From an international relations perspective, a multitude of opinions exist on what should be considered as the superior form of climate diplomacy. While some believe fiercely in the power of international agreements signed by the world's biggest nations, others emphasize the importance of local approaches and subnational governments. Nevertheless, today's global climate governance is tailored mostly towards central governments and traditional state-to-state diplomacy, as is the case for most multilateral agreements. In effect, most international climate agreements focus mainly on ratification by nation-states and rely largely on the implementation of its objectives through national governments. However, the pledges made by national governments are often not stringent enough to properly tackle the climate crisis. For example, in the case of the Paris Agreement, this has resulted in a significant emission gap between the agreement's goals and the emission reductions estimated on the basis of the Nationally Determined Contributions (NDCs).

In a bid to bridge this emission gap, some have started to look towards the potential of subnational actors and how these could increase emission reduction expectations. A number of quantitative studies conclude that subnational climate action can significantly decrease greenhouse gas emissions and allow for certain states to achieve or even overachieve their NDCs for 2030.[8] Such expectations have led to an increase in attention to the role of subnational climate action and subnational climate diplomacy in global climate governance. However, an overwhelming majority of the studies that address these topics prefer to focus on direct and clearly quantifiable contributions of subnational climate initiatives and have largely overlooked the more indirect and less clearly quantifiable contributions of subnational governments. While this has resulted in the publication of a few very useful frameworks for the assessment of sub-and non-state climate action, these frameworks overlook many of the less directly quantifiable contributions that are especially crucial to the proper valuation of subnational climate diplomacy.

[8] Kuramochi et al., "Beyond National Climate Action." 276.

Green Paradiplomacy

The most widely used term to refer to the participation of subnational actors in international relations is that of 'paradiplomacy.' The term made its debut in the late 1980s, when a group of North American political scientists aimed to create more structure in the study of international activities of subnational governments in foreign affairs.[9] Two of these scientists, Duchacek (1984) and Soldatos (1990), popularized the term "paradiplomacy" to refer to the "direct international activity by subnational actors supporting, complementing, correcting, duplicating, or challenging the nation-states' diplomacy."[10] And while the study of paradiplomacy has its origins in North American academia, during the 1990s and 2000s it had become recognized globally as a topic of scientific interest.[11]

There are currently two main paradigms that exist in the literature on paradiplomacy: one claiming that paradiplomacy is complimentary to a nation's foreign policy, and the other claiming that paradiplomacy "jeopardizes a unified and coherent foreign policy."[12] Most of the studies on paradiplomacy in relation to environmental issues, however, adhere to the first paradigm. This field of study, which is generally referred to as 'green paradiplomacy' or 'environmental paradiplomacy,' regards paradiplomacy as a way for subnational actors to add to a nation's foreign policy by demonstrating leadership on environmental goals and overcoming the obstacles that limit action at the national level. Consequently, most studies within this field focus on proving the relevance of green paradiplomacy and underlining how it can complement a nation's foreign policy.

Theories on Subnational Climate Governance

As mentioned previously, the international relations of subnational governments already gained momentum as a topic of scientific study around the 1980s. However, the topic was elevated to a new level of relevance when in 2015 the Paris Agreement officially recognized the role of sub- and non-state actors in achieving the goals of the agreement.[13] This marked an immense shift in the place of sub- and non-state actors in global climate governance since these actors were now individually recognized as relevant contributors to a multilateral agreement and not solely as representatives of their central governments. This

[9] Karvounis, "Paradiplomacy and Social Cohesion." 83.
[10] Duchacek, "The International Dimension of Subnational Self-Government."; Michelmann and Soldatos, *Federalism and International Relations*. 46.
[11] Karvounis, "Paradiplomacy and Social Cohesion." 84.
[12] Schiavon, *Comparative Paradiplomacy*.
[13] Chan et al., "Climate Ambition and Sustainable Development for a New Decade." 247.

shift was not only felt in the academic field, which - as Strachová (2021) notes – had until 2015 been mainly focused on debating whether or not subnational actors should be included in the climate agenda.[14] But it also marked a shift in the multilateral system since the official recognition of such actors signified a step away from traditional state-to-state diplomacy and nation-state-focused multilateralism. Additionally, where previously the academic debate had been discussing the pros and cons of such direct inclusion of subnational actors, the fact that the policy world had now "leapfrogged ahead" called for studies to swiftly address new questions and debates.[15]

Hale (2016) mentions three main questions that ought to be addressed in response to this shift. Firstly, "what is the direct effect of sub/nonstate climate action on the climate problem?"[16] Secondly, "what is the effect of sub/nonstate climate action on national policies?"[17] And finally, "what is the effect of sub/nonstate climate action on climate politics?"[18] Even though all three of these questions have been studied to some extent, the main focus in the scientific literature has been placed on answering the first one. It is therefore that a significant section of the body of literature consists of quantitative studies of the direct impact of sub- and non-state climate actions, which are mainly based on estimated emissions reduction or reduction potential.[19] The second and third questions, however, are more difficult to measure in such a manner since they refer to the political impact of sub- and non-state climate action, which calls for a more holistic and qualitative approach with a focus on subnational climate governance and subnational climate diplomacy.

In a more recent study, Hale et al.(2020) have actually explored how sub-and non-state climate action has been assessed in 42 major studies published prior to 2020.[20] Not only did the authors find that 95% of the studies "assess the potential or past impact of non-state and subnational climate action on GHG reduction, showing an overwhelming focus on mitigation [which] misses large parts of the climate action universe."[21] But even more surprisingly, they found that none of the studies had "rigorously estimated the indirect and interactive impacts of sub- and non-state climate action."[22]

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[14] Strachová, "Cities Towards Global Climate Governance." 370.
[15] Hale, "All Hands on Deck." 19.
[16] Hale, "All Hands on Deck." 19.
[17] Hale, "All Hands on Deck." 19.
[18] Hale, "All Hands on Deck." 20.
[19] Hsu et al., "A Research Roadmap for Quantifying Non-State and Subnational Climate Mitigation Action." 11–17; Kuramochi et al., "Beyond National Climate Action." 275–9.
[20] Hale et al., "Sub- and Non-State Climate Action." 406–20.
[21] Hale et al., "Sub- and Non-State Climate Action." 412.
[22] Hale et al., "Sub- and Non-State Climate Action." 413.

However, an interesting example of a study that does address such indirect and interactive impacts of subnational climate initiatives, is the one undertaken by van der Ven, Bernstein, and Hoffmann (2017). These authors propose an alternative approach to valuing nonstate and subnational climate governance that is based on assessing "an intervention's capacity to scale up and become entrenched in social, political, and economic institutions."[23] They criticize how most studies assess subnational climate initiatives "solely by examining their performance against intended goals, reduction targets, or relevant outputs."[24] This leads to a much too narrow conception of 'value' which is not suitable for the non-linear and dynamic nature of subnational climate governance. Instead, van der Ven, Bernstein, and Hoffmann suggest that the focus should be placed on how interventions contribute to transformative change through 'scaling' and 'entrenchment.'[25]

Van der Ven, Bernstein, and Hoffmann define scaling as "expanding the reach of governance efforts and the audience affected" and entrenchment as "generating substantive effects that are durable and difficult to reverse."[26] They claim that these concepts can serve as 'observable indicators' of the wider value of subnational climate governance that can be found through meticulous qualitative research.[27] Such qualitative research is a crucial addition to the quantitative research already in place, and is necessary to properly understand the more indirect contributions of subnational climate governance. With this approach, the authors provide much-needed structure to qualitative research on the value of subnational climate initiatives. Additionally, this approach also includes political effects in its valuation. This is especially interesting because most other studies neglect political mechanisms in their assessments, since these are especially difficult to measure against quantifiable outputs. However, by looking at scaling and entrenchment, the broader political impact of an initiative can also be taken into account. This makes this approach especially suitable for the analysis of subnational climate diplomacy that will be carried out in this thesis.

Currently, such assessments of subnational climate diplomacy are limited. This is, as has now become clear, partly due to the fact that studies on the more indirect effects of subnational climate action are still very fragmented. However even the studies that do address the indirect effects of subnational climate action rarely address the role of subnational climate diplomacy. For example, while the study by Hale et al. (2020) looks at both direct and

[23] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 2.
[24] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 6.
[25] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 8.
[26] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 8.
[27] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 8.

indirect impacts, the authors have limited their scope to the role of subnational actors as implementors of climate action and have not looked at the role of subnational actors as advocates or watchdogs.[28] However, they do recognize the relevance of this role and suggest that future research should aim to develop "more complex models to fully capture the interaction dynamics of climate action amongst sub- and non-state actors, and between such actors and national governments."[29]

Such further research on subnational climate diplomacy can provide relevant new insights into the role of subnational governments as advocates and watchdogs in international climate governance. The approach developed by van der Ven, Bernstein, and Hoffmann can be considered as especially suitable to such research, since scaling relates to the role of advocate, and entrenchment to that of watchdog. The study by van der Ven, Bernstein, and Hoffmann actually offers a more holistic approach than the other studies in the field, and although these authors do not focus explicitly on subnational climate diplomacy, their framework allows for a broad valuation of subnational climate initiatives in terms social, economic and political impacts.[30]

The authors' choice of 'scaling' and 'entrenchment' as observable indicators of the value of subnational climate initiatives is rooted in the notion of 'applied forward reasoning' as an approach to analyzing the value of policy responses.[31] This approach argues that "interventions must be measured against their capacity to 'trigger and nurture path-dependent processes that lead to transformative change over time.'"[32]

When applied to the issue of climate change, van der Ven, Bernstein, and Hoffmann came to the following conclusion:

> To trigger new path dependencies that may lead to transformative change, interventions must demonstrate potential for both scaling (expanding the reach of their governance efforts and the audience affected) and entrenchment (generating substantive effects that are durable and difficult to reverse).[33]

The authors' choice for scaling and entrenchment is based on the argument that nonstate and subnational (NSS) governance interventions are interconnected and that action at one level can lead to results on another, or vice versa. For example, "innovative governance practices at the municipal or subnational level have occasionally led to changes

[28] Hale et al., "Sub- and Non-State Climate Action." 407.
[29] Hale et al., "Sub- and Non-State Climate Action." 416.
[30] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 2
[31] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 8.
[32] Levin et al., "Overcoming the Tragedy of Super Wicked Problems." 8.
[33] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions" 8.

in national and international climate policy."[34] Also, they emphasize that NSS climate governance interventions add value that is nonquantifiable, and that "their key effects are likely to be catalytic and political—contributing to normative change, building the capacities of political actors, and altering the coalition-building and conflict dynamics that are at the heart of efforts to disrupt carbon lock-in and pursue decarbonization."[35]

However, while van der Ven, Bernstein, and Hoffmann consistently describe their approach as a way to value NSS climate governance, and not only NSS climate action, the only way in which they have further illustrated their approach is by applying relatively narrow understandings of scaling and entrenchment to one example of a specific climate intervention. Further insight into the application of this framework to cases of subnational climate governance is lacking, but by applying the framework to a study that explicitly focuses on diplomacy, this thesis will aim to add such further insights.

Rescaling

Fortunately, the argument that subnational climate diplomacy can lead to scaling and entrenchment is further supported by other authors in the literature. J. Setzer, for example, looks at "how, by undertaking an international agenda to address global environmental problems, subnational governments (SGs) are promoting a rescaling of environmental governance."[36] Setzer critically engages with multilevel governance and subnational diplomacy literature. Multilevel governance frameworks "understand the engagement of subnational jurisdictions in the governance of global environmental problems as a rescaling process."[37] In this publication, Setzer mainly draws on the multilevel governance framework that was developed by L. B. Andonova and R. B. Mitchell, in which rescaling of environmental politics is understood as "a shift in the locus, agency, and scope of global environmental politics and governance across scales."[38] Setzer argues that such a multilevel governance framework is especially fitting for analyzing the rescaling of environmental governance, since it can provide a structured overview of the many scales and linkages that exist in this type of governance.

However, the author points out that this framework does not show a complete picture of the rescaling process, and "leaves unnoticed the diplomatic roles in which subnational

[34] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 6.
[35] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 5-6.
[36] Setzer, "How Subnational Governments Are Rescaling Environmental Governance."503.
[37] Setzer, "Subnational Governments Rescaling Environmental Governance." 504.
[38] Andonova and Mitchell, "The Rescaling of Global Environmental Politics." 257.

representatives engage."[39] To address this gap, Setzer brought in aspects of subnational climate diplomacy. Yet, this literature again does not properly address rescaling. So, while multilevel governance literature addresses rescaling but not subnational diplomacy, subnational diplomacy literature addresses diplomacy but not rescaling. Therefore, the author argued that if combined, the literature on multilevel governance and subnational diplomacy can complement each other and "provide a stronger analytical framework to explain the international environmental agenda undertaken by SGs."[40]

This framework outlines six forms of rescaling: horizontal rescaling at the subnational level, horizontal rescaling at the national level, horizontal rescaling at the international/supranational level, vertical upward rescaling at the subnational level, vertical upward rescaling at the national level and vertical upward rescaling at the international/supranational level. And while the concept of 'scaling' mentioned by van der Ven, Bernstein and Hoffmann and 'rescaling' by Setzer both refer to expansions in terms of reach, locus and scope, Setzer's types of rescaling were specifically developed to analyze subnational diplomacy. So, to best accommodate the focus on subnational climate diplomacy, this thesis will combine Setzer's method for investigating rescaling with van der Ven, Bernstein and Hoffmann's method for investigating entrenchment.

Entrenchment

When it comes to entrenchment – the second concept mentioned by Van der Ven, Bernstein, and Hoffmann - there are a variety of ways in which this concept can be understood. The authors define entrenchment as the act of "generating substantive effects that are durable and difficult to reverse."[41] They base this understanding on the one proposed by Levin et al., who discuss a set of path dependent processes that allow a "particular social, economic, and political practice to endure and have expanding effects over time."[42] Van der Ven, Bernstein, and Hoffmann have incorporated three of these processes in their understanding of entrenchment and have added a fourth. These are: entrenchment through lock-in, self-reinforcing entrenchment, entrenchment through positive feedback and indirect entrenchment. This brings much needed structure to the analysis of the many different ways in which subnational climate diplomacy can induce durable change.

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[39] Setzer, "Subnational Governments Rescaling Environmental Governance." 504.
[40] Setzer, "Subnational Governments Rescaling Environmental Governance." 509.
[41] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 8.
[42] Levin et al., "Overcoming the Tragedy." 134.

Conclusion

In conclusion, this review of the existing debates on the role of subnational actors in global climate governance has shown a number of weak spots. First of all, there is a strong preference for quantitative measurements of the contributions of subnational climate action, most frequently in terms of emission reduction estimates. Secondly, studies that take on a more qualitative approach often lack structure or do not sufficiently address the interactive and indirect ways in which subnational actors cause relevant impact.[43] And most importantly, the studies that do look at these indirect and interactive contributions in a broader manner still limit their scope to the role of subnational actors as implementors.[44] But when it comes to subnational climate diplomacy, it is not as implementors but rather as advocates or watchdogs that subnational governments act.

The framework developed by van der Ven, Bernstein, and Hoffmann, however, distinguishes itself from such studies in the way that its holistic approach allows for the inclusion of both of these roles of subnational climate actors, making it especially relevant for the analysis that will be carried out in this thesis. Yet, the way that the framework measures scaling is more suitable for analyses of subnational climate interventions than for subnational climate diplomacy. The framework proposed by Setzer, however, specifically focuses on how subnational climate diplomacy can lead to rescaling but does not address entrenchment. Therefore, this thesis will combine these two frameworks to provide a more encompassing way to value the broader impact of subnational climate diplomacy, and shed light on how subnational climate diplomacy can contribute to transformative change through rescaling and entrenchment.

[43] Hale et al., "Sub- and Non-State Climate Action." 413.
[44] Hale et al., "Sub- and Non-State Climate Action." 407.

Methodology

The aim of this research is to analyze how subnational climate diplomacy contributes to transformative change through rescaling and entrenchment. To achieve this aim, it will take a qualitative approach to a case-oriented research design. This will entail a detailed and in-depth within-case analysis of the international climate agenda of California. There are a number of reasons why a within-case study of one subnational government can be considered a suitable choice for this study. Firstly, uncovering causal linkages in subnational climate diplomacy requires research-intensive qualitative approaches. In order to properly address all the various processes of rescaling and entrenchment that can be detected in a subnational government's climate agenda, it is crucial to acquire a deep and detailed understanding of that subnational government and its climate diplomacy. Therefore, a single case study can be considered the most suitable approach for the type of research that will be carried out in this thesis.

Furthermore, California's international climate agenda is an especially suitable case for multiple reasons. Seeing as this study is centered around the concept of subnational climate diplomacy, the selected case needs to be a subnational government that actively engages in this type of international relations as a separate actor from its national government. And while examples of subnational climate diplomacy can even be found in unitary systems, the way in which power is constitutionally divided under federal systems makes for a much more tolerant environment for subnational diplomacy. Additionally, the constitutionally determined divisions of power among the federal and the subnational governments provide structure and clarity on what can or cannot be considered as subnational climate diplomacy. Therefore, it is logical for this study to focus on a state from a federal system.

Of the federal countries in the world, the United States of America is by far the largest polluter and the most dominant power in international relations. The fact that the U.S. plays an important role both in international relations and in the global environmental crisis makes it an especially relevant unit of analysis for the field of global environmental governance. But as was mentioned previously, the federal system of the U.S. means that this involvement in global environmental governance does not only occur at the national but also at the subnational level. The state that stands out most in this respect is California.

California has long been a frontrunner not only when it comes to environmental policy but also when it comes to paradiplomacy. As Barnes et al. point out, "since its earliest days of climate action, California has sought to partner both beyond its borders and with various levels of the U.S. government."[45] And these 'earliest days of climate action' in California date back to the 1960s, when California was the first state in the U.S. to introduce a number of important environmental policies. Since then, the state has remained a frontrunner in environmental governance and has become an influential player on a subnational, national and even international scale. So, in essence, the case of California brings together the fields of environmental governance and paradiplomacy, and thus forms the ideal case for a study on subnational climate diplomacy.

Methods

To shed light on how subnational climate diplomacy leads to transformative change in climate governance, the following study will be centered around the two concepts of 'rescaling' and 'entrenchment.' As mentioned previously, the authors van der Ven, Bernstein, and Hoffmann have made a compelling case for the relevance of scaling and entrenchment in achieving more encompassing valuations of subnational climate governance. And while the ideas of van der Ven, Bernstein, and Hoffmann are centered around subnational climate governance, the way in which the valuation methods are further developed in the article is primarily aimed at assessing subnational climate action, and not so much subnational climate governance. The authors predominantly focus on evaluating the broader potential for scaling and entrenchment held by the outputs of climate governance initiatives. However, when examining subnational climate diplomacy, the various examples of diplomatic engagement as such can already be regarded as instances of scaling and entrenchment. So, to make this approach more applicable to studies of subnational climate diplomacy, this thesis expands it further through the addition of J. Setzer's framework for analysis of rescaling in environmental governance.

Setzer's framework was designed by incorporating elements from subnational climate diplomacy literature into Andonova and Mitchell's multilevel governance framework, which categorizes the various linkages in environmental politics according to horizontal and vertical dimensions of rescaling.[46] This framework by Andonova and Mitchell was already rather

[45] Barnes et al., "Learning From California's Ambitious Climate Policy." 17.
[46] Setzer, "Subnational Governments Rescaling Environmental Governance." 506.

innovative since it formed a departure from traditional international relations theory's spatially fixed understanding of scale, and shifted attention to the multiple horizontal and vertical scales across which political actors operate.[47] But as Setzer criticizes, a pitfall in this framework is the fact that it still largely overlooks the role of subnational governments (SGs) in this system. It only addresses two types of linkages: horizontal linkages between subnational governments, and vertical linkages between a subnational government and a foreign state. However, this completely fails to address the many other ways in which subnational governments have become key players in international relations.

In order to develop a more complete overview of the many different ways in which subnational governments engage in international relations, Setzer turned to subnational diplomacy literature. But in this literature too, Setzer found two pitfalls. The first being the lack of a strong theoretical basis in studies on subnational diplomacy, and the second being that it does not really address processes of rescaling.[48] So by combining the more complete picture of subnational governments' engagement in international relations with the multilevel governance perspective on scale, Setzer addressed the gaps in both literatures and provided a theoretical framework for further research.

Rescaling

The adapted framework proposed by Setzer includes six rescaling linkages that can be categorized according to horizontal and vertical dimensions and three levels of governance (Appendix). Horizontal rescaling refers to linkages between subnational governments, and vertical upward rescaling to linkages between subnational governments and higher levels of governance, such as national governments or intergovernmental organizations. These linkages along the vertical and horizontal axes are in turn subdivided according to the level of governance where the rescaling occurs.

Along the horizontal axis, the following three types of rescaling are mentioned:

Horizontal rescaling at the subnational level occurs "when SGs establish linkages with other SGs across borders to collaborate over matters of mutual interest. Through these linkages, SGs aim at exchanging technical, scientific, or technological expertise, which will then be used in the development and implementation of local policies."[49]

[47] Setzer, "Subnational Governments Rescaling Environmental Governance." 506 – 507.
[48] Setzer, "Subnational Governments Rescaling Environmental Governance." 508.
[49] Setzer, "Subnational Governments Rescaling Environmental Governance." 511.

Horizontal rescaling at the national level is observed when subnational governments establish linkages with other subnational governments via international organizations or transnational networks with the aim to "forge ahead with policy-making beyond what is mandated by the national government."[50] This is a bit of an ambiguous definition, because such 'forging ahead' can also be understood as one of the driving forces behind subnational climate diplomacy in general. However, this category specifically refers to the types of linkages that are a direct response to a lack of action or ambition at the national level and allow for the subnational government to take on the role of frontrunner within the country, and in some cases even provoke changes at the national level.

Horizontal rescaling at the international/supranational level takes place when subnational governments sign multilateral environmental agreements with other subnational governments, or participate in international forums of subnational governments to exchange ideas on global climate governance.[51]

Along the vertical axis, the following three types of rescaling are mentioned:

Vertical upward rescaling at the subnational level "is observed in numerous cases in which SGs establish relations with foreign states or international organizations."[52] This type of rescaling refers to vertical linkages that are targeted at implementing policies and projects at the state level. It includes official communication between subnational governments and foreign national authorities, such as delegation visits, and also the signing of agreements aimed at promoting climate policies at the state level.

Vertical upward rescaling at the national level refers to the involvement of subnational governments in the agenda-setting of multilateral environmental agreements and climate change negotiations. Setzer points out that this type of subnational climate diplomacy is still largely understudied. This is not surprising since it is one of the more indirect and non-quantifiable ways in which subnational governments can contribute to climate governance. However, participation in the agenda-setting phase allows subnational governments to influence the points of discussion that central government officials will bring up in international negotiations.

[50] Setzer, "Subnational Governments Rescaling Environmental Governance." 512.
[51] Setzer, "Subnational Governments Rescaling Environmental Governance." 512.
[52] Setzer, "Subnational Governments Rescaling Environmental Governance." 513.

Vertical upward rescaling at the international/supranational level "involves subnational representatives actively participating in the negotiation phase of multilateral environmental negotiations [or] trying to influence diplomats and other negotiators while the negotiations are taking place."[53] Essentially, this type of rescaling encompasses the different ways in which subnational governments are "acting authoritatively in the formal multilateral environmental regime."[54] This type is very similar to *vertical upward rescaling at the national level*, and also remains largely unexamined. Therefore, the following study will add new insights into these underexamined avenues of influence and further explore the six types of rescaling that make up Setzer's framework.

Entrenchment

Van der Ven, Bernstein, and Hoffmann define entrenchment as the act of "generating substantive effects that are durable and difficult to reverse."[55] Their framework distinguishes between four types of entrenchment: entrenchment through lock-in, self-reinforcing entrenchment, entrenchment through positive feedback and indirect entrenchment.

Entrenchment through lock-in arises when an initiative "contains a logic that gives it immediate durability."[56] In the context of a political system, such lock-in can be caused by "institutional rules of the game that render change difficult to initiate."[57] Examples of this are the constitutional provisions that are often put in place to make reform difficult, but therefore make it equally difficult to reverse the reform once it has been achieved.

Self-reinforcing entrenchment "occurs when the benefits for continuing and/or the costs of reversing an initiative increase over time."[58] Essentially, it refers to self-reinforcing triggers that are put in place by the initiative that over time make reversal more costly or continuation more desirable. But these triggers do not solely come in financial forms such as increased costs or returns. They also relate to processes of habituation and norm setting or norm sustaining.

Entrenchment through positive feedback occurs "when others who are not initially part of the target population make decisions to join, and by doing so, reinforce the choices of

[53] Setzer, "Subnational Governments Rescaling Environmental Governance." 514.
[54] Setzer, "Subnational Governments Rescaling Environmental Governance." 514.
[55] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions."8.
[56] Levin et al., "Overcoming the Tragedy." 134.
[57] Levin et al., "Overcoming the Tragedy." 134.
[58] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 9.

the original target populations."[59] Essentially it refers to how generating wider support outside of the initial target audience can simultaneously lead to improved support among that initial target audience. In simpler terms, when certain initiatives or policies are also adopted by other actors, this can reinforce the confidence of the initial actors in these initiatives or policies. This type of entrenchment can also be linked to the process of increasing ambition, which has frequently been mentioned as an important way in which subnational actors can contribute to climate governance. In the case of subnational climate diplomacy, increasing international support for certain policies or initiatives can improve confidence and ambition on a domestic level, and vice versa.

Van der Ven, Bernstein, and Hoffmann also stress the importance of recognizing a fourth type, which is the *indirect entrenchment of nontargeted policies or practices*. This type of entrenchment refers to those processes that are "amplifying the impact of the intervention in indirect and unanticipated ways."[60] It urges the researcher to look beyond the impact of targeted policies or practices and consider the indirect but durable impacts of nontargeted policies or practices.

As has now become clear, there is no simple quantitative way to analyze the above-mentioned processes of rescaling and entrenchment. But as van der Ven, Bernstein, and Hoffmann emphasize, it is through "careful qualitative analysis" of individual initiatives that these processes can be identified.[61] Therefore, the following study will include such a 'careful qualitative analysis' of processes of rescaling and entrenchment in the international climate agenda of California.

In order to investigate these types of rescaling and entrenchment, the first step will be to create an overview of the various acts of subnational climate diplomacy that make up the international climate agenda of California. The International Climate Action Team of California has published a list of all the bilateral and multilateral climate agreements to which California is an active signatory.[62] Though this list only shows the more formal side of California's subnational climate diplomacy in terms of participation in international partnerships, coalitions, alliances, and campaigns, it provides a substantial part of the data that is necessary for the following analysis. This has been further supplemented by data found

[59] Levin et al., "Overcoming the Tragedy." 136.
[60] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 9.
[61] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 10.
[62] California Energy Commission, "Climate Change Partnerships."

through the NAZCA Global Climate Action Portal, press releases from the Office of Governor Gavin Newsom, publicly available reports on climate cooperation and international events, and media coverage. This information has been compiled into a database, where each example has been investigated to see if it can be considered an example of one of the six types of rescaling, and if it can be linked to one of the types of entrenchment. As for the scope of analysis, the study places its main focus on (but is not completely limited to) acts of climate diplomacy undertaken during the current Governor Newsom Administration (2019 – now) and only addresses international agreements or partnerships that are still in effect at the time of publication of this thesis (September 2023).

Analysis

This analysis will be approached in the following manner: first, the case study will be introduced through a general overview of California's role as a leader in (global) climate governance. Then, each of the types of rescaling will be discussed in the order that they were mentioned in the above section on *rescaling.* Through careful qualitative analysis, it will then be determined whether or not each of these forms of rescaling can be detected in the international climate agenda of California. This same procedure will be followed for the detection of the four types of entrenchment. Finally, the findings will be summarized to provide an overview of the main ways in which California's subnational climate diplomacy contributes to transformative change through rescaling and entrenchment.

California as a Leader in Climate Governance

The U.S. state of California has been paving the way for environmental policy since long before environmental issues were even something of global concern. While the first examples of environmental regulation in California date back all the way to the 1860s,[63] it was from the mid-twentieth century onwards that the state really solidified its position as a regulatory frontrunner in environmental policy. In 1964, California actually implemented the world's first motor vehicle emissions standards and one year later, the federal government followed in California's footsteps by issuing the first nationwide vehicle emission standards as an amendment to the 1963 Clean Air Act.[64] However, this new federal standard also took away California's rights to set its own emission standards, and linked the state to the federal standard, which many Californian officials deemed insufficiently stringent to reduce air pollution in the state.[65] What ensued was an intense lobbying campaign with the aim of acquiring a waiver that would allow the state to set stricter standards than the federal government. Eventually, the campaign was successful, and California was granted a permanent waiver.

The impact of this waiver actually reaches far beyond the borders of California and has led to what has been termed 'The California Effect.' The California Effect refers to the way in which California is functioning as a sort of "superregulator" for emission standards. Since 1977, all U.S. states have been allowed to either follow the federal automotive

[63] Vogel, *California Greenin'*. 4.
[64] Vogel, *California Greenin'*. 5 & 175.
[65] Vogel, *California Greenin'*. 176.

emissions standard or the Californian standard.[66] Interestingly, many states choose to follow the more stringent Californian standard, and after a while the federal government tends to match this standard too.[67] D. Vogel has coined this process the California Effect, which he defines as the "critical role of powerful and wealthy 'green' political jurisdictions in promoting a regulatory 'race to the top' among their trading partners."[68]

Essentially, when an economically powerful state or nation implements stricter standards, this can limit market access to trading partners that do not meet the new requirements. So, if these trading partners want to retain access to that market, they will need to adjust their products to adhere to the stricter standards. This can in turn give these trading partners a competitive disadvantage in their domestic markets, which serves as an incentive to lobby for the domestic markets to also match the stricter standards, and balance the scales. In the case of California, this occurred when the state implemented stricter emission standards than the rest of the U.S. and thereby denied car manufacturers that did not meet these standards access to its market. Due to the economic importance of California's automotive market, U.S. car manufacturers were then incentivized to adapt to the Californian standard, which motivated their local governments to opt for this standard over the lower federal standard, which eventually led to the federal standard matching the Californian standard too. Vogel also noted that this position as a leader in emission regulation has become a source of state pride, which "set a pattern of Californian regulatory autonomy and national leadership that would subsequently extend beyond automobile emissions."[69] And not only does this leadership go beyond automobile emissions, but also beyond borders. Because as the leading U.S. state in terms of environmental policy, California has become an important player in global environmental governance too.

2003 – 2011 Governor Schwarzenegger

It was under Governor A. Schwarzenegger, and the George W. Bush administration, that California really began pursuing an international climate agenda. Dissatisfied by the lack of interest in climate policy at the federal level, Schwarzenegger took matters into his own hands by actively engaging in subnational climate diplomacy and developing a number of important climate policy initiatives such as the Global Warming Solutions Act, the Western

[66] Vogel, *California Greenin'*. 188.
[67] Vogel, *California Greenin'*. 188.
[68] Vogel, *Trading Up*. 6.
[69] Vogel, *California Greenin'*. 179.

Climate Initiative, the Governors' Climate and Forest Task Force, the Pacific Coast Collaborative and R20 Regions of Climate Action.[70] Schwarzenegger frequently met with international leaders to discuss climate-related issues and sign agreements, and he participated in a number of climate conferences and forums. He was particularly focused on promoting subnational climate action and cooperation with other regional and national leaders, and on raising awareness about the importance of subnational and state-level climate action.

2011 – 2019 Governor Brown

Whereas under the George W. Bush Administration California's climate diplomacy had emerged due to a lack of federal interest in climate diplomacy, it still continued to expand under the much more climate-focused Obama Administration. Schwarzenegger's successor, Governor Brown, took over his predecessor's role as a prominent climate diplomat and continued California on its path as an international climate leader. Most importantly, he launched the Under2MOU, which is "a nonbinding pledging system that parallels the Paris Agreement, but for subnational governments that are not formal parties to the UNFCCC."[71] And when federal interests in climate diplomacy plummeted with the introduction of the Trump Administration, Governor Brown became even more dedicated to protecting and expanding the role of California as an international climate leader. Essentially, Governor Brown became the "de facto national climate diplomat for the United States" during this time, and even met with the President of China, which had previously been a right reserved solely to national leaders and not subnational leaders.[72]

2019 – present Governor Newsom

This loyalty to subnational climate diplomacy has continued under the leadership of current California Governor Gavin Newsom. As a recent Politico article stated, "The most effective U.S. negotiator on international climate cooperation right now isn't in Washington. It's California Gov. Gavin Newsom, whose new pacts with China and other major polluters are cementing the Golden State's role as a climate policy power broker."[73] The article continues that this role of California as a "de facto shadow government on climate

[70] Cullenward, "California's Foreign Climate Policy."
[71] Cullenward, "California's Foreign Climate Policy." 4.
[72] Cullenward, "California's Foreign Climate Policy." 2.
[73] Begert, "Washington Can't Get a Climate Pact. Gavin Newsom Just Cut Another One."

diplomacy" is becoming even more important with the recent rise in geopolitical tensions between the U.S. and two of the world's biggest polluters, Russia and China.[74]

In these types of relations, the clear and concrete focus on climate issues in California's international agenda can at times provide a more stable avenue for international climate diplomacy than that of the federal government, since federal leaders must take into account a much wider array of factors that complicate international cooperation. This is one of the main reasons why subnational climate diplomacy is a promising asset to global climate governance, since it can serve as a way to circumnavigate gridlock in traditional state-to-state diplomacy. Especially in its relationship with China, California has proven this to be true. U.S. – China relations have been tense since the Trump Administration's trade wars, and have remained relatively tense under the rather realist approach to U.S.-China relations that seems to be preferred by current President Biden. But while this has caused recent negotiations between climate envoys of the two country's national governments to result in nothing but a resumption of communication, Governor Newsom actually signed two important environmental agreements with China in the past four months alone.

And it is not just through signing agreements that California is promoting its international climate agenda, but through various types of subnational climate diplomacy. For example, these official visits are often filled with trips to relevant sites such as factories or universities and allow plenty of opportunity to exchange knowledge and ideas. Other important channels for such exchanges are academic institutions, such as the California-China Climate Institute, a joint initiative between UC Berkeley and Beijing Tsinghua University. The aim of this institute, which was established and is still being led by former Governor Brown, is "to spur further climate action through joint research, training and dialogue in California and China [and] inform national policy makers, foster dialogue and cooperation, and promote the implementation of climate solutions at all levels."[75] Through such involvement in climate diplomacy, California is not only promoting specific climate policy, but wider transformative change through – as will be explored in the following sections – rescaling and entrenchment.

[74] Begert, "Washington Can't Get a Climate Pact. Gavin Newsom Just Cut Another One."
[75] "About Us."

Rescaling

One of the ways in which subnational climate diplomacy can lead to broad transformative change is through rescaling. J. Setzer developed a theoretical framework for the analysis of the international climate agenda of subnational governments, which can shed light on how subnational climate diplomacy can lead to a rescaling of climate governance. So, in order to gain insight into the way in which California's subnational climate diplomacy may be leading to such a rescaling of climate governance, the international climate agenda of California will be analyzed according to the six types of rescaling that make up J. Setzer's framework.

Type 1: Horizontal rescaling at the subnational level

This first type of rescaling refers to collaborations on "matters of mutual interest, [aimed at exchanging] technical, scientific, or technological expertise, which will then be used in the development and implementation of local policies."[76] This is the second most frequently detected type of rescaling in the case of California (the first being *vertical upward rescaling at the subnational level,* which will be addressed later). California has signed over 27 agreements with foreign subnational governments with the aim of cooperating on climate issues through sharing knowledge, innovation, technology and best practices. In the case of California, these types of linkages have been established primarily through the signing of Memoranda of Understanding (MOU), Memoranda of Cooperation (MOC) and Joint Declarations, but also through the creation of Sister-State relationships.

According to the data published by the California Senate Office of International Relations, California is currently involved in 33 official Sister-State or Friendship-State relationships with states all over the world.[77] These Sister-State relationships are symbols of mutual goodwill and "are intended to encourage mutually beneficial diplomatic, economic, educational, and cultural exchanges."[78] In the case of California's international climate agenda, these types of relationships have served as the foundation for several climate agreements. For example, the sister-state relationship that was established between California and the Chinese Province of Jiangsu in 2011 was expanded in 2017 with the signing of an MOU to collaborate on "research, innovation, and investment aimed at advancing the

[76] Setzer, "Subnational Governments Rescaling Environmental Governance." 511.
[77] "California's Sister State Relationships."
[78] "California's Sister State Relationships."

development of low-carbon energy resources and clean technologies."[79] Another example is the sister-state relationship between California and Osaka, Japan which was established in 1994. When in 2013 the Governor of Osaka Prefecture visited California to discuss this relationship with Governor Brown, they came to the conclusion that they would expand the sister-state relationship by signing a new MOU declaring the mutual intent to "encourage economic and trade cooperation between the two Parties in the areas of clean energy, environmental protection, information technology, bio-tech, manufacturing, and tourism [and] to support and encourage cooperation on the reduction of greenhouse gas emissions and the promotion of low-carbon development."[80]

In another interesting example, bilateral climate cooperation actually preceded the formation of a sister-state relationship. In 2015 California and the German Land Baden-Württemberg jointly founded the Under2 Coalition. And in 2018, following multiple years of successful cooperation and delegation visits, both parties decided to form a sister-state relationship that specifically focuses on collaboration in the areas of climate, energy and environmental policies.

Type 2: Horizontal rescaling at the national level

Horizontal rescaling at the national level occurs when subnational governments establish linkages with other subnational governments via international organizations or transnational networks with the aim to "forge ahead with policy-making beyond what is mandated by the national government."[81] In the case of California's international climate agenda, two prime examples of this type of rescaling are the United States Climate Alliance and We Are Still In.

The United States Climate Alliance is a "bipartisan coalition of governors committed to reducing greenhouse gas emissions consistent with the goals of the Paris Agreement."[82] The Alliance currently counts 25 member states, which together make up around 55% of the U.S. population and 60% of the U.S. economy, and thus gives the alliance substantial power. This alliance was founded by the U.S. States of California, New York and Washington as a counteraction to the Trump Administration's declaration of the intended U.S. withdrawal from the Paris Agreement. By joining forces, the member states aimed to uphold the

[79] California Energy Commission, "Climate Change Partnerships."
[80] California Energy Commission, "Climate Change Partnerships."
[81] Setzer, "Subnational Governments Rescaling Environmental Governance." 512.
[82] UN Environment Programme, "United States Climate Alliance."

Nationally Determined Contribution (NDC) to the Paris Agreement that the federal government had committed to prior to its withdrawal. This essentially entails a continuation of national climate commitments without direct involvement from the federal government. And now that the U.S. has returned as a signatory of the Paris Agreement, the United States Climate Alliance still mentions the goal to "scale up climate action nationally through close federal collaboration and by demonstrating the benefits of climate leadership" as a core part of its strategy.[83]

Other examples of this type of rescaling are 'We Are Still In' and 'America's Pledge,' which have recently merged into 'America Is All In.' Just like the United States Climate Alliance, We Are Still In was a direct response to the intended U.S. withdrawal from the Paris Agreement. Only three days after the announcement, California was part of a group of 1,200 governors, mayors, university presidents and business leaders who signed the We Are Still In Declaration which "commits signatory institutions to the collaborative pursuit of the U.S. emissions target defined under the Paris Agreement and to continued engagement with the international community."[84] The number of signatories rapidly increased and had nearly doubled by the end of the month when the America's Pledge Initiative was established by California Governor Brown and NYC Mayor Bloomberg as a companion to the We Are Still In Coalition. The coalition claims that during the Trump Administration "the bold climate actions taken by non-federal actors have kept the effort to limit warming to 1.5°C from slipping beyond our grasp" and while federal leadership on the climate crisis has now largely returned with the election of President Biden, "federal leadership alone is not enough."[85] The coalition's new aim is therefore to partner with the federal government to "develop, implement, and ensure accountability for an ambitious, all-in national climate strategy" and "promote the role of subnational leaders around the world by elevating U.S. subnational action on the global stage."[86] During COP26, President Biden actually stood alongside America Is All In to signify his recognition of subnational actors doubling down on climate action during the federal inaction of the Trump Administration.[87]

[83] United States Climate Alliance, "U.S. Climate Alliance Four-Year Strategy 2021-2025."
[84] "Our Story."
[85] America Is All In, "About."
[86] America Is All In, "About."
[87] "Our Story."

Type 3: Horizontal rescaling at the international/supranational level

Horizontal rescaling at the international/supranational level occurs when subnational governments participate in international forums of subnational governments or get involved in multilateral environmental agreements (between subnational governments).[88] Out of the 23 multilateral climate agreements that are currently active and signed by California, 14 agreements can be labeled as this type of horizontal rescaling. Three important examples are the Regions Adapt Initiative, Race to Zero and the Under2 Coalition. All three of these are examples of multilateral cooperation between subnational actors that play a notable role in the supranational regime.

The Regions Adapt Initiative was launched during COP21 by the subnational governments of Catalonia and Rio de Janeiro as "the first global initiative for regional governments to plan, take concrete action, cooperate, and report efforts on climate adaptation."[89] The initiative now counts 71 participants made up of subnational actors from 26 different countries, who by joining the initiative also automatically become members of the UNFCCC Race to Resilience. The UNFCCC Race to Resilience is "a global campaign led by the Marrakech Partnership for Global Climate Action High-Level Climate Champions, to catalyse action by non-state actors that builds the resilience of 4 billion people from vulnerable groups and communities to climate risks, by 2030."[90] The formal recognition of these partnerships by the UNFCCC and their direct link to the COP events underlines the way in which California's membership of these initiatives is triggering *horizontal rescaling at the international/supranational level.*

The same is true for the other two examples mentioned previously: Race to Zero and the Under2 Coalition. Race to Zero is a UN-backed "global campaign rallying non-state actors – including companies, cities, regions, financial, educational, and healthcare institutions – to take rigorous and immediate action to halve global emissions by 2030."[91] It is actually a sibling initiative to Race to Resilience, and like its sibling, it is also led by the UN High-Level Champions for Climate Action. Another crucial example of *horizontal rescaling at the international/supranational level* is the Under2 Coalition, of which California is one of the co-chairs. The Under2 Coalition is the "largest network of subnational governments committed to reaching net zero emissions by 2050."[92] One of the main ways in which the

[88] Setzer, "Subnational Governments Rescaling Environmental Governance." 512.
[89] "RegionsAdapt."
[90] "RegionsAdapt."
[91] "About the Campaign."
[92] "Under2 Coalition."

coalition is working towards this goal is through amplifying the voice of its member-states in diplomatic relations and advocating for deeper inclusion of subnational governments in COP processes.[93] The above-mentioned initiatives also represented its members at the most recent UNFCCC COP (COP27), which further expanded California's share in the COP27 negotiations. So, by participating in these types of multilateral agreements between subnational actors, California has been actively participating in climate governance at the international and supranational level.

Another way in which *horizontal rescaling at the international/supranational level* can be achieved is through participation in official side-events or pavilions during COPs. For example, during COP27, California officials participated in a number of pavilion events during which subnational actors exchanged opinions and ideas on the best ways to mitigate and prevent global climate change.[94] For example, the side-event titled 'Scaling Nature-based Climate Solutions across California and China: What Will It Take?' was organized by The Nature Conservancy and the California-China Climate Institute to initiate a discussion on how cooperation between California and China on nature-based climate solutions could catalyze greater global climate action. Another pavilion that was held was 'Launching the California Sustainable Insurance Roadmap' which was co-organized by United Nations Principles for Sustainable Insurance and the California Insurance Commissioner, making it a clear example of a direct linkage between California (the subnational level) and the UN (the supranational level).

Type 4: Vertical upward rescaling at the subnational level

The type of rescaling that occurs most frequently in the international climate agenda of California is *vertical upward rescaling at the subnational level*. The main examples of this type of rescaling are the signing of bilateral agreements between the state government and a foreign national government. Currently, California has signed such agreements with the national governments of 16 different countries. Most of these climate agreements are aimed at promoting mutual exchanges of best practices, knowledge, data, innovation and economic cooperation.

The wider political relevance of these agreements becomes clear when looking at which country California has signed the most agreements with, which is China. California is

[93] Climate Group, "Diplomacy."
[94] "COP27 Pavilion Events and Recordings."

currently involved in 13 active agreements with China, 5 of which are with the central government of China (and are thus vertical linkages). These linkages are especially interesting due to the complicated relationship that exists between the U.S. government and the Chinese government. For example, when in 2013 California signed a MOU with China's National Development and Reform Commission "to cooperate on the exchange of policy planning and technology pertaining to emissions reduction," this was actually the first time in history that a Chinese national government entity signed an international agreement with a foreign subnational government.[95] California and China have since then continued this relationship by remaining actively engaged in bilateral climate cooperation, and actually " the largest critical mass of U.S.-China climate change cooperation infrastructure outside of Washington now rests in California."[96]

In addition to signing such international agreements, California frequently sends out delegations, or welcomes foreign delegations to California to discuss issues related to climate governance. Actually, at the time of writing, Governor Newsom has just announced that he will travel to China next month to meet with Chinese officials about climate change, and just over two weeks ago a delegation of top California climate officials also visited a number of Chinese provinces to meet with local officials to discuss various aspects of climate cooperation. [97] These types of visits of course do not only occur in the relationship with China, but also in California's relationship with other foreign governments. In fact, receiving and sending delegations has become an integral part of California's international climate agenda.

Type 5: Vertical upward rescaling at the national level

Vertical upward rescaling at the national level refers to the involvement of subnational governments in the agenda-setting for the federal government's participation in multilateral environmental agreements and climate change negotiations. Essentially, this type includes all the different ways in which a subnational government can influence the international climate agenda of the national government. However, it is very complex to validate if specific changes in the national government's international climate agenda are actually caused by the influence of a subnational government. Nevertheless, government

[95] Leffel, "Subnational Diplomacy, Climate Governance & Californian Global Leadership." 6.
[96] Leffel, "Subnational Diplomacy, Climate Governance & Californian Global Leadership." 7.
[97] Begert, "Newsom Announces Climate-Focused Trip to China."

officials from California can be expected to contribute to the development of the federal government's agenda by conversing with federal officials during meetings or events.

For instance, during COP27 officials from the California State Transportation Agency met with officials from the U.S. Department of Energy during a side event to discuss how to provide affordable housing to solve the housing crisis, while also transitioning to a net-zero future. Another example is the U.S. Climate Action Summit, where U.S. climate leaders convene in Washington DC to debate on climate policy. During this year's edition of the summit, the Lieutenant Governor of California was on the panel for the event's Spotlight Sessions together with a number of other subnational and national government officials, such as President Biden's National Climate Advisor and members of the White House Council on Environmental Quality. During four Spotlight Sessions, the panel convened to "discuss key aspects of the implementation agenda."[98] These types of events give subnational officials the chance to directly engage with federal officials and propose points for the federal government's international climate agenda.

Another interesting manner through which California has been engaging in such *vertical upward rescaling at the national level* is through the California-China Climate Institute which was established by former Governor Brown. This is an initiative for academic cooperation between UC Berkeley and the Institute of Climate Change and Sustainable Development at Tsinghua University intended to "inform national policy makers, foster dialogue and cooperation, and promote the implementation of climate solutions at all levels."[99] It is especially interesting that the research provided by the California-China Climate Institute is used to inform national policy makers, since this creates a direct link between California's subnational climate diplomacy and the national climate agenda.

Type 6: Vertical upward rescaling at the international/supranational level

This type of rescaling encompasses the different ways in which subnational governments are "acting authoritatively in the formal multilateral environmental regime."[100] In the case of California's international climate agenda, the state has been acting authoritatively in the formal multilateral environmental regime in a manner of ways, such as by signing multilateral environmental agreements, participating in coalitions and alliances

[98] Climate Group, "US Climate Action Summit 2023 Report."
[99] UC Berkeley, "About Us."
[100] Setzer, "Subnational Governments Rescaling Environmental Governance." 514.

and attending COPs (either as part of the national delegation or as a member of coalitions/alliances, such as the U.S. Climate Alliance or America Is All In).

Analysis of California's international climate agenda shows that the state is certainly active in the formal multilateral environmental regime, since the Government of California is currently a signatory to 23 multilateral climate agreements. These multilateral climate agreements are not solely made amongst subnational entities (such as the examples of horizontal rescaling at the international/supranational level) but also involve other levels of power such as national governments. In these agreements or coalitions/alliances, California finds itself on equal footing with national governments, since the universal code of conduct for multilateral agreements requires all participating actors to be treated alike and to "behave as if they were a single entity."[101] So within the scope of such multilateral climate agreements, California – as a subnational government – is essentially shifting to a higher level of governance and being presented with equal say as the other signatories. Many of these multilateral agreements, coalitions, and alliances are in turn embedded at the supranational level through linkages with the United Nations or a strong presence at Conferences of the Parties.

Another example of *vertical upward rescaling at the international/supranational level* is the Summit of The Americas, which was held in California last year. During this summit, Governor Newsom welcomed leaders from all over the Western Hemisphere and "led a California delegation and represented the Golden State at several meetings and events with heads of state, foreign dignitaries and Biden Administration officials throughout the week."[102] Or, to refer back to the very first sentence of this thesis, the leading role that was played by Governor Newsom during last week's UN Climate Ambition Summit is another clear example of this type of vertical rescaling at the supranational level.

[101] Heywood, *Global Politics*. 467.
[102] Office of Governor Gavin Newsom, "RECAP."

Entrenchment

As has been discussed in the previous chapter on methodology, van der Ven, Bernstein, and Hoffmann define entrenchment as the act of "generating substantive effects that are durable and difficult to reverse," and they distinguish between the following four types of entrenchment. [103]

Type 1: Entrenchment through lock-in

Entrenchment through lock-in arises when an initiative "contains a logic that gives it immediate durability."[104] In the context of a political system, such lock-in can be caused by "institutional rules of the game that render change difficult to initiate."[105] In the case of California's subnational climate diplomacy, this type of entrenchment mainly occurs as a result of signing international agreements or partnerships. Essentially, by taking its local climate action to the international arena and establishing a large number of international linkages based on this climate action, the climate issue has become entrenched through lock-in. Since to, for example take a step back on these goals, the state would have to renegotiate a lot of its international agreements. Essentially, since many of California's formal international partnerships are based on its ambitious climate agenda, to turn away from that focus would be extra difficult since the state would have to account for such a shift not only within the state and the nation, but also within its international relations. Also, the political, economic and cultural ties that are created by these international linkages can help further protect and entrench subnational climate initiatives against opposition or policy shifts.

With the signing of international agreements, the signatories lock in certain promises and commitments. And while these agreements tend not to be legally binding, they can still gain this durability through policy integration and linking climate cooperation to other policy areas such as economic and technological development. For instance, in each of the bilateral agreements that address cooperation on climate issues between Japan and California, climate cooperation is linked to economic cooperation and agreements on boosting trade and investment between both parties. The broader agreement to cooperate in other policy areas such as trade and investment, can then serve as a sort of buffer for the included climate agreements, and thus provide a certain level of 'lock-in.' Because while these agreements can of course still be broken or renegotiated for various reasons, it can be assumed that a

[103] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 8.
[104] Levin et al., "Overcoming the Tragedy." 134.
[105] Levin et al., "Overcoming the Tragedy." 134.

signatory would be less likely to back out of its climate promises if that would also mean they would be backing out of a fruitful economic cooperation agreement.

Other examples are the sister-state relationships that California has established with 33 states from across the globe. As was mentioned in the previous section on scaling, California founded a number of climate agreements on these sister-state partnerships, such as with Osaka (Japan), Baden Württemberg (Germany) and Jiangsu Province (China). By framing these climate agreements within a strong and pre-existing relationship, the climate agreements have automatically gained a strong foundation and a higher chance of durability.

Type 2: Self-reinforcing entrenchment

Self-reinforcing entrenchment "occurs when the benefits for continuing and/or the costs of reversing an initiative increase over time."[106] This refers not only to costs in terms of monetary value, but also to processes of habituation and norm setting or norm sustaining. One important way in which this type of *self-reinforcing entrenchment* occurs in the case study of California is in the way that the state's participation in climate diplomacy is reinforcing its position as a climate activist and climate leader, and vice versa. Essentially, by taking a strong stance on climate, California was able to gain a place in the international regime, and because this role was largely founded on its subnational climate leadership, this again acts as an incentive to remain a climate leader both domestically and internationally. This highlights how subnational climate diplomacy can help establish long-term commitments to climate action. By placing extensive focus on climate governance and actively engaging in subnational climate diplomacy for the past 20 years, this commitment to climate action has become deeply ingrained in the political agenda and the public perception of California's role as a climate leader.

This is also an example of norm setting and sustaining, which is one of the main ways in which California's subnational climate diplomacy has been leading to *self-reinforcing entrenchment.* For example, when former Governor Schwarzenegger kickstarted California on its journey into global climate governance, it was not yet the norm for subnational governments to engage in subnational diplomacy. However, Schwarzenegger continuously challenged the status quo. For example, when in 2006 UK Prime Minister Tony Blair made an official visit to California to meet with Schwarzenegger in support of the newly enacted California Global Solutions Warming Act, the UK Foreign and Commonwealth Office

[106] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 9.

actually strongly opposed this visit since it believed that "state visits should be to the capital and the central government" and could cause friction with the U.S. federal government.[107] However, the visit still took place, and not long after Prime Minister Blair's visit, the German Foreign Minister Steinmeier also made an official visit to California, which "was described as highly unusual in diplomatic circles."[108] Nonetheless, Schwarzenegger continued to receive and depart on official visits with foreign officials and national leaders to discuss climate issues, and so did his successors, so that nowadays it has become the norm for the Governor of California to frequently engage in this type of subnational climate diplomacy.

Type 3: Entrenchment through positive feedback

Entrenchment through positive feedback refers to how generating wider support outside of the initial target audience can simultaneously lead to improved support among the initial target audience. For instance, when subnational governments actively participate in international climate negotiations and collaborations, it signals their commitment to addressing climate change, which can enhance their standing among constituents and stakeholders. The resulting increased political support can then further strengthen the position of subnational climate initiatives and make them more difficult to overturn or abandon.

An example of this in the case of California is how gaining a role as an international leader on climate, and being perceived that way internationally, has reinforced the perception of Californian citizens on their state's role as such an international climate leader. Basically, the success and recognition that California has been receiving in the international regime has reinforced the support for this climate agenda on a domestic level within the state, and even on a national level.[109] Also, by participating in international climate negotiations, California is able to amplify its climate message, reach a broader audience, and increase awareness and engagement. By displaying such active involvement in global climate governance, the state is gaining a constituency of support for its role as a climate leader, making it much more challenging for political leaders to try to reverse or abandon such efforts.

This type of entrenchment can also be linked to the process of increasing ambition, which has frequently been mentioned as an important way in which subnational actors can contribute to climate governance. For example, by successfully engaging in ambitious international climate cooperation, California demonstrates the advantages of such diplomatic

[107] Buchmann, "Subnational Climate Diplomacy in the USA." 291.
[108] Buchmann, "Subnational Climate Diplomacy in the USA." 292.
[109] Baldassare, "California Is a Model for Climate Change Action."

relations, which can raise ambition at the federal level to follow a similar path, and reinforce support at the state level for such ambitious climate diplomacy. This type of entrenchment also relates to the creation of political resilience to backsliding or slow climate progress caused by a lack of ambition at the federal level.[110]

For example, by doubling down on subnational climate diplomacy during the Trump Administration, California was able to signal to the rest of the world that the federal turn away from climate action did not necessarily entail such a turn away at the state level. By emphasizing its loyalty to global climate governance through increased engagement in subnational climate diplomacy, California was able to reduce the amount of confidence in U.S. climate diplomacy that was lost by its international partners. And by serving as a sort of buffer to diminish the loss of confidence in the U.S. as a climate diplomat, California also helped to facilitate a smoother transition after now-President Biden was elected. Additionally, the participation of California as a subnational government in the multilateral regime helps to "create a narrative of an ongoing and inevitable ecological transition which strengthens the overall UNFCCC process."[111]

Type 4: Indirect entrenchment of nontargeted policies or practices

Indirect entrenchment of nontargeted policies or practices refers to processes that are "amplifying the impact of the intervention in indirect and unanticipated ways."[112] This is an especially interesting type of entrenchment because it highlights the broad scope of influence of subnational climate diplomacy. The most striking example of this type of entrenchment is the California effect. As was already briefly explained at the start of this chapter, the California effect refers to a 'regulatory race to the top' among other U.S. states that is triggered by California's right under the Clean Air Act waiver to set stricter emission standards than those at the federal level. While the primary purpose of California's Clean Air Act waiver is purely to allow California to take a more stringent approach to emission reduction within its own borders, it also results in the indirect entrenchment of more stringent emission standards at the federal level. As touched upon previously, due to the economic and political power of California, a number of other U.S. states tend to adhere to California's emission standards rather than to the federal standard, which eventually leads to the federal level matching California's standard too, and then California raising its standard again and so

[110] European Committee of the Regions ., *Boosting International Subnational Climate Diplomacy.* 36.
[111] European Committee of the Regions ., *Boosting International Subnational Climate Diplomacy.* 12.
[112] van der Ven, Bernstein, and Hoffmann, "Valuing the Contributions." 9.

forth. So, while the initial aim of California's Clean Air Act waiver was never to exert influence over federal emission standards, this has occurred nonetheless due to processes of indirect entrenchment.

Furthermore, the indirect effects do not stop at the federal level, but they even trickle into the international level in a number of ways. For example, the 17 states that have adopted California's emission standard collectively account for 40% of the U.S. population and more than a third of the U.S. auto market.[113] This has created a substantial market for low-and-zero emission vehicles, which serves as an incentive for manufacturers to produce vehicles that meet these standards. And as more auto manufacturers produce low-emission or zero-emission vehicles to meet this demand, these types of vehicles become more accessible and affordable worldwide, which is indirectly promoting the global transition to cleaner vehicles.

[113] Valdes-Dapena, "How California Ended up in the Zero-Emissions Driver's Seat."

Conclusion

The purpose of this research has been to study how subnational climate diplomacy can lead to transformative change through rescaling and entrenchment. To accomplish this purpose, the study has taken a qualitative within-case study approach aimed at uncovering the various processes of rescaling and entrenchment in the international climate agenda of the U.S. state of California. What has become clear from this analysis is that California's subnational climate diplomacy has been leading to transformative change through rescaling and entrenchment in a manner of ways.

Rescaling

The analysis of California's international climate agenda according to Setzer's framework has shown that through subnational climate diplomacy, California is contributing to a rescaling of climate governance. The type that stood out the most is *vertical upward rescaling at the subnational level*, since this was the most frequently detected type of rescaling. It is especially striking that the main way in which California's subnational climate diplomacy is rescaling climate governance is through the creation of international linkages along the vertical axis. The fact that California is especially focused on establishing international agreements or partnerships with foreign national governments, emphasizes how subnational climate diplomacy is triggering a shift from traditional state-to-state approaches to a more multilevel approach to global climate governance.

The second most frequently detected type of rescaling is *horizontal rescaling at the subnational level*. Currently, California is an active member of 27 climate agreements with foreign subnational governments, and 33 sister-state relationships. These sister-state relationships show how the creation of such linkages between subnational governments can provide the foundations for long-term and durable cooperation, and the development of further and more specific cooperation agreements.

At the international/supranational level, California has been establishing linkages along both the horizontal and vertical axis. *Horizontal rescaling at the international/supranational level* for example, can be found in the 14 multilateral climate agreements between subnational governments in which California is currently involved. And while participation in these types of multilateral agreements already signifies a rescaling to the international level, the fact that through these multilateral agreements California is also

being represented more extensively at for example the Conferences of the Parties, signifies rescaling to the supranational level.

The same is true for *vertical upward rescaling at the international/supranational level*, which refers to the state acting authoritatively in the formal multilateral environmental regime, such as through participating in multilateral climate agreements which also include non-subnational actors among its members. California is currently active in 23 of such multilateral climate agreements. What is especially striking about this is the fact that, as is the code of conduct for formal multilateral agreements, all members of the agreement have equal say. Within the scope of these agreements, California is thus placed on the same level as the national governments that hold membership. This makes these agreements clear examples of rescaling at the international/supranational level.

As for the national level, the way in which California's subnational climate diplomacy has been leading to vertical upward rescaling at this level is through particularly indirect effects, such as through the California-China Climate Institute. And at the horizontal dimension, rescaling at the national level is mainly achieved through the U.S. Climate Alliance and the We Are Still Coalition. These examples highlight how the creation of horizontal linkages between subnational governments allows for the continuation of policies beyond or in spite of what is mandated by the national government. This same point is further emphasized by the analysis of California's subnational climate diplomacy according to the four types of entrenchment.

Entrenchment

It can be concluded that by engaging in subnational climate diplomacy, California is generating effects in climate governance that are both durable and difficult to reverse. For example, by 'locking-in' climate commitments in international climate agreements, any significant shifts in these commitments also require a renegotiation of the pledges made under the agreements. Such *entrenchment through lock-in* can be further increased by linking climate cooperation to other policy areas. In the case of California, climate agreements are often combined with pledges to cooperate on economic and technological development.

Another way in which California's subnational climate diplomacy has been triggering entrenchment is through self-reinforcing mechanisms. By becoming a leader in climate governance within the U.S., California gained recognition in the international arena, which again served as an incentive to remain a climate leader. Or more specifically, the way that

Governor Schwarzenegger challenged the norms of the time with the above-mentioned delegation visits actually led to these types of delegation visits becoming the new norm.

A similar type of entrenchment results from positive feedback. The case study of California showed how successful participation in international climate cooperation can demonstrate the advantages of such cooperation, which then reinforces support at the state level and increases ambition at the federal level. For example, by showing continued loyalty to the commitments made under the Paris Agreement, California reassured its constituents and its international partners that there still remained a certain level of stability in U.S. climate governance at the subnational level, and in subnational climate diplomacy.

Finally, there are a number of indirect manners in which entrenchment occurs. In the case of California, the main example of this type is that of the "California Effect," which shows how the state's emission standard has been indirectly entrenching the federal standard, and can even expand its impact internationally and support the global transition to cleaner vehicles.

Overall, what can be concluded from these findings is that California's subnational climate diplomacy has contributed considerably to transformative change through rescaling and entrenchment. And while the specific examples discussed here are limited to the case of California, the relevance of these findings is not. They exemplify processes that are not strictly unique to the case of California but can presumably also be detected in other examples of subnational climate diplomacy around the world. Therefore, the examples of rescaling and entrenchment discussed here can serve as a model for similar analyses of the international climate agendas of other subnational governments around the globe. In fact, for the multiple foreign subnational governments with which California engages through climate diplomacy, it can be expected that these interactions hold relevance in terms of rescaling and entrenchment on both sides. Additionally, the examples of multilateral climate alliances and coalitions included in this case study underline how California is part of a large community of subnational governments that have become very active in subnational climate diplomacy. So even though California is certainly still one of the main global frontrunners in subnational climate diplomacy, it is certainly not alone in its efforts and subnational climate diplomacy is becoming more and more central to international relations.

Ultimately, the main takeaway from this study is that subnational climate diplomacy is an important asset to global climate governance and can therefore benefit from a more encompassing understanding of its broader value. This thesis has aimed to contribute to such

an understanding by placing the focus on two ways in which subnational climate diplomacy can have a more indirect, yet influential, impact on global climate governance: rescaling and entrenchment. The results from this study have shown that subnational climate diplomacy can contribute to transformative change in global climate governance, not only through producing directly quantifiable emission reductions, but also through rescaling climate governance and entrenching durable change.

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Appendix

J. Setzer's Framework for Analysis of Subnational Rescaling in Global Environmental Politics[114]

Table 1. Examples of the horizontal and vertical rescaling in subnational, national and supranational/international levels

	Horizontal rescaling	Vertical rescaling
Subnational level	Linkages between SGs to establish technical, scientific or technological partnerships (Rescaling 1)	SGs engage with intergovernmental organizations or foreign governments to establish decentralized cooperation agreements (Rescaling 4)
National level	Linkages between SGs to forge ahead with policy-making beyond what is mandated by the national government (Rescaling 2)	SGs engage in the agenda-setting phase of UN treaties to contribute on how the national government is responding to global environmental problems (Rescaling 5)
International level	Linkages between SGs at international meetings to debate new ideas and discuss alternatives to the international regime (Rescaling 3)	SGs engage in the negotiation phase of UN treaties to influence diplomats and negotiators (Rescaling 6)

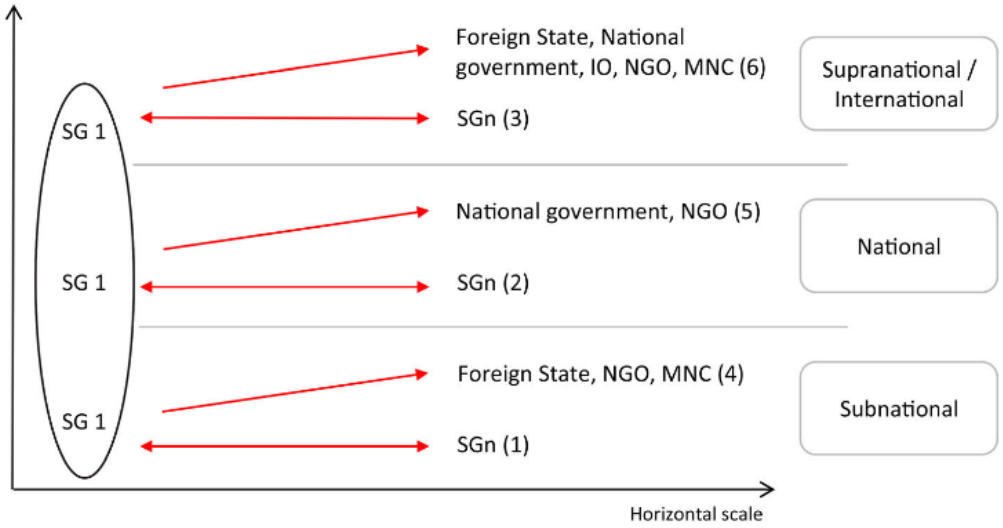

Figure 2. Horizontal and vertical dimensions of subnational rescaling in global environmental politics. The numbers in brackets (1–6) indicate the number of linkages described earlier. IGO = intergovernmental organizations and MNC = multinational corporation.
Source: Author, drawing upon Andonova and Mitchell (2010).

[114] Setzer, "How Subnational Governments Are Rescaling Environmental Governance."